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APPENDIX B

PROPONENT'S ENVIRONMENTAL ASSESSMENT



Proponent's Environmental Assessment for LS Power Grid California, LLC's *Power the South Bay Project* May 2024

The Proposed Project was approved by the California Independent System Operator (CAISO) to ensure the reliability of the CAISO-controlled grid. The Proposed Project includes two new high-voltage direct current (HVDC) terminals and associated new transmission lines. The new transmission lines include an approximately 8.6-mile Albrae to Baylands 320 kilovolt (kV) direct current (DC) underground and overhead transmission line connecting the Albrae terminal to the Baylands terminal; an approximately 0.4-mile Newark to Albrae 230 kV alternating current (AC) transmission line, both overhead and underground, connecting the new Albrae terminal to the existing Pacific Gas & Electric Newark substation; and an approximately 3.5-mile Baylands to Northern Receiving Station (NRS) 230 kV AC transmission line, both overhead and underground, connecting the new Baylands terminal to the existing Silicon Valley Power NRS substation. The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, California.

Application A-_-_- to the California Public Utilities Commission

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ACRONYMS, INTIALISMS, AND DEFINED WORDS

AADT	annual average daily traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ABCs	Across Barrier Connections
AC	alternating current
AC Transit	Alameda-Contra Costa Transit District
ACC I	California Advanced Clean Cars Program
ACC II	Advanced Clean Cars II Program
ACCR	Aluminum Conductor Composite Reinforced
ACDEH	Alameda County Department of Environmental Health
ACE	Altamont Commuter Express
ACFC/WCD	Alameda County Flood Control and Water Conservation District
ACFCD	Alameda County Flood Control District
ACRCD	Alameda County Resource Conservation District
ACSS	Aluminum Conductor Steel Supported
ACWD	Alameda County Water District
ADA	Americans with Disabilities Act
AERMOD	Air Quality Dispersion Modeling
AF	acre feet
AF/year	acre-feet per year
AFFH	Affirmatively Furthering Fair Housing
AHF	Above Hayward Fault
AIA	Airport Influence Area
Alameda CTC	Alameda County Transportation Commission
ALUC	Airport Land Use Commission
AMPP	Association for Materials Protection and Performance
amsl	above mean sea level
ANSI	American National Standards Institute
APE	Area of Potential Effects
APLIC	Avian Power Line Interaction Committee
APM	Applicant Proposed Measure
APNs	Assessor Parcel Numbers
AQMDs	Air Quality Management Districts
ARCRD	Alameda County Resource Conservation District
ARP	Aquifer Reclamation Program
ASG	Advanced Specialty Gas
ASTM	American Society for Testing and Materials International
ATCMs	air toxics control measures
BAAH	breaker-and-a-half
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Basin Plan	The San Francisco Bay Basin, Water Quality Control Plan
BAT	best available technology
BAU	Business-As-Usual

Bay Area O&M HCP	San Francisco Bay Area Operations and Maintenance Habitat Conservation Plan
BCC	Birds of Conservation Concern
BCDC	Bay Conservation and Development Commission
BCT	best control technology
BG	bare ground
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BHF	Below Hayward Fault
bhp	brake horsepower
BLM	Bureau of Land Management
BMPs	Best Management Practices
BMX	Bicycle Moto-cross
BRTR	Biological Resources Technical Report
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy Standards
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CBC	California Building Code
CBSC	California Building Standards Commission
CCBC	Cross County Bicycle Corridors
CCC	California Coastal Commission
CCPs	Comprehensive Conservation Plans
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDM	Community Distribution Model
CEC	California Energy Commission
CEHC	California Essential Habitat Connectivity Project
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFCs	chlorofluorocarbon compounds

CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CGS	California Geological Survey
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CHSC	California Health and Safety Code
CIP	Critical Infrastructure Protection
CLUP	Comprehensive Land Use Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CPCN	Certificate of Public Convenience and Necessity
CPHI	California Point of Historical Interest
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CRLF	California red-legged frog
CRS	Community Rating System
CRS	Cultural Resource Specialist
CSLC	California State Lands Commission
CTS	California tiger salamander
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CY	cubic yards
dB	decibel
dBA	A-weighted decibels
DC	direct current
DIR	Department of Industrial Relations
DNL	day-night average sound level
DOC	Department of Conservation
DOE	Department of Energy
DOL	Department of Labor
DOORS	Diesel Off-Road Online Reporting System
DOT	Department of Transportation
DPM	Diesel Particulate Matter
DPR	Department of Parks and Recreation
DPS	distinct population segment
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EA	Environmental Assessment
EAP	Energy Action Plan
EFS	Environmental Field Specialist
EFZ	Earthquake Fault Zones
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act

EMS	Energy Management System
EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
ERIS	Environmental Risk Information Services
ERO	Electric Reliability Organization
ESA	Endangered Species Act
ESA	Environmental Site Assessments
ESA	Environmental Science Associates
ESRI	Environmental System Research Institute
ESRP	Endangered Species Recovery Program
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FFD	Fremont Fire Department
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
First Update	First Update to the Climate Change Scoping Plan: Building on the Framework
FMMP	Farmland Mapping and Monitoring Program
FPB	Fire Prevention Bureau
FPD	Fremont Police Department
FPPA	Farmland Protection Policy Act
FRAP	Fire and Resource Assessment Program
FTA	Federal Transit Administration
FUSD	Fremont Unified School District
GHG	Greenhouse Gas
GHGRS	Greenhouse Gas Reduction Strategy
GIE	gas-insulated electronics
GIS	gas-insulated switchgear
GIS	Geographic Information System
GO	General Order
GS	grass fuel
Greater Bay Area	Greater San Francisco Bay Area
GSA	Groundwater Sustainability Agency
GSPs	Groundwater Sustainability Plans
GWMP	Groundwater Management Plan
GWP	Global Warming Potential
HAP	Hazardous Air Pollutants
HAZCOM	Hazardous Materials Communication
HCP	Habitat Conservation Plan
HDD	horizontal directional drilling

HDPE	high-density polyethylene
HFCs	hydrofluorocarbons
HMBP	Hazardous Material Business Plan
HMCD	Hazardous Materials Compliance Division
HMMP	Hazardous Materials Management Plans
HMSO	Hazardous Materials Storage Ordinance
HRI	Historic Resources Inventory
HSAA	Hazardous Substance Account Act
HSC	Health and Safety Code
HSC	Health and Safety Code
HUC	Hydrologic Unit Code
HVAC	heating, ventilation, and air conditioning
HVDC	high-voltage direct current
HWCL	Hazardous Waste Control Law
I	Interstate
IDC	International Disposal Corporation of California
IEEE	Institute of Electrical and Electronics Engineers
IEPR	Integrated Energy Policy Report
IN	Infrastructure
in/sec	inches per second
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resources Plan
ISA	International Society of Arboriculture
ISO	Insurance Services Office
ITP	Incidental Take Permit
kcmil	thousand circular mils
KOPs	key observation points
kV	kilovolt
kW	kilowatts
kWH	kilowatt hours
LAN	Local Area Network
LB	left bank
Ldn	dBA day-night noise level
LED	light emitting diode
LEED	Leadership in Energy and Environmental Design
Leq	equivalent sound level
LEV	Low-Emission Vehicle
LHMP	Local Hazard Mitigation Plan
L_{max}	maximum intermittent noise levels
LOS	level-of-service
LRA	Local Responsibility Area
LS Power	LS Power Grid California, LLC
LSAA	Lake or Streambed Alteration Agreement
LTA	Local Transportation Analysis
m	meters

MBTA	Migratory Bird Treatment Act
MCV	Manual of California Vegetation Online
MFD	Milpitas Fire Department
mgd	million gallons per day
mm ²	square millimeter
MMT	million metric tons
MND	Mitigated Negative Declaration
MOT	materials of trade
MPD	Milpitas Police Department
mph	miles per hour
MPOs	Metropolitan Planning Organizations
MRR	Mandatory Reporting Rule
MRZ	Mineral Resource Zones
MS	Measurable Environmental Sustainability
MS4	Municipal Separate Storm Sewer System
MSDS	Material Safety Data Sheet
MT	metric tons
MTC	Metropolitan Transit Commission
Muni Water	San José Municipal Water System
MUSD	Milpitas Unified School District
MVA	megavolt amperes
MVAR	megavolt amperes of reactive power
MW	megawatts
MWh	megawatt hours
MY	model year
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NARA OFR	National Archives and Records Administration Office of the Federal Register
NB	nonburnable
NCCP	Natural Communities Conservation Plan
NCP	National Contingency Plan
NDIR	Non-Dispersive Infrared Photometry
NEC	National Electrical Code
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service

NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRS	Northern Receiving Station
NSF	National Science Foundation
NSLU	Noise Sensitive Land Use
NWI	National Wetlands Inventory
NWIC	Northwest Information Center
NWR	National Wildlife Refuge
O&M	operation and maintenance
OAL	Office of Administrative Law
OEHHA	Office of Environmental Health Hazard Assessment
OEM	original equipment manufacturer
OES	Office of Emergency Services
OFEE	Oil Filled Electrical Equipment
OHP	Office of Historic Preservation
OHWM	Ordinary High-Water Mark
OPGW	optical ground wires
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PEA	Proponent's Environmental Assessment
PERP	Portable Equipment Registration Program
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PHEVs	plug-in hybrid electric vehicles
PL	Public Law
PLSS	Public Land Survey System
PM	particulate matter
Porter-Cologne	Porter-Cologne Water Quality Control Act
POS	Parks and Open Space
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRMMP	Paleontological Resources Mitigation and Monitoring Plan
Procedures	State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State
Proposed Project	Power the South Bay Project
PSC	Planning Section Chief
PSMP	Protection System Maintenance Program
PU	Public Utilities

PV	paved
PVC	polyvinyl chloride
QSP	Qualified SWPPP Practitioner
RB	right bank
RCRA	Resource Conservation and Recovery Act
Region	San Francisco Bay Region
REL	Reference Exposure Levels
RHNA	Regional Housing Needs Allocation
ROG	Reactive Organic Gases
ROW	right-of-way
RPS	Renewables Portfolio Standard
RSL	Remote Sensing Laboratory
RTP	Regional Transportation Plan
RV	Representative Viewpoint
RWF	Regional Wastewater Facility
RWQCB	Regional Water Quality Control Board
RWS	Regional Water System
SB	Senate Bill
SBWR	South Bay Water Recycling
SCADA	Supervisory Control and Data Acquisition
SCAQMD	South Coast Air Quality Management District
SCCL	Santa Clara City Library
SCFD	Santa Clara Fire Department
Scoping Plan	Climate Change Scoping Plan: A Framework for Change
SCPAL	Santa Clara Police Activities League
SCPD	Santa Clara Police Department
SCS	Sustainable Communities Strategy
SCUSD	Santa Clara Unified School District
SCVAS	Santa Clara Valley Audubon Society
SCVHP	Santa Clara Valley Habitat Plan
SCVURPP	Santa Clara Valley Urban Runoff Prevention Program
SCVWD or "Valley Water"	Santa Clara Valley Water District
SDNHM	San Diego Natural History Museum
SDS	Safety Data Sheets
Second Update	California's 2017 Climate Change Scoping Plan
SEMS	Standardized Emergency Management System
SFAB	San Francisco Air Basin
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
SH	shrub
SIP	State Implementation Plan
SJCE	San José Clean Energy
SJFD	San José Fire Department
SJPD	San José Police Department
SJPL	San José Public Library

SJW	San José Water
SLF	Sacred Lands File
SMARTS	Stormwater Multiple Application and Report Tracking System
SMCRA	Surface Mining Control and Reclamation Act
SME	Subject Matter Expert
SMGB	State Mining and Geology Board
SMHM	salt marsh harvest mouse
SMP	Soil Management Plan
SPCC	Spill Prevention, Control, and Countermeasure Plan
SR	State Route
SRA	State Responsibility Area
STATCOM	static synchronous compensator
Survey Area	Biological Resources Survey Area
SVCE	Silicon Valley Clean Energy
SVP	Silicon Valley Power
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TA	Transportation Analysis
TACs	toxic air contaminants
T-BACT	Available Control Technology
TCP	Traffic Control Plan
TCRs	Tribal cultural resources
TDM	Transportation Demand Management
The Board	Board of Forestry and Fire Protection
THPO	Tribal Historic Preservation Officer
TIA	Transmission Interconnection Agreement
TL	trash litter
TMDL	Total Maximum Daily Loads
TMP	Trail Management Plan
TMP	Transmission Maintenance Plan
TOA	Transportation Operational Analysis
TOH	Toe of the Hill
TPP	Transmission Planning Process
tpy	tons per year
Tri-Cities	Cities of Fremont, Newark, and Union City
TSDF	treatment, storage, and disposal facility
TW	Trapezoidal Wire
TWA	time weighted average
U.S.C.	United States Code
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UFC	Uniform Fire Code
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
Urban Runoff	Toxic Gas Ordinance and Non-Point Source Ordinance

USA	Underground Service Alert
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UW	Urban Water
UWMP	Urban Water Management Plan
V	volt
VHFHSZ	Very High Fire Hazard Severity Zones
VLP	Voluntary Local Program
VMT	vehicle miles traveled
VOC	volatile organic compounds
VSC	Voltage-Source Converter
VTA	Valley Transportation Authority
VTP	Valley Transportation Plan
WBWG	Western Bat Working Group
WC	waterbody crossings
WEAP	Worker Environmental Awareness Program
WMPs	Wildfire Mitigation Plans
WPCP	Water Pollution Control Plant
WPT	western pond turtle
WS	open water
XLPE	single core cross-linked polyethylene
ZEV	Zero Emission Vehicle

1.0 EXECUTIVE SUMMARY

1.1 PROPOSED PROJECT SUMMARY

LS Power Grid California, LLC (LS Power), a wholly-owned subsidiary of LS Power Associates, L.P., established to own and operate transmission projects in the State of California, is proposing the Power the South Bay Project ("Proposed Project"). The Proposed Project includes components to be constructed and operated by LS Power as well as modifications to existing Pacific Gas and Electric Company (PG&E) and Silicon Valley Power (SVP) substations, which would be constructed and operated by PG&E and SVP. The Proposed Project is located within an existing regional transmission system that provides electricity to the greater San Francisco Bay Area. The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, California.

The Proposed Project includes the following main components:

- Two new high-voltage direct current (HVDC) terminals:
 - The new Albrae terminal interconnected to the existing PG&E Newark substation; and
 - The new Baylands terminal interconnected to the existing SVP Northern Receiving Station (NRS) substation.
- One approximately 8.6-mile Albrae to Baylands 320 kV direct current (DC) transmission line, both overhead and underground, connecting the Albrae terminal to the Baylands terminal;
- One approximately 0.4-mile Newark to Albrae 230 kV alternating current (AC) transmission line, both overhead and underground, connecting the new Albrae terminal to the existing PG&E Newark substation;
- One approximately 3.5-mile Baylands to NRS 230 kV AC transmission line, both overhead and underground, connecting the new Baylands terminal to the existing SVP NRS substation; and
- Modifications to PG&E's Newark and SVP's NRS substations to accommodate connection of the new Newark to Albrae and Baylands to NRS 230 kV transmission lines. These modifications would be completed by PG&E and SVP, respectively, but are included in this Proposed Project description as they are part of the overall transmission upgrade project.

The Proposed Project was approved by the California Independent System Operator (CAISO) to ensure the reliability of the CAISO-controlled grid. The Proposed Project's purpose is to strengthen the electrical grid in the Greater Bay Area. To accomplish this, the Proposed Project would:

- Ensure the reliability of the South Bay sub-area of the Greater Bay Area of the CAISO-controlled grid;
- Provide better access to cost-effective, renewable energy and other electric transmission grid benefits;
- Support the provision of safe, reliable, and adequate electricity service to the PG&E and SVP service territories;

- Provide voltage support to the existing PG&E transmission system to support additional load growth; and
- Facilitate the importation and use of renewable electricity to fulfill the State of California's energy policies and goals by ensuring reliable operation of the grid.

1.2 LAND OWNERSHIP AND RIGHT-OF-WAY REQUIREMENTS

1.2.1 LAND OWNERSHIP

Land entitlement issues are not part of this regulatory proceeding, in which the California Public Utilities Commission (CPUC) is considering whether to grant or deny LS Power's application for a Certificate of Public Convenience and Necessity (CPCN) to construct new electrical facilities. Rather, any land rights issues would be resolved in subsequent negotiations and/or condemnation proceedings in the proper jurisdiction, following the decision by the CPUC on LS Power's application (see, for example, Jefferson-Martin 230 kV Transmission Project, A.02-04-043, D.04-08-046, p. 85).

LS Power Facilities

The parcel associated with the proposed Albrae terminal site (Assessor Parcel Number [APN] 531-165-9-4) is currently owned by a private owner, and LS Power would secure approximately 6.1 acres of the approximately 25.3-acre parcel. The parcel associated with the proposed Baylands terminal site (APN 015-30-109) is currently owned by the City of San José, and LS Power would negotiate a long-term lease. These parcels of land are adequate to accommodate the HVDC terminal construction activities, including site grading, fencing, staging area, equipment, internal circulation, and other operational considerations (see **Section 3.4.3, New or Modified Rights-of Way or Easements**).

PG&E and SVP Facilities

PG&E owns the parcels on which the existing Newark substation is located and would not require additional land for any of the on-site modifications. Additionally, the City of Santa Clara owns the parcels on which the existing NRS substation is located and would not require additional land for any of the on-site modifications.

1.2.2 RIGHTS-OF-WAY OR EASEMENTS

LS Power Facilities

The proposed HVDC terminals would be sited on land owned or leased by LS Power and would not require a new or modified right-of-way (ROW) or easement. The proposed Newark to Albrae 230 kV, Albrae to Baylands 320 kV DC, and Baylands to NRS 230 kV transmission lines, duct banks, and splice boxes would require new ROWs/easements or franchise agreements. The proposed Albrae to Baylands 320 kV DC transmission line overhead alignment would require a ROW width of 130 feet, and the proposed underground alignment would generally require a ROW of approximately 15 feet. The overhead portion of the proposed Baylands to NRS 230 kV transmission line would require a ROW width of 110 feet, and the ROW width for the proposed underground transmission line would be generally approximately 15 feet. The ROW would be expanded at vault locations as needed. The specific width of necessary easements, ROWs, or franchise agreements along the Proposed Project transmission line alignments would be refined

during the final engineering process. The Proposed Project is anticipated to require a total of approximately 38 acres of new ROW, easement, or franchise agreements. Finally, LS Power would secure crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure crossed by the Proposed Project.

A portion of the new permanent easement/ROWs would be acquired by LS Power through negotiations with private landowners, SVP, PG&E, and municipal-, state-, and regional agency-owned lands as further discussed in **Section 3.4.1, Land Ownership**. New permanent ROWs or licenses would also be acquired from each applicable public agency through that agency's designated process. LS Power would negotiate required franchise agreements with Alameda County Flood Control District (ACFCD), City of Fremont, City of San José, City of Santa Clara, Santa Clara Valley Water District (SCVWD or "Valley Water"), Santa Clara Valley Transportation Authority (VTA), California State Lands Commission, California Department of Transportation ("Caltrans"), PG&E, and SVP. The total number of land rights to be acquired would be finalized during final engineering. LS Power would also have the power of eminent domain to acquire any necessary land rights for construction of the Proposed Project.

Temporary easements would be required for the Proposed Project's construction staging areas. **Figure 3-4, Project Route Map** highlights the staging areas being considered for the Proposed Project. The majority of the staging areas would be accessed through public street ROWs. Specifically, only one staging area would require access beyond public street ROW. For this site, the same landowner who owns the site also owns access to the public street ROW. Therefore, in the temporary easement agreement, access would be required. Additionally, temporary rights necessary for the installation of the proposed underground transmission lines would be included in the necessary ROW easement/franchise agreements. All temporary ROWs and easements would be acquired through a temporary ROW agreement or construction agreement. LS Power has already begun discussions with the private landowners regarding temporary construction access and would continue to do so in the coming years.

PG&E and SVP Facilities

PG&E and SVP are not anticipated to require new ROW or easements. All PG&E and SVP scope of work associated with the Proposed Project would occur within existing ROW, easement, or fee-owned property.

1.3 AREAS OF CONTROVERSY

LS Power met with several regulatory agencies to solicit input on the Proposed Project design and potential resource and land use issues in the vicinity of the Proposed Project. Agencies and stakeholders consulted with include the CPUC, CAISO, PG&E, SVP, City of Santa Clara, City of Milpitas, City of Fremont, City of San José, SCVWD, County of Santa Clara, County of Alameda, California State Lands Commission, ACFCD, Native American Heritage Commission, Santa Clara Valley Habitat Agency, United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), Caltrans, Bay Conservation and Development Commission (BCDC), State of California Assembly, and United States Congress. Based on the conducted outreach and consultation with agencies, no areas of controversy and/or public concern were identified.

1.4 SUMMARY OF IMPACTS

There are no potentially significant or significant and unavoidable impacts expected as a result of the Proposed Project.

LS Power would be responsible for overseeing the assembly of construction and environmental teams that would implement and evaluate the Applicant Proposed Measures (APMs) for the Proposed Project. LS Power maintains an environmental compliance management program to allow for implementation of the APMs to be monitored, documented, and enforced during each Proposed Project phase. The Proposed Project would include APMs to ensure that Proposed Project-level impacts would be less than significant for the following resource areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Paleontological Resources
- Hazards, Hazardous Materials, and Public Safety
- Hydrology and Water Quality
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

The APMs are described in **Table 3-12, Applicant Proposed Measures** and are described in detail in **Section 5.0, Environmental Analysis**, which includes an analysis of why the APM was selected and how it would reduce and/or minimize potential impacts. In addition, PG&E has included Habitat Conservation Plan (HCP) Field Protocols (FPs) as well as construction Best Management Practices (BMPs) for the following resource areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Hazardous Materials
- Paleontological Resources

1.5 SUMMARY OF ALTERNATIVES

As outlined in **Section 4.0, Description of Alternatives**, this Proponent's Environmental Assessment (PEA) considered alternatives that would achieve the Functional Specifications published by CAISO. These included the following alternative categories and specific alternatives:

- Terminal Site Alternatives
 - Two Albrae terminal site alternatives (refer to **Section 4.1.1**, *Albrae Terminal Alternative Sites* and **Figure 4-1**, *Albrae Terminal Alternative Sites Map*)
 - Three Baylands terminal site alternatives (refer to **Section 4.1.2**, *Baylands Terminal Alternative Sites* and **Figure 4-2**, *Baylands Terminal Alternative Sites Map*)
- Transmission Line Route Alternatives
 - Two Albrae to Baylands 320 kV DC transmission line route alternatives (refer to **Section 4.1.3**, *Albrae to Baylands 320 kV DC Transmission Line Route Alternatives* and **Figure 4-3**, *Albrae to Baylands 320 kV DC Transmission Line Alternatives Map*)
 - One Newark to Albrae 230 kV AC transmission line alternative (refer to **Section 4.1.4**, *Newark to Albrae 230 kV AC Transmission line Route Alternatives* and **Figure 4-4**, *Neawrk to Albrae 230 kV AC Transmission Line Alternatives Map*)
 - Two Baylands to NRS 230 kV AC transmission line route alternatives (refer to **Section 4.1.5**, *Baylands to NRS 230 kV AC Transmission Line Route Alternatives* and **Figure 4-5**, *Baylands to NRS 230 kV AC Transmission Line Alternatives Map*)
- Technology Alternative
 - One technology alternative (refer to **Section 4.1.6**, *Technology Alternatives and Figure 4-6*, *320 kV Transmission Line Routing Study Area*)

Section 6.0, Comparison of Alternatives of the PEA includes a comparison of the alternatives in terms of environmental performance, including a relative ranking for each alternative's environmental impacts in comparison to the Proposed Project. The Proposed Project and all considered alternatives are anticipated to have no significant impacts. Key criteria for selection of the Proposed Project include feasibility, environmental impacts, and costs. **Section 6.0** includes the rationale for Proposed Project selection where alternatives were identified to result in less and/or lesser impacts to the environment.

1.6 PRE-FILING CONSULTATION AND PUBLIC OUTREACH SUMMARY

As discussed previously in **Section 1.3, Areas of Controversy**, agencies consulted include the CPUC, CAISO, PG&E, SVP, City of Santa Clara, City of Milpitas, City of Fremont, City of San José, SCVWD, County of Santa Clara, County of Alameda, California State Lands Commission, ACFCD, Native American Heritage Commission, Santa Clara Valley Habitat Agency, USFWS, CDFW, Caltrans, BCDC, State of California Assembly, and United States Congress. In addition, LS Power and the CPUC held a Pre-filing Consultation meeting on March 28, 2023, to discuss the Proposed Project. The agenda for the meeting included: an introduction to the Proposed Project, location review, purpose and need overview, and schedule. During the meeting, LS Power shared a summary of the Proposed Project description and preliminary mapping. The Proposed Project's need to be in-service by June 2028 was also discussed.

1.7 CONCLUSIONS

The PEA analyzes the potential environmental impacts associated with the construction, operation, and maintenance of the Proposed Project. Through preparation of the PEA, it was

determined that each of the 20 resource areas covered in the PEA do not have the potential to be significantly impacted by the Proposed Project. The Proposed Project would result in no impacts or negligible impacts to agriculture and forestry, mineral resources, population and housing, and wildfire. Any impacts that would occur have been determined to be less than significant for the remaining 16 resource areas. The section below summarizes conclusions and APMs for the following resource areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology, Soils, and Paleontological Resources
- Greenhouse Gas Emissions
- Hazards, Hazardous Materials, and Public Safety
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Implementation of APMs (refer to **Table 3-12**) would ensure that impacts remain less than significant. These impacts are discussed below by resource area.

1.7.1 AESTHETICS

As discussed in **Section 5.1, Aesthetics**, the Proposed Project would result in less-than-significant impacts on scenic vistas as temporary construction would result in a view of construction equipment. The Proposed Project would not result in an impact to damaging scenic resources within a state scenic highway. The Proposed Project would implement **APM AES-1** to maintain an orderly site and return temporary staging and work sites to their pre-project conditions resulting in less-than-significant impacts conflicting with applicable zoning and other regulations regarding

scenic quality. **APM AES-1** would be implemented to ensure new sources of substantial light or glare would be avoided, and security lighting at the proposed terminal sites would be directed away from residential areas and prevent light spillover. With the implementation of **APM AES-1**, the Proposed Project would result in less-than-significant impacts to light and glare.

1.7.2 Agriculture and Forestry Resources

As discussed in **Section 5.2, Agriculture and Forestry Resources**, the Proposed Project would result in no impacts to converting farmland to non-agricultural use or conflicting with a Williamson Act contract. No areas of existing farmland or forest land are located within the Proposed Project area. Additionally, the Proposed Project does not consist of any forest land and, thus, would not result in conflict with forest land zoning or the loss or conversion of forest land. The Proposed Project would not result in impacts involving other changes that could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No APMs are included.

1.7.3 AIR QUALITY

The Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. As discussed in **Section 5.3, Air Quality**, the Proposed Project would not exceed thresholds established by the Bay Area Air Quality Management District (BAAQMD). **APM AQ-1** has been included to ensure that at least 75 percent of equipment horsepower hours related to off-road construction equipment include Tier 4 interim or Tier 4 final emissions controls. **APM AQ-2** has been included to ensure dust control BMPs are implemented during construction activities. There would be less-than-significant impacts related to a cumulatively considerable net increase of any criteria pollutant. The Proposed Project would not exceed any of the BAAQMD thresholds, which would ensure compliance with the Cities of Santa Clara, Fremont, Milpitas, and San José's California Environmental Quality Act (CEQA) requirements and would not result in a cumulatively considerable impact. The Proposed Project would result in less-than-significant impacts regarding exposing sensitive receptors to substantial pollutant concentrations and would not result in significant impacts related to odors. The Proposed Project would not exceed any of the BAAQMD thresholds of significance at the nearest sensitive receptors, and temporary construction odors may occur but would be short-term. Operation of the Proposed Project is not anticipated to result in emissions that would cause odors. Additionally, PG&E **BMPs AQ-1** through **AQ-4** would be implemented to ensure impacts remain less than significant. SVP would implement Proposed Project **APM AQ-1**, which requires at least 75 percent of equipment to include Tier 4 interim or Tier 4 final controls.

1.7.4 BIOLOGICAL RESOURCES

The Proposed Project would result in less-than-significant impacts to biological resources. The Proposed Project would not result in 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 CDFW or USFWS. Additionally, the Proposed Project would result in less-than-significant impacts to any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS. **APMs BIO-1** through **BIO-19** have been included to ensure that impacts would remain less than significant. The Proposed Project would not result in a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA) (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling,

hydrological interruption, or other means as well as interfering with the movement of any native resident or migratory fish or wildlife species. The following permits may be required: Section 1602 Lake or Streambed Alteration Agreement from CDFW; CWA Section 401 Water Quality Certification from the Regional Water Quality Control Board; and CWA Section 404 Permit from the United States Army Corps of Engineers (USACE) (Nationwide or individual, depending on the impact acreage). Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, would not occur. The Proposed Project would not conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP. Additionally, PG&E construction BMPs and FPs would be implemented from PG&E's Bay Area Operations and Maintenance Habitat Conservation Plan ("Bay Area O&M HCP") to ensure impacts would remain less than significant. Specifically, **FP-1** through **FP-18** and **BMPs BIO-1** and **BIO-2** were included for PG&E's scope of work related to the Proposed Project.

1.7.5 CULTURAL RESOURCES

The Proposed Project would not result in a significant adverse change in the significance of a historical resource pursuant to §15064.5. The Proposed Project would include APMs **CUL-1** through **CUL-4** to ensure that impacts to historic resources would remain less than significant. The Proposed Project would avoid the four identified resources in the Proposed Project area. In addition, the Proposed Project has the potential to encounter unidentified historical resources, archaeological resources, and/or human remains during ground disturbing activities. The Proposed Project would result in less-than-significant impacts by potentially causing a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 and disturbing human remains. **APMs CUL-1** through **CUL-4** would ensure that impacts would remain less than significant. If human remains were encountered, the Proposed Project would implement **APM CUL-5** to ensure impacts would remain less than significant. Additionally, PG&E **BMPs CULT-1** through **CULT-3** would be implemented to ensure impacts remain less than significant for the PG&E scope of work.

1.7.6 ENERGY

The Proposed Project would not conflict with state or local plans for renewable energy and it would not add capacity for the purpose of serving a non-renewable energy source. As discussed in **Section 5.6, Energy**, construction and operation of the Proposed Project would utilize a relatively small amount of energy and fossil fuels, while increasing the electrical system efficiency for future uses of renewable energy within the region. Therefore, with respect to adverse environmental impacts resulting from wasteful, inefficient, or unnecessary consumption of energy resources, the Proposed Project was found to have a less-than-significant impact. No APMs are included.

1.7.7 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

There were determined to be less-than-significant impacts related to the 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, strong seismic ground shaking, seismic-related ground failure including liquefaction, and landslides. As discussed in **Section 5.7, Geology, Soils, and Paleontological Resources**, the Proposed Project is located in an area with some seismic activity; however, due to the short construction time and the fact that the proposed facilities would be operated in an unmanned

nature, there would be little risk of injury caused by seismic activity. Geotechnical studies would be considered as part of final design relative to the local soil and rock conditions as discussed in **APM GEO-1**. The Proposed Project would not include the use of septic tanks or alternative wastewater disposal and would result in no impacts in this regard. The Proposed Project would result in less-than-significant impacts related to liquefaction and landslide potential. No impacts would occur relating to the compatibility of soils for supporting septic tanks as a result of the Proposed Project.

Potential for paleontological resources exist at depths greater than seven feet. The existing regulations and plans, as well as **APMs PALEO-1** and **PALEO-2**, would ensure impacts to any paleontological resources within the Proposed Project area would be less than significant. PG&E would implement **BMP PALEO-1** in the case that unanticipated paleontological resources are discovered during construction activities, and impacts would be less than significant. The Proposed Project's impact to geology, soils, and paleontological resources would be less than significant.

1.7.8 GREENHOUSE GAS EMISSIONS

The Proposed Project would result in less-than-significant impacts to generating greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment. Construction and operation of the Proposed Project would not exceed BAAQMD thresholds for metric tons of CO₂e. The Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Since the Proposed Project would not exceed BAAQMD screening thresholds, the Proposed Project would not conflict with the Cities of Fremont, San José, Milpitas, or Santa Clara's plans to reduce the emissions of GHGs. No APMs are included for GHG.

1.7.9 HAZARDS, HAZARDOUS MATERIALS, AND PUBLIC SAFETY

There were determined to be less-than-significant impacts to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The Proposed Project would result in less-than-significant impacts to emitting hazardous emissions, or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The Proposed Project would result in less-than-significant impacts regarding being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to air traffic. There were determined to be less-than-significant impacts regarding interfering with an adopted emergency plan, exposing people or structures to wildfires. The Proposed Project would implement **APMs HAZ-1** through **HAZ-5** to ensure impacts remain less than significant. No impacts related to creating a significant hazard to the public or environment or exposing people to a significant risk of injury or death would occur during transport of heavy materials by helicopter or through excessive shock. No impacts relating to unexploded ordinance are anticipated. As discussed in **Section 5.9, Hazards, Hazardous Materials, and Public Safety**, the Proposed Project would not result in any significant impacts to this resource area. Additionally, PG&E would implement **BMPs HAZ-1** through **HAZ-11** to ensure impacts remain less than significant.

1.7.10 HYDROLOGY AND WATER QUALITY

There were determined to be less-than-significant impacts to violating water quality standards or water discharge requirements and degrading surface or groundwater quality and supplies. The Proposed Project would result in less-than-significant impacts relating to alteration of 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 surface. The Proposed Project would result in less-than-significant impacts to releasing of pollutants due to project inundation in flood hazard, tsunami, or seiche zones and would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The Proposed Project would cross Levee Systems potentially subject to Section 408 approval from USACE as well as water crossings potentially requiring approval from the San Francisco BCDC. The Proposed Project would obtain necessary approvals, and impacts would be less than significant. **APM WQ-1** would be implemented to further ensure that Proposed Project-level impacts relating to dewatering and groundwater discharge would remain less than significant. PG&E would implement construction **BMPs HAZ-2, HAZ-7, and HAZ-9** through **HAZ-11** to ensure stormwater BMP installation occurs and construction dewatering is in compliance with applicable laws and regulations.

1.7.11 LAND USE AND PLANNING

There were determined to be no impacts related to physically dividing an established community and less-than-significant impacts related to causing 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. While the Proposed Project is not subject to local discretionary approvals, local ministerial permits would be obtained prior to construction. No APMs are included.

1.7.12 MINERAL RESOURCES

There were determined to be no impacts resulting from the loss of availability of a known mineral resource that would be of value to the region or that could be of value locally. The Proposed Project does include areas mapped as Mineral Resource Zone (MRZ)-3. However, there are no existing mineral extraction operations in these areas, and the highly developed nature of the Proposed Project area makes the potential for future mineral extraction very low, regardless of the inclusion of the Proposed Project. No impacts would occur, and no APMs are included.

1.7.13 NOISE

There were determined to be less-than-significant impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Proposed Project. The Proposed Project would result in less-than-significant impacts to the generation of excessive ground-borne vibration or ground-borne noise levels. Additionally, since the Proposed Project is located within the vicinity of a private airstrip or an airport land use plan, there were determined to be less-than-significant impacts related to exposing people residing or working in the Proposed Project area to excessive noise levels. No APMs are included.

1.7.14 POPULATION AND HOUSING

There were determined to be no impacts to inducing substantial unplanned population growth in the Proposed Project area, either directly or indirectly. The Proposed Project would be remotely

operated with no permanent workforce on-site and only require a small number of positions for O&M; therefore, no population growth would be directly induced by operation of the Proposed Project. Additionally, the Proposed Project would result in no impact to displacing substantial numbers of existing people or housing, necessitating the construction of replacement housing. No APMs are included.

1.7.15 PUBLIC SERVICES

There were determined to be less-than-significant impacts related to schools, parks, and other facilities as a result of the Proposed Project. As discussed in **Section 5.15, Public Services**, the Proposed Project would not permanently affect service ratios, response times, or other objectives for fire and police protection services in the area. During operation, the Proposed Project would not require regular oversight, service, or management; the facilities would operate in an unmanned nature, minimizing the amount of public services that would be required during operation. The Proposed Project's public services impacts would be less than significant. Emergency service providers would be notified of the timing, location, and duration of construction activities in the event that temporary lane closures are required during construction. No APMs are included.

1.7.16 RECREATION

There were determined to be less-than-significant impacts related to regional parks and recreation resources. As discussed in **Section 5.16, Recreation**, the Proposed Project is located within the vicinity of numerous parks and trails. The Proposed Project would not be expected to increase the use of any parks or trails in the area or damage any of the facilities. Through implementation of **APM REC-1**, coordination would occur with the City of Fremont, City of San José, City of Santa Clara, Metropolitan Transportation Commission, USFWS, and the National Park Service for the preparation of the Proposed Project's trail management plan. With implementation of **APM REC-1**, impacts would remain less than significant.

1.7.17 TRANSPORTATION

Proposed Project-generated traffic disruptions would be temporary, periodic, and managed with a traffic control plan(s), and existing roadways would not be permanently degraded. Construction of the Proposed Project would minimize temporary full closure of any roads and access routes for emergency vehicles within and near the Proposed Project site would be maintained. **APM TRA-1** would ensure a traffic control plan would be prepared. The Proposed Project would not limit access or increase usage of public transit and includes **APM TRA-2** to ensure LS Power coordinates any bus stop closures with the Santa Clara VTA and/or Alameda-Contra Costa Transit District as appropriate. As shown in **Section 5.17, Transportation**, construction traffic associated with the Proposed Project would have a less-than-significant impact on regional vehicle miles traveled. Construction and O&M of the Proposed Project would not conflict with the City of Milpitas Trail, Pedestrian, and Bicycle Master Plan, City of Santa Clara Bicycle Plan, City of Fremont Bicycle Master Plan, or the City of San José Better Bike Plan. **APM TRA-3** would ensure that any damage caused by construction activities would be repaired to preconstruction conditions. Thus, compliance with local permits and implementation of **APMs TRA-1 through TRA-3** would further ensure that Proposed Project-level impacts would be less than significant.

1.7.18 TRIBAL CULTURAL RESOURCES

There were determined to be less-than-significant impacts related to causing a substantial adverse change in the significance of a Tribal cultural resource (TCR), defined by Public Resources Code (PRC) Section 21074 as either a site, feature, or place, landscape, or object with a cultural value to a California Native American Tribe. Less-than-significant impacts were identified for TCRs 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 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. Although there are no resources identified by PRC Section 5024.1, the Sacred Lands File search and Tribal outreach indicates that lands sacred to the Ohlone Indian Tribe and the North Valley Yokuts Tribe are present within the Proposed Project search area. **APM TCR-1** requires the development and implementation of a Worker Environmental Awareness Program; **APM TCR-2** requires Native American monitoring; and **APM CUL-3** has been included which specifies procedures to occur if a previously unidentified cultural resource is uncovered during implementation of the Proposed Project. **APM CUL-4** would require a cultural survey prior to utilization of the temporary construction staging areas and any other areas not surveyed, which would reduce impacts to less than significant if the Proposed Project work areas are expanded or adjusted by ensuring that any newly identified cultural resources are avoided by ground-disturbing activities. Unrecorded human remains may be present within the Proposed Project area; if encountered, implementation of **APM CUL-5**, providing avoidance and protection of the remains by ensuring that appropriate personnel are present and appropriate procedures are followed, would ensure that impacts to human remains are reduced to less than significant. Therefore, with implementation of **APMs CUL-1** through **CUL-5**, impacts would be less than significant. PG&E would implement **BMPs CULT-1** through **CULT-3**, addressing worker training, unanticipated discovery, and human remains to ensure potential impacts to TCRs would be less than significant.

1.7.19 UTILITIES AND SERVICE SYSTEMS

There were determined to be less-than-significant impacts related to the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. **APM UTIL-1** has been included to ensure coordination occurs with all utility companies with utilities located within or crossing the Proposed Project ROW. The Proposed Project would result in less-than-significant impacts related to having sufficient water supplies. There would be no impacts related to wastewater treatment capacity and complying with solid waste regulations. The Proposed Project would result in less-than-significant impacts regarding generating solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure. Less-than-significant impacts would occur regarding increasing the rate of corrosion of adjacent utility lines. Therefore, with implementation of **APMs UTIL-1** and **HAZ-5**, impacts would be less than significant.

1.7.20 WILDFIRE

The Proposed Project would result in no impacts related to impairing an adopted emergency response or evacuation plan, exposing Proposed Project area occupants to pollutant concentrations from a wildfire, or installing infrastructure that may exacerbate fire risk. As discussed in **Section 5.20, Wildfire**, the Proposed Project is not located within a State Responsibility Area (SRA) or lands classified as Very High Fire Hazard Severity Zone (VHFHSZ). The nearest SRA is approximately 1.6 miles east of the proposed Albrae to Baylands 320 kV DC

transmission line corridor, 5.6 miles east of the proposed Albrae terminal, and 4.6 miles east of the proposed Baylands terminal (see **Figure 5.20-1**, *SRA Fire Hazard Severity Zones – 2024 Adopted Map*). Additionally, the Proposed Project would not 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. Impacts would be less than significant, and no APMs are included.

1.8 REMAINING ISSUES

The Proposed Project would result in less-than-significant impacts with the implementation of APMs and BMPs as discussed herein. There are no significant areas of public controversy or concern. Proposed Project design is ongoing, including surveys for existing underground utilities along the proposed transmission line routes. A Final Induction Study and Utility Coordination (**APM HAZ-5**) would be prepared once existing utility surveys and sufficient transmission design are complete.

2.0 INTRODUCTION

LS Power Grid California, LLC (“LS Power”), a wholly owned subsidiary of LS Power Associates, L.P., established to own and operate transmission projects in the State of California, is proposing the Power the South Bay Project (“Proposed Project”). As required by the California Public Utilities Commission’s (CPUC) Guidelines for Energy Project Applications Requiring California Environmental Quality Act (CEQA) Compliance Pre-filing and Proponent’s Environmental Assessments (PEAs) and the CEQA Guidelines (14 Cal. Code of Regs. Section 15000 et seq.), this section defines the objectives, purpose, and need for the Proposed Project. Additional information regarding LS Power’s Proposed Project’s purpose and need is provided in LS Power’s Certificate of Public Convenience and Necessity (CPCN) application to the CPUC in accordance with CPUC General Order (GO) 131-D.

2.1 PROJECT BACKGROUND

The Proposed Project was identified by the California Independent System Operator (CAISO) in its 2021-2022 Transmission Plan as the “Newark to Northern Receiving Station (NRS) HVDC Project”; as a “reliability driven” project that would address multiple near-term and long-term overloads on the San José area 115 kilovolt (kV) transmission system and would provide system reliability benefits for the Greater Bay Area.

2.1.1 PURPOSE AND NEED

The Proposed Project’s purpose is to strengthen the electrical grid in the Greater Bay Area in the County of Santa Clara, California. The Proposed Project would:

- Ensure the reliability of the South Bay sub-area of the Greater Bay Area of the CAISO-controlled grid;
- Provide better access to cost-effective, renewable energy and other electric transmission grid benefits;
- Support the provision of safe, reliable, and adequate electricity service to the Pacific Gas and Electric Company (PG&E) and Silicon Valley Power (SVP) service territories;
- Provide voltage support to the existing PG&E and SVP transmission systems to support additional load growth; and
- Facilitate the importation and use of renewable electricity to fulfill the State of California’s energy policies and goals by ensuring reliable operation of the grid.

These would be accomplished through the construction of two high-voltage direct current (HVDC) terminals and a new 320 kV direct current (DC) transmission line connecting the two terminals. The northern terminal site is the proposed Albrae terminal, which is located north of Weber Road and west of Boyce Road in the City of Fremont, approximately 0.2 mile northeast of the existing PG&E Newark substation, adjacent to PG&E-owned land. The southern terminal site is the proposed Baylands terminal, which is located south of Los Esteros Road, west of Zanker Road, and east of Disk Drive in the City of San José, approximately 1.8 miles northeast of the existing SVP NRS substation. In addition to the proposed HVDC terminals, the following primary components are proposed:

- One approximately 8.6-mile 320 kV DC transmission line, both overhead and underground, connecting the Albrae terminal and the Baylands terminal;
- One approximately 0.4-mile 230 kV alternating current (AC) transmission line, both overhead and underground, connecting the Albrae terminal to the existing PG&E Newark substation;
- One approximately 3.5-mile 230 kV AC transmission line, both overhead and underground, connecting the Baylands terminal to the existing SVP NRS substation;
- Modifications to the existing PG&E Newark substation; and
- Modifications to the existing SVP NRS substation.

While PG&E and SVP substation modifications are part of the overall scope of the Proposed Project being reviewed and evaluated by the CPUC under CEQA in this proceeding, PG&E and SVP would likely utilize the adopted CEQA document to separately comply with the CPUC's permitting requirements under G.O. 131-D (see, e.g., CAISO 2022; Gates 500 kV Dynamic Reactive Support Project (A.21-02-018), Final Initial Study/Mitigated Negative Declaration [8/4/2022] §2.4 ¶2).

California Independent System Operator Overview

CAISO is responsible for planning and managing the high-voltage transmission network (transmission grid) for approximately 80 percent of the State of California, including the service territories of PG&E and SVP, where the Proposed Project is located. CAISO undertakes an annual Transmission Planning Process (TPP) to identify reliability, public policy, and economic transmission solutions over a 10-year planning horizon. CAISO considers additional transmission facilities and/or changes in operation that would solve the problems, allowing the transmission grid to meet reliability objectives and criteria. In addition, CAISO evaluates the transmission grid's ability to help meet certain State of California government policy objectives, including the Renewables Portfolio Standard (RPS). Finally, CAISO transmission planners and economists also examine whether transmission upgrades could save ratepayers money by reducing electric grid transmission congestion and allowing the use of lower-cost generation (CAISO, 2022).

CAISO Transmission Planning

Each year, CAISO provides a comprehensive evaluation of its transmission grid to identify upgrades needed to successfully meet the State of California's policy goals, in addition to examining conventional grid reliability requirements and projects that can bring economic benefits to consumers. This transmission plan is updated annually and is prepared in the larger context of supporting the implementation of energy and environmental policies, while maintaining reliability through a resilient electric system (CAISO, 2023a).

In its 2021-2022 planning cycle, CAISO evaluated upgrades needed to successfully meet the State of California's policy goals, in addition to examining conventional grid reliability requirements and projects that can bring economic benefits to consumers. CAISO's analysis, conducted through an open and stakeholder-inclusive planning process, led to the identification of the need for the Proposed Project as part of a comprehensive solution (relying in part on other upgrades already identified to meet reliability needs notwithstanding State policy objectives) to mitigate current and forecasted overloads in the San José area (CAISO, 2022).

The San José/SVP area is primarily served from the Newark 230/115 kV substation in the north and the Metcalf 500/230/115 kV substation in the south. Transmission planning studies prepared by CAISO included large load increases in the San José and SVP areas, including a significant load increase of approximately 500 megawatts (MW) in the SVP area. As a result, CAISO identified several reliability concerns, including multiple near-term and long-term overloads in the San José area 115 kV transmission system. Due to the electrical proximity of the bulk of the area load to the existing Newark substation, specifically the SVP area load where most of the load increase is, the bulk of the power flows from the Newark side. Given this imbalance between two sources in the AC connected network, the Proposed Project would result in better performance from a power flow perspective as a result of the controllability of the HVDC source. Additionally, the Proposed Project would provide benefits in reducing local capacity requirements in the San José sub-area and overall Greater Bay Area that reduces reliance on local gas-fired generation. As such, CAISO identified the need for a Voltage-Sourced Converter (VSC) HVDC link in the Greater Bay Area located near the existing PG&E Newark substation and the existing SVP NRS substation. The Proposed Project meets CAISO's originally approved technical specification for the identified need (CAISO, 2022).

CAISO Competitive Bid Process

Following approval of the 2021-2022 Transmission Plan, in accordance with the Federal Energy Regulatory Commission's Order No. 1000 and the CAISO open-access transmission tariff, CAISO opened a competitive bid solicitation window in April 2022, which provided project sponsors the opportunity to submit proposals to finance, construct, own, operate, and maintain the Newark to NRS HVDC Project (i.e., the Proposed Project). CAISO specified a latest in-service date of June 1, 2028.

In March 2023, LS Power was selected by CAISO as the approved project sponsor for the Proposed Project. CAISO selected LS Power's proposal from a total of six validated proposals, all of which contained some form of cost containment to protect consumers from cost overruns. CAISO's selection report stated that LS Power's proposal provides "significantly greater cost certainty and lower projected overall costs than the cost containment proposals of the other project sponsors" (CAISO, 2023b).

2.1.2 PROJECT OBJECTIVES

The Proposed Project was selected because it best meets all of the objectives identified by CAISO in the 2021-2022 Transmission Plan and minimizes potential adverse environmental impacts. These objectives are as follows:

- Meet the CAISO's reliability-driven need by addressing multiple near-, mid-, and long-term reliability issues in the existing San José area 115 kV system.
- Meet the technical specifications set forth by CAISO for a VSC-HVDC link in the Greater Bay Area located near or adjacent to the existing PG&E Newark substation and SVP NRS substation. Adjacency to the existing PG&E Newark and SVP NRS substations would reduce the length of the interconnection (230 kV) transmission lines, thereby reducing the right-of-way requirements and potential for significant environmental impacts.
- Improve and maintain the reliability of the transmission grid by providing dynamic reactive power support and increase deliverability of renewable power, by building and operating a facility that would help keep transmission voltages within specified parameters, reduce

transmission losses, increase reactive margin for the system bus, increase transmission capacity, provide a higher transient stability limit, increase damping of minor disturbances, and provide greater voltage control and stability.

- Facilitate deliverability of energy from existing and proposed renewable generation projects to the Greater Bay Area and corresponding progress toward achieving California's RPS goals in a timely and cost-effective manner by California utilities.
- Comply with and assist CAISO in meeting applicable Reliability Standards and Criteria developed by North American Electric Reliability Corporation, Western Electricity Coordinating Council, and CAISO.
- Design and construct the Proposed Project in conformance with LS Power's standards, the National Electric Safety Code, and other applicable national and State codes and regulations.

2.1.3 PROJECT APPLICANT

The Proposed Project is proposed by LS Power Grid California, LLC, a Delaware limited liability company established to own and operate transmission projects in California as a designated California Public Utility. LS Power Grid California, LLC is an indirect subsidiary of LS Power Associates, L.P. which, together with its subsidiaries and affiliates, is generally known as LS Power. Since it was founded in 1990, LS Power has developed or acquired more than 47,000 MW of competitive power generation and built over 780 miles of high-voltage transmission lines. Although PG&E and SVP are not applicants in LS Power's application for a CPCN, their scopes of work are needed to interconnect the Proposed Project to PG&E and SVP's electrical grids. PG&E and SVP's substation modifications would be included in the CPUC's CEQA analysis; however, PG&E and SVP would likely utilize the adopted CEQA document to separately comply with the CPUC's permitting requirements under GO 131-D.

The Proposed Project is LS Power's seventh competitive transmission selection by CAISO. The first was the 2016 selection of LS Power affiliate DesertLink, LLC for the Harry Allen to Eldorado 500 kV Transmission Project, a 60-mile transmission line that was placed in service in August 2020. In January 2020, CAISO selected LS Power in a competitive solicitation for the Gates 500 kV Dynamic Reactive Support Project in the County of Fresno. In February 2020, CAISO selected LS Power in a competitive solicitation for the Round Mountain 500 kV Area Dynamic Reactive Support Project in the County of Shasta. In January 2023, CAISO selected LS Power in a competitive solicitation for the Manning 500/230 kV Substation Project in the County of Fresno and the Collinsville 500/230 kV Substation Project in the East Bay area. Finally, in March 2023, CAISO selected LS Power in a competitive solicitation for the Metcalf to San Jose B HVDC Project to be constructed in the County of Santa Clara.

The Proposed Project would be remotely operated with no permanent workforce on-site during normal operations. The Proposed Project would be operated by LS Power's control center, which is staffed 24 hours per day, seven days per week, in Austin, Texas. Maintenance activities would be provided by LS Power's local maintenance/technical staff, utilizing existing internal LS Power staff and external resources for maintenance and emergency response. The Proposed Project would be incorporated into LS Power's existing operations, maintenance, and compliance programs using experienced staff and trusted contractors to provide operational and cost efficiencies with reduced risks. The Proposed Project would also be monitored by CAISO's control

center in Folsom, California, and CAISO would have operational control of the HVDC terminals with authority to direct LS Power’s control center.

2.2 PRE-FILING CONSULTATION AND PUBLIC OUTREACH

2.2.1 PROPOSED PROJECT PRE-FILING CONSULTATION AND PUBLIC OUTREACH

LS Power met with several regulatory agencies in the early planning stages of the Proposed Project to solicit input on Proposed Project design and potential resource and land use issues in the vicinity of the Proposed Project. **Table 2-1, *Pre-filing Consultations*** summarizes the meetings and public outreach that took place during the development of this PEA. Coordination with these agencies would continue through the Proposed Project’s planning process with ministerial and discretionary permits applied for where necessary.

Table 2-1: Pre-filing Consultations			
Agency	Meeting Dates	Attendees	Summary of Discussions
CPUC	March 28, 2023; August 7, 2023; November 2, 2023; January 17, 2024 Ongoing bi-weekly meetings starting in January 2024.	LS Power staff, and CPUC Staff and third-party consultant	Pre-filing coordination, introduction to the Proposed Project, permitting requirements, and schedule. Site visit to review Proposed Project.
CAISO	Approved Project Sponsor Agreement (APSA) Negotiations: May through August 2023. Quarterly Status Reports in July 2023, October 2023, December 2023, and March 2024. Project kickoff meeting with City of San José on April 7, 2023. February 6, 2024; March 5, 2024 April 15, 2024	LS Power staff, CAISO staff	APSA negotiations; Quarterly status reports; Participated in project kickoff meeting with the City of San José and LS Power staff regarding proposed routing and siting and preliminary engineering; Future expansion and ultimate HVDC development plan.
PG&E	Kickoff meeting on April 6, 2023. Ongoing bi-weekly meetings starting in July 2023. Various other coordination meetings.	LS Power staff, PG&E staff	Bi-weekly meetings to discuss interconnection to the existing PG&E Newark substation and GO 131-D coordination.
SVP, City of Santa Clara	March 15, 2023; Ongoing monthly meetings starting in March 2023. Various	LS Power staff, SVP staff, City of Santa Clara staff, AECOM staff	Monthly meetings to discuss interconnection to the existing SVP NRS substation, engineering updates, and data exchange; Coordination for siting the

Table 2-1: Pre-filing Consultations			
Agency	Meeting Dates	Attendees	Summary of Discussions
	other coordination meetings.		proposed Albrae to Baylands 320 kV DC and Baylands to NRS 230 kV transmission line routes and the proposed Baylands terminal, interconnection agreements, easement, licenses, and GO 131-D coordination.
City of Milpitas	March 22, 2023; September 19, 2023; April 30, 2024	LS Power staff, City of Milpitas staff	Proposed Project introduction and summary and high-level overview of Proposed Project route within the City of Milpitas.
City of Santa Clara	April 24, 2023; June 8, 2023; June 12, 2023; July 25, 2023; February 29, 2024	LS Power staff, City of Santa Clara staff, SVP staff, AECOM staff	Proposed Project overview, discussion of interconnection of the existing SVP NRS substation, location of Baylands terminal, boring permitting requirements, local area developments, utility coordination, facility layouts, permit requirements, schedule, cumulative projects in the City of Santa Clara, and coordination of traffic control plans on Lafayette Street.
City of Fremont	April 20, 2023; May 3, 2023; June 7, 2023; June 20, 2023; July 7, 2023; August 7, 2023; September 6, 2023; November 8, 2023; December 13, 2023; January 8, 2024; February 13, 2024; February 14, 2024; March 18, 2024; April 10, 2024	LS Power staff, City of Fremont staff	Proposed Project overview, monthly meetings to discuss overhead and underground transmission line routes, evaluation of transmission line route alternatives, transmission undergrounding requirements in the City of Fremont, addition of a two-inch fiber conduit in the City, access to Cushing Parkway bridge, stakeholder outreach, Albrae terminal site location, permit requirements, and utility easement.
City of San José	April 7, 2023; April 25, 2023; May 3, 2023; May 9, 2023; May 12, 2023; June 14, 2023; July 12, 2023; July 21, 2023; August 9, 2023; October 18, 2023; December 5, 2023; January 9, 2024; February 8, 2024; March 15, 2024; April 18, 2024;	LS Power staff, City of San José staff	Coordination regarding transmission line routes, vault locations, City of San José infrastructure plans, proposed Baylands terminal location, monthly meetings to discuss siting within the San José-Santa Clara Regional Wastewater Facility (RWF), alternative terminal siting, sensitive habitat in Proposed Project area, PG&E and SVP interconnection, utility coordination, ground leasing, construction access coordination, stakeholder engagement,

Table 2-1: Pre-filing Consultations			
Agency	Meeting Dates	Attendees	Summary of Discussions
	Various other coordination meetings		landowner outreach, staging area locations, cumulative projects, geotechnical permitting requirements, and public outreach.
Santa Clara Valley Water District (SCVWD or "Valley Water")	May 9, 2023; May 30, 2023; June 26, 2023; July 28, 2023; August 24, 2023; September 22, 2023; October 18, 2023; November 16, 2023; December 6, 2023; January 9, 2024; February 13, 2024; April 10, 2024	LS Power staff, SCVWD staff	Proposed Project overview, discussion of proposed HVDC terminal location and siting alternatives, location of the proposed Albrae to Baylands 320 kV DC transmission line, Coyote Creek flood channel concerns, Guadalupe River crossing discussions, wetlands delineation survey, sensitive habitat in Proposed Project area, permitting/licensing/easement requirements, road crossings, environmental and mitigation requirements, routing for salt marsh harvest mouse, and responsible agency review of the PEA.
County of Santa Clara	May 12, 2023; July 6, 2023	LS Power staff, County of Santa Clara staff, BMWL Public Affairs staff	Proposed Project overview, stakeholder and public outreach, and proposed transmission line siting and routing.
County of Alameda	June 9, 2023	LS Power staff, County of Alameda staff	Proposed Project overview, construction scheduling, and stakeholder outreach.
City of San José, City of Santa Clara	September 12, 2023; September 21, 2023	LS Power staff, City of San José staff, City of Santa Clara staff	Siting of proposed Baylands terminal site and on-site discussion of site alternatives within RWF.
RWF	September 21, 2023; Various other Coordination Meetings	RWF Staff	Siting of proposed Baylands terminal site and on-site discussion of site alternatives within RWF. Coordination meetings regarding siting of Baylands terminal, siting of the Albrae to Baylands 320 kV transmission line, and other potential laydown areas for construction.
California State Lands Commission (CSLC)	January 3, 2024	LS Power staff, CSLC staff	Proposed Project overview, discussion of CSLC lease required for potential Proposed Project route crossing in State lands, and natural waterways and wetlands.
Alameda County Flood Control District (ACFCD)	January 3, 2024	LS Power staff, ACFCD staff	Proposed Project overview, discussion of routing and siting of proposed Albrae to Baylands 320 kV DC transmission line, ACFCD

Table 2-1: Pre-filing Consultations			
Agency	Meeting Dates	Attendees	Summary of Discussions
			jurisdiction over Fremont canals, and ACFCD easements required.
Native American Heritage Commission (NAHC)	A Sacred Lands File (SLF) search request was submitted on May 16, 2023.	No meeting was held as the coordination with SLF was an email search request.	The SLF search was returned by the NAHC with positive results on June 14, 2023, with instructions to contact the North Valley Yokuts Tribe and the Ohlone Indian Tribe. The NAHC also provided a list of Native American contacts who may be able to supply information pertinent to the Proposed Project area. Each of the 19 individuals listed were contacted by email sent on January 10, 2024, with follow-up emails sent on January 24, 2024. To date, one contact has responded to outreach efforts, and their requests were taken in and included in the development of Section 5.18, Tribal Cultural Resources .
Santa Clara Valley Habitat Agency	October 17, 2023	LS Power staff, Santa Clara Valley Habitat Agency staff, City of San José staff	Proposed Project overview, coordination regarding adjacent Burrowing Owl Conservation Easement managed by the Santa Clara Valley Habitat Agency.
Santa Clara Valley Habitat Agency, United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW)	December 7, 2023; April 15, 2024	LS Power staff, Santa Clara Valley Habitat Agency staff, USFWS staff, CDFW staff, City of San José staff	Proposed Project overview, coordination regarding adjacent Burrowing Owl Conservation Easement managed by the Santa Clara Valley Habitat Agency.
California Department of Transportation	February 12, 2024	LS Power staff, California Department of Transportation staff	Proposed Project overview, coordination regarding required discretionary permits.
Bay Conservation and Development Commission (BCDC)	January 8, 2024	LS Power staff, BMWL Public Affairs staff, BCDC staff	Proposed Project overview, coordination regarding construction near Coyote Creek, review of potential jurisdictional conflicts, discretionary permits required, construction methods for stream crossings, and public access.
State of California Senate and Assembly; United States Congressional	August 29, 2023; September 20, 2023; September 28, 2023; November 1, 2023	LS Power staff, California Senators, California Assembly Members, California Congressional staff	Proposed Project summary, public outreach plan, and Proposed Project updates.

Significant Consultation Outcomes

During the consultation and outreach efforts that took place during the development of this PEA and the CPCN application, LS Power reviewed the Proposed Project's route and terminal locations with numerous stakeholders. Significant outcomes from the consultation and outreach efforts that were incorporated into the Proposed Project include:

- Baylands Terminal
 - During the competitive solicitation process, the City of San José provided a location for the proposed Baylands terminal in their guidance memo titled *San José Interests in CAISO Transmission Lines*. Shortly after the Proposed Project was awarded, the City of San José informed LS Power that the site described in their guidance memo had instead been committed for the construction of a new dewatering facility onsite. LS Power has worked closely with the City of San José to identify the new location of the proposed Baylands terminal as described herein.
- Newark to Albrae 230 kV AC Transmission Line
 - Selection of the proposed 0.4-mile underground and overhead Newark to Albrae 230 kV transmission line instead of a 0.2 mile overhead transmission line to align with PG&E's proposed interconnection point.
- Albrae to Baylands 320 kV DC Transmission Line
 - Shifting an approximately 0.75-mile proposed overhead portion of the Albrae to Baylands 320 kV DC transmission line to be underground in the City of Fremont.
 - Inclusion of an additional 2-inch fiber duct within the Proposed Project's duct banks throughout the City of Fremont.
 - Siting of the proposed overhead route of the Albrae to Baylands 320 kV DC transmission line on SCVWD-controlled property to avoid crossing a salt harvest mouse conservation easement managed by SCVWD.
- Baylands to NRS 230 kV AC Transmission Line
 - Selection of the proposed Baylands to NRS 230 kV underground route from the Baylands terminal into Los Esteros Road to Grand Boulevard to Disk Drive instead of the original proposed overhead route through the newly established burrowing owl habitat managed by the Santa Clara Valley Habitat Agency. The selected route includes two additional jack and bores under Union Pacific Railroad tracks.
 - Proposal of Baylands to NRS Alternative 1, a horizontal directional drill (HDD) under the burrowing owl habitat managed by the Santa Clara Valley Habitat Agency.¹ Baylands to NRS Alternative 1 is described in detail in **Section 4.0, Description of Alternatives**, and evaluated in **Section 6.0, Evaluation of Alternatives**.
 - Proposal of Baylands to NRS Alternative 2, an alternative to the California Department of Transportation ("Caltrans") crossing east of Lafayette Street to avoid the siting of a utility longitudinal to Caltrans rights-of-way. Baylands to NRS Alternative 2 is described in detail in **Section 4.0, Description of Alternatives**, and evaluated in **Section 6.0, Evaluation of Alternatives**.

¹ LS Power has begun discussions with the Santa Clara Valley Habitat Agency, United States Fish and Wildlife Service, and California Department of Fish and Wildlife regarding the potential HDD through the burrowing owl habitat.

Development Projects that Could Conflict with Proposed Project

Appendix 7-A, Cumulative Projects Table shows additional development projects within an approximately two-mile radius of the Proposed Project, including project name, associated project description, location, proximity to the Proposed Project, and status of the associated project. None of these projects are currently anticipated to directly conflict with the Proposed Project.

2.2.2 RECORDS OF CONSULTATION AND PUBLIC OUTREACH

A summary of LS Power's consultations is provided in **Table 2-1** above. To date, LS Power has not conducted any open houses or otherwise performed outreach to the public at large. Throughout the approval process, LS Power would keep area residents and property owners, government officials, Native American Tribes, and interested parties informed about the scope of the Proposed Project through printed materials, one-on-one meetings, and presentations to local organizations.

During construction, LS Power would work to minimize disruptions from construction traffic and limit dust and noise. LS Power would continually communicate with government agencies, including the CPUC, County of Alameda, County of Santa Clara, City of Fremont, City of Milpitas, City of San José, City of Santa Clara, local Native American Tribes, and any other applicable government officials, regarding construction plans.

2.3 ENVIRONMENTAL REVIEW PROCESS

2.3.1 PROPOSED PROJECT ENVIRONMENTAL REVIEW PROCESS

Public utilities are required to obtain a permit from the CPUC for construction of certain infrastructure listed under Public Utilities (PU) Code Section 1001. The CPUC's CPCN process includes two components: (1) an environmental review pursuant to the CEQA, and (2) the review of project need and costs pursuant to PU Code Section 1001 et seq.

For timing of the review process of all applicable permits, see **Table 3-10, Anticipated Permits and Approvals**, located in **Section 3.10.1, Anticipated Permits and Approvals**. No local discretionary (e.g., land use) permits are required because the CPUC has preemptive jurisdiction over the siting, construction, and operation and maintenance (O&M) of the Proposed Project. The CPUC's authority does not preempt special districts, such as Air Quality Management Districts (AQMDs), other state agencies, or the Federal government. LS Power would obtain all applicable ministerial permits from local jurisdictions, including the Cities of Fremont, Milpitas, San José, and Santa Clara. LS Power would obtain ministerial permits, approvals, and licenses and would participate in reviews and consultations as needed with federal and state agencies.

2.3.2 CEQA REVIEW

CEQA requires state and local agencies in California to assess and disclose the potential adverse environmental consequences of discretionary actions. The CPUC has exclusive jurisdiction over the siting of electrical infrastructure projects greater than 50 kV and proposed by regulated public utilities. The Proposed Project would include new 230 kV and 320 kV transmission lines. Furthermore, LS Power is a regulated public utility in the State of California and is subject to CPUC siting approval for applicable projects. As further outlined in **Table 3-10**, other agencies

with potential ministerial authority over the Proposed Project include the Cities of Fremont, San José, Milpitas, and Santa Clara. For these reasons, the CPUC is the appropriate CEQA Lead Agency for the Proposed Project.

The CPUC conducts its environmental evaluation in accordance with both CEQA and with its own environmental rules. CEQA provides guidelines to ensure a thorough environmental evaluation. Specifically, it requires the examination of particular environmental issues, such as water and air quality, greenhouse gases, noise, land uses, agricultural, biological, cultural and Tribal resources, mineral resources, public services, utilities, wildfire, recreation, population and housing, hazards and hazardous materials, public safety, paleontological resources, transportation, and aesthetics.

According to Section 15002(g) of the CEQA Guidelines, “a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” The CEQA Guidelines further define three types of environmental effects (or impacts): direct or primary effects that are caused by a project and occur at the same time and place, indirect or secondary effects that are reasonably foreseeable and caused by a project but occur at a different time or place, and cumulative effects. If it is determined that a project would cause a significant direct, indirect, or cumulative impact (or contribute considerably to an existing cumulative impact), CEQA requires that the analysis disclose such impacts and identify feasible mitigation measures for each significant environmental effect identified. This PEA analyzes the potential environmental impacts associated with the construction and O&M of the Proposed Project.

2.3.3 PRE-FILING CEQA COORDINATION

LS Power and the CPUC held Pre-filing Consultation meetings on March 28, 2023, August 7, 2023, November 2, 2023, and January 17, 2024, to discuss the Proposed Project. The agenda for the meetings included: an introduction to the Proposed Project, location review, purpose and need overview, and schedule. During the meetings, LS Power shared a summary of the Proposed Project description and preliminary mapping. The Proposed Project's need to be in service by June 2028 was also discussed. Following the pre-filing consultation meeting, LS Power and CPUC have held additional meetings as summarized in **Table 2-1**.

LS Power submitted a Draft PEA for CPUC review on February 20, 2024, in compliance with the CPUC's pre-filing process as outlined in the CPUC's *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments*, updated November 2019.

In addition, on February 28, 2024, the CPUC and LS Power conducted a site visit of the Proposed Project. The site visit included a walking tour of the proposed Baylands terminal property as well as a driving tour of most of the proposed transmission line routes. The CPUC conducted a preliminary review of the Draft PEA and, following the site visit, provided comments on March 22, 2024, with recommendations to supplement the PEA in order for the CPCN application to be deemed complete in a timely manner. This PEA has been supplemented with additional information to address comments raised during the CPUC's preliminary review.

2.4 DOCUMENT ORGANIZATION

2.4.1 PEA ORGANIZATION

In accordance with the PEA Checklist, *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments*, updated November 2019, the Proposed Project PEA is divided into nine sections as summarized below. **Appendix 2-A, PEA Checklist Table**, provides references for the location of required PEA elements.

Section 1.0, Executive Summary. This section provides a Proposed Project summary, land ownership and rights-of-way requirements, areas of controversy, summary of impacts, summary of alternatives, and a pre-filing consultation and public outreach summary. All figures in the PEA are included in **Appendix 1-A, PEA Figures**.

Section 2.0, Introduction. This section provides a detailed description of the Proposed Project's background, pre-filing consultation and public outreach, environmental review process, and document organization.

Section 3.0, Proposed Project Description. This section provides a detailed description of the Proposed Project overview and components, existing and proposed system, land ownership, rights-of-way and easements, construction, construction workforce, equipment, traffic and schedule, post-construction, O&M, anticipated permits and approvals, Applicant Proposed Measures (APMs), and project description graphics, mapbook, and Geographic Information System (GIS) requirements.

Section 4.0, Description of Alternatives. This section describes the alternatives considered by LS Power during development of the Proposed Project.

Section 5.0, Environmental Analysis. This section includes a description of the environmental setting, regulatory setting, and impact analysis for each resource area. The following resource areas are discussed in **Section 5.0**:

- 5.1 Aesthetics
- 5.2 Agriculture and Forestry Resources
- 5.3 Air Quality
- 5.4 Biological Resources
- 5.5 Cultural Resources
- 5.6 Energy
- 5.7 Geology, Soils, and Paleontological Resources
- 5.8 Greenhouse Gas Emissions
- 5.9 Hazards, Hazardous Materials, and Public Safety
- 5.10 Hydrology and Water Quality
- 5.11 Land Use and Planning
- 5.12 Mineral Resources
- 5.13 Noise
- 5.14 Population and Housing
- 5.15 Public Services
- 5.16 Recreation
- 5.17 Transportation

- 5.18 Tribal Cultural Resources
- 5.19 Utilities and Service Systems
- 5.20 Wildfire
- 5.21 Mandatory Findings of Significance

Section 6.0, *Comparison of Alternatives.* This section includes a comparison of the alternatives described in **Section 4.0**.

Section 7.0, *Cumulative and Other CEQA Considerations.* This section discusses the cumulative and growth-inducing impacts from the Proposed Project.

Section 8.0, *List of Preparers.* This section provides a list of people, their organization, and their qualifications for all authors and reviewers of each section of the PEA.

Section 9.0, *References.* This section provides a full reference list for the PEA.

3.0 PROPOSED PROJECT DESCRIPTION

This section defines the Power the South Bay Project's ("Proposed Project's") location and components; describes the existing electric system; and explains how the Proposed Project would be implemented and its place within California's electrical transmission system. The Proposed Project includes components to be constructed and operated by LS Power Grid California, LLC ("LS Power") as well as modification of the existing Pacific Gas and Electric Company (PG&E) Newark substation, to be constructed and operated by PG&E, and modification of the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation, to be constructed and operated by SVP. This section also describes construction and operation of the Proposed Project as well as identifies any permits or other approvals that may be needed to implement the Proposed Project. Finally, this section identifies any measures proposed by LS Power to avoid or minimize potential environmental impacts.

The Applicant Proposed Measures (APMs) and any mitigation measures ultimately imposed as part of this application proceeding would not apply to PG&E or SVP's scopes of work. Although PG&E and SVP's substations are part of the Proposed Project being evaluated under California Environmental Quality Act (CEQA), PG&E and SVP's construction would not be authorized under this specific California Public Utilities Commission (CPUC) decision. However, the PG&E substation modification would be subject to all applicable regulatory requirements, and PG&E's Best Management Practices (BMPs) are incorporated into this Proponent's Environmental Assessment (PEA) and considered by the CPUC in its environmental review of the Proposed Project. PG&E's proposed BMPs are also identified in **Section 3.11.2, PG&E Best Management Practices**. Similarly, the SVP substation modifications would be subject to all applicable regulatory requirements, and SVP would implement one Proposed Project APM.

3.1 PROJECT OVERVIEW

The Proposed Project was approved by the California Independent System Operator (CAISO) to ensure the reliability of the CAISO-controlled grid. This would be accomplished through the construction of two new high-voltage direct current (HVDC) terminals, which would connect to the existing Newark 230 kilovolt (kV) substation and the existing NRS 230 kV substation, and new transmission lines. The Proposed Project is being proposed by LS Power, a Delaware limited liability company established to own and operate transmission projects in California as a designated California Public Utility.

Project Summary

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, California as shown on **Figure 3-1, Project Vicinity**, **Figure 3-2, Project Location**, and **Figure 3-3, Project Overview**. The Proposed Project includes the following key elements:

- Two new HVDC terminals:
 - The new Albrae terminal interconnected to the existing PG&E Newark substation; and
 - The new Baylands terminal interconnected to the existing SVP NRS substation.
- One approximately 8.6-mile Albrae to Baylands 320 kV direct current (DC) transmission line, both overhead and underground, connecting the Albrae terminal to the Baylands terminal;

- One approximately 0.4-mile Newark to Albrae 230 kV alternating current (AC) transmission line, both overhead and underground, connecting the new Albrae terminal to the existing PG&E Newark substation;
- One approximately 3.5-mile Baylands to NRS 230 kV AC transmission line, both overhead and underground, connecting the new Baylands terminal to the existing SVP NRS substation; and
- Modifications to PG&E's Newark and SVP's NRS substations to accommodate connection of the new Newark to Albrae and Baylands to NRS 230 kV transmission lines. These modifications would be completed by PG&E and SVP, respectively, but are included in this Proposed Project description as they are part of the overall transmission upgrade project.

Project Location

The proposed Albrae terminal site is approximately 6.1 acres and is located approximately 0.8 mile west of Interstate (I)-880 and approximately 0.2 miles northeast of the existing PG&E Newark substation (see **Figure 3-4, Project Route Map**). The proposed Albrae terminal site is located in the City of Fremont and is zoned for General Industrial uses. Surrounding land uses consist of industrial facilities, including glass and concrete fabrication to the north, an electric utilities distribution center to the east, and a car repair, storage, and auction lot to the south and west. The proposed Albrae terminal site is located within the northwest quarter of the Public Land Survey System (PLSS) Niles Quadrangle of Township 5 South and Range 1 West.

The proposed Baylands terminal site is approximately 9.2 acres and is located approximately 0.5 miles north of State Route (SR)-237, approximately 1.8 miles west of I-880, and approximately 1.8 miles northeast of the existing SVP NRS substation. The site is located within the City of San José and zoned for Planned Development Single-Family Residential uses. Surrounding land uses consist of Los Esteros Road and a recycling and trash center to the north, San José-Santa Clara Regional Wastewater Facility (RWF) to the east, and undeveloped land to the south and west. The proposed Baylands terminal site is located within the northwest quarter of the PLSS Milpitas Quadrangle Section 3 of Township 6 South and Range 1 West.

The proposed Albrae to Baylands 320 kV DC transmission line is located within the Cities of Fremont, Milpitas, and San José and would connect the new Albrae terminal to the new Baylands terminal. The underground portion of the proposed Albrae to Baylands 320 kV DC transmission line would be located within existing roadways, such as Weber Road, Boyce Road, Cushing Parkway, Fremont Boulevard, McCarthy Boulevard, and Los Esteros Road (refer to **Figure 3-4**). The overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would traverse from North McCarthy Boulevard (approximately 0.1 mile south from its intersection with Dixon Landing Road) to its intersection with Los Esteros Road, spanning across existing wastewater drying ponds, and would include approximately 11 new transmission line support structures. The proposed Albrae to Baylands 320 kV DC transmission line would transition back underground at Los Esteros Road and turn southeast into the proposed Baylands terminal site, which is located southeast of Los Esteros Road. Approximately 5.5 miles of this proposed alignment are located in the City of Fremont, 0.2 mile is located in the City of Milpitas, and approximately 2.9 miles are located in the City of San José.

The proposed Newark to Albrae 230 kV transmission line would be constructed to connect the proposed Albrae terminal to the existing Newark substation. The proposed Newark to Albrae 230

kV transmission line would be approximately 0.4 mile of new underground and overhead alignment and located entirely within the City of Fremont. The proposed Newark to Albrae 230 kV transmission line would be located underground in Weber Road before transitioning aboveground for a short overhead span that would likely include approximately two new transmission support structures (refer to **Figure 3-4**). The structures are proposed to range in height from approximately 80 to 140 feet.

The proposed Baylands to NRS 230 kV transmission line would be constructed to connect the proposed Baylands terminal to the existing NRS substation. The proposed Baylands to NRS 230 kV transmission line would consist of approximately 3.3 miles of underground alignment in roadways such as Los Esteros Road, Disk Drive, Nortech Parkway, and Lafayette Street. In the approximate middle of this line, the alignment would transition to an overhead position for approximately 0.2 mile at the crossing of the Guadalupe River (refer to **Figure 3-4**). Approximately 2.3 miles of this alignment are located in the City of San José, and approximately 1.2 miles are located in the City of Santa Clara.

3.2 EXISTING AND PROPOSED SYSTEM

3.2.1 EXISTING SYSTEM

The Proposed Project is located within an existing regional transmission system that provides electricity to the Greater San Francisco Bay Area ("Greater Bay Area"). The Greater Bay Area is at the center of PG&E's service territory, serving five counties including the Counties of Santa Clara and Alameda. To better conduct performance evaluation, the Greater Bay Area is divided into three sub-areas: East Bay, South Bay, and San Francisco Peninsula. The Proposed Project is located within both the East Bay and South Bay sub-areas. The East Bay sub-area includes the County of Alameda and the following Cities: Concord, Berkeley, Oakland, Hayward, Fremont, and Pittsburg. This area primarily relies on its internal generation to serve electricity customers.

The South Bay sub-area covers approximately 1,500 square miles and includes the County of Santa Clara. Some of the Cities in the South Bay sub-area include San José, Mountain View, Morgan Hill, and Gilroy. Los Esteros, Metcalf, Monta Vista, and Newark are the key substations that deliver power to this sub-area. The South Bay sub-area encompasses the De Anza and San José divisions and the City of Santa Clara. Generation facilities within this sub-area include Calpine's Metcalf Energy Center, Calpine's Los Esteros Energy Center, Calpine's Gilroy Power Units, and SVP's Donald Von Raesfeld Power Plant. In addition, this sub-area has key 500 kV and 230 kV interconnections to the Moss Landing and Tesla substations.

The San José/SVP area is generally served from the Newark 230/115 kV substation in the north and the Metcalf 500/230/115 kV substation in the south. The existing system in the Greater Bay Area includes numerous existing PG&E overhead and underground transmission and distribution circuits that serve load throughout the area. The existing transmission system is shown in **Figure 3-5, Transmission System of Power the South Bay Project**.

There are currently three 115 kV lines and one 230 kV line that connect the existing PG&E Newark, Nortech, Los Esteros, and SVP NRS substations, with two 115 kV lines directly connecting the existing substations and one 115 kV and one 230 kV line having an intermediate stop at the SVP SSS substation and nearby Los Esteros substation.

The existing Newark substation is approximately 27.5 acres and is located in the City of Fremont, southwest of the intersection of Boyce Road and Weber Road. The existing NRS substation is approximately 13.5 acres and is located in the City of Santa Clara, south of the intersection of Tasman Drive and Lafayette Street. Due to the electrical proximity of the bulk of the area load to the existing Newark substation, the bulk of the power flows from the Newark side. There is an existing imbalance between two sources in the existing system and overloads on the San José area 115 kV system.

3.2.2 PROPOSED PROJECT SYSTEM

The main components of the Proposed Project's system consist of two new HVDC terminals and three new transmission lines. One transmission line would connect the HVDC terminals while the other two transmission lines would be independently connected to two existing substations (refer to **Figure 3-4**). The two new HVDC terminals would be independently connected to two separate existing substations—the PG&E Newark and SVP NRS substations—creating an additional transmission connection between them. The new HVDC terminals—the Albrae and Baylands terminals—would each have a rated real power output of 1,044 megavolt amperes (MVA) or 1,000 megawatts (MW) with 300 megavolt amperes of reactive power (MVAR). The Proposed Project would initially have a rated real power output of 593 MVA measured at SVP's NRS 230 kV substation and would support the regional transmission system by providing voltage support in the San José area. The proposed HVDC terminal facilities would provide up to 593 MVA to meet the increased demand for energy within the existing service area and would not serve any additional users beyond those already being served by the existing system. The reactive power would support the regional transmission system by providing voltage support to the electrical grid in the vicinity of the proposed HVDC terminals, as discussed further in **Section 3.2.3, System Reliability**. Each new HVDC terminal would include Voltage Source Converter (VSC) HVDC equipment, an AC switchyard using gas-insulated switchgear (GIS) in a breaker-and-a-half (BAAH) configuration, and three single-phase converter transformers including space for an on-site spare. The VSC HVDC equipment and the GIS switchyards would be located within separate enclosures designed to protect the equipment from environmental and physical threats. Specific equipment and components for each proposed HVDC terminal is discussed further in **Section 3.3.4.1, HVDC Terminal Facilities**. See **Figure 3-5** and **Figure 3-6, Albrae Terminal to Baylands Terminal Schematic** for depictions of the existing and proposed systems affected by the Proposed Project.

The two new HVDC terminals and the proposed Albrae to Baylands 320 kV DC transmission line would interconnect with the existing transmission system via the new Newark to Albrae and Baylands to NRS 230 kV transmission lines. Specifically, the new Albrae terminal would be interconnected with the existing PG&E Newark substation via the new approximately 0.4-mile underground and overhead Newark to Albrae 230 kV transmission line that would transition aboveground to an LS Power-owned transition structure that would then connect to a future one-structure overhead line within PG&E-owned property to be built and owned by PG&E (see **Figure 3-4** and **Figure 3-7a, Albrae Terminal General Arrangement**). The new Baylands terminal would be interconnected with the existing SVP NRS substation via the new approximately 3.5-mile overhead and underground Baylands to NRS 230 kV transmission line that would enter the substation underground and transition aboveground at a steel substation riser structure owned by SVP (see **Figure 3-7b, Baylands Terminal General Arrangement**). To provide a new bay position for the new Baylands to NRS 230 kV transmission line connection, SVP would need to add new and modify existing electrical infrastructure within the existing NRS substation. The new

HVDC terminals would be connected via the proposed approximately 8.6-mile Albrae to Baylands 320 kV DC overhead and underground transmission line.

Excavation and installation of the concrete-encased duct bank and associated splice vaults would require the relocation of certain third-party utilities in areas of conflict. Utilities would be avoided where practicable, but some utilities would require relocation. Utilities that would require relocation may include sanitary sewer, stormwater, gas, water, electric, and telecommunication. There are two aboveground electric distribution line spans on PG&E-owned property outside of the existing Newark substation that conflict with PG&E's plan for the proposed Newark to Albrae 230 kV transmission line that would need to be relocated underground. No other changes to the existing distribution system would occur.

All new facilities and interrelated activities associated with the Proposed Project are described in **Section 3.3, Project Components**, and schematic diagrams of the proposed HVDC terminal facilities are provided in **Figures 3-7a** and **3-7b**. No capacities of existing lines are expected to change as part of the Proposed Project.

3.2.3 SYSTEM RELIABILITY

The San José/SVP area is primarily served from the existing Newark substation in the north and the existing Metcalf substation in the south. Transmission planning studies prepared by CAISO identified several reliability concerns consisting of thermal overloads, including a significant load increase of approximately 500 MW in the SVP area, resulting in multiple near-term and long-term overloads in the San José area 115 kV system. The San José/SVP area is primarily served from the existing Newark substation in the north and the existing Metcalf substation in the south. However, the bulk of the power flows from the Newark side due to the electrical proximity of the bulk of the area load to the existing Newark substation, specifically the SVP area load where most of the load increase is. Due to this imbalance between two sources in the AC-connected network, the Proposed Project would result in better performance from the power flow perspective as a result of the controllability of the HVDC source. The Proposed Project would also provide benefits in reducing local capacity requirements in the San José sub-area and overall Greater Bay Area that reduces reliance on the local gas-fired generation. As such, CAISO identified the need for the Proposed Project.

The Proposed Project would provide a new system tie between the existing Newark and NRS substations, increasing capacity and controllability between the SVP area and the existing Newark 230 kV substation.

The overall Proposed Project would initially have a real power output of 593 MVA measured at the existing NRS 230 kV substation. The proposed HVDC terminals and associated Albrae to Baylands 320 kV DC transmission line would initially be capable of 1,044 MVA (or 1,000 MW with 300 MVAR). The reactive power would support the regional transmission system by providing voltage support to the electrical grid in the vicinity of the proposed HVDC terminals. This voltage support would be available independent of the real power flow on the DC transmission line. If the proposed Albrae to Baylands 320 kV DC transmission line was to go out of service, the proposed HVDC terminals would still be able to operate as a static synchronous compensator (STATCOM) to provide voltage support to the regional transmission system. The Proposed Project was developed in response to the CAISO-identified reliability issues and would provide system stability and reliability for the Greater Bay Area.

3.2.4 PLANNING AREA

The Greater Bay Area is at the center of PG&E's service territory, serving five counties including the County of Santa Clara. The Greater Bay Area is a planning area that is divided into three sub-areas: East Bay, South Bay, and San Francisco Peninsula. The Proposed Project, in conjunction with the existing PG&E Newark and SVP NRS substations, would support the existing regional transmission system that provides electricity to the South Bay and East Bay sub-areas within the Greater Bay Area. Therefore, the system planning area served by the Proposed Project is identified as the "Greater Bay Area". The term "regional transmission system" is used to describe the network that provides electricity to this planning area. The larger, regional system that provides electricity to all PG&E's and SVP's customers is identified as the "bulk PG&E transmission system."

3.3 PROJECT COMPONENTS

3.3.1 PRELIMINARY DESIGN AND ENGINEERING

The main Proposed Project component involves the development of two new HVDC terminals (proposed Albrae and Baylands terminals) that would be interconnected to the existing PG&E Newark and SVP NRS substations, respectively. A detailed Proposed Project map that identifies the locations of major Proposed Project components, as well as access roads and staging areas, is included as **Figure 3-4**. The individual components of the Proposed Project are discussed in greater detail in **Section 3.3.4, Proposed Facilities**.

LS Power has completed approximately 30 percent of the engineering design, PG&E has completed approximately five percent engineering design, and SVP has completed approximately 30 percent engineering design for the Proposed Project. As such, the information in this document is based on preliminary engineering design and is subject to change based on additional and/or final engineering design, further studies and design to be performed by PG&E and SVP, regulatory requirements, conditions on the ground, and ongoing coordination discussions among LS Power, PG&E, SVP, CPUC, and CAISO.

3.3.2 SEGMENTS, COMPONENTS, AND PHASES

All components of the Proposed Project would be installed during a single phase of construction (i.e., continuous construction timeframe). The preliminary construction schedule is described in **Section 3.6.4, Construction Schedule**. The primary components of the Proposed Project are as follows:

- New Albrae terminal (~6.1 acres fenceline);
- New Baylands terminal (~7.0 acres fenceline);
- New Albrae to Baylands 320 kV DC transmission line (~8.6 miles);
- New Newark to Albrae 230 kV AC transmission line (~0.4 mile);
- New Baylands to NRS 230 kV AC transmission line (~3.5 miles);
- Modifications to the existing PG&E Newark substation (~0.5 acre); and
- Modifications to the existing SVP NRS substation (~13.5 acres).

These Proposed Project components are further described in the sections below.

3.3.3 EXISTING FACILITIES

The Proposed Project would include all new facilities and modifications to the existing PG&E Newark and SVP NRS substations to accommodate interconnection to the new facilities. Related existing facilities are described in the following subsections and include existing conditions at the proposed HVDC terminal sites, existing substations, and existing transmission and distribution lines that would be affected by the Proposed Project.

3.3.3.1 Proposed HVDC Terminal Sites Existing Conditions

The proposed Albrae terminal site currently consists of an approximately 25.3-acre storage yard for an active precast building material manufacturing facility (Assessor Parcel Number [APN] 531-165-9-4). Approximately 6.1 acres of the southwestern portion of the site would be utilized for the proposed Albrae terminal. The existing storage structures on the southwestern corner of the property would be removed.

The proposed Baylands terminal is located on the San José-Santa Clara RWF property and is currently an approximately 9.2-acre highly disturbed, vacant, undeveloped lot, with no facilities or development on-site (APN-015-30-109).

3.3.3.2 Existing Substations

The existing PG&E Newark substation is a 230/115 kV transmission substation that is currently connected to seven 230 kV transmission lines, twenty-one 115 kV transmission lines, two 60 kV transmission lines, and approximately ten distribution lines. The existing substation facility is approximately 27.5 acres in size. Existing facilities at the Newark substation range in height up to approximately 170 feet above-grade, while new facilities for the modification of the Newark substation would range in height up to approximately 130 feet above-grade. The new transmission lines that would be constructed for the proposed Newark to Albrae 230 kV transmission line would be self-supported, tubular steel poles with direct imbed or drilled pier foundations. The proposed facilities are discussed further in **Section 3.3.4.2, Transmission Lines**. For security reasons, PG&E prefers not to identify specific substation components or provide detailed information on the location of substation facilities.

The existing SVP NRS substation is a 230/115/60 kV transmission substation that is currently connected to one 230 kV transmission line (SSS), five 115 kV transmission lines (PG&E Newark-two lines, Nortech-one line, SRS-two lines), and four sub-transmission lines (two short 60 kV gen-tie lines to Gianera [GIA] generating station, SRS-one line, KRS-on line). The existing substation facility is approximately 13.5 acres in size. All existing 230 kV lines at the existing NRS substation are located underground with a maximum below-ground depth of 35 feet. Existing overhead facilities at the NRS substation range in height up to approximately 135 feet above-grade. To support the interconnection at NRS, SVP would construct a new bus within the existing NRS substation, which would include a new gantry (dead-end) structure within the NRS substation. The bus equipment would range in height up to approximately 60 feet above-grade.

The existing PG&E Newark and SVP NRS substations have a non-reflective finish and are gray in color. New substation facilities would generally also be gray and non-reflective. For the modifications to PG&E's Newark substation and SVP's NRS substation, new lighting would be

installed per standard and would be determined during detailed design. Outdoor lighting additions would be in line with Institute of Electrical and Electronics Engineers (IEEE) C2 to provide two foot-candle intensity, and light emitting diode (LED) lighting would be used to meet the latest efficiency recommendations in California Title 24. Locations of the existing Newark and NRS substations are depicted in **Figures 3-3** and **3-4**.

3.3.3.3 Existing Transmission and Distribution Facilities

Twenty-eight existing aboveground transmission lines and approximately 10 aboveground distribution lines are connected to the existing Newark substation. Also, five existing aboveground transmission lines and four existing aboveground subtransmission lines are connected to the existing NRS substation. Existing distribution, subtransmission, and transmission structures can range in height from 30 feet to 170 feet, with structure height generally increasing with higher voltage. The Proposed Project would not directly affect any other existing transmission lines. However, two existing distribution lines would be relocated underground on PG&E-owned property to support PG&E's plan for their portion of the proposed Newark to Albrae 230 kV transmission line. As part of the modifications to both the existing PG&E Newark substation and existing SVP NRS substation, line connections (getaways) may be adjusted or rearranged. These changes are anticipated to affect the existing line(s) between the substation racks and the edge of the substation property. **Section 3.2.1, Existing System** provides additional details regarding existing transmission and distribution lines in the Proposed Project area.

3.3.4 PROPOSED FACILITIES

3.3.4.1 HVDC Terminal Facilities

The proposed new HVDC terminals' primary function would be to convert AC power to DC power at the sending terminal and to convert DC power back to AC power at the receiving terminal. To facilitate this conversion, each new HVDC terminal would include VSC HVDC equipment, an AC switchyard using GIS in a BAAH configuration, and converter transformers including space for an on-site spare. The VSC HVDC equipment and the GIS switchyards would be located within separate enclosures designed to protect the equipment from environmental and physical threats. Specific equipment and components for each proposed HVDC terminal are provided below.

Albrae Terminal

The proposed Albrae terminal site would be constructed northeast of the existing PG&E Newark substation within an approximate 6.1-acre site located on a larger parcel (part of APN 531-165-9-4). Construction of the proposed Albrae terminal would permanently disturb a total area of approximately 6.1 acres and would result in the removal of existing structures and asphalt. The final fenced terminal would be approximately 6.1 acres in size. **Figure 3-7a** depicts the proposed Albrae terminal layout and arrangement of major equipment and structures.

The proposed Albrae terminal would include aboveground facilities supported by a combination of deep, reinforced drilled shafts foundations and slab foundations with spread footings or piles. The tallest structures within the proposed Albrae terminal facility would be the approximately 100-foot-tall lightning shielding masts. The proposed Albrae terminal facility would include VSC HVDC equipment; three single-phase converter transformers, including space for an on-site spare; three 230 kV sulfur hexafluoride (SF₆) gas-insulated circuit breakers; and associated bus, disconnect switches, current transformers, voltage transformers, and termination/riser structures.

Baylands Terminal

The proposed Baylands terminal site would be constructed approximately 1.8 miles northeast of the existing SVP NRS substation, within a 9.2-acre site located on a larger parcel (part of APN 015-30-109). LS Power would negotiate a lease for the proposed Baylands terminal with the property owner (City of San José). Construction of the proposed Baylands terminal would permanently disturb a total area of approximately 9.2 acres, and the final fenced terminal would be approximately seven acres in size. **Figure 3-7b** depicts the proposed Baylands terminal layout and arrangement of major equipment and structures.

The proposed Baylands terminal would include aboveground facilities supported by a combination of deep, reinforced drilled shaft foundations and slab foundations with spread footings. The tallest structures within the proposed Baylands terminal facility would be the approximately 100-foot-tall lightning shielding masts. The proposed Baylands terminal facility would include VSC HVDC equipment; three single-phase converter transformers, including space for an on-site spare; three 230 kV SF₆ gas-insulated circuit breakers; and associated bus, disconnect switches, current transformers, voltage transformers, and termination/riser structures.

Ancillary Terminal Components for Albrae and Baylands

The Proposed Project includes AC switchyards at each proposed HVDC terminal that would use GIS in a BAAH configuration. Both GIS switchyards would be located within an enclosure designed to protect the equipment from environmental and physical threats (refer to **Figures 3-7a** and **3-7b**).

All major HVDC terminal equipment (e.g., VSC HVDC equipment, GIS, converter transformers, cooling equipment, etc.) would be installed on concrete foundations. Each transformer would have an oil containment system consisting of an impervious, lined, open, or stone-filled sump area around the transformer. The maximum amount of oil required for the transformers would be approximately 25,000 gallons for each of the three transformers. Transformer oil containment basins are designed to contain the oil volume of the transformers plus a 25-year, 24-hour storm event.

The general layout and arrangement of the major HVDC terminal equipment is shown in **Figures 3-7a** and **3-7b**. **Figure 3-8**, *HVDC Terminal Site Profile Drawings* provides a vertical depiction of the proposed HVDC terminal sites and includes the approximate height of various terminal equipment. HVDC terminal facilities, like those included in the Proposed Project, are designed to meet project-specific requirements and specifications. Therefore, design drawings and simulations (refer to **Section 5.1**, *Aesthetics*) have been included with the PEA to depict the visual appearance of the proposed Albrae and Baylands terminals. Representative photographs have not been included as they would not accurately reflect the anticipated appearance of the proposed facilities as well as the simulations. Photographs of existing HVDC and substation facilities have also been excluded for security purposes for currently operating facilities.

Equipment and enclosures at the proposed HVDC terminal sites would be non-reflective as practicable and neutral gray or neutral earth-tone colors. Enclosure roofs would typically be white. Lighting would be installed at the proposed HVDC terminal locations and would conform to National Electric Safety Code (NESC) requirements and other applicable outdoor lighting codes. The proposed HVDC terminal facilities are not anticipated to require nighttime illumination.

Terminal station lighting would be photocell and motion controlled to provide illumination for security. LED lights would be mounted on A-frames, H-frames, structures, poles, and enclosures as required. All lighting provided would be shielded and pointed down to minimize glare onto surrounding properties and habitats.

The proposed HVDC terminals would be primarily powered by a tertiary winding on a converter transformer at each terminal to step-down the energy from the transmission voltage level to the distribution voltage level. An electric distribution line would be installed to provide backup power for each proposed HVDC terminal from existing PG&E distribution lines that are near each proposed HVDC terminal site (refer to **Figures 3-4, 3-7a, and 3-7b**).

The new HVDC terminal facilities would also include a stormwater management system consisting of a stormwater drainage and conveyance system and a stormwater detention system. The size of the detention system would vary for each proposed HVDC terminal site, depending on site-specific conditions and may include a detention basin, underground detention vaults, or a combination thereof. The proposed HVDC terminal pads would be graded to drain towards the stormwater conveyance system to ultimately direct stormwater into the detention system. The stormwater detention system would not be lined, allowing for infiltration and groundwater recharge.

The stormwater detention system is designed to capture the runoff from a 100-year storm, 24-hour rainfall event and then release the captured water. Overflow from the detention system would be returned to sheet flow via a level spreader that would provide for sheet flow of the stormwater to the adjacent land surface during storms that exceed the system's design capacity. The level spreading approach would control erosion and prevent scouring at discharge locations.

No new impervious areas would be created as a result of the PG&E or SVP modifications to their existing substations. No additional stormwater management measures are anticipated to be required for these facilities.

Disturbance area characteristics for the Proposed Project are discussed in **Section 3.5, Construction**. All facilities at the proposed HVDC terminal locations, including the associated access roads and stormwater drainage and conveyance system, would occur within the two proposed HVDC terminal sites to be secured by LS Power.

Belowground work for the proposed HVDC terminal facilities would include the construction of the foundations for the terminal equipment and enclosures, oil containment for transformers, ground grid, low voltage cable needed for terminal equipment, conduit, and underground transmission line, including duct banks and splice vaults. It is anticipated that ground disturbance depth would not exceed approximately 50 feet for terminal equipment drilled shaft foundations and approximately 200 feet for piles.

3.3.4.2 Transmission Lines

Albrae to Baylands 320 kV DC Transmission Line

A new Albrae to Baylands 320 kV DC transmission line would be constructed to connect the proposed Albrae terminal to the proposed Baylands terminal. The proposed Albrae to Baylands 320 kV DC transmission line would be approximately 8.6 miles in length, would be rated at 1,044 MVA, and would be installed in a combination of underground and overhead positions (refer to

Figures 3-3 and 3-4). The characteristics of the overhead and underground segments are further discussed below.

Underground Transmission Line Segments

The underground portion of the new Albrae to Baylands 320 kV DC transmission line, approximately 6.7 miles in length, would be a single-circuit DC transmission line consisting of two 2,500 square millimeter (mm²) copper 320 kV single core cross-linked polyethylene (XLPE) cables composed of a copper conductor, conductor binder and screen, XLPE insulation, insulation screen, water barrier, metallic sheath, and an outer jacket.

The underground transmission line would be encased within a duct bank proposed to have five smaller internal ducts: three eight-inch ducts for conductor (with two ducts for the installed transmission cable and one duct as a spare) and two two-inch ducts for fiber optic cables. An additional two-inch fiber optic cable would be installed within the City of Fremont for their use as a condition of their franchise agreement. The minimum depth for the top of the duct bank would be approximately three feet, with the top of the duct bank typically varying between approximately three to 10 feet beneath the surface. The typical width for the underground duct bank would be approximately 2.5 feet. The trench excavation width would typically vary between three to four feet, based on shoring requirements. A duct bank would generally be used everywhere, except where trenchless crossings are required. The Proposed Project includes 10 proposed trenchless crossings: three jack-and-bore locations (under existing railroad lines) and seven horizontal directional drill (HDD) locations (under waterways). These trenchless crossings are shown on **Figure 3-4**. Typical duct bank diagrams have been provided as **Figure 3-9, Typical Duct Bank Configurations**.

Underground splice vaults would be located approximately every 1,500 to 3,000 feet with dimensions of approximately 30 feet long, 10 feet wide, and 10 feet tall. The splice vault excavation would be approximately three feet wider on each side for installation of the splice vault. Splice vaults would be sited during detailed engineering design based on gathered utility data and cable supplier specifications. As practical, splice vaults would be sited to avoid interfering with existing access points and intersections to minimize disruptions to the public during construction and operation and maintenance (O&M). During construction, it is anticipated that up to three separate construction crews would be working on splice vault installations at different locations along the proposed transmission lines concurrently. Splice vaults would provide entry points for both conductor installation (during construction) and worker access (during O&M). The conductor cables would be installed in the duct bank following installation of the duct bank and splice vaults. Cable installation activities would occur at all splice vault locations and near the termination structures at the proposed HVDC terminal sites. During operation, the vaults would provide access to the underground cables for maintenance inspections, repairs, and replacement, if needed. The vaults would be constructed of prefabricated (precast) or cast-in-place, steel-reinforced concrete. Each vault would typically have two manhole covers measuring approximately 39 inches in diameter. The bottom of the splice vaults would typically be located approximately 12 feet below ground level. Typical splice vault diagrams are provided in **Figure 3-10, Typical Splice Vault Diagrams**.

The Proposed Project's Albrae to Baylands 320 kV DC transmission line would enter the proposed HVDC terminals underground and transition aboveground at a steel substation termination/riser structure. The new termination/riser structures located at the proposed HVDC terminal sites would

be approximately 25 feet tall. **Figure 3-11, Typical Termination/Riser Structures** provides details and typical metrics for the proposed 320 kV DC termination/riser structures.

For the transition from overhead to underground transmission lines, tubular steel transmission cable riser poles would be required (see **Figure 3-12, Typical Overhead Transmission Line Structures**). These overhead transmission structures would be a maximum of approximately 130 feet tall. The structures would be supported by deep, reinforced drilled shaft foundations with a maximum diameter of 12 feet and depth of 60 feet.

For the Albrae to Baylands 320 kV DC transmission line, jack-and-bore crossings would include a 36-inch casing pipe; three eight-inch ducts with two ducts for the installed cable and one duct as a spare; two two-inch ducts for fiber optic cables; a wheel assembly with spacers to keep the ducts properly spaced within the casing; and a bentonite slurry fill. **Figure 3-13, Typical 320 kV DC Jack-and-Bore Diagrams** depicts the typical jack-and-bore operation, components, and dimensions. Typical work areas for jack-and-bore crossings are discussed further in **Section 3.5.3.1, Construction Work Areas**, and the jack-and-bore technique is also further discussed in **Section 3.5.6.2, Trenchless Techniques**.

HDD crossings would include three ten-inch ducts, with two ducts for the installed cable and one duct as a spare, and two four-inch ducts for the fiber optic cables. The ducts would either be pulled through the unreinforced bore hole or an approximately 30-inch casing pipe would be installed. If a casing pipe is used, the ducts would be pulled through the casing and the remaining space backfilled with a thermal grout. **Figure 3-14, Typical HDD Diagram** depicts the typical HDD operation, components, and dimensions. Typical work areas for HDD crossings are discussed further in **Section 3.5.3.1**, and the HDD technique is also further discussed in **Section 3.5.6.2**.

At the Cushing Parkway bridge crossing (refer to **Figure 3-4**), the Proposed Project includes two options: attachment to the underside of the Cushing Parkway bridge or trench adjacent to the bridge within an existing 10-foot utility easement. Both options would utilize an existing 30-foot O&M easement located adjacent to the bridge structure for construction and operation.

Overhead Transmission Line Segments

For the overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line, approximately 1.9 miles in length, overhead structures would predominately utilize self-supported tubular steel monopoles with a horizontal conductor configuration and two overhead optical ground wires (OPGW) (refer to **Figure 3-12**). Dead-end structures would be self-supported tubular steel poles with a vertical conductor configuration. Tangents would be supported by direct embed foundations, while angles and dead-ends would be supported by deep, reinforced drilled shaft foundations. The maximum foundation depth is expected to be approximately 60 feet. The proposed overhead 320 kV DC structures would range in height from approximately 95 to 150 feet. The proposed overhead Albrae to Baylands 320 kV DC transmission line structure spans would range from 250 to 1,300 feet. The overhead portion of the Albrae to Baylands 320 kV DC transmission line would utilize a double bundled 320 kV 1351.5 thousand circular mils (kcmil) Aluminum Conductor Steel Supported (ACSS)/Trapezoidal Wire (TW) "Martin" conductor per phase.

A summary of overhead transmission line poles is presented in **Table 3-1, Proposed Project Pole Summary (Approximate Value)**. Structure locations are shown on **Figure 3-4**. The maximum pole

height denotes the height of the pole only; foundations may add an additional two to three feet above ground level.

Table 3-1: Proposed Project Pole Summary (Approximate Value)				
Pole Type	Approximate Quantity	Approximate Pole Height (feet)	Average Base Diameter at Grade (feet)	Average Tip Diameter (inches)
Albrae to Baylands 320 kV DC Transmission Line				
Tubular Steel Tangent Poles	4	120	8	14
Tubular Steel Angle Poles	3	150	8	14
Tubular Steel Dead-end Poles	2	100	8	32
Tubular Steel Cable Riser Poles	2	95	12	14
Newark to Albrae 230 kV Transmission Line				
Tubular Steel Cable Riser Poles	1	110	8	32
Transmission Structures	2	140	8	32
Baylands to NRS 230 kV Transmission Line				
Tubular Steel Cable Riser Poles	2	120	8	32
Note: This table is preliminary and subject to change based on final engineering. Data from LS Power.				

Newark to Albrae 230 kV Transmission Line

The proposed Newark to Albrae 230 kV transmission line would be constructed to connect the proposed Albrae terminal to the existing PG&E Newark substation. The proposed Newark to Albrae 230 kV transmission line would be approximately 0.4 mile (2,000 feet) of overhead and underground alignment. The proposed Newark to Albrae 230 kV transmission line would include approximately two new overhead transmission line structures, including one cable riser pole, to be constructed and owned by LS Power, and one transmission structure, within PG&E-owned property, to be constructed and owned by PG&E. The structure heights are shown in **Table 3-1** above. The new structures would be supported by deep, reinforced drilled shaft foundations with a maximum depth of approximately 60 feet. Refer to **Figures 3-3** and **3-4** for the proposed location of the new Newark to Albrae 230 kV transmission line and **Figure 3-12** for diagrams of the proposed new overhead structures. The new overhead Newark to Albrae 230 kV transmission line would utilize two 230 kV Aluminum Conductor Composite Reinforced (ACCR) conductor. The new underground Newark to Albrae 230 kV transmission line would utilize a double bundled 2,500 mm² copper 230 kV single core XLPE cables per phase. Each cable would be composed of a copper conductor, conductor binder and screen, XLPE insulation, insulation screen, water barrier, metallic sheath, and an outer jacket.

Baylands to NRS 230 kV Transmission Line

The proposed Baylands to NRS 230 kV transmission line would be constructed to connect the proposed Baylands terminal to the existing SVP NRS substation. The proposed Baylands to NRS 230 kV transmission line would consist of approximately 3.3 miles of underground alignment and 0.2 mile of overhead alignment. For the transition from overhead to underground transmission lines, tubular steel transmission cable riser structures would be required (refer to **Figure 3-12**). These overhead transmission structures would be a maximum of approximately 120 feet tall. The structures would be supported by deep, reinforced drilled shaft foundations with a maximum diameter of 12 feet and depth of 60 feet.

The underground portion of the proposed Baylands to NRS 230 kV transmission line would be encased in a duct bank with seven internal ducts, comprised of four eight-inch ducts (three for installing conductor and one as a spare), two two-inch ducts for fiber, and one two-inch duct for a ground wire (refer to **Figure 3-9**). The minimum depth for the top of the duct bank would be approximately three feet, with the top of the duct bank typically varying between approximately three to 10 feet beneath the surface. The typical width for the underground duct bank would be approximately 2.5 feet. The trench excavation width would typically vary between three to four feet, based on shoring requirements. A duct bank would generally be used everywhere, except where trenchless crossings are required. Underground splice vaults would be located approximately every 1,500 to 3,000 feet with dimensions of approximately 30 feet long, 10 feet wide, and 10 feet tall. The bottom of the splice vaults would typically be located approximately 12 feet below ground level. Splice vaults would be sited during detailed engineering design based on gathered utility data and cable supplier specifications. As practical, splice vaults would be sited to avoid interfering with existing access points and intersections to minimize disruptions to the public during construction and O&M. The proposed overhead Baylands to NRS 230 kV transmission line would utilize a single 230 kV 1351.5 kcmil ACSS/TW "Martin" conductor per phase. The proposed underground Baylands to NRS 230 kV transmission line would utilize a single 230 kV 2,500 mm² copper single core XLPE cable per phase. Each cable would be composed of a copper conductor, conductor binder and screen, XLPE insulation, insulation screen, water barrier, metallic sheath, and an outer jacket.

Depending on site conditions, existing utilities, and rating requirements, the Baylands to NRS 230 kV transmission line jack-and-bore crossings would either require one 48-inch casing pipe or three 18-inch casing pipes. The jack-and-bore crossings requiring one 48-inch casing pipe would include four 8-inch ducts with three ducts for the cables and one for a spare; three 4-inch ducts with two for fiber optic cables and one for a grounding cable; a wheel assembly with spacers to keep the ducts properly spaced within the casing; and a bentonite slurry fill. The jack-and-bore crossings requiring three 18-inch casing pipes would be spaced up to 15 feet apart and each casing would include two 8-inch ducts one for the cable and one for a spare; one 2-inch duct fiber optic cables or a grounding cable; a wheel assembly with spacers to keep the ducts properly spaced within the casing; and a bentonite slurry fill. **Figure 3-13** depicts the typical jack-and-bore operation, components, and dimensions. Typical work areas for jack-and-bore crossings are discussed further in **Section 3.5.3.1**, and the jack-and-bore technique is also further discussed in **Section 3.5.6.2**.

HDD crossings would include three ten-inch ducts, with two ducts for the installed cable and one duct as a spare, and two four-inch ducts for the fiber optic cables. The ducts would either be pulled through the unreinforced bore hole, or an approximately 30-inch casing pipe would be installed. If a casing pipe is used, the ducts would be pulled through the casing and the remaining space backfilled with a thermal grout. **Figure 3-14** depicts the typical HDD operation, components, and dimensions. Typical work areas for HDD crossings are discussed further in **Section 3.5.3.1**, and the HDD technique is also further discussed in **Section 3.5.6.2**.

The proposed Baylands to NRS 230 kV transmission line would enter the existing NRS substation underground and transition aboveground at a steel substation termination/riser structure. The new 230 kV AC termination/riser structures would be approximately 25 feet tall and would have drilled pier foundations. **Figure 3-11** provides details and typical metrics for the proposed 230 kV AC termination/riser structures.

Transmission Line Avian Protection Design

Appropriate methods to reduce the risks of avian collisions would be incorporated into Proposed Project design, consistent with the Avian Power Line Interaction Committee (APLIC) recommendations (APLIC, 2012), where appropriate. Conductors and ground wires would be spaced sufficiently apart so that raptors cannot contact two conductors or one conductor and a ground wire, causing electrocution (APLIC, 2006).

3.3.4.3 Access Roads

The existing and primary access to the Proposed Project locations for both construction and O&M would be from existing public roads.

Transmission Lines

The proposed underground transmission line segments would be almost exclusively within existing roads. Construction and operation access to these underground transmission lines would be via the roads where the transmission lines are located. One new access road would be required to construct a small portion of the proposed Baylands to NRS 230 kV transmission line on State-owned land east of the Guadalupe River. An approximately 500-foot access road would be constructed along the underground portion of the line to AC-3, one of the two overhead structures for the Guadalupe River crossing. The road would be approximately 20 feet wide and would be constructed utilizing crushed rock. No additional new or improved access roads would be required.

Access to the overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would be on existing private access roads within the San José-Santa Clara RWF. These roads, shown on **Figure 3-3** and pages 5 through 7 on **Figure 3-4**, range from approximately 15 to 70 feet wide and are a combination of paved and unpaved, but they are regularly maintained. No improvements to these roads are anticipated as part of the Proposed Project. Additional details are provided in **Section 3.5.1.1**, *Existing Access Roads*.

Albrae Terminal

The existing and primary access to the proposed Albrae terminal for both construction and O&M would be from Weber Road via Boyce Road. Boyce Road is an existing four-lane minor arterial road, and Weber Road is an existing two-lane road owned by PG&E, approximately 22 feet wide. No improvements are expected to be required along Weber Road and Boyce Road.

A new access road for the proposed Albrae terminal would be constructed from Weber Road to provide ingress/egress to the site; the access road would be approximately 20 feet wide and approximately 50 feet long. Construction of this access road would include grading and rocking per the final Proposed Project design. The proposed Albrae terminal would not include dedicated permanent internal access roads. Rather, the entire new Albrae terminal facility would be capped with crushed rock to provide access within and around the facility footprint. A new permanent gate would be installed at the proposed Albrae terminal driveway along the perimeter wall that would align with the proposed Albrae terminal access road. Additional details are provided in **Section 3.5.1.2**, *New Access Roads*.

Baylands Terminal

The existing and primary access to the proposed Baylands terminal for both construction and O&M would be from Los Esteros Road via Zanker Road. Zanker Road and Los Esteros Road are existing public, paved two-lane collector divided roads, approximately 26 feet wide. No improvements are expected to be required along Zanker Road and Los Esteros Road.

A new access road for the proposed Baylands terminal would be constructed from Los Esteros Road and would be approximately 20 feet wide and approximately 1,000 feet long. Construction of this access road would include grading and rocking per the final Proposed Project design. The proposed Baylands terminal would not include dedicated permanent internal access roads. Rather, the entire proposed Baylands terminal facility would be capped with crushed rock to provide access within and around the facility footprint. A permanent gate would be installed at the new Baylands terminal driveway along the perimeter wall that would align with the internal access road. Additional details are provided in **Section 3.5.1.2**.

3.3.5 OTHER POTENTIALLY REQUIRED FACILITIES

PG&E Substation Modifications

The new Albrae terminal would be interconnected with the existing PG&E Newark substation via the new approximately 0.4-mile-long overhead and underground Newark to Albrae 230 kV transmission line. The majority of the 0.4-mile overhead and underground line would be located on PG&E-owned property. LS Power would construct an approximately 0.2-mile underground line that would transition aboveground to an LS Power-owned transition structure on the east side of Weber Road. PG&E would extend the conductor from the LS Power-owned transition structure to a 0.2-mile two-structure overhead transmission line that would be constructed and owned by PG&E. PG&E would extend the conductor from their last overhead structure to the new Newark 230 kV bus position within the existing Newark substation. The point of ownership demarcation for the conductor would be at a transition structure to be owned by LS Power. PG&E would be responsible for bringing in the new circuit from that point to the termination within the existing Newark substation, the final configuration of which would be established through a Transmission Interconnection Agreement (TIA) with PG&E.

One open 230 kV bay at PG&E's existing Newark substation (refer to **Figure 3-4**) would be modified to accommodate interconnection of the Proposed Project. To accommodate the proposed Newark to Albrae 230 kV transmission line, PG&E would be responsible for installing a new transmission line segment from the Newark 230 kV bus up to the above-described point of ownership demarcation. Additional substation modifications include installation of new circuit breakers, disconnect switches, capacitive voltage transformers, a new dead-end structure, and typical substation equipment, such as structural steel, bus work, conduits, and grounds.

SVP Substation Modifications

LS Power's scope for the new 230 kV connection to the existing SVP NRS substation is proposed to cease at the SVP dead-end within the NRS property line. SVP would be responsible for bringing the new circuit from this point to the terminations, the final configuration of which would be established in the TIA with SVP.

LS Power would bring the proposed Baylands to NRS 230 kV transmission line into the existing NRS substation underground to a transition structure to be owned by LS Power within the NRS substation. SVP would be responsible for installing a new gantry (dead-end) structure within the existing NRS substation, as well as CAISO metering. SVP would also be responsible for installing the new transmission line segment to the new dead-end structure and would install the jumpers between the two line terminations and through the CAISO meters. The new dead-end structure would be owned by SVP.

Preliminarily, the required SVP substation modifications, needed due to the increased load being served, include new line positions, transformer positions, installation of two new 230/115 kV transformers, working in parallel with one existing 230/115 kV transformer.

Aerial Marking and Lighting

The addition of aviation lighting and/or marking (i.e., marker balls) is not anticipated for the Proposed Project.

3.3.6 FUTURE EXPANSIONS AND EQUIPMENT LIFESPANS

There are currently no definitive plans for future expansion of the Proposed Project. CAISO's Appendix G: Description and Functional Specifications for Transmission Facilities Eligible for Competitive Solicitation in the Board Approved 2021-2022 Transmission Plan ("Functional Specification") conceptualizes certain future transmission upgrades that may follow the Proposed Project (CAISO, 2022). Specifically, the Functional Specification describes an ultimate HVDC development plan which would create a new HVDC link between the Proposed Project's Albrae terminal and a new HVDC terminal currently under development in the vicinity of the Metcalf 500/230/115 kV substation (part of the Power Santa Clara Valley Project), as well as a new 230 kV AC transmission line from the Baylands terminal to the existing PG&E Los Esteros 230 kV substation. At this time, CAISO has not definitively committed to approving the conceptualized ultimate HVDC development plan nor indicated the timing for its approval or the project's execution. If the CAISO Board were to approve such a plan in a future transmission planning process and LS Power were to be selected as the approved project sponsor, LS Power would seek CEQA review and a Certificate of Public Convenience and Necessity (CPCN) for the ultimate HVDC development plan project, independent of this proceeding.

However, the Functional Specification provides that the Proposed Project should satisfy certain requirements to facilitate the ultimate HVDC development plan. These requirements would include providing adequate space at the proposed Albrae terminal site for the ultimate HVDC development plan, ensuring the proposed Albrae terminal can be made to operate in a multi-terminal configuration, and providing an additional bay in the Baylands 230 kV switchyard for the new 230 kV AC connection from the proposed Baylands terminal to the existing Los Esteros substation. As presented herein, the Proposed Project satisfies these requirements.

The Proposed Project would resolve several reliability concerns, including multiple near-term and long-term overloads in the San José area 115 kV transmission system. The Proposed Project would provide voltage support to the existing PG&E and SVP transmission system and could potentially obviate additional voltage support upgrades elsewhere. The expected usable life of the proposed Albrae and Baylands terminals is expected to exceed 40 years, and the expected life of the transmission lines is expected to exceed 50 years.

3.3.7 BELOWGROUND CONDUCTOR/CABLE INSTALLATIONS

The Proposed Project would include construction of a new Newark to Albrae 230 kV transmission line utilizing a combination of underground and overhead configurations, a new Albrae to Baylands 320 kV DC transmission line utilizing a combination of underground and overhead configurations, and a new Baylands to NRS 230 kV transmission line primarily located in an underground configuration. The underground segment of the proposed Newark to Albrae 230 kV transmission line would include two 2,500 mm² copper 230 kV single core XLPE cables per phase, each composed of a copper conductor, conductor binder and screen, XLPE insulation, insulation screen, water barrier, metallic sheath, and an outer jacket. The underground segments of the proposed Albrae to Baylands 320 kV DC transmission line would include one 2,500 mm² copper 230 kV single core XLPE cable per pole, each composed of a copper conductor, conductor binder and screen, XLPE insulation, insulation screen, water barrier, metallic sheath, and an outer jacket. The underground segments of the proposed Baylands to NRS 230 kV transmission line would include a single 2,500 mm² copper 230 kV single core XLPE cable per phase, each composed of a copper conductor, conductor binder and screen, XLPE insulation, insulation screen, water barrier, metallic sheath, and an outer jacket.

The minimum depth for the top of the underground transmission line duct bank would be approximately three feet, with the top of the duct bank typically varying between approximately three to 10 feet beneath the surface (refer to **Figure 3-9**). Splice vaults would generally be installed along the underground transmission line alignments approximately every 1,500 to 3,000 feet to facilitate installation of the underground cables and would extend approximately 12 feet deep (refer to **Figure 3-10**). The underground portion of the new Albrae to Baylands 320 kV DC transmission line would require approximately 20 vaults. The underground portions of the new Baylands to NRS 230 kV transmission line would require approximately 10 vaults.

Once the duct bank conduit is installed, the trench would be backfilled around the conduits with flowable thermal concrete to form the duct bank encasement. Additional fluidized backfill would be utilized to fill most of the remainder of the trench. When located within roads, a road base backfill, flowable backfill, or slurry concrete cap would be installed, and the road surface would be restored in compliance with local requirements.

3.3.8 ELECTRIC SUBSTATIONS AND SWITCHING STATIONS

As described above, the Proposed Project includes the construction of two new HVDC terminals (Albrae and Baylands) as well as modifications to two existing PG&E and SVP substations (Newark and NRS, respectively). The two new HVDC terminals would each contain converter transformers, including space for an on-site spare, and two distribution transformers, as well as GIS equipment. Both proposed HVDC terminal facilities would include an HVDC control and equipment enclosure as well as a GIS control and equipment enclosure. Protective relaying and control equipment as well as supervisory control and data acquisition (SCADA) equipment would be located in the equipment enclosure. Additionally, each HVDC control and equipment enclosure would have space allocated for spare parts and maintenance tool storage on-site. Larger spare parts would be stored within the terminal site. Both HVDC terminals would include SF₆ gas-insulated circuit breakers, associated bus, disconnect switches, current transformers, voltage transformers, and other associated GIS equipment. The proposed HVDC facilities would be remotely operated with no permanent workforce on-site. Additional O&M procedures are described in **Section 3.8, Operation and Maintenance**, below.

3.3.9 TELECOMMUNICATION LINES

The Proposed Project includes telecommunications infrastructure that would connect the new HVDC terminals to each other, connect the new HVDC terminals to the existing PG&E and SVP substations, and connect each proposed HVDC terminal to local existing third-party internet providers. It is anticipated that these telecommunication lines would all be co-located with the transmission lines, and no separate overhead lines or wireless connections (e.g., antennas) would be included. Two underground telecommunication paths would be installed along the proposed transmission lines to provide redundant communication paths. An additional telecommunication connection would be made at each new HVDC terminal location, connecting to existing third-party internet service providers. Each telecommunication path would consist of fiber optic cables.

In underground segments, the two co-located telecommunication lines would typically be housed in two two-inch diameter polyvinyl chloride (PVC) conduits, which would be directly buried in the trench duct bank package (refer to **Figure 3-9**). Typical depth of the telecommunications lines is four to ten feet below ground surface. For the telecommunication lines in the transmission line duct bank, fiber splices would be contained within separate underground fiber splice vaults or at the substation termination structures, and fiber splices would not be located within the proposed transmission line splice vaults.

In aboveground locations, telecommunication lines would be attached to overhead structures as OPGW. The overhead OPGW would be installed in a similar manner to the conductor. The splice between two reels of OPGW would be contained within a splice box mounted on a tubular structure.

The local third-party internet connections for the proposed HVDC terminal sites are anticipated to also be located underground and connect to existing telecommunication lines located adjacent to the proposed HVDC terminal sites.

3.4 LAND OWNERSHIP, RIGHTS-OF-WAY, AND EASEMENTS

Land entitlement issues are not part of this regulatory proceeding, in which the CPUC is considering whether to grant or deny LS Power's application for a CPCN to construct new electrical facilities. Rather, any land rights issues would be resolved in subsequent negotiations and/or condemnation proceedings in the proper jurisdiction, following the decision by the CPUC on LS Power's application (see, for example, Jefferson-Martin 230 kV Transmission Project, A.02-04-043, D.04-08-046, p. 85).

3.4.1 LAND OWNERSHIP

3.4.1.1 LS Power Facilities

The parcel associated with the proposed Albrae terminal is under private ownership and the parcel associated with the proposed Baylands terminal is under municipal ownership. These parcels of land are adequate to accommodate all considerations of the Proposed Project, including site grading, fencing, staging areas, equipment, internal circulation, spill and stormwater management, and other operational considerations, as described below (see **Section 3.4.2, Existing Rights-of-Way or Easements**).

The parcel where the proposed Albrae terminal facility would be constructed (APN 531-165-9-4) is under private ownership. Prior to construction, for the proposed Albrae terminal, LS Power would secure up to 6.1 acres of an approximately 25.3-acre parcel of land. This area is adequate to accommodate the proposed Albrae terminal facility, including all considerations for site grading, fencing, staging areas, equipment, internal circulation, spill and stormwater management, and other operational considerations.

The proposed Baylands terminal facility is planned to be located within the San José-Santa Clara RWF property (APN-015-30-109) that is owned by the City of San José. The City of San José has agreed to work with LS Power to negotiate long-term ground leases for this space. LS Power would negotiate a lease for approximately 9.2 acres of APN 015-30-109. This area is adequate to accommodate the proposed Baylands terminal facility, including all considerations for site grading, fencing, staging areas, equipment, internal circulation, spill and stormwater management, and other operational considerations.

The Proposed Project would require a right-of-way (ROW) and an easement from private landowners for transmission lines (see **Section 3.4.3, *New or Modified Rights-of-Way or Easements***, below). LS Power would have to negotiate an easement with four private landowners for the transmission lines. LS Power would also obtain real estate rights from municipal-, state-, and regional agency-owned lands for the transmission lines including the following:

- Alameda County Flood Control;
- City of Fremont;
- City of San José;
- City of Santa Clara;
- Santa Clara Valley Water District (SCVWD or “Valley Water”);
- Santa Clara Valley Transportation Authority (VTA);
- California State Lands Commission;
- California Department of Transportation (“Caltrans”);
- PG&E; and
- SVP

Finally, LS Power would secure crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure crossed by the Proposed Project.

3.4.1.2 PG&E Facilities

PG&E owns the parcel the existing Newark substation is located on.

3.4.1.3 SVP Facilities

The City of Santa Clara owns the parcel the existing NRS substation is located on.

3.4.2 EXISTING RIGHTS-OF-WAY OR EASEMENTS

3.4.2.1 LS Power Facilities

LS Power does not have any existing ROWs or easements within the Proposed Project area.

3.4.2.2 PG&E Facilities

PG&E's existing transmission, power, and distribution lines connecting to the Newark substation are located within existing ROWs or easements, of varying size and width. All substation modifications to be carried out by PG&E would be limited to existing utility-owned property (i.e., existing substation properties).

3.4.2.3 SVP Facilities

SVP's existing transmission, power, and distribution lines connecting to the NRS substation are located within existing ROWs or easements, of varying size and width. All substation modifications to be carried out by SVP would be limited to existing utility-owned property (i.e., existing substation properties).

3.4.3 NEW OR MODIFIED RIGHTS-OF-WAY OR EASEMENTS

3.4.3.1 LS Power Facilities

LS Power is in the process of acquiring rights to the two parcels of land proposed for development of the two new HVDC terminals. The proposed HVDC terminals would be sited on land owned or leased by LS Power and would not require a new or modified ROW or easement. The proposed Albrae terminal is located in the General Industrial ("I-G") District in the City of Fremont. Within the I-G district, building heights are restricted to 75 feet, and setbacks from front yards and side streets is 15 feet. The HVDC converter enclosure would be less than 75 feet tall, and the appropriate setbacks would be met. The proposed Baylands terminal is located in the Single-Family Residence ("R-1") District in the City of San José. Building heights are restricted to 35 feet, and setbacks range from five to 20 feet in the R-1 district. The proposed Baylands terminal would exceed the height restrictions set forth by the City. However, the Proposed Project would be consistent with typical terminal building heights and would be consistent with CPUC regulations pursuant to CPUC General Order (GO) 131-D, Section XIV.B.

The proposed Newark to Albrae 230 kV transmission line, Albrae to Baylands 320 kV DC transmission line, and Baylands to NRS 230 kV transmission lines, duct banks, and splice boxes would require new ROWs/easements or franchise agreements.

The Albrae to Baylands 320 kV DC transmission line overhead alignment would require a ROW width of 130 feet, and the underground alignment would generally require a ROW of approximately 15 feet. Within the City of San José, transmission structure heights are limited to 150 feet in areas with non-residential or non-urban land use designations. All proposed structures would be less than 150 feet.

The overhead portion of the proposed Baylands to NRS 230 kV transmission line would require a ROW width of 110 feet, and the ROW width for the underground transmission is generally approximately 15 feet. Within the City of San José, transmission structure heights are limited to

150 feet in areas with non-residential or non-urban land use designations. All proposed structures would be less than 150 feet.

The ROW for all underground portions of the proposed Newark to Albrae 230 kV transmission line, Albrae to Baylands 320 kV DC transmission line, and Baylands to NRS 230 kV transmission line would be expanded at vault locations. The specific width of necessary easements, ROWs, or franchise agreements along the Proposed Project transmission line alignments would be refined during the final engineering process. The Proposed Project is anticipated to require a total of approximately 38 acres of new ROW, easement, or franchise agreement.

A portion of the new permanent easement/ROWs would be acquired by LS Power through negotiations with private landowners, SVP, PG&E, and municipal-, state-, and regional agency-owned lands discussed in above in **Section 3.4.1**. New permanent ROWs or licenses would also be acquired from each applicable public agency through that agency's designated process. LS Power would negotiate required franchise agreements with Alameda County Flood Control, the City of Fremont, City of San José, City of Santa Clara, SCVWD, VTA, the California State Lands Commission, Caltrans, PG&E, and SVP. The total number of land rights to be acquired would be finalized during final engineering. LS Power would also have the power of eminent domain to acquire any necessary land rights for construction of the Proposed Project.

Construction of the proposed transmission lines or HVDC terminal units would not require the relocation or demolition of any commercial or residential properties or structures.

3.4.3.2 PG&E Facilities

PG&E owns the parcel the existing Newark substation is located on, and no additional ROWs or easements would be required.

3.4.3.3 SVP Facilities

The City of Santa Clara owns the parcel the existing NRS substation is located on, and no additional ROWs or easements would be required.

3.4.4 TEMPORARY RIGHTS-OF-WAYS OR EASEMENTS

Temporary easements would be required for the Proposed Project's construction staging areas. **Figure 3-4** highlights the staging areas being considered for the Proposed Project. The majority of the staging areas would be accessed through public street ROWs. There is one potential staging area that would require access beyond public street ROW. If this staging area is utilized, LS Power would include temporary access in the temporary easement agreement. Temporary rights necessary for the installation of the proposed underground transmission lines would be included in the necessary ROW easement/franchise agreements. LS Power has already begun discussions with the private landowners on temporary construction easements.

3.5 CONSTRUCTION

This section includes an overview of the typical methods that would be used for construction of the Proposed Project, including the two proposed HVDC terminals, overhead and underground facilities, existing substation modifications, new access roads, construction equipment, and temporary work areas.

3.5.1 CONSTRUCTION ACCESS

3.5.1.1 Existing Access Roads

Existing access roads for the Proposed Project provide access to the overhead portion of the Albrae to Baylands 320 kV DC transmission line and are shown on pages 5 through 7 of **Figure 3-4**. As shown in **Figure 3-4**, the existing access road begins at the southern boundary of Staging Area 4, off McCarthy Boulevard, at the location of overhead structure DC-1 and ends at Zanker Road. The approximate existing access road metrics are provided in **Table 3-2, Existing Access Roads**.

Name of Road	Type of Road/Improvement	Dimensions	Disturbance Area
N/A – Albrae to Baylands Existing Access Road	Existing paved and unpaved access road. No improvements anticipated.	Average of 25 feet wide, 3.8 miles long (20,064 feet)	Approximately 11.5 acres

HVDC Terminal Sites Access

The existing and primary access to the proposed Albrae terminal site for both construction and O&M would be from Weber Road. Weber Road is an existing two-lane, approximately 30-foot-wide, private, paved road that turns into a two-lane, approximately 22-foot wide, paved road outside of the PG&E facility and the existing Newark substation. Access to Weber Road is from Boyce Road. No improvements are expected to be required along Weber Road or Boyce Road. However, upgrading the paved turning apron may be required at the entry into the proposed Albrae terminal (refer to **Figure 3-7a**).

The existing and primary access to the proposed Baylands terminal site for both construction and O&M would be from Los Esteros Road. Los Esteros Road is an existing two-lane, approximately 23 feet wide, public, paved road providing access to the site via Zanker Road from SR-237. No improvements are expected to be required to Los Esteros Road or Zanker Road for the proposed access to the proposed Baylands terminal site. However, upgrading the paved turning apron may be required (refer to **Figure 3-7b**).

Transmission Line Access

The Proposed Project includes underground transmission lines that are sited almost exclusively within existing public roads. Therefore, the roads where the Proposed Project is located and adjoining roads would be utilized for construction and operations access.

As discussed above, access for the overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would be obtained mainly through utilization of the existing access road network on the San José-Santa Clara RWF. These existing access roads are paved and unpaved and vary in length and width. The San José-Santa Clara RWF access road network is connected on one end to Zanker Road (to the west) and to McCarthy Boulevard on the east.

Refer to **Table 3-2, Figures 3-3 and 3-4**, as well as **Section 5.17, Transportation** for listings and descriptions of the roads that would be utilized for transmission line access.

Existing Substation Site Access

Access to the existing Newark substation is from Weber Road and Nobel Drive via Auto Mall Parkway (refer to **Figure 3-4** and **3-7**). Access to the existing NRS substation is from Lafayette Street (refer to **Figure 3-4** and **3-7**).

Incidental Road Damage

No incidental road damage is anticipated to result from Proposed Project operational activities. As discussed above, the Proposed Project would be primarily accessed through paved public roadways. LS Power would work with the appropriate department of transportation or applicable agency to identify any incidental road damage caused by construction and an appropriate way to restore roads damaged by the Proposed Project to preconstruction conditions (refer to **APM TRA-3, Repair Infrastructure**). LS Power would also comply with all permit conditions (e.g., encroachment permits), as required, related to roadway usage and repair. Anticipated potentially required permits and approvals are discussed in **Section 3.10, Anticipated Permits and Approvals**.

3.5.1.2 New Access Roads

The Proposed Project includes three new permanent access roads, two of which would provide access to each proposed HVDC terminal (Albrae and Baylands) during construction and O&M and one that would provide access to the new Baylands to NRS 230 kV transmission line overhead structure AC-3 during construction and O&M. The new access road at the proposed Albrae terminal site would be approximately 20 feet wide and approximately 50 feet long, and the new access road at the proposed Baylands terminal would be approximately 1,000 feet long. Construction of these proposed terminal access roads would include grading and rocking or paving per the final Proposed Project design. Permanent gates would be installed at both proposed HVDC terminal driveways along the perimeter wall at the newly constructed site entrance. The proposed HVDC terminals would not include dedicated permanent internal access roads. Rather, the entire proposed terminal facilities would be capped with crushed rock to provide access within and around the facility footprint. The new access roads are depicted in **Figures 3-4** and **3-7**. In addition, one new access road would be required at the new Baylands to NRS 230 kV transmission line overhead structure AC-3. The new access road would be constructed adjacent to the new Baylands to NRS 230 kV transmission line underground alignment. **Table 3-3, New Access Roads** provides additional access road details.

Name of Road	Type of Road/Improvement	Approximate Dimensions	Approximate Disturbance Area
Albrae Terminal Access Road	New access road, graded and topped with rock (e.g., class II base or similar)	50 feet long 20 feet wide	0.02 acre
Baylands Terminal Access Road	New access road, graded and topped with rock (e.g., class II base or similar)	1,000 feet long 20 feet wide	0.46 acre
Access Road to AC-3	New access road, graded and topped with rock (e.g., class II base or similar)	500 feet long 20 feet wide	0.24 acre

3.5.1.3 Overland and Temporary Access Routes

One overland access route would be required during construction and O&M for the new Newark to Albrae 230 kV transmission line overhead structure AC-1. The new overland access route would be approximately 20 feet wide and 750 feet long located on PG&E-owned property outside of the existing Newark substation.

3.5.1.4 Watercourse Crossings

The Proposed Project includes nine watercourse crossings, most of which occur along the proposed Albrae to Baylands 320 kV DC transmission line underground alignment (refer to **Figure 3-4**). At these crossings, HDD construction techniques would be employed, including along the following waterways:

- Coyote Creek near 4275 Cushing Parkway;
- Agua Caliente Creek near 46333 Fremont Boulevard;
- A creek offshoot of Coyote Creek that intercepts Fremont Boulevard near 46560 Fremont Boulevard;
- Coyote Creek Lagoon offshoot of Coyote Creek that intercepts Fremont Boulevard near 48401 Fremont Boulevard;
- A wetland just south of the Coyote Creek Lagoon crossing near 48700 Fremont Boulevard;
- Coyote Creek just north of San José-Santa Clara RWF lands near 1601 Dixon Landing Road; and
- Grand Boulevard, near the intersection with Spreckles Avenue and Los Esteros Road, approximately 3,400 feet northwest of the proposed Baylands terminal.

In addition, there is an overhead crossing of the Guadalupe River along the proposed Baylands to NRS 230 kV transmission line route located adjacent to SR-237 and another crossing underneath or adjacent to the Cushing Parkway bridge that crosses the Don Edwards San Francisco Bay National Wildlife Refuge.

3.5.1.5 Helicopter Access

A light-duty helicopter is anticipated to be required to string the overhead transmission line conductor. A helicopter is anticipated to be used during conductor stringing operations for the proposed Albrae to Baylands 320 kV DC transmission line and Baylands to NRS 230 kV transmission line. The helicopter is not anticipated to be used to transport heavy materials over or within areas of development. During conductor stringing operations, helicopter takeoff and landing areas may include nearby staging areas, such as Staging Areas 6, 7, or 8. The helicopter may temporarily land on existing or proposed access roads as needed. It is also anticipated that local airfields would be utilized for takeoff and landing, fueling, maintenance, and long-term helicopter parking. Fueling would occur at local airfields and would be in compliance with applicable rules and regulations. No fueling is anticipated to take place on Proposed Project ROWs or staging areas. The conductor stringing operations that would utilize the helicopter would be completed in no more than a week. A Congested Area Plan would not be required. Proposed Project helicopter usage would comply with applicable rules and regulations. As necessary, LS Power would develop a Helicopter Plan to set forth all safety and operations procedures.

3.5.2 STAGING AREAS

3.5.2.1 Staging Area Locations

The Proposed Project includes 11 potential temporary construction staging areas located along the Proposed Project alignment, resulting in a total area of approximately 117 acres. This does not include proposed staging that would occur at each new HVDC terminal site. LS Power anticipates utilizing approximately four to six staging areas during construction, including the proposed HVDC terminal sites. The 11 staging area sites have been included because site availability during the construction window years in the future is uncertain at this stage. In addition, limited construction staging and equipment parking may occur on City streets along the underground transmission line alignment, where approved by the local agency (e.g., the Cities of San José, Santa Clara, and Fremont). This is a common practice during construction projects within or along public roadways. The final staging areas utilized would be based on site availability at the time of construction. The proposed potential staging area locations are depicted in **Figure 3-4** and are summarized in **Table 3-4, Staging Areas**.

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Table 3-4: Staging Areas		
No.	Location	Approximate Size (Acres)
1	Located off Boyce Road, approximately 0.2 mile northwest of the proposed Albrae terminal	5.4
2	Located off Boyce Road, approximately 0.3 mile southeast of the proposed Albrae terminal	7.8
3	Located off Fremont Boulevard, adjacent to the proposed Albrae to Baylands 320 kV DC transmission line alignment	3.1
4	Located off North McCarthy Boulevard, adjacent to the proposed Albrae to Baylands 320 kV DC transmission line alignment	2.6
5	Located off North McCarthy Boulevard, adjacent to the proposed Albrae to Baylands 320 kV DC transmission line alignment	1.8
6	Located off Los Esteros Road, approximately 0.3 mile northeast of the proposed Baylands terminal	16.7
7	Located off Zanker Road, approximately 0.6 mile southeast of the proposed Baylands terminal	51.6
8	Located off Los Esteros Road, adjacent to the proposed Baylands terminal and adjacent to the proposed Albrae to Baylands 320 kV DC transmission line alignment	6.8
9	Located off First Street, west of the intersection of Tony P. Santos Way and First Street, approximately 0.2 mile northwest of the proposed Baylands to NRS 230 kV transmission line alignment	3.4
10	Located off First Street, adjacent to the proposed Baylands to NRS 230 kV transmission line alignment	12.0
11	Located off Nortech Court, adjacent to the proposed Baylands to NRS 230 kV transmission line alignment	6.0
TOTAL		117.1

3.5.2.2 Staging Area Preparation

Preparation of the staging areas would involve clearing, grubbing, and limited grading, as needed, to establish a level working surface. Where staging areas would be located on existing paved areas, such as Staging Area 11, site preparation would not be required. Staging areas may be used as a refueling area for vehicles and construction equipment; as an equipment wash station; for assemblage; for storage of material and equipment, storage containers, construction trailers, and portable restrooms; and for parking and lighting. Transmission line and HVDC terminal equipment required for the Proposed Project, such as conduit, cables, HVDC equipment, GIS equipment, riser structures, bus, cable trench, rebar, etc., would be received and temporarily stored at a staging area prior to installation.

Helicopter takeoff and landing areas may include nearby staging areas, such as Staging Areas 6, 7, or 8, during conductor stringing operations. The helicopter may temporarily land on existing or proposed access roads as needed. It is anticipated that local airfields would be utilized for takeoff and landing, fueling, maintenance, and long-term helicopter parking.

Construction workers would typically meet at the staging areas each morning and park their vehicles. All construction equipment and vehicles associated with the Proposed Project construction would typically be parked within one of the staging areas while inactive.

Gravel may be used to line the ground at the staging areas to avoid the creation of unsafe surface conditions and unnecessary sediment transport off-site. Perimeter security fencing would be

installed around the outer limits of the staging areas. Lighting would also be installed for security purposes and would be shielded to direct light downward and away from any nearby sensitive receptors. Temporary construction power would be provided via existing distribution line(s) near the Proposed Project staging areas. Temporary generators would be a contingency if distribution power is unavailable.

3.5.3 CONSTRUCTION WORK AREAS

All Proposed Project components would require construction work areas, and some Proposed Project components would require permanent work areas for the life of the Proposed Project. All construction work areas (i.e., limits of construction) are depicted in **Figure 3-4**. Each component of the Proposed Project's construction (temporary) and O&M (permanent) work is described below and summarized in **Table 3-5, Work Area Disturbance Summary**. A detailed description of the work to be performed in the identified work areas is provided in **Section 3.5.4, Site Preparation**; **Section 3.5.5, Transmission Line Construction (Aboveground)**; **Section 3.5.6, Transmission Line Construction (Belowground)**; and **Section 3.5.7, Substations, Switching Stations, and Gas Compressor Stations**.

3.5.3.1 Construction Work Areas

General HVDC Terminal Site Staging

It is anticipated that all major electrical and terminal equipment for both the proposed Albrae and Baylands terminals, such as the converter transformers, would be delivered to the proposed HVDC terminal site and placed directly on previously constructed foundations. Other terminal equipment, such as HVDC equipment, riser structures, bus, conduit, cable trench, rebar, etc., would be received and temporarily stored at a staging area prior to installation. All construction equipment and vehicles associated with proposed HVDC terminal construction would be parked within a staging area while inactive and at the completion of each workday, where practical.

Albrae Terminal

As discussed in **Section 3.5.2, Staging Areas**, the Proposed Project would utilize the proposed Albrae terminal site for construction staging. The construction of the proposed Albrae terminal would require grading, fill, and the installation of chain-link fencing that would extend beyond the proposed permanent impact area and around the outer limits of the staging area (property). The permanent footprint of the proposed Albrae terminal is approximately 6.1 acres, and the uplands in the remaining approximately 19.2 acres of the site may be temporarily impacted by construction staging and work area utilized for construction of the proposed Albrae terminal (refer to **Figure 3-7a**).

Baylands Terminal

As discussed in **Section 3.5.2**, the Proposed Project would utilize the proposed Baylands terminal site for construction staging. The construction of the proposed Baylands terminal would require grading, fill, and the installation of chain-link fencing that would extend beyond the proposed permanent impact area and around the outer limits of the staging area. In addition, work areas would be needed around the perimeter of the proposed Baylands terminal facility to facilitate construction and access. The permanent footprint of the proposed Baylands terminal and

permanent access road is approximately 9.2 acres which would be the entirety of the site (refer to **Figure 3-7b**).

Transmission Lines

For underground segments, the Proposed Project's transmission line installation work areas would be located either in existing roadways or within proposed HVDC terminal sites (refer to **Figures 3-4, 3-7a, and 3-7b**). Work areas for the portions of transmission lines within proposed HVDC terminal sites would be considered part of the proposed HVDC terminal work areas. The proposed underground transmission lines would be installed primarily within public roads. The exact location of the proposed underground transmission line alignment, including splice vaults, HDD pits, and jack-and-bore pits, are not known at this time; therefore, construction work area estimates include the entire area of the existing road ROW where the transmission lines would be installed. Final transmission line work areas would be much smaller than the estimates included herein. Typical work areas for transmission line components include, but are not limited to, the following:

- Jack-and-bore sending and receiving pits are typically approximately 15 feet by 50 feet.
- Jack-and-bore temporary workspace in line or adjacent to the pits is typically approximately 30 feet by 80 feet.
- HDD sending and receiving pits are typically approximately six feet by 20 feet.
- HDD pull back area for staging and fusion would typically begin at the receiving pit and be longer than the proposed HDD's entire length.
- Pulling and splicing sites can vary in size depending on site-specific conditions and requirements but are typically approximately 30 feet wide and up to 200 feet long.

During underground construction, typically two lanes of traffic would be shut down where construction would be taking place. This area would represent the temporary construction work area and would typically be 15 to 30 feet in width depending on site-specific road conditions and City-approved traffic control plans (TCPs). All additional underground construction activities would occur within this area.

Following installation of the proposed underground transmission line, the road surface would be restored to the original condition or as otherwise in compliance with local requirements. All underground transmission not installed in roads (e.g., parking lots or sidewalks) would be restored to the original condition or as otherwise agreed to with the respective landowners.

For the proposed overhead transmission line segments, work pads (for foundation drilling and pole erection) and stringing sites would be needed along the transmission line. Work pads would be required at each pole location and would be approximately 100 feet by 400 feet within the proposed transmission line ROW. Work pads would first be graded and built up as necessary, utilizing construction mats where required. Work pads would be constructed to include space for foundation drilling, which would require space to set up a drill rig, as well as allow for ingress and egress for dump trucks and concrete trucks. Additionally, work pads would include space for pole erection sites, which would include space for the assembly of the structures, and a crane and boom trucks necessary to set the structure.

Stringing sites would include space to set up the trucks with the tensioning equipment as well as the trailers with reels of conductor. Each of these stringing sites would require clearing an area of approximately 200 by 400 feet and generally would coincide with the work pads constructed for the structures.

The proposed transmission line construction process is further discussed below in **Section 3.5.5.1, Poles and Towers**.

Interconnections and Substation Modifications

PG&E Interconnections and Substation Modifications

The Proposed Project HVDC terminal and transmission line connecting to the existing PG&E Newark substation would not require the expansion of the existing site. All work activities for the overhead portion of the proposed Newark to Albrae 230 kV transmission line to be installed by PG&E would be conducted within PG&E-owned property. Modifications required within the existing Newark substation to allow for the interconnection of the proposed Albrae terminal to the PG&E system would occur within the existing Newark substation fence line. All staging areas for PG&E modifications would be located on existing PG&E-owned property.

SVP Interconnections and Substation Modifications

The Proposed Project HVDC terminal and transmission line connecting to the existing SVP NRS substation would not require the expansion of the existing site. All work activities would be conducted within the property's existing fence lines.

Other Work Areas

Before stringing overhead transmission lines, temporary guard structures would be installed as described in **Section 3.5.5.4, Guard Structures**.

3.5.3.2 Work Area Disturbance

Implementation of the Proposed Project would result in both temporary and permanent work area disturbance. **Table 3-5** provides estimated work area totals (including both temporary and permanent footprints) for each Proposed Project component.

Table 3-5: Work Area Disturbance Summary		
Work Area	Temporary or Permanent Disturbance	Disturbance Area (approximate metrics)
Staging Areas ¹	Temporary	117.1 acres ²
Albrae Terminal	Permanent	6.1 acres
Albrae Terminal	Temporary	19.3 acres
Baylands Terminal	Permanent	9.2 acres
Newark Substation Modifications	Permanent	0.5 acre
NRS Substation Modifications	Permanent	13.5 acres
Underground Transmission Lines ³	Temporary	88.6 acres
Overhead Transmission Lines	Temporary	14.7 acres
Overhead Transmission Lines ⁴	Permanent	0.3 acre
Total Temporary Work Area Disturbance ⁵	Temporary	239.7 acres
Total Permanent Work Area Disturbance	Permanent	29.6 acres
Notes: ¹ Does not include staging at terminal or substation locations. ² Total area of 11 potential staging areas is included herein. However, the Proposed Project would only utilize approximately four to six staging areas, not including the terminal and existing substation sites. Therefore, the actual total disturbance area for staging areas would be much less than the total area listed herein. ³ Includes work areas within and adjacent to roads where underground transmission lines would be installed. Transmission line work areas that occur within terminal site boundaries are accounted for within the terminal site work area totals. ⁴ Includes new permanent access road to new structure AC-3. ⁵ While permanent work areas, such as the HVDC terminals and substation modification areas, would also be used during construction, these areas are not included in the temporary impact areas. Each impact area is only counted once, as either permanent or temporary.		

Figure 3-4 identifies the temporary and permanent disturbance areas associated with the Proposed Project. In total, the Proposed Project would result in approximately 29.6 acres of permanent disturbance and approximately 239.7 acres of temporary disturbance to mainly previously disturbed land, roads, and a paved parking lot.

3.5.3.3 Temporary Power

LS Power plans to have connections to existing overhead or underground distribution lines near the Proposed Project for supply of construction power. A temporary distribution line would be installed overhead on wood poles or underground to provide temporary power to the staging areas and both proposed HVDC terminal sites during construction. The use of temporary generators at the proposed terminals and staging areas would be a contingency if distribution power is not available in a timely manner prior to construction commencing. Temporary generators would be required during construction of the proposed underground transmission lines. While the exact

location of temporary distribution lines is not yet-known, impacts from the temporary power would typically occur within existing road ROWs and the staging area boundaries.

3.5.4 SITE PREPARATION

3.5.4.1 Surveying and Staking

LS Power would survey and mark the centerline at line-of-sight intervals, at points of intersection (including offset stakes marking the edges of the access road ROW), and at all known overhead structure locations and known underground facilities. LS Power would also clearly mark environmentally sensitive areas (i.e., areas with sensitive biological, cultural, paleontological, or hydrological resources), where appropriate, to restrict construction activities and equipment from entering these areas.

3.5.4.2 Utilities

Prior to initiating construction, LS Power would contact Underground Service Alert (USA), also known as USA North 811, to identify underground utilities in the immediate area. Prior to excavating for proposed transmission line construction, LS Power would conduct exploratory excavations (i.e., potholing) in order to verify the locations of existing utility facilities in the ROW. It is anticipated that PG&E may need to reroute existing substation getaways at the existing Newark substation, including raising or lowering some existing transmission lines to provide space for the LS Power tie in at the existing Newark substation. It is also anticipated that SVP may need to reroute existing substation getaways at the existing NRS substation. In addition, as part of the Proposed Project construction, excavation and installation of the concrete-encased duct bank and associated splice vaults would require the relocation of certain third-party utilities in areas of conflict. In the event underground utilities are identified, LS Power would work with the owner of those utilities to determine if design changes can be made or if utility relocation is necessary. Utilities would be avoided where practicable, but some utilities would require relocation. Utilities that would require relocation may include sanitary sewer, stormwater, gas, water, electric, and telecommunication.

3.5.4.3 Vegetation Clearing

Construction and operation of the proposed Baylands terminal location would require the permanent clearing of approximately 8.6 acres of annual grassland. The proposed Albrae terminal site does not contain vegetation. Additionally, construction and operation of the new transmission line poles and structures would require the permanent clearing of approximately 0.03 acre of annual grassland. General construction (underground, overhead, and staging areas) would require the temporary clearing of approximately 81.5 acres of annual grassland, , and less than 0.01 acre of riparian vegetation. Vegetation removal would be completed utilizing mechanized removal equipment, such as a bulldozer, mower, or disc tractor, or by hand using chain saws. Vegetation removal would not occur outside of approved work areas.

3.5.4.4 Tree Trimming and Removal

The Proposed Project site would be cleared of trees and vegetation as discussed in the above section, specifically for the permanent facilities and to facilitate construction of those facilities. Based on preliminary design, approximately 24 trees would be removed (approximately 14 trees along the proposed Albrae to Baylands 320 kV DC transmission line and approximately 10 along

the proposed Baylands to NRS 230 kV transmission line) as a result of the Proposed Project. A majority of the trees are non-native landscaped trees, including conifers, Canary Island pine, sweet gum. Tree removals would occur in the vicinity of proposed overhead structures (e.g., DC-11 and AC-4) or along underground transmission lines where they enter or exit from substation and terminal sites, including the entrance to the NRS substation, Newark substation (along Weber Road), and the Baylands terminal.

If needed, tree removal would be completed utilizing mechanized removal equipment, such as a bulldozer or excavator, or by hand using chain saws. Tree removal would be limited as much as possible and would not occur outside of approved work areas.

Tree trimming as required pursuant to General Order (GO) 95-D would be performed as part of ongoing Proposed Project transmission line operation, if needed. Currently, no trees are present under the proposed overhead transmission line segments such that trimming would be required. Any tree removal or trimming performed under the Proposed Project would be conducted to facilitate the safe construction of the Proposed Project and to reduce the fire hazard associated with construction.

3.5.4.5 Work Area Stabilization

Temporary work areas, terminal sites, and substation upgrade areas, including drainage and detention basins and access roads, would be stabilized during construction with BMPs that would be outlined in the Proposed Project's Stormwater Pollution Prevention Plan (SWPPP), as discussed in more detail in **Section 5.10, Hydrology and Water Quality**. The SWPPP BMPs would remain in place and would be maintained until new vegetation is established or sites are otherwise stabilized.

3.5.4.6 Grading

Construction of the Proposed Project and associated improvements would require earthmoving activities at the two terminal sites. However, the proposed HVDC terminal sites were chosen with avoidance of major site grading in mind. While earthmoving activities would be required for the proposed terminal sites and underground transmission lines, this is unlikely to be considered a substantial grading activity. Encountering subsurface rock during construction of the proposed terminals is not anticipated. Proposed underground transmission line construction would result in cut and fill of material. Overhead line construction for the Proposed Project would result in the excavation of the structure foundations (approximately 15 foundations). Subsurface rock may be encountered during the overhead line foundation excavation. In addition, proposed underground transmission line construction would result in cut and fill of soil and fill material (see additional details in **Section 3.5.6**).

Grading, excavation, and material removal quantities anticipated for the Proposed Project based on current information are summarized in **Table 3-6, Proposed Project Grading, Excavation, and Material Removal Summary**.

Table 3-6: Proposed Project Grading, Excavation, and Material Removal Summary		
Grading Description	Approximate Quantity (Cubic Yards [CY])	Activity Description
Underground Transmission Cut	60,000	Trenching for installation of underground transmission duct banks and splice vaults. Also includes HDD and jack-and-bore pits.
Underground Transmission Fill	30,000	Backfill in and around underground duct back and splice vaults.
Overhead Transmission Cut	2,000	Excavation of structure foundations.
Overhead Transmission Fill	2,000	Backfill and concrete for structure foundations.
Albrae Terminal Cut	15,000	Grading and excavations at Albrae terminal site.
Albrae Terminal Fill	37,000	Grading at Albrae terminal site.
Baylands Terminal Cut	53,000	Grading and excavations at Baylands terminal site.
Baylands Terminal Fill	31,000	Grading at Baylands terminal site.
Total Cut	130,000	Total cut for Proposed Project.
Total Fill	100,000	Total fill for Proposed Project.
Notes: Cut and fill estimated quantities rounded to the nearest thousand CY.		

As a result of the proposed HVDC terminal site grading (e.g., cut and fill) and Proposed Project excavations (e.g., trenching, structure foundations, vaults), approximately 130,000 CY of material would be hauled off-site, stockpiled, or wasted, and approximately 100,000 CY would be imported on-site. In addition to general earthmoving quantities, approximately four to eight inches of surface gravel would be required to be imported and installed within the proposed Albrae and Baylands terminal sites. This material would be imported from a suitable, nearby aggregate source. All clean spoils excavated by the Proposed Project would be used on-site to balance cut and fill, as feasible. All spoils that are not useable and/or contaminated would be sent to a properly licensed landfill facility or other site for reuse. Recyclables would be taken to a licensed recycling facility, and all refuse would be taken to a landfill or another suitable facility.

Generally, grading and excavation would be accomplished in a phased approach. Earthwork activities (e.g., grading, excavation) would be completed such that the site meets the Proposed Project's design specifications and matches proposed grades. During earthwork, soils and other surficial deposits that do not possess sufficient strength and stability to support structures would be removed from the work area. Removal would typically extend to competent materials with high mechanical strength and resistant to erosion and deformation. Material that requires processing would be mechanically processed on-site for placement as fill.

3.5.5 TRANSMISSION LINE CONSTRUCTION (ABOVEGROUND)

3.5.5.1 Poles and Towers

The Proposed Project's overhead transmission line construction would utilize tubular steel poles, which would either be installed on concrete pier foundations or directly embedded. Structure heights would vary, with a maximum height of approximately 150 feet. New poles would be composed of non-reflective, dull galvanized steel.

In order to facilitate the interconnection of the proposed Newark to Albrae 230 kV transmission line into the existing Newark substation, two existing distribution line spans on PG&E's property would need to be relocated underground. As part of this relocation, four poles would be removed and relocated underground by PG&E on PG&E property.

Structure Foundations

The Proposed Project structures would either be placed on drilled pier or direct embed foundations. Regardless of the foundation type, large augers or drill rigs would complete the required foundation excavations. For drilled pier foundations, a reinforcing steel rebar cage would then be lowered into the excavation. Concrete forms would be placed at the surface to allow for the final desired pier height above ground level. Each completed foundation would be left to cure until required strength is met, which may take up to approximately 28 days. After the concrete cures, the transmission structure would then be secured to the anchor bolts embedded into the finished foundation.

For locations suitable for direct embed foundations, the foundation hole would also be drilled using a large auger or drill rig. Then the space between the wall of the excavation and the tubular steel structure would be filled with native soil, gravel, or concrete.

If during drilling/excavation of a foundation hole, the excavation becomes unstable, the hole would be kept open by either inserting a permanent or temporary steel casing or by filling the hole with a drilling slurry. After a foundation is drilled to the desired depth using the drilling slurry, concrete would then be pumped to the bottom of the hole, displacing the slurry. Depending on site conditions, the slurry brought to the surface would typically be collected in a pit adjacent to the foundation or vacuumed directly into a truck to be reused or discarded at an appropriate off-site disposal facility.

Structure foundations would typically require an excavated hole about six to ten feet in diameter and about 15 to 60 feet deep, resulting in excavations ranging from about 16 to 175 CY per foundation. Tubular steel structures would require approximately 16 to 175 CY of concrete delivered per foundation. Concrete trucks would supply and pour concrete into drilled foundation holes. Cranes would be used to lift and place new poles into the newly installed holes or foundations. Cranes would also be utilized to lift rebar and anchor bolt cages into newly installed holes and suspend them during foundation pouring. Cranes and/or bucket trucks would lift workers into elevated positions to work on newly installed poles or towers. Crew cab and pickup trucks would be used to transport workers and tools to each installation site. Water trucks and portable water tanks would be used to minimize fugitive dust during excavation and restoration activities.

Structure Delivery and Assembly

The steel transmission structures would be delivered to each structure's temporary work pad in multiple sections using flatbed trucks. Depending on conditions at the time of construction, each structure may be assembled on the ground or aerially framed. To frame a structure on the ground, a crane would be utilized to move the structure sections into place, and forklifts would be utilized to assemble the arms. Hydraulic jacks may be temporarily mounted between structure sections in order to jack the structure sections together if they slip together, or the section would be bolted together. After assembly of the structure on the ground is complete, a crane would be used to lift

the entire structure onto the anchor bolts protruding from the drilled pier foundation or into the open hole for direct embed foundations to be backfilled.

If a structure was to be aerially framed, a large crane would be used to lift the bottom section of the structure onto the anchor bolts protruding from the drilled pier foundation. When the bottom section was secured, the subsequent section(s) of the structure would be similarly slipped together and hydraulically jacked or bolted as required.

No pole topping is anticipated for the Proposed Project.

3.5.5.2 Aboveground Conductor and Underground Cable

Aboveground Conductor

Proposed Project transmission lines would be installed in a combination of underground and overhead positions. The proposed overhead Albrae to Baylands 320 kV DC transmission lines would utilize a double bundled 320 kV 1351.5 kcmil ACSS/TW "Martin" conductor per phase. The Newark to Albrae 230 kV transmission line would be developed by LS Power and PG&E. The proposed overhead PG&E Newark to Albrae 230 kV transmission line would utilize two 230 kV 1351.5 kcmil ACSS/TW "Martin" conductor per phase. The proposed overhead Baylands to NRS 230 kV transmission line would utilize a single 230 kV 1351.5 kcmil ACSS/TW "Martin" conductor per phase.

Conductor stringing would begin with the installation of insulators and stringing blocks. Blocks are rollers, temporarily attached to the bottom of each of the insulators, that allow the conductor to be pulled, or "strung," through each structure until the entire line is ready to be pulled up to the final tension position. The initial stringing operation would consist of pulling a "sock line," which is a small rope or cable, through the blocks. Pulling the sock line is accomplished by either pulling it with a small helicopter or a vehicle traveling along the ROW. The sock line would then be attached to the hardline, which is a larger cable, and pulled through the blocks. The hardline would then be attached to the conductor which would then be pulled through the blocks and into place.

Each stringing site would be approximately 400 feet by 100 feet. Stringing sites are typically located at dead-end structures but can also be located as required to match the length of conductor reels. Generally, stringing sites coincide with the work pads constructed for the structures and would be in direct line with the direction of the overhead conductors being installed. A typical stringing site's length is equal to approximately three times the height of the adjacent structure. The equipment that would be required at stringing sites includes a tensioner with a conductor reel at one end of a wire pull and a puller set-up positioned in a stringing site at the other end of a wire pull. It is anticipated that the stringing sites used for conductor installation would also be used for OPGW installation.

Prior to installing the new overhead conductor, LS Power would utilize temporary guard structures at road crossings, walking paths, waterways, utility crossings, and other locations where the new conductor could come in contact with existing electrical and communication facilities, or vehicular and/or pedestrian traffic, in the event the conductor accidentally falls during stringing operations.

Underground Conductor

Underground conductor cables would be installed into the duct banks once the duct bank and splice vaults are installed (see additional information on duct bank construction in **Section 3.5.6** below). Each duct bank section between splice vaults would be treated as a separate segment in terms of conductor installation. The cables would be pulled into the duct banks by placing a pulling rig on one end of the duct bank segment and a cable reel on the other end of the duct bank segment. **Figure 3-15, Typical Underground Stringing Operation** depicts the underground conductor installation process.

Cable installation activities would occur at all splice vault locations and near the substation termination structures. Splice vaults would generally be installed along the proposed transmission line alignment approximately every 1,500 to 3,000 feet to facilitate installation of the underground cables.

After the cables are pulled through the ducts, construction crews would stage a splice trailer adjacent to the splice vault in order to complete the cable splicing per manufacturer's instructions and specifications. The cable sheath and insulation would be removed at each splice location from the XLPE cable prior to the copper conductors being spliced together. At the substation termination structures, the cable sheath and insulation would be removed from the XLPE cable to facilitate the installation of a terminator on the copper conductor. In order to reach the elevated terminators on the substation termination structures, temporary scaffolding may be required.

Splice vaults located within roads would be designed to accommodate all local and federal safety loading requirements, including the American Association of State Highway and Transportation Officials highway loading guidelines. Construction crews would excavate and place concrete splice vaults, that would be used initially to pull the cables through the duct bank and later to splice cables together (refer to **Section 3.5.6** below for additional information). During operation, the vaults would provide access to the underground cables for maintenance inspections, repairs, and replacement, if needed. The vaults would be constructed of prefabricated (precast) or cast-in-place, steel-reinforced concrete. Each vault would typically have two manhole covers measuring approximately 39 inches in diameter. The vaults would be delivered to the construction site utilizing a large flatbed semi-truck/trailer. Installation of each vault would generally entail excavation, shoring, and leveling of the splice vault pit using crushed gravel or flowable fill; followed by delivery and installation of the vault using a crane; filling, grouting, and compacting the backfill; and repaving the excavated area. Backfill for splice vaults would consist of either compacted native soil, slurry, or concrete.

As described in **Section 3.5.6.2** below, specialized underground conductor installation techniques would be used where surface or underground conditions preclude utilization of standard trenching techniques. Specifically, the Proposed Project would include approximately three locations where a jack-and-bore technique would be used for railway crossings and seven locations where an HDD would be used for waterway and culvert crossings (locations depicted on **Figure 3-4**). As discussed further in **Section 3.5.8.1, Public Safety**, for work associated with the proposed underground transmission lines in existing roads, temporary fences would be erected around open trenches and bore pits that are open for an extended period of time. Open trenches would be steel plated during non-working hours. Road barriers, signage, and flaggers would be utilized around construction areas in accordance with the TCP. The TCP would allow the transit of emergency response and maintenance vehicles.

3.5.5.3 Telecommunications

As described in **Section 3.3.9, Telecommunication Lines** above, the Proposed Project would include new telecommunication lines connecting the two new HVDC terminals to each other, connecting the new HVDC terminals to the existing Newark and NRS substations, and connecting the new HVDC terminals to local third-party internet providers. All new telecommunication lines are anticipated to be located underground or co-located on overhead tubular steel poles. No additional aboveground or wireless telecommunication (e.g., antennas) would be required. Where co-located with the proposed underground transmission lines, the telecommunication lines would be placed within the transmission line duct vaults, and fiber splices would be contained within separate underground fiber splice vaults or at the substation termination structures. Fiber splices would not be located within the proposed transmission line splice vaults.

3.5.5.4 Guard Structures

LS Power would utilize temporary guard structures at road crossings, walking paths, waterways, utility crossings, and other locations where the new overhead conductor could encounter existing electrical and communication facilities or vehicular and/or pedestrian traffic, in the event the conductor accidentally falls during wire pulling operations. Guard structures would typically require the temporary use of an area measuring up to 1,500 square feet, depending upon guard structure configuration and location. Guard structures would be constructed of wooden poles fashioned into a H-Frame or erected utilizing bucket trucks. All guard structures would be removed after the conductor is secured in place, typically taking less than two weeks. A total of up to approximately 15 guard structures would be installed at a total of five locations.

Traffic control would be required at all public roadway intersections regardless of the need for guard structures. In some instances, especially on small or private roads, LS Power may use flaggers to temporarily halt traffic for brief periods of time while the overhead line is installed over road crossings instead of using guard structures. Some guard structures may include netting between the guard structures to provide additional protection.

3.5.5.5 Blasting

Blasting is not anticipated to be required during construction or operation of the Proposed Project.

3.5.6 TRANSMISSION LINE CONSTRUCTION (BELOWGROUND)

3.5.6.1 Trenching

Open-cut trenching techniques would be used for the majority of transmission duct bank installation. After the route is marked, the pavement within the trench would be removed. For the typical duct bank, the pavement would be cut with a wet saw or asphalt zipper and excavated with an excavator. Jackhammers may be used sparingly to break up sections of concrete that the saw cutting and pavement-breaking machines cannot reach. Excavators would be used to remove all spoils, with the spoils being loaded into dump trucks to be hauled off-site and be disposed of properly. If groundwater is encountered, dewatering may be required using a portable pump, and the water would be disposed of in accordance with applicable regulations and acquired permits. Dewatering procedures are described in **Section 3.5.10.2, Dewatering** below. Upon reaching final trench excavation depth, the trench walls would be secured via shoring as necessary. The typical

width for the underground duct bank would be approximately 2.5 feet. The trench excavation width would typically vary between three to four feet, based on shoring requirements. The typical trench dimensions for installation of the proposed underground transmission lines would be approximately three to four feet wide and six feet deep (refer to **Figure 3-9**). Depths may vary depending on soil stability and existing substructures. The trench would be widened and shored where necessary to meet California Occupational Safety and Health Administration ("Cal/OSHA") safety requirements.

Dewatering from Proposed Project excavations would be conducted in accordance with the provisions of Attachment J to the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order WQ 2022-0057-DWQ). Dewatering would be conducted using a pump or well points. Groundwater encountered during underground construction would be pumped into water trucks for haul off or directly into containment tanks (e.g., Baker tanks) that allow acceptable de-sedimentation prior to discharge and tested for turbidity and pH, and other required parameters. The groundwater would be discharged into the storm sewer system when the water meets quality standards in accordance with applicable regulations and acquired permits or would be hauled off for disposal if parameters are detected in concentrations that prohibit discharge. Discharge may also be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations if testing determines water is suitable for such use in accordance with applicable regulations and acquired permits. All hazardous materials and hazardous wastes would be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. See **Section 3.5.11, Hazardous Materials and Management** for more discussion on hazardous materials and management.

LS Power would then install the conduits (separated by spacers) and backfill around the conduits with flowable thermal concrete to form the duct bank encasement. The ducts would typically consist of PVC conduits, which house the XLPE conductor cables. Both the 320 kV and 230 kV duct bank lines are anticipated to have eight-inch-diameter conduits. Additionally, two-inch-diameter conduits for the telecommunications cable used for system protection and communication and ground wire(s) would be installed. Within the City of Fremont, an additional two-inch fiber conduit would be installed within all duct banks for future use by the City of Fremont. Additional fluidized backfill would be utilized to fill most of the remainder of the trench. When located within roads, a road base backfill, flowable backfill, or slurry concrete cap would be installed, and the road surface would be restored in compliance with local requirements. While the duct bank is being installed and restored, an additional trench would be opened further down the alignment. This process would continue until all duct banks are installed. The trenching operation would progress such that only a maximum of approximately 1,000 feet of trench would be left open at any one time or as allowed by permit requirements. There would be multiple trenching crews working simultaneously along the route in different locations.

All trench backfilling material is anticipated to be flowable backfill. Trench backfill material would be evaluated for adequate thermal characteristics to dissipate heat to meet the design capacity of the new transmission lines. For a typical trench section, the duct bank would be encased in flowable thermal concrete, while the remainder of the upper trench section would be filled with fluidized backfill. Each duct bank would have a minimum of 36 inches of cover (refer to **Figure 3-9**). The state of the ground after backfilling would be returned to preconstruction conditions. Where applicable, grading would be performed to restore the surface to preconstruction contours. In vegetated areas, the surface would be reseeded where appropriate. Disturbed roads would be reconstructed to the relevant local requirements. Reconstruction would include the restoration of

all removed curbs, gutters, and sidewalks, as well as restoration of all removed or damaged paved surface, including the wear surface, stripping, and signage.

For the proposed Albrae to Baylands 320 kV DC transmission line trenching, approximately 30,000 CY of spoils would be removed from the trench. Minimal spoils are anticipated to be used as backfill, with flowable thermal concrete or flowable backfill anticipated to be used for the majority of backfilled material. For the proposed Newark to Albrae 230 kV transmission line trenching, approximately 1,000 CY of spoils would be removed and disposed of or reused off-site. For the proposed Baylands to NRS 230 kV transmission line trenching, approximately 15,000 CY of spoils would be removed from the trench. As with the proposed Albrae to Baylands 320 kV DC transmission line trenching, minimal spoils are anticipated to be used as backfill, with flowable thermal concrete or flowable backfill anticipated to be used. As such, almost all spoils would be removed and disposed of or reused off-site. Off-site disposal could occur at the Newby Island Sanitary Landfill, the Kirby Canyon Landfill, the Ox Mountain Landfill, the Guadalupe Landfill, or another approved facility. Refer to **Section 3.5.12.1, Solid Waste** for additional information regarding disposal of excavated materials, and **Section 3.5.12.3, Hazardous Waste** for processes specific to hazardous materials and potentially contaminated soils or groundwater.

LS Power would excavate and place concrete splice vaults that would be used initially to pull the cables through the duct bank and later to splice cables together. Installation of each vault would generally entail excavation, shoring, and leveling of the splice vault pit using crushed gravel or flowable fill; followed by delivery and installation of the vault using a crane; filling, grouting, and compacting the backfill; and repaving the excavated area. Backfill for splice vaults would consist of either compacted native soil, slurry, or concrete. Underground splice vaults for proposed transmission lines would be located approximately every 1,500 to 3,000 feet with dimensions of approximately 30 feet long, 10 feet wide, and 10 feet tall. The splice vault excavation would be approximately three feet wider on each side for the shoring and installation of the splice vault. As practical, splice vaults would be sited to avoid interfering with existing access points and intersections to minimize disruptions to the public during construction and O&M. During construction, it is anticipated that up to three separate construction crews would be working on splice vault installations at different locations along the proposed transmission lines concurrently.

As further detailed in **Section 3.5.8.1**, LS Power would implement standard BMPs, including, but not limited to:

- The public would be restricted from entering construction work areas along the transmission lines.
- Public access restrictions would be maintained during the duration of construction activities at a given location.
- For work associated with the underground transmission lines in existing roads, temporary fences would be erected around open trenches and bore pits that are open for an extended period of time. Open trenches would be steel plated during non-working hours.
- All crossings of existing utilities would be done in a manner that ensures proper separations are maintained and proper supports are in place during the installation process.
- Road barriers, signage, and flaggers would be utilized around construction areas in accordance with the TCP. The TCP would allow the transit of emergency response and maintenance vehicles.

- As practicable, the crews would be located along the route in a manner that minimizes impacts.

3.5.6.2 Trenchless Techniques

In addition to open-cut trenching, LS Power would use horizontal boring (jack-and-bore) or HDD construction techniques to install the conduit ducts where open-cut trenching is not feasible. Specifically, the Proposed Project includes seven HDD locations and three jack-and-bore locations (refer to **Figure 3-4**). The jack-and-bore technique would involve concurrently pushing a casing pipe through the trenchless crossing and removing the spoil inside the casing with a rotating auger (refer to **Figure 3-13**). The HDD installation would use a drill head on the end of a hollow drill pipe and spray nozzle on the end to bore under an obstruction (refer to **Figure 3-14**). The trenchless crossings would be filled from end to end with a low strength fluidized backfill (e.g., thermal grout or bentonite slurry) to ensure consistent thermal contact between the conduits and the earth to promote heat dissipation.

The jack-and-bore sending and receiving pits would be located on either side of the features to be crossed. The sending and receiving pits would be excavated utilizing an excavator or backhoe. The sending and receiving pits for the jack-and-bore would be approximately 15 feet by 50 feet. The temporary workspace adjacent to the sending and receiving pits at the jack-and-bore site would be approximately 30 feet by 80 feet. However, these dimensions may vary depending upon site-specific constraints and permit requirements. The standard depth of the pits would be approximately 10 feet below-grade, with the top of the casing pipe generally at least four feet below-grade. Depths may vary depending on soil stability, existing substructures, and permitting requirements. **Figure 3-13** depicts the typical jack-and-bore operation, including typical dimensions and arrangements. The pits would be shored where necessary to meet Cal/OSHA requirements. A typical jack-and-bore sending and receiving pit would require the removal of approximately 350 CY of spoils. All pit spoils are anticipated to be hauled off-site, and a fluidized backfill would be used following the trenchless construction. When located within roads, a road base backfill, flowable backfill, or slurry concrete cap would be installed, and the road surface would be restored in compliance with local requirements.

The HDD sending and receiving pits would be located on either side of the features to be crossed. The sending and receiving pits would be excavated utilizing an excavator or backhoe. The sending and receiving pits for the HDD would be approximately six feet by 20 feet. These pits would be used only for fluid containment before pumping the fluid to the control equipment for cleaning and recirculation. A typical HDD sending and receiving pit would require the removal of approximately 20 CY of spoils. When located within roads, all pit spoils are anticipated to be hauled off-site, and a fluidized backfill would be used following the trenchless construction and duct bank tie-in. A road base backfill, flowable backfill, or slurry concrete cap would be installed, and the road surface would be restored in compliance with local requirements. In non-roadway areas, a fluidized backfill would typically be used following the trenchless construction and duct bank tie-in. The flowable backfill would typically be stopped approximately one foot from the top of finish grade and native soils would be used for the remainder of the backfill. The typical temporary workspace around sending and receiving pits at the HDD site would be approximately 200 feet by 100 feet, but the temporary workspace dimensions may significantly vary to accommodate site-specific constraints at each setup location. Pull back area for pipe staging and fusion would typically begin at the receiving pit and be longer than the proposed HDD's entire length. The temporary workspace dimensions can vary given tight setup locations. **Figure 3-14**

depicts the typical HDD operation, including typical dimensions and arrangements. The pits would be shored where necessary to meet Cal/OSHA requirements.

Geotechnical and topographical survey data would be used to design an HDD path that is adequately beneath the stream bed to minimize the likelihood of fracturing-out. During construction, drilling conditions would be monitored during drilling activities to ensure adequate conditions. Drilling fluid return volume would be continuously monitored. A significant drop in return volume would signify fracturing-out, and drilling would be stopped. The bore alignment and any stream crossings would be visually monitored for fracturing-out at a 100-foot radius.

Dewatering and hazardous waste management are discussed further in **Section 3.5.10**, *Water Use and Dewatering*, **Section 3.5.11**, and **Section 3.5.12**, *Waste Generation and Management*. As discussed further in **Table 3-12**, *Applicant Proposed Measures*, **APMs HAZ-1** and **HAZ-2** have been included for a site-specific Spill Prevention, Control, and Countermeasures Plan (SPCCP) and a Hazardous Materials Management Plan (HMMP), and **APM WQ-1** describes dewatering procedures and measures. The following BMPs would be implemented during the construction of trenchless crossings:

- Drilling mud and bore lubricant control, monitoring, and containment measures would be established prior to trenchless construction activities commencing and remain in place until after trenchless construction activities are completed.
- Spoils would be stored at least 25 feet from any body of water and contained by a sediment barrier and plastic sheeting where practical.
- If using spoils as backfill, pits would be stabilized after backfilling is complete.
- Drilling fluid would be stored in water-tight containers when not in use.
- Emergency spill/fracturing out kits would be staged near trenchless construction equipment.

In the event that soils or groundwater suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during trenching operations, the excavated soils or groundwater would be tested, and, if contaminated above hazardous waste levels, the soils would be contained and disposed of at a licensed hazardous waste facility. All hazardous materials and hazardous wastes would be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. See **Section 3.5.11** for more discussion on hazardous materials and management.

3.5.7 SUBSTATIONS, SWITCHING STATIONS, AND GAS COMPRESSOR STATIONS

The Proposed Project includes the construction of two new HVDC terminals as well as modifications at two existing substations. A GIS switching station would be constructed as part of each new HVDC terminal. There are no gas compressor stations being proposed.

3.5.7.1 Facility Installation or Modification

Construction of the Proposed Project would occur in a phased approach, beginning with site preparation and grading of the site, then installation of foundations and underground equipment, and lastly installation and testing of electrical equipment. Prior to clearing activities associated with site development, all necessary surveys, marking, and installation of stormwater

management features (e.g., silt fence, fiber rolls, etc.) would be completed. During site development, fencing, gates, and driveways would be installed (some on a temporary basis) to provide site security during construction activities.

Following site development, all necessary below-grade construction, including installation of structure and equipment foundations, underground ducts, and the ground grid would begin. Once earthwork and below-grade activities are completed, above-grade construction and equipment installation would take place. The enclosure would be erected, and major equipment and structures would be installed and anchored on their respective foundations. It is anticipated that all major electrical and terminal equipment, such as the converter transformers, would be delivered to the proposed HVDC terminal site and placed directly on their respective foundations. Other HVDC terminal equipment, such as HVDC equipment, GIS equipment, riser structures, bus, conduit, cable trench, rebar, etc., would be received and temporarily stored at a staging area prior to installation. Transmission interconnection line terminations and distribution connections would be installed primarily within public roads and inside the proposed HVDC terminal station facilities following the installation of the HVDC terminal structures and associated equipment. Following construction, temporary disturbance areas would typically be recontoured to match preconstruction grades.

3.5.7.2 Civil Works

The proposed HVDC terminal sites, including the drainage and detention basin, would be stabilized during construction with BMPs. These BMPs would be described in the SWPPP prepared for construction activities with the Proposed Project. The SWPPP would be prepared prior to construction and would be tailored to the final approved design of the Proposed Project. The BMPs included in the SWPPP would be monitored and revised throughout the construction process as needed to respond to field conditions. Grading and excavations are further described in **Section 3.5.4.6, Grading**, above.

3.5.8 PUBLIC SAFETY AND TRAFFIC CONTROL

3.5.8.1 Public Safety

The active HVDC terminal construction and staging areas would be fenced to restrict public access to the site. All open holes or trenches associated with the underground transmission lines would be covered at the end of the day to protect the public and construction workers. Public access restrictions would be maintained during the duration of construction activities and would be coordinated with local agencies when affecting public ROWs. Public access restrictions would vary from a few days or weeks for trenching operations to many months or years for staging areas. Public access restrictions for the proposed HVDC terminals would be the duration of construction (approximately two years) and operations. Public safety, with regards to traffic controls on roadways and trails, is discussed below in **Section 3.5.8.2, Traffic Control**. The following BMPs would be implemented to ensure public and worker safety during construction on the Proposed Project site:

- The public would be restricted from entering construction work areas and staging areas, both along the proposed transmission lines and at the HVDC terminal sites.
- Public access restrictions would be maintained during the duration of construction activities at a given location.

- Each construction contractor would submit safety plans to LS Power for review and approval prior to commencement of construction activities.
- All crossings of existing utilities would be done in a manner that ensures proper separations are maintained and proper supports are in place during the installation process.
- For work associated with the underground transmission lines in existing roads, temporary fences would be erected around open trenches and bore pits that are open for an extended period of time. Open trenches would be steel plated during non-working hours.
- Road barriers, signage, and flaggers would be utilized around construction areas in accordance with the TCP. The TCP would allow transit of emergency response and maintenance vehicles.
- Any spills or hazardous materials would be addressed according to the SWPPP, SPCCP (as defined in **Section 3.5.11.1, Hazardous Materials**), and HMMP (as defined in **Section 3.5.11.2, Hazardous Materials Management**) to ensure public safety.

3.5.8.2 Traffic Control

Traffic control procedures may be implemented intermittently along Boyce Road and Weber Road for the proposed Albrae terminal and Los Esteros Road for the proposed Baylands terminal during construction and deliveries. Lane closures may be necessary along these roads when equipment is being delivered to the Proposed Project site. To facilitate the proposed underground transmission line construction, lane closures would be necessary to allow adequate work area for construction at any given time. These restrictions would be temporary and short-term based on delivery schedules. To facilitate proposed underground transmission line construction, temporary closures of sidewalks, lanes, roads, trails, paths, and/or driveways may be necessary along the transmission line alignment where the proposed transmission lines are located within existing roads or trails to allow adequate work area for construction at any given time.

These restrictions would be temporary, and traffic detours could be necessary as part of construction. Temporary routes, timing, and processes for detour locations would be identified in the TCPs that LS Power would develop in consultation with the applicable local agencies (e.g., City of San José). While TCPs would govern underground transmission line construction within public roadways for the full duration of said construction, traffic control measures, such as lane closures and detours, would be temporary and short-term in any given location as underground construction moves along the alignment in a linear fashion.

Signage, flaggers, and/or other traffic control measures would be utilized to guide traffic around active work areas in a safe manner. All TCPs and encroachment permits would be reviewed and approved by the Cities of Fremont, Milpitas, San José, and Santa Clara and the Counties of Alameda and Santa Clara as appropriate and would be provided to the CPUC prior to implementation. TCPs are based on final approved Proposed Project design and are typically prepared immediately prior to construction when encroachment permit applications are submitted to the local agency.

3.5.8.3 Security

Physical security for the proposed HVDC terminal stations would be designed in accordance with North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP)

requirements with 24-hours-a-day, seven-days-a-week monitoring, response, and control through the LS Power control center and staff. Each proposed HVDC terminal would include an at least eight-foot-tall security wall to protect the facility from environmental and physical threats. The perimeter security wall would include an approximately 24-foot-wide gate. Access to the proposed HVDC terminal and enclosures would be restricted. The proposed HVDC terminal design would include indoor and outdoor physical security cameras placed throughout the site. Proposed HVDC terminal lighting would be photocell and motion controlled to provide illumination for security. LED lights would be mounted on A-frames, H-frames, structures, poles, and enclosures as required.

During construction, perimeter security fencing would be installed around the outer limits of the proposed HVDC terminal work area and staging areas. Lighting would also be installed for security purposes. A security professional may also monitor the construction sites where materials are stored, which may include the proposed HVDC terminal sites, staging areas, and ROW during periods when construction personnel are not present.

3.5.8.4 Livestock

Livestock are not anticipated to be encountered during construction or operation of the Proposed Project. Therefore, specific livestock fencing, guards, or other similar protective measures would not be required as part of LS Power's Proposed Project.

PG&E Substation Modifications

A portion of the proposed Newark to Albrae 230 kV transmission line is located in an area that is subject to cattle grazing. This work would be conducted by PG&E and would occur on PG&E property. PG&E regularly conducts maintenance work on the site while grazing cattle are present and has developed procedures for excluding the cattle from work areas that would be implemented during construction.

3.5.9 DUST, EROSION, AND RUNOFF CONTROLS

3.5.9.1 Dust

During construction, migration of dust from the construction sites would be limited by control measures set forth by the APMs outlined in **Section 5.3, Air Quality**. These measures may include the use of water trucks and other dust control measures, including the application of non-toxic soil binders.

3.5.9.2 Erosion

The Proposed Project would result in more than one acre of soil disturbance. As a result, the Proposed Project would be required to prepare, file, and implement a SWPPP in accordance with the State's General Permit for Stormwater Discharges Associated with Construction Activities (2009-009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). The SWPPP would include measures to prevent and minimize erosion and off-site transport of pollutants from construction activities. The SWPPP would designate BMPs that would be followed during construction to help stabilize disturbed areas and reduce erosion, sedimentation, and pollutant transport. While the SWPPP would designate specific BMPs based upon site conditions, BMPs that would be utilized may include, but are not limited to, silt fencing, straw wattles, erosion control blankets, riprap, etc.

3.5.9.3 Runoff

The Proposed Project would also include a stormwater management system consisting of a stormwater drainage and conveyance system and a stormwater detention system at each proposed HVDC terminal location. The size of the detention system would vary for each proposed HVDC terminal site, depending on site-specific conditions and may include a detention basin, underground detention vaults, or a combination thereof. The proposed HVDC terminal pads would be graded to drain towards the stormwater conveyance system to ultimately direct stormwater into the detention system. The stormwater detention system would not be lined, allowing for infiltration and groundwater recharge. The stormwater detention system would be designed to capture the runoff from the 100-year storm, 24-hour rainfall event and then release the captured water. Overflow from the detention system would be returned to sheet flow via a level spreader that would provide for sheet flow of the stormwater to the adjacent land surface during storms that exceed the system's design capacity. The level spreading approach would control erosion and prevent scouring at discharge locations.

3.5.10 WATER USE AND DEWATERING

3.5.10.1 Water Use

The Proposed Project would minimize the amount of water required since a substantial amount of the required work would occur in paved roads. Water would regularly be used for dust control in the proposed staging areas and terminal sites but less frequently used for dust control during duct bank construction. Water used for construction activities, such as for dust suppression and compaction requirements, would be trucked in from a nearby off-site location. It is estimated that a total of up to approximately 15,000,000 gallons of water would be used for construction purposes during an approximately 24-month portion of construction when the site development and below-grade construction phases occur at the proposed terminal sites. Water used during construction activities would be temporary and originate from a local source that has the existing capacity to service the Proposed Project's needs. In addition to the potential use of potable water, recycled, reclaimed water, or groundwater would be used in accordance with applicable regulations and acquired permits to meet the Proposed Project's construction needs. Construction crews would be responsible for providing their own drinking water during construction.

Minimal water would be necessary to facilitate restoration of temporarily impacted areas following the completion of construction. The Proposed Project would not require water sources for O&M activities, as the proposed HVDC terminal facilities would be remotely operated with no permanent workforce on-site. LS Power personnel would be responsible for providing their own drinking water during O&M activities.

3.5.10.2 Dewatering

Dewatering would be conducted using a pump or well points. Groundwater encountered during underground construction would be pumped into water trucks for haul off or directly into containment tanks (e.g., Baker tanks) that allow acceptable de-sedimentation prior to discharge and tested for turbidity and pH, and other required parameters. The groundwater would be discharged into the storm sewer system when the water meets quality standards in accordance with applicable regulations and acquired permits or would be hauled off for disposal if parameters are detected in concentrations that prohibit discharge. Discharge may also be applied to flat,

vegetated, upland areas, used for dust control, or used in other suitable construction operations if testing determines water is suitable for such use in accordance with applicable regulations and acquired permits.

3.5.11 HAZARDOUS MATERIALS AND MANAGEMENT

3.5.11.1 Hazardous Materials

Hazards and hazardous materials are discussed in greater detail in **Section 5.9, Hazards, Hazardous Materials, and Public Safety**. Construction of the Proposed Project would require the limited use of hazardous materials, such as fuels, lubricants, cleaning solvents, and chemicals. All hazardous materials would be stored, handled, and used in accordance with applicable regulations. Safety Data Sheets (SDS) would be made available at the construction site(s) for all workers. Based on the anticipated volume of hazardous liquid materials, such as fuel, that would be stored and dispensed at a staging area, an SPCCP may be required (in accordance with applicable provisions of 40 C.F.R. Parts 112.1-112.7). If pre-existing hazardous waste is encountered on the Proposed Project site, it would be removed and disposed of in a manner consistent with all state and federal regulations. It is not anticipated that herbicides or pesticides would be used during construction. As discussed further in **Table 3-12, APMs HAZ-1 and HAZ-2** have been included for a site-specific SPCCP and HMMP.

3.5.11.2 Hazardous Materials Management

Hazards and hazardous materials are discussed in greater detail in **Section 5.9**. Prior to construction, an SPCCP and HMMP would be prepared, describing hazardous materials use, transport, storage, management, and disposal protocols. Construction would not begin until these plans are complete. The plans would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The HMMP would include the following information related to hazardous materials and waste, as applicable:

- A list of hazardous materials present on-site during construction and O&M to be updated as needed along with product SDS and other information regarding storage, application, transportation, and disposal requirements;
- A Hazardous Materials Communication (i.e., HAZCOM) Plan;
- Assignments and responsibilities of Proposed Project Health and Safety roles;
- Standards for any secondary containment and countermeasures that would be required for hazardous materials;
- Spill response procedures based on product and quantity. The procedures would include materials to be used, location of such materials within the Proposed Project area, and disposal protocols; and
- Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an Occupational Safety and Health Administration (OSHA)-trained individual and testing at a certified laboratory.

3.5.12 WASTE GENERATION AND MANAGEMENT

3.5.12.1 Solid Waste

Solid wastes generated during construction would primarily be non-hazardous wastes, including wood, metal, paper, and plastic packaging. Construction debris volumes are estimated to total approximately 2,000 CY. Solid waste generated during construction of the Proposed Project would typically be collected at the point of creation, transported to a staging area, and then temporarily stored at a staging area as the solid waste awaits salvage, recycling, and/or disposal. Solid wastes would be sorted, and recyclable and non-recyclable materials would be stored separately at the staging areas. During trenching excavations, the excavated material would be loaded onto trucks and transported to an approved disposal facility or location of reuse. Construction waste would be disposed of properly and in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste, including, but not limited to, the California Integrated Waste Management Act of 1989 which has set reduction rates for the amount of solid waste sent to landfills. Construction waste that cannot be recycled would ultimately be disposed of at the Newby Island Sanitary Landfill, the Kirby Canyon Landfill, the Ox Mountain Landfill, the Guadalupe Landfill, or another approved facility (California Department of Resources, Recycling, and Recovery ["CalRecycle"], 2023a and 2023b). Additional information is provided in **Section 5.19, Utilities and Service Systems** and **Table 5.19-1, Waste Volume by Type**.

Earthwork associated with the Proposed Project would require cut and fill, and excess material after completion of grading and excavation would be approximately 130,000 CY. During trenching excavations, minimal excavated material would be used to backfill, with most of the excavated material not being reused. Cut material from terminal and substation site grading would be used as fill on-site, where possible. In addition to the earthwork and trench spoils waste, construction debris volumes are estimated to result in a total of approximately 2,000 CY. LS Power would transport excess soil to landfills that recycle excess soil materials as part of landfill operations (as opposed to disposing of the soils as waste), where possible. Landfills would determine their capacity for recycling in the future, closer to the time of disposal. Pavement waste produced from trench excavation is anticipated to be transported to an appropriate recycling facility in the area. Where possible, recyclable construction material would be transported to an approved recycling facility.

3.5.12.2 Liquid Waste

Liquid waste streams anticipated for the Proposed Project primarily include sanitary waste, dewatering effluent, drilling fluids, and stormwater runoff. Sanitary waste from self-contained portable toilets would be routinely pumped and would be transported by licensed sanitary waste services for off-site disposal at their contracted treatment, storage, and disposal facility. Sanitary waste would be generated at a rate of 50 to 100 gallons per week for every ten workers on-site.

Stormwater runoff would be managed according to a stormwater management plan and associated SWPPP to comply with any general construction permits and approved by the local Regional Water Quality Control Board (RWQCB). If groundwater is encountered, dewatering may be required using a portable pump, and the water would be disposed of in accordance with applicable regulations and acquired permits. Dewatering procedures are further described in **Section 3.5.10.2**, above. Drilling fluid is anticipated to be disposed of at the Altamont Pass Landfill or another approved facility.

3.5.12.3 Hazardous Waste

As discussed in **Section 3.5.11**, construction of the Proposed Project would require the limited use of hazardous materials, such as fuels, lubricants, cleaning solvents, and chemicals. Additionally, the Proposed Project would include transformers containing mineral oil, which is considered a hazardous material in the State of California. Additional potentially hazardous waste sources that could be encountered during construction include contaminated soils, incidental spill waste, and concrete washout.

Waste generated or encountered would be handled, contained, and disposed of according to local, state, and federal regulations. In addition, prior to construction, an HMMP would be prepared describing hazardous material use, transport, storage, management, and disposal protocols. This could include containerization in Department of Transportation approved vessels, review of relevant SDS, use of secondary containment, and training of material handlers to ensure worker safety and the reduction of cross contamination. Off-site disposal would occur at Clean Harbors San Jose Facility or another approved facility. It is not anticipated that herbicides or pesticides would be used during construction. Additional information and analysis are provided in **Section 5.9**.

Staging Areas and Baylands to NRS 230 Site Contamination

As further described in **Section 5.9**, Staging Areas 10, 11 and an underground portion of the proposed Baylands to NRS 230 kV transmission line are located within the Cisco Systems Site 6 (EnviroStor Case Number 43010027)/Syntax Court Disposal Site (GeoTracker Case Number T10000007316), which is an approximately 19-acre site with soil contaminated with heavy metals, including lead and arsenic, as well as volatile organic compounds (VOCs) in soil vapor and shallow groundwater. A Soil Management Plan (SMP) and Health and Safety Plan were prepared in 2001 to guide handling of potentially contaminated soil within the site, which was named Cisco Systems Site 6. Because the contaminated fill material was left in place, a "Covenant to Restrict Use of Property" was put in place on May 23, 2003, and includes the following restrictions and requirements for the site:

- No residence for use as human habitation;
- No hospital for humans;
- No schools for persons under 21 years of age or day care centers for children;
- DTSC access for inspection, monitoring or other activities necessary to protect public health and the environment;
- Written notice to DTSC at least 14 days prior to any activities that will disturb the soil at or below 1.5 feet below grade;
- Activities that disturb the soil at or below 1.5 feet below grade shall be conducted in accordance with procedures described in the SMP and Health and Safety Plan approved on April 27, 2001, by the DTSC;
- Contaminated soils brought to the surface will be managed in accordance with applicable provision of state and federal law;
- No notice is required for activities that disturb only the top 1.5 feet of soil below grade. However, upon conclusion of such activities, at least 1.5 feet of clean soil must be maintained above the contaminated fill layer; and

- No cultivation of food (cattle, food crops).

3.5.13 FIRE PREVENTION AND RESPONSE

3.5.13.1 Fire Prevention and Response

Section 5.20, *Wildfire* outlines the Proposed Project's fire risk. As described in that section, the Proposed Project is located within a low fire threat area, as identified by California Department of Forestry and Fire Protection ("CAL FIRE") or the CPUC. Impacts are not anticipated to occur, and no mitigation would be required. If required based on final design or permits, a Construction Fire Prevention Plan (or equivalent) would be prepared prior to construction based on final design and the approved Proposed Project footprint.

3.5.13.2 Fire Breaks

During construction activities that are considered "hot work" (e.g., welding, grinding, or any other activity that creates hot sparks), LS Power would implement a ten-foot buffer around that activity, and vegetation would be cleared to ensure sparks do not create a fire hazard. For activities that do not produce sparks but still have potential to produce a fire hazard, LS Power would implement a five-foot buffer to be cleared of vegetation, and additional details (i.e., handling sparks) would be provided in the Construction Fire Prevention Plan.

Under Section 35 of GO 95, the CPUC regulates all aspects of design, construction, and O&M of electrical power lines and fire safety hazards for utilities subject to their jurisdiction (CPUC, 2020). In addition, Fire Prevention Standards for Electric Utilities (California Code of Regulations [CCR] Title 14, sections 1250-1258) provide definitions, maps, specifications, and clearance standards for projects under the jurisdiction of California Public Resources Code (PRC) sections 4292 and 4293 in State Responsibility Areas (SRAs). LS Power would design and construct the proposed HVDC terminals in accordance with all applicable state and federal regulations. The Proposed Project is not located within an SRA.

3.6 CONSTRUCTION WORKFORCE, EQUIPMENT, TRAFFIC, AND SCHEDULE

3.6.1 CONSTRUCTION WORKFORCE

Construction of the proposed HVDC terminal facilities and transmission lines is expected to occur simultaneously. The construction workforce and equipment deployed for the Proposed Project would be typical for similar transmission line and terminal construction projects of this size. It is anticipated that a maximum of approximately 60 workers would be employed at a single construction site at one time. The peak employment is anticipated to be approximately 300 workers, but, on average, the workforce on-site would be less. The workers would likely commute from the Greater Bay Area. For the proposed underground transmission line activities, multiple duct bank, splice vault, trenchless crossing, and cable installation crews would work simultaneously along the route in different locations. It is anticipated that up to 10 crews could be working simultaneously to complete the proposed underground transmission line activities mentioned above and the proposed terminal sites.

Appendix 3-A, *Construction Equipment and Workforce Table* lists the expected equipment and personnel by construction activity as well as a brief construction work plan summary for each activity. It also lists the uses of the equipment for each construction phase. This information is

preliminary, and not all equipment and personnel listed may be used during all portions of each specified activity. Additional personnel or other equipment may be identified during final Proposed Project design or implemented during construction as needed, based on site conditions.

3.6.2 CONSTRUCTION EQUIPMENT

The equipment that would be used to construct each Proposed Project component, along with its approximate duration of use, is provided in **Appendix 3-A**. In addition, a full list of equipment that would be used during construction is outlined and provided in **Table 3-7, Anticipated Construction Equipment**.

Table 3-7: Anticipated Construction Equipment	
Equipment Type	Equipment Use
Air compressor	Operate air tools
Asphalt grinder	Grind asphalt
Asphalt paver	Restoration purposes
Backhoe	Excavate trenches
Bobcat	Excavate trenches
Boom truck	Access poles and other height-restricted items Lift/set steel
Boom truck with trailer	Deliver steel, disc, panels, and insulators
Bucket truck/manlift	Set steel Install equipment Use as guard structure
Bulldozer	Grade access roads and terminal sites Demolition Excavate and backfill walls
Cable dolly	Pull cable
Cable dolly (trailer)	Transport reels of cable (no engine; can be pulled by assist truck)
Compactor	Compact soil Clear/grub/finish
Concrete boom crane pump truck	Pour concrete at a distance away from the truck
Concrete truck	Transport and pour concrete
Crane	Lift/position equipment and materials
Diesel generator	Power for construction activities
Discing tractor and machine	Loosen soil for terminal sites
Drilling rig/truck-mounted augur	Excavate for direct-bury poles Excavate trenches
Dump truck	Haul excavated materials/import backfill, as needed
Excavating scraper	Grade pads and access roads
Excavator	Excavate soils/materials (trenching)
Forklift	Transport materials at construction sites and staging areas
Grader	Grading and soil movement Restoring original contours
HDD machine	Trenchless crossing installation

Table 3-7: Anticipated Construction Equipment

Equipment Type	Equipment Use
Heavy hauler moving truck	Transport large equipment to site
Helicopter	Stringing activities
Jack-and-bore machine	Trenchless crossing installation
Jackhammer	Break concrete and asphalt
Line truck	Install clearance structures Pull cables/connections
Loader	Demolition Load dump trucks
Pickup truck	Transport construction personnel and material
Portable generator	Operate power tools, work trailers, and terminal sites
Potholing machine (hydro vacuum excavator)	Verify the locations of existing utilities
Pressure digger	Excavate for poles and foundations Excavate trenches
Pulling rig/wire puller	Pull cables into duct
Reel trailer/wire trailer	Feed new conductor to the wire puller
Relay/telecommunication van	Transport and support construction personnel
Roller	Repair streets and compact soil
Scraper	Grade pads and access roads
Security vehicle	Site security
Splice truck/trailer	Store splicing supplies
Street sweeper	Clean paved roads
Tensioner	Control conductor at pulling tension during pulling operation
Tool van/conex	Tool storage
Tractor/trailer unit	Transport materials to sites and staging areas
Trencher	Trench for underground lines
Water truck	Provide water for dust suppression and other construction needs
Welding truck	Equipment and materials for field welding
Wire truck	Hold spools of wire

In addition to use of the equipment identified above, pickup trucks and construction worker vehicles are anticipated to travel daily to and from the work areas for each component of the Proposed Project.

3.6.3 CONSTRUCTION TRAFFIC

The types and quantity of equipment that would be used to construct each Proposed Project component, along with its approximate duration of use, is provided in **Appendix 3-A**. For the proposed Albrae terminal, all construction vehicles and equipment would enter the Proposed Project area from Weber Road. For the proposed Baylands terminal, all construction vehicles and equipment would enter the site from Los Esteros Road. Although some disruption to traffic flow may occur when trucks ingress or egress from the access roads, such events would be periodic and temporary. Signage, flaggers, or other traffic control measures would be used to reduce

potential disruptions to traffic flow and to maintain public safety during construction. Parking of worker vehicles would generally occur within one of the staging areas, though some worker vehicle parking may occur on-site during proposed underground transmission line construction within existing roads. Most of the transmission line crews would park at the proposed terminal sites, and a worker would drive workers from the terminal sites to the transmission line site. As construction would occur on public roadways, TCPs and encroachment permits may be required from the Cities of Fremont, Milpitas, San José, and Santa Clara. Implementation of a TCP (**APM TRA-1, Traffic Control Plan**) would further reduce impacts to traffic congestion. Pursuant to **APM TRA-1**, appropriate traffic controls would be implemented during the short-term closures necessary for activities such as duct bank trenching, construction of underground transmission lines, vault installations, and delivery of heavy equipment and materials. Traffic controls would include, but not be limited to, traffic control cones, candles, electronic and/or temporary signage, and/or barricades between work zones and transportation facilities.

The peak vehicle trips would be during the duct bank excavation and installation portion of the Proposed Project (e.g., site development and below-grade construction activities) due to the number of crews and the hauling away or importation of fill. Total maximum daily vehicle trips (i.e., roundtrips) during this time period would be approximately 500 trips per day, consisting of approximately 225 truck trips and 275 worker trips. Other periods of the construction would have lower average worker vehicle trips and would, therefore, have correspondingly lower impacts. **Table 3-8, Estimated Average Daily Construction Traffic** outlines the average daily truck and worker related vehicle trips, as well as the vehicles miles traveled (VMT) per construction phase.

Table 3-8: Estimated Average Daily Construction Traffic					
Construction Phase	Average Daily Truck Trips	Average Daily Worker Trips	Average Daily Truck VMT	Average Daily Worker VMT	Total Daily Average VMT
Albrae Terminal					
Survey	4	2	160	54	214
Material Delivery	2	5	400	135	535
Road Work, Site and Staging preparation	10	18	300	540	840
Below-Grade Construction	10	27	300	810	1110
Above-Grade Construction and Equipment Installation	6	27	180	810	990
Baylands Terminal					
Survey	4	2	160	54	214
Material Delivery	2	5	400	135	535
Road Work, Site and Staging Preparation	10	18	300	540	840
Below-Grade Construction	10	27	300	810	1110
Above-Grade Construction and Equipment Installation	6	27	180	810	990
Newark to Albrae 230 kV Underground Transmission Line					
Surveying/Potholing	6	6	180	189	369
Vaults	12	7	360	216	576
Duct Bank and Restoration	30	10	750	297	1047
Cable Install	12	7	360	216	576
Albrae to Baylands 320 kV DC Underground Transmission Line					
Surveying/Potholing	6	6	180	189	369
Vaults	24	14	720	9432	1152

Table 3-8: Estimated Average Daily Construction Traffic					
Construction Phase	Average Daily Truck Trips	Average Daily Worker Trips	Average Daily Truck VMT	Average Daily Worker VMT	Total Daily Average VMT
Duct Bank and Restoration	60	20	1500	594	2094
HDD Crossings	12	6	240	189	429
Jack-and-Bore	12	6	240	189	429
Cable Install	12	7	360	216	576
Baylands to NRS 230 kV Underground Transmission Line					
Surveying/Potholing	6	6	180	189	369
Vaults	24	14	720	432	1152
Duct Bank and Restoration	60	20	1500	594	2094
HDD Crossings	12	6	240	189	429
Jack-and-Bore	12	6	240	189	429
Cable Install	12	7	360	216	576
Newark to Albrae 230 kV Overhead Transmission Line					
Surveying	2	1	80	27	214
Clearing/ROW/Access	5	8	150	243	393
Foundation/Structures/Wire	10	11	300	338	638
Albrae to Baylands 320 kV DC Overhead Transmission Line					
Surveying	4	2	160	54	214
Clearing/ROW/Access	10	16	300	486	786
Foundation/Structures/Wire	20	23	600	675	1275
Baylands to NRS 230 kV Overhead Transmission Line					
Surveying	4	2	160	54	214
Clearing/ROW/Access	10	16	300	486	786
Foundation/Structures/Wire	20	23	600	675	1275
Other Construction Activities					
Commissioning and Testing	6	18	180	540	720
PG&E Newark Substation Upgrades and Connection	10	18	400	540	940
SVP NRS Substation Upgrades and Connection	5	9	200	270	470
Staging Areas	30	14	900	405	1305
Notes:					
<ul style="list-style-type: none"> - Table assumes workers live approximately 15 miles away from the work site. This is based on the suburb area and the proximity of RV parks. - Worker trips are commute trips by workers. - Truck trips are trips moving from one site to another site. This does not include miles traveled on the Proposed Project site. - Truck trips include water trucks, dump trucks, traffic control trips, and equipment delivery trips. - Table is based on the landfill locations in relation to the Proposed Project. 					

Vehicle trips generated by construction personnel would generally occur with workers arriving at the site in the morning and leaving the site at the end of the day, with limited worker-related trips to or from the worksite during the course of the day. Construction activities are anticipated to occur Monday through Saturday during daylight hours. However, given the large amount of construction proposed within existing roads, local municipalities may dictate that transmission line construction occur at nighttime within certain areas of the Proposed Project. The most likely areas for nighttime construction would be within commercial and industrial areas and not residential

areas. To reduce the potential number of daily worker-related vehicle trips to and from the site, LS Power would encourage carpooling where practicable.

3.6.4 CONSTRUCTION SCHEDULE

LS Power estimates that construction of the Proposed Project would take a total of approximately 24 months to complete, depending upon unforeseen/unpredictable factors such as weather. Rainfall is not likely to cause significant delays in schedule, and wildfire delays are not anticipated as the Proposed Project is in a low fire threat area. Biological resources concerns have the potential to delay schedule if special-status species are identified in the Proposed Project area. For example, if a special-status wildlife species is observed in the active construction area, a qualified biologist or monitor has the authority to stop work activities upon the discovery of live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to the species (see **Section 5.4** for the Proposed Project APMs for biological resources). Construction is anticipated to begin in June 2026 and run through May 2028. Post energization performance testing would continue through approximately October 2028. The complete construction schedule, outlined by task, is summarized in **Table 3-9, Proposed Preliminary Construction Schedule**. Refer to **Appendix 3-A** for additional information regarding the construction schedule for each Proposed Project component.

Table 3-9: Proposed Preliminary Construction Schedule			
Terminal	Start Date	End Date	Approx. Number of Workdays
Albrae Terminal			
Site Development (includes survey, road work, site and staging area preparation)	June 2026	September 2026	120
Below-Grade Construction	September 2026	January 2027	150
Above-Grade Construction and Equipment Installation	January 2027	March 2028	450
Commissioning and Testing	November 2027	May 2028	210
Post Energization and Performance Testing	June 2028	October 2028	150
Baylands Terminal			
Site Development (includes survey, access road work, site and staging area preparation)	June 2026	September 2026	120
Below-Grade Construction	September 2026	January 2027	150
Above-Grade Construction and Equipment Installation	January 2027	March 2028	450
Commissioning and Testing	November 2027	May 2028	210
Post Energization and Performance Testing	June 2028	October 2028	150
Transmission Lines			
Underground Construction Mobilization and Surveying	June 2026	February 2027	270
Albrae to Baylands 320 kV DC Underground Transmission Line Construction	July 2026	October 2027	480
Newark to Albrae 230 kV Underground Transmission Line Construction	November 2026	March 2027	150

Table 3-9: Proposed Preliminary Construction Schedule			
Terminal	Start Date	End Date	Approx. Number of Workdays
Baylands to NRS 230 kV Underground Transmission Line	July 2026	June 2027	360
Albrae to Baylands 320 kV DC Overhead Transmission Line Construction	June 2026	March 2027	300
Newark to Albrae 230 kV Overhead Transmission Line Construction	November 2026	March 2027	150
Baylands to NRS 230 kV Overhead Transmission Line Construction	November 2026	March 2027	150
Commissioning and Testing	March 2028	May 2028	90
Existing Substation Modifications¹			
PG&E Newark Substation Modifications	December 2026	February 2028	450
SVP NRS Substation Modifications	September 2025	February 2028	540
Notes:			
¹ LS Power is not responsible for PG&E's or SVP's project components.			

Construction of the proposed Albrae and Baylands terminals would occur concurrently and would begin with site development, which would include surveying, access road work, and site and staging area preparation. Below-grade construction at the proposed terminal sites would begin after site development is complete, followed by above-grade construction and equipment installation. Construction of the proposed transmission lines would begin at the same time as site development of the proposed terminals and would generally occur in a linear fashion, with underground and overhead segments being constructed concurrently. It is anticipated that construction of the overhead portions of the proposed transmission lines would conclude prior to construction of the underground portions.

3.6.5 WORK SCHEDULE

Construction activities on the Proposed Project would generally be scheduled to occur during daylight hours six days per week (Monday through Saturday). However, given the large amount of construction proposed within existing roads, local municipalities may dictate that transmission line construction occur at nighttime within certain areas of the Proposed Project to reduce traffic impacts and construction duration. The most likely areas for nighttime construction would be within commercial and industrial areas and not residential areas. Night work may be required during portions of the trenchless construction (e.g., during jacking and pullback operations) to allow for continuous operation. All work hours for the proposed underground transmission lines and trenchless crossings would be coordinated with the applicable municipalities. For the duct bank and vaults, work would occur outside of peak traffic hours as coordinated with the applicable cities. Construction activities would occasionally be scheduled outside of normal hours to avoid or reduce schedule delays, complete construction activities such as continuous concrete pours, accommodate the schedule for system outages, mitigate safety concerns, or to address emergencies.

For the proposed HVDC terminal sites, construction would occur at the site for the duration of the Proposed Project. For the proposed underground transmission line activities, work would generally move in a linear fashion, with multiple duct bank, splice vault, trenchless crossing, and cable installation crews working simultaneously along the route in different locations. As practicable, the crews would be located along the route in a manner that minimizes impacts.

3.7 POST-CONSTRUCTION

3.7.1 CONFIGURING AND TESTING

A final commissioning and testing plan would be coordinated with PG&E, SVP, and CAISO to ensure system reliability during energization of the Proposed Project. Generally, commissioning and testing would begin with pre-commissioning activities that include equipment fit-up inspections, electrical and mechanical tests, and simple function tests to ensure the equipment is connected properly. The protection/control systems for the proposed HVDC terminals and transmission lines would be tested per Proposed Project requirements. After pre-commissioning is completed on the proposed HVDC terminals and associated transmission lines, each proposed HVDC terminal would be energized individually, followed by the energization of the proposed Albrae to Baylands 320 kV DC transmission line connecting the proposed HVDC terminals. To energize a proposed HVDC terminal, the transmission lines to the nearby existing PG&E and SVP substations would first be energized. Next, the GIS switchyard portions of the proposed HVDC terminals would be energized. This would be followed by transformer energization. After confirmation that the transformer is working properly, functional tests would begin on the proposed HVDC terminals to ensure the power electronic devices operate as designed. This would include various performance tests to ensure the proposed HVDC terminals are able to meet all necessary electrical output. While running these tests, the proposed HVDC terminal cooling systems would be tested to confirm adequate cooling of applicable power electronic devices. A similar sequence would be implemented to energize both proposed HVDC terminals. Once commissioning and testing is complete for both proposed HVDC terminals, the proposed Albrae to Baylands 320 kV DC transmission line connecting the proposed HVDC terminals would be energized. Additional performance tests to ensure the proposed HVDC terminals are able to meet all necessary electrical output would be conducted following the energization of the proposed Albrae to Baylands 320 kV DC transmission line. Post-energization performance testing would continue through approximately October 2028. The personnel and equipment that would be used for commissioning and testing, along with the approximate duration of use, is provided in **Appendix 3-A**.

3.7.2 LANDSCAPING

The majority of the Proposed Project would be installed underground in city streets. Along the Proposed Project route, landscaping would be restored to pre-existing conditions as needed. LS Power would coordinate with the Cities of Fremont, Milpitas, San José, and Santa Clara to obtain tree removal permits and replace trees pursuant to the applicable Municipal Codes. Each proposed HVDC terminal site would be surrounded by a security wall with minimal landscaping. Additional landscaping would not be installed unless required by a local government or other jurisdictional agency. When required, landscaping would consist of drought resistant plants to minimize the need for watering and other maintenance.

3.7.3 DEMOBILIZATION AND SITE RESTORATION

3.7.3.1 Demobilization

Following completion of construction, the process of demobilization would begin. First, all equipment not needed for the remaining testing and revegetation would be removed. Once all post-energization performance testing is complete, all temporary construction structures (i.e., office trailers, portable toilets, etc.) and remaining construction and testing equipment would be

removed. Next, all temporarily disturbed work areas would be restored to their preconstruction conditions. See below for site restoration details.

3.7.3.2 Site Restoration

LS Power would restore all temporarily disturbed areas to approximate preconstruction conditions. Construction debris and waste would be removed and transported off-site to an approved disposal facility. Any types of Proposed Project waste materials that are routinely recycled would be recycled in an appropriate fashion at an approved disposal facility. LS Power would conduct a final inspection to ensure that cleanup activities are successfully completed. Areas that are disturbed by grading, augering, or equipment movement would be restored to their original contours and drainage patterns. Work areas would be de-compacted, and salvaged topsoil would be respread following recontouring to aid in the restoration of temporarily disturbed areas. Revegetation activities would be conducted in accordance with the Proposed Project SWPPP and APMs recommended herein. Restoration could include recontouring, reseeding, and planting replacement vegetation, as appropriate. Additional restoration efforts may include preparing the site for future utility uses. Erosion control measures may be required and would also be implemented in accordance with the Proposed Project SWPPP and APMs recommended herein. Disturbed roads would be reconstructed to the relevant transportation authority specifications. Reconstruction would include the restoration of all removed curbs, gutters, and sidewalks as well as the restoration of all removed or damaged paved surfaces, including the wear surface, striping, and signage.

3.8 OPERATION AND MAINTENANCE

3.8.1 REGULATIONS AND STANDARDS

O&M of the Proposed Project would be conducted in accordance with all applicable Federal Energy Regulatory Commission (FERC), NERC, CPUC, or CAISO requirements. Any O&M work would also be conducted in accordance with NESC, National Electrical Code (NEC), OSHA, and other applicable regulations and standards. Furthermore, since the Proposed Project would not be located within a high fire threat area, as identified by CAL FIRE or the CPUC, a project-specific Wildfire Management Plan is not required for O&M activities. However, LS Power would prepare a Wildfire Management Plan for its existing California projects prior to their energization, and this plan would be updated to include the Proposed Project prior to the energization of the Proposed Project.

The new transmission lines would also follow all applicable CPUC GOs; particularly GO 128, which governs the construction and maintenance of underground electric lines. LS Power would also comply with CAISO standards for inspection, maintenance, repair, and replacement.

3.8.2 SYSTEM CONTROLS AND OPERATION STAFF

The proposed HVDC terminals would be remotely monitored by LS Power's control center during O&M, which is staffed 24 hours a day, seven days a week. The LS Power control centers currently operate high-voltage transmission lines and substations and meet all of the physical and cyber security requirements necessary to operate the Proposed Project. LS Power's control centers would be integrated into CAISO to operate the Orchard STATCOM and Fern Road GIS/STATCOM projects, which are currently under construction and are planned to enter operations prior to the Proposed Project.

LS Power would have a SCADA/Energy Management System (EMS) architecture that provides a scalable system capable of handling and processing millions of data points. The SCADA/EMS system would be designed to receive and store large amounts of data that can be used for real-time operations, equipment health monitoring, and predictive maintenance. It would consist of fully redundant servers, power supplies, and Local Area Network (LAN) connections, routers, and switches. If equipment malfunctions, O&M personnel would be dispatched to the site to investigate the problem and take appropriate corrective action. The Proposed Project would be operated and maintained by LS Power's control center in Austin, Texas and LS Power's local maintenance/technical staff, utilizing existing internal LS Power staff and external resources for maintenance and emergency response. The Proposed Project would be incorporated into LS Power's existing programs with existing equipment, experienced staff, and trusted contractors to provide operational and cost efficiencies with reduced risks. The Proposed Project would also be monitored by CAISO's control center in Folsom, California, and CAISO would have operational control of the proposed HVDC terminals with authority to direct LS Power's control center.

LS Power currently maintains a transmission maintenance group staffed with experienced workers. LS Power would hire one technician to be located in close proximity to the Proposed Project to perform routine inspections, monitoring, and repairs. LS Power would also have two other technicians located in California for LS Power's other projects who would assist in O&M of the Proposed Project facilities, if needed. Day-to-day management of the Proposed Project would be provided by LS Power's asset management team.

3.8.3 INSPECTION PROGRAMS

3.8.3.1 LS Power Facilities

General Inspection Programs and Standards

LS Power has developed standards for inspection that ensure a reliable high-voltage transmission system and is committed to complying with those standards. LS Power would comply with CAISO standards for inspection through its existing maintenance policies and procedures and by leveraging the experience of its affiliate, Desertlink. Desertlink's Transmission Maintenance and Inspection Plan was approved by CAISO in 2020. LS Power would also have an approved Transmission Maintenance and Inspection Plan to comply with the provisions for the Orchard STATCOM and Fern Road GIS/STATCOM projects, which are currently under construction.

Prior to energization, the Proposed Project would be incorporated into LS Power's existing maintenance policies and procedures that are successfully utilized for maintaining highly reliable transmission systems across the United States. As part of these policies and procedures, LS Power has a Transmission Maintenance Plan (TMP) and Protection System Maintenance Program (PSMP) in which the Proposed Project would be incorporated. Additionally, an HVDC-specific maintenance plan would be developed based on the manufacturer's recommendations. The TMP and HVDC-specific maintenance plan would detail items such as inspection frequency and type, components to be inspected, qualifications of inspectors, and recordkeeping. LS Power's PSMP would contain specific maintenance and testing procedures for applicable Protection System Component Types in compliance with NERC Standard PRC-005-6, as well as internal LS Power standards related to system projection. The maintenance and testing procedures are based upon manufacturers' recommendations, national standards, good utility practice, and NERC guidance documents.

Project Specific Inspections

Each of the major Proposed Project components would have specific inspection plans that detail inspection items, inspection period, and staff qualifications required to perform the inspections. In general, monthly visual inspections would be performed at the proposed HVDC terminals to inspect equipment in accordance with manufacturer recommendations. This typically would be performed without taking the proposed HVDC terminals out of service. It is anticipated that the proposed HVDC terminals would be taken out of service to perform more extensive visual and electrical checks and maintenance on the equipment within the proposed HVDC terminals periodically according to manufacturer recommendations. Due to the diversity of equipment and the individual system components, a small, specialized team would execute the maintenance requirements. Inspection and maintenance would be performed by a small crew of one to two high-voltage technicians and one to two personnel provided by the equipment vendor with support provided by LS Power staff. Inspections and maintenance would be performed from the ground as well as from manlifts within the proposed HVDC terminals.

The transmission line inspections would be performed by qualified technicians through sensors and splice vault inspections. The underground vaults would be visually and electrically inspected from within the splice vaults periodically by a crew of two or more technicians and equipment vendor experts. The overhead transmission lines would be visually inspected from the ground periodically by a crew of two or more technicians. No new access is anticipated for any of the Proposed Project inspection activities.

3.8.3.2 PG&E Facilities

PG&E would continue its regular inspections at its Newark substation.

3.8.3.3 SVP Facilities

SVP would continue its regular inspections at its NRS substation.

3.8.4 MAINTENANCE AND OPERATIONS PROGRAMS

3.8.4.1 LS Power Facilities

Once construction is complete, the Proposed Project typically would not be occupied on a daily basis. The proposed HVDC terminals would be monitored and controlled by LS Power's control centers. A perimeter wall would enclose the Proposed Project, and all access gates would be locked to prevent the entry of unauthorized individuals. Access would be restricted further by posting signage on the exterior and at the entryway to the proposed HVDC terminal station facilities.

LS Power would hire one additional California-based technician to accommodate the integration and O&M of the Proposed Project. The technician would perform minor repairs and oversee the outside contractors for the maintenance of the Proposed Project. Repairs would be performed in accordance with the manufacturer's recommendations. In the event that equipment or parts replacements are required, LS Power would maintain critical spare parts and materials required to repair system facilities, including, but not limited to, HVDC valves, control panels, protection panels, cooling system, and medium voltage equipment. The spare parts inventory would be in

addition to the more than three percent redundant HVDC valve submodules that would be included as installed spares. Space for a spare transformer and phase reactor would be accounted for on each proposed HVDC terminal site.

It is anticipated that the terminals would be taken out of service to perform maintenance on equipment within the proposed HVDC terminals periodically according to manufacturer recommendations. Due to the diversity of equipment and the individual system components, a small, specialized team would execute the maintenance requirements. Inspection and maintenance would be performed by a small crew of one to two high-voltage technicians and one to two personnel provided by the equipment vendor with support provided by LS Power staff. Inspections and maintenance would be performed from the ground as well as from manlifts within the proposed HVDC terminals.

The transmission line inspections would be performed by qualified technicians through sensors and splice vault inspections. The underground vaults would be visually and electrically inspected from within the splice vaults periodically by a crew of two or more technicians and equipment vendor experts. The overhead transmission line would be visually inspected from the ground periodically by a crew of two or more technicians. If issues are found during inspections, maintenance would be performed on the transmission line component as required.

Impacts from the Proposed Project to surrounding utilities would be studied, and any cathodic protection required as a result of the Proposed Project would be coordinated with the impacted utility. If required, landscaping would be designed to require little to no maintenance.

LS Power would regularly inspect, maintain, and repair the Proposed Project and access roads following completion of Proposed Project construction. These inspections would look at vegetation growth, road conditions, and water drainage conditions. Maintenance of these access roads would include vegetation trimming, road surface renewal, ditch cleaning, and water management practices, all on an as-needed basis.

3.8.4.2 PG&E Facilities

PG&E would continue its regular O&M at its Newark substation.

3.8.4.3 SVP Facilities

SVP would continue its regular O&M at its NRS substation.

3.8.5 VEGETATION MANAGEMENT PROGRAMS

The vegetation management process can be split into three different subcategories: inspection, planned vegetation treatment, and emergency vegetation treatment. Inspections would vary in frequency from annually to every five years. These inspections would be conducted by ground and air, as necessary. During the inspections, any encroachments would be noted and prioritized based on risk level. Planned vegetation treatment includes herbicide spraying (where permitted), removing excessive growth, ROW mowing, ROW side cutting, removal of encroaching trees, and vegetation removal to mitigate wildfire risks. In accordance with fire break clearance requirements in PRC 4292 and Title 14, Section 1254 of the CCR, LS Power would trim or remove flammable vegetation in the area surrounding the Proposed Project site and all other safety hazards. Crews would typically conduct this work using mechanical equipment consisting of weed trimmers, rakes,

chain saws, shovels, and leaf blowers. Emergency vegetation treatment would be conducted when any vegetation encroaches within the 10-foot line clearance. LS Power would typically inspect the proposed HVDC terminals on an annual basis to determine if brush clearing is required. Due to the underground nature of the Proposed Project, LS Power would also look for underground vegetation encroachments, including tree roots, water intrusion, and other natural occurring environmental encroachments.

3.9 DECOMMISSIONING

3.9.1 DECOMMISSIONING

3.9.1.1 LS Power Facilities

The plan is for the Proposed Project to be in operation or use indefinitely, with no currently established plans or timing for decommissioning. Therefore, there are no reasonably foreseeable plans for the disposal, recycling, or future abandonment of the Proposed Project facilities.

3.9.1.2 PG&E Facilities

PG&E is not subject to decommissioning and would retain its facilities as long as they are useful.

3.9.1.3 SVP Facilities

SVP is not subject to decommissioning and would retain its facilities as long as they are useful.

3.10 ANTICIPATED PERMITS AND APPROVALS

3.10.1 ANTICIPATED PERMITS AND APPROVALS

The CPUC is the lead California agency for the Proposed Project. LS Power must comply with CPUC's GO 131-D Section III-B, which contains the permitting requirements for construction of the Proposed Project (CPUC, 2023). This PEA was prepared as part of an application to obtain a CPCN for the Proposed Project. Although PG&E and SVP are not applicants in LS Power's application for a CPCN, PG&E and SVP's scopes of work are needed to interconnect the Proposed Project to PG&E and SVP's electrical grid, respectively. PG&E and SVP's substation modifications would be included in the CPUC's CEQA analysis. However, PG&E and SVP would likely utilize the respective adopted CEQA document to separately comply with the CPUC's permitting requirements under GO 131-D.

In addition to the CPCN, LS Power may be required to obtain several other permits from federal, state, and local agencies. **Table 3-10, *Anticipated Permits and Approvals*** lists the permits, approvals, and licenses that LS Power may be required to obtain from jurisdictional agencies.

Table 3-10: Anticipated Permits and Approvals¹

Agency	Permit/ Approvals²	Permit Trigger	Application Process	Timing
City of Fremont	Traffic Control Plan	Any construction within public ROW.	Submit application and TCP to City of Fremont Transportation Engineering Division for review and approval.	Prior to the start of construction requiring traffic control.
City of Fremont	Encroachment Permit	Construction within City roads or ROWs. Construction of Albrae terminal.	Submit application to City of Fremont for review and approval.	Prior to the start of construction within City roads or ROW.
City of Fremont	Grading Permit (non-discretionary)	Grading for the terminal site.	Submit application to City of Fremont for review and approval.	Prior to the start of construction of the proposed Albrae terminal.
City of San José	Traffic Control Plan	Construction within City roads or ROWs.	Submit TCP to City of San José for review and approval.	Prior to the start of construction requiring traffic control.
City of San José	Encroachment Permit	Construction within City roads or ROWs. Construction of proposed Baylands terminal.	Submit application to City of San José for review and approval.	Prior to the start of construction within City roads or ROW.
City of San José	Grading Permit (non-discretionary)	Grading for the proposed Baylands terminal site.	Submit application to City of San José for review and approval.	Prior to the start of construction of the proposed Baylands terminal.
City of Santa Clara	Traffic Control Plan	Construction within City roads or ROWs.	Submit TCP to City of Santa Clara for review and approval.	Prior to the start of construction requiring traffic control.
City of Santa Clara	Encroachment Permit	Construction within City roads or ROWs.	Submit application to City of Santa Clara for review and approval.	Prior to the start of construction within City roads or ROW.
SCVWD	Encroachment Permit	Work on or near SCVWD land, easement, or facility.	Submit application to SCVWD for review and approval.	Prior to the start of construction within or near SCVWD property.
Caltrans	Encroachment Permit	Construction under Caltrans roads or with Caltrans ROWs.	Submit application to Caltrans for review and approval.	Prior to the start of construction within or near Caltrans ROW.
California Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit	Classification of new underground project	Installation of new underground boring or pipejacking greater than 30 inches in diameter.	Submit notification and required information to the Mining and Tunneling Unit, District 1.	Prior to bidding for construction of the applicable underground feature.

Table 3-10: Anticipated Permits and Approvals¹

Agency	Permit/ Approvals²	Permit Trigger	Application Process	Timing
State Water Resources Control Board (SWRCB)	Clean Water Act (CWA), National Pollutant Discharge Elimination System General Permit for Discharge of Construction Related Stormwater	SWPPPs are required for stormwater discharges associated with construction activities that disturb more than one acre of land.	Prepare SWPPP and submit Notice of Intent with the SWRCB.	Prior to the start of construction.
California Department of Fish and Wildlife (CDFW)	Section 1602 Lake or Streambed Alteration Agreement (LSAA)	Potential impacts to CDFW jurisdictional waters under Section 1602 of the CDFW Code.	Submit application to CDFW for review and approval.	Prior to the start of construction within jurisdictional waters.
CDFW	Section 2081 Incidental Take Permit (ITP) or Section 2080.1 Consistency Determination	Potential take of species listed under the California Endangered Species Act.	Submit application to CDFW for review and approval.	Prior to the start of construction.
San Francisco Bay Conservation and Development Commission (BCDC)	Administrative Permit	Construction within, over, or under BCDC jurisdiction.	Submit application to BCDC for review and approval.	Prior to the start of construction within BCDC jurisdiction.
CPUC	California Public Utilities Code Section 1001 et seq. and CPUC GO 131-D CPCN	Construction of transmission line and electrical substation facilities governed by GO 131-D.	Submit CPCN Application and PEA to CPUC. The CPUC would initiate the CEQA process and make a proposed and final CPCN ruling.	Prior to the start of construction.
RWQCB	CWA Section 401 Water Quality Certification	Potential impacts to CWA jurisdictional waters.	Submit application to RWQCB for review and approval.	Prior to the start of construction within jurisdictional waters.
Santa Clara Valley Habitat Conservation Plan (HCP) (multiple agencies)	State and Federal Incidental Take Permit	Potential impacts to covered State and Federal species.	Apply for coverage under the Santa Clara Valley HCP.	Prior to the start of construction.
Army Corps of Engineers (USACE)	CWA Section 404 Permit – Nationwide Permit 57	Potential cut or fill within CWA jurisdictional waters.	Submit Preconstruction Notification (PCN) to USACE for review and approval.	Prior to the start of construction within jurisdictional waters.
USACE	Section 408 Program (Rivers and Harbors Act of 1899)	Potential modification of USACE Civil Works Projects (Levees).	Submit application to USACE, San Francisco District.	Prior to alteration of levees.

Table 3-10: Anticipated Permits and Approvals¹

Agency	Permit/ Approvals ²	Permit Trigger	Application Process	Timing
USACE and California State Historic Preservation Office (SHPO)	National Historic Preservation Act (NHPA) Section 106 Consultation	Federal Undertaking (USACE Section 404 and 408 Permit Processes).	USACE submits to SHPO for consultation.	Prior to issuance of USACE Section 404 or 408 permits.
U.S. Fish and Wildlife Service (USFWS)	Section 7 or Section 10 ITP	Potential take of federally listed species, in compliance with the Federal Endangered Species Act.	Submit Biological Assessment or HCP to USFWS for review and approval.	Prior to the start of construction.
Federal Aviation Administration (FAA)	Determination of No Hazard	Construction of overhead transmission line structures.	Submit application to FAA for review and approval.	Approximately six months prior to the start of construction.
Union Pacific Railroad	New Wireline Crossing Authorization	Installation of new underground transmission line under Union Pacific's existing railroad via jack-and-bore.	Submit application to Union Pacific for review and approval.	Prior to the start of construction within or near Union Pacific ROW.

¹ Permit requirements in this table only apply to the applicant (LS Power) and are separate from applicable permits for PG&E and SVP's upgrades.
² Permits/approvals listed in this table are potentially required and do not necessarily represent a comprehensive list of all possible permits/approvals required for the Proposed Project. In addition, some permits listed in this table may not ultimately be required.

3.10.2 RIGHTS-OF-WAY OR EASEMENT APPLICATIONS

LS Power would acquire approximately one parcel of land through the purchase of privately owned parcels, totaling approximately 6.1 acres, for construction and O&M of the proposed Albrae terminal. A long-term land lease would be negotiated with the City of San José for construction and O&M of the proposed Baylands terminal.

In addition to the land purchase transactions, additional ROW, franchise, or easement rights would be required for the three transmission lines included in Proposed Project. These requirements are summarized in **Table 3-11, Permanent Land and ROW Requirements**.

Table 3-11: Permanent Land and ROW Requirements

Proposed Project Component	Approximate Length (miles)	Approximate Area (acres)
Newark to Albrae 230 kV Transmission Line	0.4	2.5
Albrae to Baylands 320 kV DC Transmission Line	8.6	28.2
Baylands to NRS 230 kV Transmission Line	3.5	7.2
TOTAL	12.5	37.9

3.11 APPLICANT PROPOSED MEASURES AND BEST MANAGEMENT PRACTICES

PG&E and SVP are not applicants in this CPCN application proceeding and would not be subject to the APMs listed below. However, PG&E would comply with a separate list of construction BMPs

as set forth in **Section 3.11.2**. SVP would implement one Proposed Project APM as described in **Section 3.11.3**, *SVP Best Management Practices*.

3.11.1 APPLICANT PROPOSED MEASURES

LS Power would be responsible for overseeing the construction and environmental teams that would implement the Proposed Project APMs. LS Power would manage construction to allow for implementation of the APMs to be monitored, documented, and enforced during each Proposed Project phase, as appropriate. All those contracted by LS Power to perform this work would be provided with all relevant permits, conditions, and APMs, as well as instructions on how to properly implement the APMs to ensure their effectiveness in reducing potential environmental effects.

Implementation of the proposed APMs would be the responsibility of the environmental compliance and construction teams. The environmental compliance team would include an environmental project manager, resource specialists, and environmental monitors, as needed. All APMs would be implemented consistent with applicable federal, state, and local regulations. The environmental compliance team would be responsible for the inspection, documentation, and reporting of LS Power compliance with all APMs as proposed. As needed, environmental specialists would be retained to verify that all APMs are properly implemented during the construction phase.

The APMs are described in **Table 3-12** and are described in detail in **Section 5.0, Environmental Analysis**, which includes an analysis of why the APM was selected and how it would reduce and/or minimize potential impacts. All applicable CPUC Draft Environmental Measures were included, as needed, to further reduce potential impacts.

If conditions occur where construction may potentially adversely affect a known or previously unknown environmentally sensitive resource, or if construction activities significantly deviate from Proposed Project requirements, LS Power monitors and/or contract administrators would have the authority to halt construction activities, if needed, until an alternative method or approach can be identified. Any concerns that arise during implementation of the APMs would be communicated to the appropriate authority to determine if corrective action is required, or the concerns would be addressed on-site, as applicable. As the proposed APMs are implemented, environmental monitors from LS Power would be responsible for the review and documentation of such activities. Field notes and digital photographs would be used to document and describe the status of APMs, as necessary.

Table 3-12: Applicant Proposed Measures	
APM Number	Description
Air Quality	
APM AQ-1: Construction Fleet Minimum Requirements and Tracking	<p>LS Power shall ensure that at least 75 percent of equipment horsepower hours related to off-road construction equipment include Tier 4 interim or Tier 4 final emissions controls. An initial listing that identifies each off-road unit's certified tier specification to be operated on the Proposed Project shall be submitted to the CPUC before the start of construction activities. Construction activities shall not begin until the equipment listing has been submitted to the CPUC.</p> <p>As LS Power requires new or replacement construction equipment on the Proposed Project, LS Power shall document verification of the certified</p>

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	<p>engine tier before their use on Proposed Project sites. Before the start of construction, LS Power shall develop a diesel-powered equipment-use hours tracking tool and procedure. The tracking tool shall be utilized by LS Power to keep track of the certified engine tier and daily equipment use hours of all off-road diesel-powered equipment. If all diesel-powered equipment is Tier 4 certified, the tracking tool is not required. The tracking tool shall be maintained by LS Power, and tracking updates shall be submitted to the CPUC on a monthly basis to track the Proposed Project's compliance. The updated tracking tool shall be submitted to the CPUC no later than the tenth day of the following month.</p>
APM AQ-2: Dust Control Best Management Practices	<p>LS Power shall implement the following measures to control fugitive dust during construction activities:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. The watering regiment may be adjusted during rain events as needed. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. • Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • All trucks and equipment, including their tires, shall be washed off or otherwise cleaned prior to leaving the site. • Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. • Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.
Biological Resources	
APM BIO-1: Restoration of Disturbed Areas	<p>Once construction is complete in a given area, natural vegetation areas (annual grassland, annual grassland/wetland, riparian, wetland, and vernal pools) that are temporarily disturbed by Proposed Project activities shall be restored to approximate preconstruction conditions. Areas that are temporarily disturbed by grading, augering, or equipment movement shall</p>

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	be restored to their original contours and drainage patterns. Work areas shall be decompacted, and salvaged topsoil materials shall be respread following recontouring to aid in restoration of temporary disturbed areas. Revegetation activities shall be conducted in accordance with the Proposed Project SWPPP and APMs. Restoration could include recontouring, reseeding, and planting replacement of natural vegetation, as appropriate. Temporarily disturbed natural vegetation areas shall be revegetated with appropriate weed-free native seed mixes or species that are characteristic of the plant community that was disturbed.
APM BIO-2: Rare Plant Surveys	Protocol surveys following standard guidelines shall be conducted within suitable habitat areas for special-status plants that may occur within the Proposed Project impact areas during the appropriate blooming period to determine the location and extent of populations of rare plants, if present. In the event of the discovery of a rare plant, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, LS Power shall consult with the USFWS for ITP, as required. There are no CDFW-listed species that were analyzed, but CNPS species would require surveys and potential mitigation if they cannot be avoided. Construction activities that may impact rare plants, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Upon the discovery of sensitive plants, the qualified biologist shall have the authority to stop work activities and, following the identification and implementation of steps required to avoid or minimize impacts to sensitive plants, direct construction work to commence once more.
APM BIO-3: Preconstruction Sweeps	Prior to initial vegetation clearance and ground-disturbing activities, a qualified biologist shall conduct preconstruction survey sweeps of the Proposed Project work area for special-status wildlife and plants in potentially suitable habitats. In the event of the discovery of a special-status plant, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, LS Power shall seek coverage from the Santa Clara Valley HCP, or shall consult with the USFWS and/or CDFW for take ITP or other authorization as well as any additional mitigation. Any other construction activities that may impact sensitive biological resources, including movement of construction equipment and other activities outside of the fenced/paved areas within wildlife habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources. These surveys will be conducted within 30 days of the start of construction activities and after protocol surveys for individual species have been conducted. These surveys serve to double-check populations, nesting/breeding areas, and sensitive habitats that would be identified during protocol surveys and to ensure that these areas will be avoided by construction activities.
APM BIO-4: Sensitive Area Demarcation	All sensitive biological areas (including creeks, rivers, wetlands, vernal pools, riparian areas, and special-status species habitats) within the Proposed Project work area shall be clearly marked prior to construction commencement to restrict construction activities and equipment from entering these areas, except as necessary for construction activities.

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	These markings shall be inspected regularly to ensure that they remain in place.
APM BIO-5: Vehicle Cleaning Prior to Entering Natural Areas	Vehicles and equipment shall be cleaned prior to use in native habitat on the Proposed Project areas to avoid the spread of noxious weeds and non-native invasive plant species.
APM BIO-6: Vehicle Speed Limits	Speed of vehicles driving along proposed access roads and on the Proposed Project site during construction and operation shall be limited to 15 mph, except in the case of legal roadgoing vehicles traveling on portions of the Proposed Project site that are public roadways which shall be limited to posted speed limits. In addition, construction and maintenance employees shall be required to stay on established and clearly marked and existing roads, except where not feasible due to physical or safety constraints and shall be advised that care should be exercised when commuting to and from the Proposed Project area.
APM BIO-7: Salt Marsh Harvest Mouse (SMHM) Surveys	Protocol surveys following standard guidelines shall be conducted within all proposed impact areas and suitable buffers within suitable habitat areas for salt marsh harvest mouse (SMHM) by an approved biologist. In the event of the discovery of SMHM individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted prior to construction activity. Any other construction activities that may impact SMHM including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat would be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to SMHM, such as allowing individuals to leave on their own or temporarily halting construction in areas where SMHM is present. All adjacent known SMHM preserve areas shall be clearly marked as well and avoided. This APM would be applied along the transmission line west of the proposed alignment in the vicinity of Coyote Creek Lagoon.
APM BIO-8: Excavation Wildlife Safety BMPs	Excavated holes/trenches that are not within areas that have wildlife exclusion fencing or that are not filled at the end of a workday shall be covered, or a wildlife escape ramp shall be installed to prevent the inadvertent entrapment of wildlife species.
APM BIO-9: Worker Environmental Awareness Program (WEAP) Training	A WEAP shall be developed and implemented to educate all on-site construction workers on site-specific biological and non-biological resources and proper work practices to avoid harming wildlife during construction activities. This WEAP shall include measures to reduce trash buildup during construction.

Table 3-12: Applicant Proposed Measures	
APM Number	Description
APM BIO-10: Outdoor Lighting Measures	The use of outdoor lighting during construction and O&M shall be minimized whenever practicable. Photocell and motion detection-controlled lighting shall be provided at a level sufficient to provide safe entry and exit to the Proposed Project terminals and control enclosures and for security purposes. All lighting shall be selectively placed, shielded, and directed downward to the extent practicable. All lighting near sensitive species habitat shall be directed away from these areas to the extent practicable. Night work shall be avoided as practicable; however, given the large amount of construction proposed within existing roads, local municipalities may dictate that transmission line construction occurs at nighttime within certain areas of the Proposed Project. The most likely areas for nighttime construction are within commercial and industrial areas and not residential or potentially sensitive biological areas. Night work is not anticipated during O&M except during emergencies.
APM BIO-11: Special-Status Bird Surveys	Protocol surveys following standard guidelines shall be conducted for California black rail, tricolored blackbird, California clapper rail, burrowing owl, golden eagle, and bald eagle and focused surveys shall be conducted for western snowy plover, white-tailed kite, and other raptors. In the event of the discovery of suitable habitats, nests, or live individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW would be consulted. Tricolored blackbird and burrowing owl are covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific protocol surveys, the take for this species shall be covered either under the HCP or covered under a State ITP in consultation with CDFW. If impacts are identified during species-specific protocol surveys for the other State-listed avian species that are not covered under the Santa Clara Valley HCP (California black rail, California clapper rail, Western snowy plover, bald eagle, and any other avian species that are identified), the take shall be covered under a State ITP in consultation with CDFW. Any other construction activities that may impact special-status birds, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Additionally, qualified biologists shall monitor all active nests to ensure that construction activities are not disturbing the nest. The monitor/inspector shall have the authority to stop work activities upon the discovery of nests or live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive birds. Additional burrowing owl protections may be required in the vicinity of the proposed Baylands terminal site depending on proximity of construction to active burrows. These measures may include constructing berms or placing haybales between the known burrowing owl burrows and active construction areas and having additional monitors to make sure the owls are not being stressed by construction activities.
APM BIO-12: Nesting Bird Protection Measures	If feasible, LS Power shall avoid certain construction activities such as vegetation trimming/removal during the migratory bird nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season (generally February 15 – August 31) APM BIO-15 shall be used. Any construction activities that may impact nesting birds including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat shall be monitored by a

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	qualified biologist. Additionally, biologists shall monitor all active nests to ensure that construction activities are not disturbing the nest. The monitor/inspector shall have the authority to stop work activities upon the discovery of nests or live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to nesting birds.
APM BIO-13: Raptor Surveys	If a raptor nest is observed within 500 feet of the Proposed Project during protocol or preconstruction surveys, a qualified biologist shall determine if it is active. If the nest is determined to be active, the qualified biologist shall establish an appropriately sized no construction buffer around the nest and shall monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated with the Proposed Project are disturbing or disrupting nesting or breeding activities, the monitor shall make recommendations to reduce noise or disturbance in the vicinity of the nest. If the nest is determined to be inactive, the nest shall be removed under direct supervision of the qualified biologist.
APM BIO-14: Golden Eagle Protection	The USFWS recommends a one mile no disturbance buffer around active nests during the active nesting season (USFWS, 2021). LS Power shall conduct an eagle nest survey within suitable nesting habitat prior to construction. If preconstruction surveys determine that there is an active golden eagle nest within the Survey Area, LS Power shall consult with the agencies to identify an appropriate disturbance buffer based on existing conditions, including existing visual barriers, existing noise levels, existing high levels of human activity and vehicle traffic, and other factors. In lieu of placing an avoidance buffer, LS Power could construct a barrier wall, outside of the nesting season, to obstruct construction activities from line of site from the nest. The barrier would also dampen noise from construction activities. A full-time biological monitor shall monitor the bird(s) for signs of distress. If signs of distress are identified, the biological monitor shall require construction to cease until the birds exhibits normal behavior.
APM BIO-15: Nesting Bird Surveys	Preconstruction nest surveys shall be conducted during the nesting or breeding season (generally February 15 – August 31) within all proposed impact areas and suitable buffers within suitable habitat areas for Migratory Bird Treatment Act (MBTA)-protected birds. This survey shall be performed to determine the presence or absence of nesting birds and roosting bats. If roosting bats or active nests (i.e., containing eggs or young) are identified, a suitable construction avoidance buffer shall be implemented to ensure that the nesting or breeding activities are not affected. If the nesting or breeding activities by a Federal- or State-listed species are observed, LS Power shall consult with the USFWS and CDFW as necessary. Monitoring of the nest shall continue until the birds have fledged or construction is no longer occurring on the site.
APM BIO-16: Special-Status Invertebrate Surveys	Protocol surveys following standard guidelines and during appropriate seasons shall be conducted within all proposed impact areas and suitable buffers within potentially suitable habitat areas for vernal pool tadpole shrimp, vernal pool fairy shrimp, monarch butterfly, Western bumblebee, and Crotch's bumblebee. In the event of the discovery of suitable habitat, host plants, or individuals of these special-status invertebrates, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If impacts are identified during species-specific surveys for

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	<p>verna pool tadpole shrimp, vernal pool fairy shrimp, monarch butterfly, Western bumblebee, or Crotch's bumblebee which are not covered under the Santa Clara Valley HCP, the take shall be covered under a Federal ITP (vernal pool tadpole shrimp; Federally Endangered, vernal pool fairy shrimp; Federally Threatened, monarch butterfly; Federal candidate species) or State ITP (Western bumblebee and Crotch's bumblebee; State candidate species) in consultation with CDFW or USFWS. Any other construction activities that may impact special-status invertebrates or their habitats, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of individuals or host plants and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive invertebrates.</p>
<p>APM BIO-17: Wetland, Vernal Pool, and Waterway Construction Timing Restrictions</p>	<p>Construction in the vicinity of waterways, wetlands, and vernal pools such as along the Cushing Parkway bridge that borders the Don Edwards San Francisco Bay National Wildlife Refuge (NWR), near vernal pools north of the existing Newark substation, and in the vicinity of Coyote Creek and Guadalupe River shall be restricted to occur during the dry season (generally from May 1st through October 15th) to the maximum extent possible. This would minimize the chance of encountering and impacting sensitive species such as vernal pool tadpole shrimp and California tiger salamander that can be found in annual grassland/wetland, wetland, and vernal pool habitat present in these areas as well as fish species such as steelhead, longfin smelt, and green sturgeon that could be using waterways. If construction cannot be conducted during the dry season in the vicinity of waterways, wetlands, and vernal pools, they would be clearly marked and avoided to the maximum extent possible and biological monitors would be present to ensure that no impacts occur.</p>
<p>APM BIO-18: Special-Status Amphibian Surveys</p>	<p>Protocol surveys shall be conducted for California tiger salamander and California red-legged frog and preconstruction surveys shall be conducted within all proposed impact areas and suitable buffers within potentially suitable habitat areas for California tiger salamander and California red-legged frog. In the event of the discovery of suitable habitats or live individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted. California tiger salamander and California red-legged frog are covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific surveys, the take for this species shall be covered either under the HCP or covered under a State ITP in consultation with CDFW. Any other construction activities that may impact special-status amphibians including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive amphibians.</p>
<p>APM BIO-19: Wetland and Aquatic Resources Delineations</p>	<p>Pursuant to property owner approval, a wetland and aquatic resources delineation will be conducted for the portion of the proposed Baylands to NRS 230 kV transmission line within Caltrans ROW containing potentially</p>

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	State or Federal jurisdictional waters. Accurate acreages of vernal pools and RWQCB, CDFW, and USACE jurisdictional waters will be defined from these delineations. Vernal pools and jurisdictional waters shall be marked as a sensitive area and shall be avoided to the extent practicable. If these areas cannot be avoided, applicable permits shall be obtained.
Cultural Resources	
APM CUL-1: WEAP Training	<p>LS Power shall obtain a qualified archaeologist to design the cultural resources component of a WEAP that shall be provided to all Proposed Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. The WEAP shall be submitted to the CPUC prior to construction. No construction worker shall be involved in ground-disturbing activities without having participated in the WEAP. The WEAP shall include, at a minimum:</p> <ul style="list-style-type: none"> • Training on how to identify potential cultural resources and human remains during the construction process; • A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to historic preservation; • A discussion of procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Proposed Project; • A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and LS Power policies; and • A statement by the construction company or applicable employer agreeing to abide by the WEAP, LS Power policies, and other applicable laws and regulations. <p>The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Proposed Project, provided that the program elements pertaining to cultural resources are designed by a qualified archaeologist, which is defined as an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology (36 CFR Part 61)</p>
APM CUL-2: Archaeological and Native American Monitoring	<p>Archaeological and Native American monitoring shall be conducted during initial ground disturbance associated with the Proposed Project when within 100 feet (30 m) of previously recorded prehistoric or ethnohistoric resources, or after unanticipated discovery of same. Archaeological monitoring shall be conducted during ground disturbance associated with the Proposed Project when within 100 feet (30 m) of previously recorded historic-period resources, or after unanticipated discovery of same. Prehistoric and/or ethnohistoric archaeological sites have been recorded adjacent to the Proposed Project area, and the Sacred Lands File (SLF) search and Tribal outreach indicate that lands sacred to the North Valley Yokuts Tribe and the Ohlone Indian Tribe are present within the Proposed Project search area. In addition, historic-era archaeological sites have been recorded within 100 feet (30 m) of the Proposed Project area. A qualified archaeologist, or an archaeological monitor under the supervision of a qualified archaeologist, shall be retained by LS Power to monitor</p>

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	excavation in each work area for the Proposed Project in accordance with the above monitoring criteria to ensure that there is no impact to any significant unanticipated historical resource. A qualified archaeologist, and a Native American monitor, if determined during Tribal consultation, shall be retained by LS Power to monitor excavation in each work area for the Proposed Project in accordance with the above monitoring criteria to ensure that there is no impact to any significant unanticipated cultural resource. Procedures to be followed in the event that a Native American monitor is not available shall be determined during Tribal consultation. Native American monitoring requirements established in this APM may be superseded by government-to-government consultation conducted between the CPUC and Tribal organizations as part of the Assembly Bill 52 process or otherwise.
APM CUL-3: Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources	In the event that previously unidentified cultural resources are uncovered during implementation of the Proposed Project, all work within 100 feet (30 m) of the discovery shall be halted and redirected to another location. LS Power's qualified archaeologist shall inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts shall occur, the resource shall be documented on State of California Department of Parks and Recreation (DPR) cultural resource records, and no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, LS Power's qualified archaeologist shall evaluate the significance and California Register of Historic Resources (CRHR) eligibility of the resources and, in consultation with the CPUC, determine appropriate treatment measures. Preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, LS Power's qualified archaeologist, in consultation with the CPUC and, if the unearthed resource is prehistoric or Native American in nature, the Native American monitor shall develop additional treatment measures, such as data recovery consistent with CEQA Guidelines 15126.4(b)(3)(C)-(D). Archaeological materials recovered during any investigation shall be curated at an accredited curation facility or transferred to the appropriate Tribal organization.
APM CUL-4: Cultural Resources Inventory	The limits of construction for proposed overhead structure AC-3, limits of construction for the area west of overhead structure AC-4 within Caltrans ROW, the remainder of proposed overhead structures DC-1 through DC-11, and temporary construction Staging Areas 1, 3 through 9, and part of 10 shall be surveyed prior to construction. If additional proposed facilities and ground-disturbing activities move outside the previously surveyed acreage, the new areas shall be subjected to a cultural resources inventory to ensure that any newly identified cultural resources are either avoided by project redesign or evaluated and treated.
APM CUL-5: Unanticipated Discovery of Human Remains	Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy where feasible and otherwise managed pursuant to the standards of CEQA Guidelines 15064.5(d) and (e). If human remains are discovered during construction or O&M activities, all work shall be diverted from the area of the discovery and the CPUC shall be informed immediately. LS Power's qualified archaeologist shall contact the appropriate County Coroner to determine whether or not the remains are Native American. If the remains are

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	determined to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC). The NAHC shall then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn shall make recommendations for the appropriate means of treating the human remains and any associated funerary objects. No part of the Proposed Project is located on federal land and no federal monies are involved; therefore, the Proposed Project is not subject to the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990.
Geology, Soils, and Paleontological Resources	
APM GEO-1: Geotechnical Studies and Geologic Hazard Reduction Measures	<p>The following measures shall be implemented during construction to minimize impacts from geological hazards and disturbance to soils:</p> <ul style="list-style-type: none"> • Keep vehicle and construction equipment within the limits of the Proposed Project and in approved construction work areas to reduce disturbance to topsoil; • Geotechnical studies shall be completed to evaluate the risk of geologic hazards associated with the Proposed Project. The geotechnical studies shall provide geotechnical engineering recommendations relative to subsurface soil and rock conditions, groundwater conditions, lateral earth pressures, and seismic classifications of the Proposed Project area. Recommendations from the geotechnical studies shall be considered in the final design. • Avoid construction in areas with saturated soils, whenever practical, to reduce impacts to soil structure and allow safe access. Similarly, avoid topsoil salvage in saturated soils to maintain soil structure; • Keep topsoil material on-site in the immediate vicinity of the temporary disturbance or at a nearby approved work area to be used in restoration of temporary disturbed areas. Temporary disturbance areas shall be re-contoured following construction to match pre-construction grades. Areas shall be allowed to re-vegetate naturally or be reseeded with a native seed mix from a local source if necessary. On-site material storage shall be sited and managed in accordance with all required permits and approvals; and • Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Removed vegetation shall be disposed of off-site to an appropriate licensed facility or can be chipped on-site to be used as mulch during restoration.
APM PALEO-1: Paleontological Resources Mitigation Monitoring Plan (PRMMP)	<p>Prior to the issuance of grading permits, a qualified paleontologist shall be retained to prepare and oversee the PRMMP for the Proposed Project. The PRMMP shall contain monitoring procedures, define areas and types of earthwork to be monitored, and provide methods for determining the significance of fossil discoveries. The PRMMP shall direct that a qualified paleontological monitor (working under the supervision of the qualified paleontologist) shall monitor all excavations or grading at depths exceeding seven feet bgs where potentially fossil-bearing alluvial deposits of Pleistocene age may be present. The duration and timing of paleontological monitoring shall be determined by the qualified paleontologist based on the grading plans and construction schedule and may be modified based on the initial results of monitoring. The PRMMP shall state that any fossils that are collected shall be prepared to the point of curation, identified to the lowest reasonable taxonomic level, and</p>

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	<p>curated into a recognized professional repository (e.g., San Diego Natural History Museum [SDNHM], University of California Museum of Paleontology [UCMP]), along with associated field notes, photographs, and compiled fossil locality data. The repository shall be contracted prior to the start of earthwork to curate and store any discovered and recovered fossils. Such an institution shall be a recognized paleontological specimen repository with a permanent curator, such as a museum or university. Donation of the fossils shall be accompanied by financial support for initial specimen curation and storage.</p> <p>Following the completion of the above tasks, the qualified paleontologist shall prepare a final mitigation report that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. The report shall be submitted to appropriate agencies, as well as to the designated repository.</p>
APM PALEO-2: Paleontological Resource Findings	<p>If paleontological resources are encountered during ground disturbing activities when the qualified paleontologist or paleontological monitor is not on-site (an inadvertent discovery), earthwork within the vicinity of the discovery shall immediately halt, and the qualified paleontologist shall evaluate the significance of the fossil discovery. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered and the qualified paleontologist deems the discovery site has been mitigated to the extent necessary.</p>
Hazards, Hazardous Materials, and Public Safety	
APM HAZ-1: Site-Specific Spill Prevention, Control, and Countermeasure Plan	<p>A site-specific SPCCP shall be prepared prior to the initiation of storage of hazardous liquids on the Proposed Project site in excess of the appropriate regulatory thresholds. In the event of an accidental spill, the Proposed Project shall be equipped with secondary containment that meets SPCCP guidelines. The secondary containment shall be sufficiently sized to accommodate accidental spills. The plan shall be provided to the CPUC prior to construction for recordkeeping.</p>
APM HAZ-2: Hazardous Materials Management Plan	<p>A HMMP shall be prepared and implemented for the Proposed Project. The plan shall be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The plan shall include the following information related to hazardous materials and waste, as applicable:</p> <ul style="list-style-type: none"> • A list of hazardous materials present on-site during construction and O&M to be updated as needed, along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements; • A Hazardous Materials Communication (i.e., "HAZCOM") Plan; • Assignments and responsibilities of Proposed Project health and safety roles; • Standards for any secondary containment and countermeasures required for hazardous materials;

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	<ul style="list-style-type: none"> • Spill response procedures based on product and quantity. The procedures shall include materials to be used, location of such materials within the Proposed Project area, and disposal protocols; and • Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA-trained individual and testing at a certified laboratory. <p>The Proposed Project would also have lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Secondary containment shall be constructed around and under the battery racks, and the HMMP shall address containment from a battery leak.</p> <p>The plan shall be provided to the CPUC prior to construction for recordkeeping. Plan updates shall be made and submitted as needed if construction activities change such that the existing plan does not adequately address the Proposed Project.</p>
APM HAZ-3: Compliance with the Covenant to Restrict Use of Property (Cisco Systems Site 6/Syntax Court Disposal Site)	<p>Construction activities within the Cisco Systems Site 6/Syntax Court Disposal Site boundaries (as outlined in Figure 5.9-1, Contaminated Sites Map) shall comply with the Covenant to Restrict Use of Property and Environmental Restriction, signed May 23, 2003. Specific activities could include:</p> <ul style="list-style-type: none"> a) Providing written notice to the Department of Toxic Substances Control (DTSC) at least 14 days prior to ground disturbing construction activities with the location of excavation, proposed depth, and soil management procedures. b) Conducting construction activities in accordance with the SMP and the Health and Safety Plan (2001 and 2015 update). c) Handling excavated soils in accordance with all applicable local, state, and federal regulations.
APM HAZ-4: Compliance with the Covenant and Agreement for Environmental Restriction (South Bay Asbestos Area)	<p>Construction activities within the South Bay Asbestos Area site boundaries shall comply with the Covenant and Agreement for Environmental Restriction, signed October 21, 2004, by the property owner and the DTSC. Specific activities would include, but not necessarily be limited to, the following:</p> <ul style="list-style-type: none"> a) Coordinating with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Lead Agency and gaining written approval for ground disturbing activities that could affect the soil cap. b) Preparing a SMP for any soils contaminated with asbestos or asbestos containing materials brought to the surface by grading, excavation, trenching, or backfilling.
APM HAZ-5: Final Induction Study and Utility Coordination	<p>Design and construction of the proposed transmission lines shall be coordinated with existing utility owners (as applicable) to ensure that operation of the new transmission lines shall not cause unsafe electromagnetic induction effects on any existing metallic utilities located in close proximity to the proposed transmission lines. LS Power shall</p>

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	conduct a detailed induction study for all existing metallic utilities in close proximity to proposed transmission line alignments. Where potential adverse effects are identified by the Final Induction Study, LS Power shall coordinate with the applicable utility owner to develop appropriate mitigation measures. Final designs and mitigation strategies, if required, shall be submitted to the CPUC prior to commencement of construction of the transmission lines.
Hydrology and Water Quality	
APM WQ-1: Groundwater Dewatering and Discharge Measures	<p>Groundwater, if encountered during construction, shall be handled and discharged in accordance with all state and federal regulations including the following:</p> <ul style="list-style-type: none"> • Recovered groundwater shall be contained on-site and tested prior to discharge; • When testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations • Land application shall be made in a manner that discharge does not result in substantial erosion; • Water unsuitable for land application shall be disposed of at an appropriately permitted facility; and • Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE, RWQCB, and/or CDFW, as applicable).
Recreation	
APM REC-1: Trail Management Plan	<p>LS Power shall coordinate with the City of Fremont, City of Milpitas, City of San José, City of Santa Clara, the National Park Service (NPS), Metropolitan Transit Commission (MTC), and the USFWS for the preparation of the Proposed Project TMP. The TMP shall identify if a detour route(s) is required, as well as provide for trail-specific traffic control and safety measures for pedestrians, trail users, and motorists.</p> <p>Measures that may be implemented by LS Power as part of the TMP include, but are not limited to, provision of a crossing guard during periods of active construction along the portions of the trails that would be directly impacted by construction of the Proposed Project or designation of a detour route if use of a crossing guard is not practical. Signage and flagging may be used to help direct trail users and provide safety for both trail users and construction crews. A copy of the TMP shall be provided to CPUC for recordkeeping.</p>

Table 3-12: Applicant Proposed Measures	
APM Number	Description
Traffic and Transportation	
APM TRA-1: Traffic Control Plan	LS Power shall prepare a TCP to describe measures to guide traffic (such as signs and workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. LS Power shall follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. LS Power shall follow the recommendations regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. As required for obtaining a local encroachment permit, LS Power shall provide a TCP to the applicable local jurisdictions which shall comply with the U.S. Department of Transportation's (DOT) Manual on Uniform Traffic Control Devices (MUTCD). Construction activities shall be coordinated with local law enforcement and fire protection agencies, as required. Emergency service providers shall be notified, as required by the local permit, of the timing, location, and duration of construction activities. A copy of the TCP shall be provided to CPUC for recordkeeping.
APM TRA-2: Coordinate Bus Stop Closures	If bus stop closures are required for Proposed Project implementation, LS Power shall coordinate closures with Santa Clara VTA and/or Alameda-Contra Costa County Transit ("AC Transit"), as appropriate, in advance of closure to minimize disruptions to service. Where disruptions to service are anticipated, advanced notice shall be given to allow transit users on effected routes to identify and locate a temporary interim bus stop(s). Measures that may be implemented to give advanced notice of disruptions to service may include, but not necessarily be limited to, posting signage at bus stops with planned closures and posting notices for anticipated route detours and bus stop closures on the Santa Clara VTA and AC Transit websites. Identification and implementation of specific measures shall be implemented in coordination with Santa Clara VTA and AC Transit.
APM TRA-3: Repair Infrastructure	Following construction, LS Power shall confirm that contractors have repaired damage to roads, trails, and bicycle facilities resulting from Proposed Project construction activities. Existing conditions shall be documented to assure that roads, trails, and bicycle facilities are returned to preconstruction conditions. LS Power shall confer with local agencies, as needed, to confirm repairs are consistent with preconstruction conditions.
APM TCR-1: WEAP Training	<p>LS Power shall work with interested Tribes to design the TCRs component of a WEAP that shall be provided to all Proposed Project personnel who may encounter and/or alter TCRs or prehistoric/ethnohistoric archaeological properties, including construction supervisors and field personnel. The WEAP shall be submitted to the CPUC prior to construction. No construction worker shall be involved in ground-disturbing activities without having participated in the WEAP.</p> <p>The WEAP shall include, at a minimum:</p> <ul style="list-style-type: none"> • Training on how to identify potential TCRs and human remains during the construction process; • A review of applicable regulations pertaining to TCRs; • A discussion of procedures to be followed in the event that unanticipated TCRs are discovered during implementation of the Proposed Project;

Table 3-12: Applicant Proposed Measures	
APM Number	Description
	<ul style="list-style-type: none"> • A discussion of culturally appropriate dignity, taking into account the Tribal cultural values and meaning of the resource, including the cultural character and integrity, traditional uses, and confidentiality of resources. • A statement by the construction company or applicable employer agreeing to abide by the WEAP, LS Power policies, and other applicable laws and regulations. <p>The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Proposed Project, provided that the program elements pertaining to cultural resources are designed with the input of interested Tribes.</p>
APM TCR-2: Native American Monitoring	<p>Native American monitoring shall be conducted during ground disturbance associated with the Proposed Project when within 100 feet (30 meters) of previously recorded prehistoric, ethnohistoric, or TCRs. Prehistoric and/or ethnohistoric archaeological sites have been recorded within the Proposed Project area, and the SLF search and Tribal outreach indicates that lands sacred to the North Valley Yokuts Tribe and the Ohlone Indian Tribe are present within the Proposed Project search area. A Native American monitor determined during Tribal consultation shall be retained by LS Power to monitor excavation associated with the Proposed Project to ensure that there is no impact to any significant unanticipated prehistoric, ethnohistoric, or TCR. Prior to construction, LS Power shall confer with a designated Tribal representative on the appropriate course of action to be taken should unanticipated cultural materials, and specifically human remains, be discovered during construction. Native American monitoring requirements established in this APM may be superseded by government-to-government consultation conducted between the CPUC and Tribal organizations as part of the AB 52 process or otherwise.</p>
Utilities	
APM UTIL-1: Coordination with Utilities	<p>LS Power shall notify all utility companies with utilities located within or crossing the Proposed Project ROW to locate and mark existing underground utilities along the entire length of the Proposed Project. Due to the linear nature of transmission line construction, utilities shall be marked in short segments at least 14 days prior to construction within said segments. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering, or relocation of the existing utility shall be coordinated with each utility owner/operator. LS Power shall coordinate with third-party utilities and shall submit the intended construction methodology to the owner of the third-party utility for review and coordination. Construction methods shall be adjusted as necessary to ensure that the integrity of existing utility lines is not compromised.</p>

3.11.2 PG&E BEST MANAGEMENT PRACTICES

PG&E would be responsible for overseeing the construction and environmental teams that would implement their construction BMPs and field protocols (FPs). PG&E would manage construction

to allow for implementation of the BMPs to be monitored, documented, and enforced, as appropriate. All those contracted by PG&E to perform this work would be provided with all relevant permits, conditions, and BMPs, as well as instructions on how to properly implement the BMPs to ensure their effectiveness.

The construction BMPs are described in **Table 3-13, PG&E Best Management Practices (BMPs) and Field Protocols (FPs)** and discussed in **Section 5.0**, which includes an analysis of why each BMP or FP was selected and how it would reduce and/or minimize potential impacts.

If conditions occur where construction may potentially adversely affect a known or previously unknown environmentally sensitive resource, or if construction activities significantly deviate from Proposed Project requirements, PG&E monitors and/or contract administrators would have the authority to halt construction activities, if needed, until an alternative method or approach can be identified. Any concerns that arise during implementation of the BMPs would be communicated to the appropriate authority to determine if corrective action is required, or the concerns would be addressed on-site, as applicable. As the proposed BMPs are implemented, environmental monitors from PG&E would be responsible for the review and documentation of such activities. Field notes and digital photographs would be used to document and describe the status of BMPs as necessary.

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
Air Quality	
BMP AQ-1	<p>Vehicle Idling. A vehicle operator is prohibited from idling an on-road diesel-fueled vehicle with a Gross Vehicle Weight of $\geq 10,001$ pounds (lbs), or an off-road diesel-fueled vehicle with a primary engine ≥ 25 horsepower (hp), in excess of five minutes unless conducting one or more of the following activities:</p> <ul style="list-style-type: none"> • Doing work for which the vehicle was intended; • Powering equipment necessary to perform a job function; • Operating lights or signals to direct traffic at a PG&E job site; • Service, testing or maintenance on the vehicle; • Regenerating an exhaust filter; • Idling for safety reasons, including providing light when working after dark, defrosting windows, keeping the cabin warm to avoid a health hazard, and providing air conditioning to avoid heat illness; • Idling due to traffic conditions beyond the vehicle operator's control; • Warming an engine up to operating temperatures, as specified by the equipment manufacturer; • Queuing, such as when a line of off-road trucks forms to receive materials from an excavator. Queuing does not include a vehicle waiting for another vehicle to perform a task. Idling while queuing is not allowed within 100 feet of a residential home.
BMP AQ-2	<p>Fugitive Dust – General. Field crews must limit fugitive dust from PG&E project work at all times. Types work activities where water trucks or other dust abatement methods are typically required include:</p> <ul style="list-style-type: none"> • Construction; • Demolition; • Excavation; • Trenching;

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
	<ul style="list-style-type: none"> • Grading; • Sand blasting; • and other earthmoving activities <p>Visible emissions of fugitive dust from PG&E project activities must be maintained within the project boundary. The crew shall abate dust by:</p> <ul style="list-style-type: none"> • Applying water to disturbed areas and to storage stockpiles; • Covering and securing stockpiled soil at the end of each workday; • Applying water in sufficient quantities to prevent dust plumes during activities such as clearing & grubbing, backfilling, trenching and other earth moving activities; • Limit vehicle speed to 15 miles per hour within approved unpaved work areas and along unpaved roads; • Vehicles and equipment used to transport bulk materials must be wetted, covered, and provide at least 6 inches of free board (space between top of truck and load) during transport; • Clean-up track-out at least daily; • Escalate preventative measures as needed to match conditions • Consider postponing construction activities during high wind events; and • The crew shall not generate dust in amounts that create a nuisance to wildlife or people, particularly where sensitive receptors such as neighborhoods, schools, and hospitals are located nearby or down-wind. During inactive periods (e.g. after normal working hours, weekends, and holidays), the crew shall apply water or other approved material to form a visible crust on the soil and restrict vehicle access.
BMP AQ-3	<p>Portable Equipment Registration Program. PG&E requires that portable engines be registered into the Statewide Portable Equipment Registration Program (PERP) administered by the California Air Resources Board (CARB), if:</p> <ul style="list-style-type: none"> • the engine is portable (mounted on a truck, trailer, skids, or wheels); • the engine is 50 brake horsepower or greater, and; • the engine does not provide motive force for a vehicle. <p>Auxiliary engines mounted on vehicles need to be registered if they are 50 brake horsepower or greater. For PG&E-owned units, PG&E Environmental Management Air Program is responsible for maintaining valid PERP registration with support from Transportation Services. For rental units, the rental vendor is responsible for the PERP registration and to provide PG&E with a copy of the current registration, permit, and placard before use.</p> <p><u>Greenhouse Gas (GHG) Facility Requirements:</u></p> <p>If diesel portable engines greater than 50 brake horsepower (bhp) are operated onsite at a GHG facility subject to the Mandatory Reporting Rule for GHGs (MRR) at any time, the AB617 PERP Log must be completed.</p>

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
BMP AQ-4	Tier 4 Construction Equipment. At least 75 percent of construction equipment with a rating between 100 and 750 hp shall be required to use engines compliant with Environmental Protection Agency (EPA) Tier 4 non-road engine standards. In the event enough Tier 4 equipment are not available to meet the 75-percent threshold, documentation of the unavailability shall be provided and engines utilizing a lower standard shall be used.
Biological Resources	
FP-01	Hold annual training on HCP requirements for employees and contractors performing covered activities in the Plan Area that are applicable to their job duties and work.
FP-02	Park vehicles and equipment on pavement, existing roads, or other disturbed or designated areas (barren, gravel, compacted dirt).
FP-03	Use existing access and ROW roads. Minimize the development of new access and ROW roads, including clearing and blading for temporary vehicle access in areas of natural vegetation.
FP-04	Locate off-road access routes and work sites to minimize impacts on plants, shrubs, trees, small mammal burrows, and unique natural features (e.g., rock outcrops).
FP-05	Notify conservation landowner at least two business days prior to conducting covered activities on protected lands (state and federally owned wildlife areas, ecological reserves, or conservation areas); more notice shall be provided if possible or if required by other permits. If the work is an emergency, as defined in PG&E's Utility Procedure ENV-8003P-01, PG&E shall notify the conservation landowner within 48 hours after initiating emergency work. While this notification is intended only to inform conservation landowner, PG&E shall attempt to work with the conservation landowner to address landowner concerns.
FP-06	Minimize potential for covered species to seek refuge or shelter in pipes and culverts. Inspect pipes and culverts, with a diameter wide enough to be entered by a covered species that could inhabit the area where pipes are stored, for wildlife species prior to moving pipes and culverts. Immediately contact a biologist if a covered species is suspected or discovered.
FP-07	Vehicle speeds on unpaved roads shall not exceed 15 mph.
FP-08	Prohibit trash dumping, firearms, open fires (such as barbecues), hunting, and pets (except for safety in remote locations) at work sites.
FP-09	During fire season in designated State Responsibility Areas, equip all motorized equipment with federally approved or state-approved spark arrestors. Use a backpack pump filled with water and a shovel and fire-resistant mats and/or windscreens when welding. During fire "red flag" conditions as determined by Cal Fire, curtail welding. Each fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C. Clear parking and storage areas of all flammable materials.
FP-10	Minimize the activity footprint and minimize the amount of time spent at a work location to reduce the potential for take of species.
FP-11	Utilize standard erosion and sediment control BMPs (pursuant to the most current version of PG&E's <i>Stormwater Field Manual for Construction Best Management Practices</i>) to prevent construction site runoff into waterways.

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
FP-12	Stockpile soil within established work area boundaries and locate stockpiles so as not to enter water bodies, stormwater inlets, or other standing bodies of water. Cover stockpiled soil prior to precipitation events.
FP-13	Fit open trenches or steep-walled holes with escape ramps of plywood boards or sloped earthen ramps at each end if left open overnight. Field crews shall search open trenches or steep-walled holes every morning prior to initiating daily activities to ensure wildlife are not trapped. If any wildlife is found, a biologist shall be notified and shall relocate the species to adjacent habitat or the species shall be allowed to naturally disperse, as determined by a biologist.
FP-14	If the covered activity disturbs 0.1 acre or more of habitat for a covered species in grasslands, the field crew shall revegetate the area with a commercial "weed free" seed mix.
FP-15	Prohibit vehicular and equipment refueling 250 feet from the edge of vernal pools, and 100 feet from the edge of other wetlands, streams, or waterways. If refueling must be conducted closer to wetlands, construct a secondary containment area subject to review by an environmental field specialist (EFS) and/or biologist. Maintain spill prevention and cleanup equipment in refueling areas.
FP-16	Maintain a buffer of 250 feet from the edge of vernal pools and 50 feet from the edge of wetlands, ponds, or riparian areas. If maintaining the buffer is not possible because the areas are either in or adjacent to facilities, the field crew shall implement other measures as prescribed by the land planner, biologist, or HCP administrator to minimize impacts by flagging access, requiring foot access, restricting work until dry season, or requiring a biological monitor during the activity
FP-17	Directionally fell trees away from an exclusion zone, if an exclusion zone has been defined. If this is not possible, remove the tree in sections. Avoid damage to adjacent trees to the extent possible. Avoid removal of snags and conifers with basal hollows, crown deformities, and/or limbs over 6 inches in diameter.
FP-18	Nests with eggs and/or chicks shall be avoided; contact a biologist, land planner, or the Avian Protection Program manager for further guidance.
BMP BIO-1	Burrowing Owl. A survey for evidence of burrowing owl (sign or presence) shall be conducted prior to initial ground disturbance. The survey shall occur within the best detection timeframe and within two weeks of construction. If burrowing owl are detected, consult with the CDFW.
BMP BIO-2	Nesting Birds. If work is anticipated to occur within the nesting bird season (February through August), nesting birds, including raptors and other species protected under the MBTA, may be impacted. If active nests are discovered, exclusionary measures and/or designated avoidance buffers may be required and implemented according to the guidance in the PG&E Nesting Bird Management Plan. The Proposed Project biologist determines if the construction action will impact the nest, and if so, identifies whether alternative actions or monitoring can be implemented to avoid impacts. If active nests are observed during construction, crews must immediately alert the PG&E Proposed Project biologist.
Cultural Resources	
BMP CULT-1	Worker Awareness Training. PG&E will provide environmental awareness training on archeological cultural and paleontological resources protection. This training may be administered by the PG&E cultural resources specialist (CRS) or a designee as a stand-alone training or

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
	included as part of the overall environmental awareness training as required by the project and will at minimum include: types of cultural resources or fossils that could occur at the project site; types of soils or lithologies in which the cultural resources or fossils could be preserved; procedures that should be followed in the event of a cultural resource, human remain, or fossil discovery; and penalties for disturbing cultural or paleontological resources.
BMP CULT-2	<p>Inadvertent Discovery. If any new cultural resources are encountered during Proposed Project activities, all work must be suspended in the vicinity (approximately 100 feet) of the resource, and the cultural resource specialist (CRS) shall be immediately notified. At that time, the CRS shall coordinate any necessary investigations of the site with appropriate specialists, as needed. PG&E may be required to implement protective measures deemed necessary for the protection of the cultural resources.</p> <p>Prehistoric resources that may be identified during Proposed Project implementation may include, but are not limited to, stone tools and manufacturing debris made of obsidian, basalt, and other lithic materials; milling equipment such as bedrock mortars, portable mortars, and pestles; and locally darkened soils (midden) that may contain dietary remains such as shell and bone, as well as human remains. Historic resources that may be identified include, but are not limited to, small cemeteries or burial plots, structural foundations, cabin pads, cans with soldered seams or tops, bottles or fragments of clear and colored glass, cut (square) nails, and ceramics.</p>
BMP CULT-3	<p>Human Remains. In keeping with the provisions provided in 7050.5 of the CHSC and Public Resource Code 5097.98, if human remains are encountered (or are suspected) during any project-related activity, PG&E shall:</p> <ul style="list-style-type: none"> • Stop all work within 100 ft.; • Immediately contact: CRS, who will then notify the county coroner; • Secure location, but do not touch or remove remains and associated artifacts; • Do not remove associated spoils or pick through them; • Record the location and keep notes of all calls and events; and • Treat the find as confidential and do not publicly disclose the location. <p>If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. The most likely descendant shall work with the CRS to develop a program for re-interment or other disposition of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the appropriate actions have been implemented.</p>
Geology, Soils, and Paleontological Resources	
BMP PALEO-1	<p>Unanticipated Paleontological Discoveries. If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with the qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not</p>

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
	resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted in consultation with the landowner, PG&E, and CPUC. The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.
Hazards, Hazardous Materials, and Public Safety	
BMP HAZ-1	<p>Oil-Filled Electrical Equipment (OFEE). The following measures shall be followed:</p> <ul style="list-style-type: none"> • OFEE shall be managed in accordance with ENV-3000P-02-JA01 Job Aid: Handling In-Service Electrical Equipment from the Field. • If during the removal/replacement of OFEE, visible evidence of an oil leak is identified (e.g., seeping, weeping, staining, sheen), contact your local EFS immediately to determine cleanup actions and regulatory reporting requirements. • Work must cease on all leaking pre-July 1, 1979 equipment or equipment without a non-poly-chlorinated biphenyls (PCB) blue sticker or other non-PCB indicator on its nameplate until you've made contact with your local EFS. • All leaking equipment must be patched, pumped, or containerized in the field so that it shall not leak during transport; taken straight back to the Service Center (i.e., stops at staging areas are prohibited); and placed in the designated returned equipment area with a completed yellow condition tag. • Other equipment and bushings that cannot be tested and shall be assumed > 500 ppm PCB. Contact the EFS to coordinate generation of a purchase order and contract for disposal. This equipment shall be transported by a PG&E-approved hazardous waste contractor and taken to a disposal facility. <ul style="list-style-type: none"> ○ Note: Do NOT transport to a PG&E waste consolidation site.
BMP HAZ-2	<p>Hazardous Materials Business Plan (HMBP). The EFS shall be notified 30 days prior to a threshold exceeding hazardous material/waste being placed on-site. Threshold limits are 200 cubic feet of compressed gases (1,000 cubic feet for simple asphyxiation or the release of pressure only; carbon dioxide), 500 lbs of solids, or 55 gallons of liquids for more than 30 non-consecutive days. If required, the local county or city shall be notified of any amount of hazardous material/waste:</p> <ul style="list-style-type: none"> • Counties: Nevada, San Bernardino (waste only), San Francisco, Santa Clara (call for city specific details), Santa Cruz, Yuba (waste only) • Cities: Bakersfield (waste only), Berkeley, Healdsburg, Sebastopol, Petaluma, Santa Clara (call for city specific details) • PG&E shall develop an HMBP as necessary.
BMP HAZ-3	<p>Hazardous Waste Management. This Proposed Project may involve the storage of hazardous materials, and they must be managed according to regulations and the following BMPs.</p>

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
	<ul style="list-style-type: none"> • All releases of hazardous materials must be immediately addressed. Maintain a spill kit on-site during the length of the Proposed Project. Contact the Proposed Project EFS for spills of hazardous materials/wastes to determine if agency notifications shall be required and/or if additional resources are needed. • Hazardous materials, greater than 440 lbs and less than 1,001 lbs can be transported on PG&E vehicles if the proper materials of trade (MOT) shipping paper/Material Safety Data Sheet (MSDS) accompanies the load. Contact the Proposed Project EFS for additional guidance in these areas. • All hazardous materials containers must be marked correctly. • All hazardous materials signs must be displayed as required. • Non-saturated oily rags (to be laundered) stored in non-combustible containers. • Emergency equipment such as fire extinguisher, eye wash, MSDS, etc. must be available on-site. • Hazardous material containers must be in good condition. • All hazardous materials must be compatible with containers. • Hazardous materials containers are kept closed. • If there is an unauthorized release of hazardous material, contact your EFS immediately. For after-hours releases contact the Environmental Emergency Hotline at 1-800-874-4043. <p>Immediately contact the local PG&E EFS and stop work if any of the following conditions occur. After hours or if the local EFS is unavailable, please call the Environmental Hotline at 800-874-4043.</p> <ul style="list-style-type: none"> • Discharge or spill of hazardous substance. • If an Environmental Regulator visits the site. • Visually cloudy/muddy water is observed leaving the work area; • An underground storage tank is discovered. • A subsurface component related to site remediation activities (e.g., monitoring well, recovery well, injection well) is discovered. No subsurface components may be impacted. • If during excavation unanticipated evidence of contamination is identified (e.g., staining, odors), work must cease and when safe to do so, cover the trench with steel plates. In order to minimize impacts to public safety and the environment, place contaminated soil on a polyethylene sheet (four milliliters) and cover or place the contaminated soil in lined covered containers. Then contact your local/support EFS to determine the next steps. • If any subsurface components related to site remediation activities (e.g., monitoring well, recovery well, injection well) are discovered in the path of excavation, work must cease in that location and your EFS must be notified to determine the next steps. No subsurface components may be impacted.
BMP HAZ-4	<p>Lead Acid Batteries. This Proposed Project shall be generating lead-acid battery universal waste. The construction contractor or PG&E technicians shall properly manage and dispose of universal waste and follow Lead Acid Battery Procedure ENV 4000P-05-JA05 and/or ENV 4000P-05-JA06. Contact the Proposed Project EFS for additional guidance in these areas.</p>

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
	<p><u>Management of Undamaged (Intact) Batteries – Universal Waste:</u></p> <ul style="list-style-type: none"> • If batteries are undamaged (i.e., intact and not leaking), they can be managed as universal waste at the nearest PG&E waste consolidation site. Remote sites shall have batteries transported and disposed of from site if quantities warrant. A PG&E-approved hazardous waste contractor transports intact batteries from a waste consolidation site to an approved universal waste handler using a non-hazardous waste manifest. <ul style="list-style-type: none"> ○ Note: It is recommended that large station backup batteries are better shipped directly from the substation to a disposal facility rather than taken to a PG&E waste consolidation site. Coordinate with the local EFS for disposal. • Reference ENV 4000P-05-JA05 for general information, proper labeling, transportation, storage, and accumulation time limit. <p><u>Management of Damaged or Leaking Batteries – Hazardous Waste:</u></p> <ul style="list-style-type: none"> • Ship damaged or leaking batteries from a waste consolidation site to an approved treatment, storage, and disposal facility (TSDF) for disposal using a PG&E-approved hazardous waste contractor and a uniform hazardous waste manifest (see ENV-4000P-02-JA01 Uniform Hazardous Waste Manifest). • Batteries must be placed in non-reactive, structurally sound, closed containers (such as plastic drum) that are adequate to prevent breakage or further damage and contain vermiculite, which can be attained at a PG&E waste consolidation site. • Reference ENV 4000P-05-JA05 for general information, proper labeling, transportation, storage, and accumulation time limit. Transportation – Reference ENV 4000P-05-JA05. • Transporting > 10 lbs of non-spillable batteries per vehicle from a field location to a consolidation facility requires a shipping paper (see Utility Procedure: ENV-4000P-05, Hazardous Waste Shipping Paper). Contact EFS if there is a large quantity of batteries for waste to determine handling and whether to ship from site to recycler. • Transporting ≤ 10 lbs of intact batteries per vehicle does not require a shipping paper. However, document the shipment in the log maintained in the consolidation site's waste storage area. Disposal – Reference ENV 4000P-05-JA06.
BMP HAZ-5	<p>Lead Paint Removal. For any physical removal, sanding, scraping, needle gunning, blasting, or welding, contact the local Safety Specialist or Paintings and Coating Department. For PG&E Contractor lead paint removal, the Contractor shall adhere to the Contract for worker health and safety. If the Proposed Project team has safety concerns prior to or during the Proposed Project, immediately contact the Safety Program Consultant.</p>
BMP HAZ-6	<p>Sulfur Hexafluoride (SF₆) Gas Material/Waste Management. Advanced Specialty Gas (ASG) provides sole-source service in supplying, replacing, removal and recycling of SF₆ in all facilities. ASG provides 24-hour service in response to events involving SF₆ as well as delivery and removal of all SF₆ cylinders.</p> <ul style="list-style-type: none"> • Contact information: https://www.advancedspecialtygases.com.

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
	<p>Before accessing any equipment that may contain SF₆ gas byproduct waste, contact the local EFS at least two weeks in advance for assistance in arranging cleanup, transportation, and disposal.</p> <ul style="list-style-type: none"> • PSC shall retrieve, package, label, and transport SF₆ byproduct waste (i.e., fluorides of sulfur, metallic fluorides, etc.). All SF₆ byproduct waste that is removed must have proper shipping papers, which could include a remote waste shipping paper or a manifest (manifests require a permanent or temporary EPA identification number). • SF₆ cylinder tracking and facility inventory shall be managed in accordance with Utility Procedure TD-3350P-001.
BMP HAZ-7	<p>Spill Prevention, Control, and Countermeasure (SPCC) Plan. The local/support EFS shall be notified 30 days prior to an SPCC-triggering event occurs. Events that trigger an SPCCP include:</p> <ul style="list-style-type: none"> • New storage of oil at a facility causing the total oil storage to exceed 1,320 gallons. • Modification to existing oil storage at a facility that contains >1,320 gallons of oil by addition or removal of oil containers >55 gallons. <p>If the oil volume is contained in anything greater than 55 gallons, the SPCC Plan must be certified by a licensed engineer. SPCC containment must be installed prior to moving on-site of oil quantities requiring containment. The PM number must remain open until the local/support EFS notifies the team that the plan is certified by an engineer, and any necessary modifications are complete.</p>
BMP HAZ-8	<p>Underground Electric Cable. Underground electric cable might require special handling and disposal as the cable may potentially be wrapped in lead or asbestos containing material, contain asbestos insulation, and/or oil for insulation. Furthermore, insulating oil used in underground cable may contain PCBs. If evidence of these hazardous materials is identified during the cable replacement, such as weeping oil from the cut end of the cable, the local EFS shall be contacted immediately to arrange for sampling, and to determine transportation and disposal requirements. A PG&E authorized hazardous waste hauler may be required to transport the cable. Arc-proofing wrap that is both friable (brittle, crisp or fragile) and non-friable must be removed by a certified abatement vendor or trained PG&E personnel (PG&E Insulation & Coatings, PSC, Bohm, ACS).</p>
BMP HAZ-9	<p>Vault Dewatering. Vault dewatering may be required. All vault dewatering must take place in accordance with the Vault Dewatering form.</p>
BMP HAZ-10	<p>Stormwater BMP Installation. This Proposed Project shall require an SWPPP. If the construction crew shall not be installing stormwater BMPs, it is the responsibility of the Proposed Project manager to contact the Stormwater Quality Subject Matter Expert (SME) and Environmental Lead prior to construction to request BMP support with as much lead time as possible. Thirty days is preferred. The regional Stormwater SME shall hire a contractor to install, maintain, and remove stormwater BMPs.</p>
BMP HAZ-11	<p>Construction Dewatering. If dewatering of trenches or excavations is required, the Environmental Lead/Proposed Project EFS shall be notified at least 30 days in advance to ensure the appropriate dewatering methods are used, proper notifications are made, and, if necessary, applicable authorizations/permits are obtained. All dewatering activities must be</p>

Table 3-13: PG&E Best Management Practices (BMPs) and Field Protocols (FPs)	
BMP or FP Number	Description
	coordinated through the Environmental Lead/Proposed Project EFS throughout the duration of the Proposed Project.

3.11.3 SVP BEST MANAGEMENT PRACTICES

Where applicable to SVP's scope of work, SVP would implement Proposed Project APMs. The specific APM applicable to SVP's scope of work is listed in **Table 3-14, Proposed Project APMs Applicable to SVP Work**. Implementation of this APM is discussed in **Section 5.3**, which includes an analysis of why the APM was selected and how it would reduce and/or minimize potential impacts. Prior to construction, SVP may develop specific BMPs to implement in place of the APM listed below. These BMPs would, if utilized, be consistent with the requirements and specifications included within the Proposed Project APMs.

SVP would be responsible for overseeing the construction and environmental teams that would implement the APM and/or BMPs. SVP would manage construction to allow for implementation of the APMs/BMPs to be monitored, documented, and enforced, as appropriate. All those contracted by SVP to perform this work would be provided with all relevant permits, conditions, and APMs/BMPs, as well as instructions on how to properly implement the APMs/BMPs to ensure their effectiveness.

If conditions occur where construction may potentially adversely affect a known or previously unknown environmentally sensitive resource, or if construction activities significantly deviate from Proposed Project requirements, SVP and/or monitors would have the authority to halt construction activities, if needed, until an alternative method or approach can be identified. Any concerns that arise during implementation of the APMs/BMPs would be communicated to the appropriate authority to determine if corrective action is required, or the concerns would be addressed on-site, as applicable. As the proposed APMs/BMPs are implemented, environmental monitors from SVP would be responsible for the review and documentation of such activities. Field notes and digital photographs would be used to document and describe the status of APMs/BMPs, as necessary.

Table 3-14: Proposed Project APMs Applicable to SVP Work	
APM Number	Description
Air Quality	
APM AQ-1: Construction Fleet Minimum Requirements and Tracking	<p>SVP shall ensure that at least 75 percent of equipment horsepower hours related to off-road construction equipment include Tier 4 interim or Tier 4 final emissions controls. An initial listing that identifies each off-road unit's certified tier specification to be operated on the Proposed Project shall be submitted to the CPUC before the start of construction activities. Construction activities shall not begin until the equipment listing has been submitted to the CPUC.</p> <p>As new or replacement construction equipment on the Proposed Project, SVP shall document verification of the certified engine tier before their use on Proposed Project sites. Before the start of construction, SVP shall develop a diesel-powered equipment-use hours tracking tool and procedure. The tracking tool shall be utilized by SVP (and/or its construction contractor[s]) to keep track of the certified engine tier and daily</p>

Table 3-14: Proposed Project APMs Applicable to SVP Work

APM Number	Description
	equipment use hours of all off-road diesel-powered equipment. If all diesel-powered equipment is Tier 4 certified, the tracking tool is not required. The tracking tool shall be maintained by SVP, and tracking updates shall be submitted to the CPUC on a monthly basis to track the Proposed Project's compliance. The updated tracking tool shall be submitted to the CPUC no later than the tenth day of the following month.

4.0 DESCRIPTION OF ALTERNATIVES

This section of the Proponent's Environmental Assessment (PEA) describes the Alternatives considered to date by the Power the South Bay Project ("Proposed Project") team. LS Power Grid California, LLC ("LS Power") is sponsoring the Proposed Project in response to a competitive solicitation conducted by the California Independent System Operator (CAISO).

In its 2021-2022 Transmission Planning Process (TPP), CAISO evaluated upgrades needed to successfully meet the State of California's policy goals, in addition to examining conventional grid reliability requirements and projects that can bring economic benefits to consumers (CAISO, 2023a). CAISO's analysis, conducted through an open and stakeholder-inclusive planning process, led to the identification of the need for the Proposed Project (referred to in CAISO documents as the "Newark to NRS HVDC Project") as part of a comprehensive solution (relying in part on other upgrades to meet reliability needs notwithstanding state policy objectives) to mitigate current and forecasted overloads in the San José area (CAISO, 2022).

As part of the CAISO competitive solicitation for the Proposed Project, Functional Specifications (CAISO, 2022) were included within the 2021-2022 Transmission Plan that define the minimum project parameters from a technical standpoint. These Functional Specifications are key to consideration of alternatives for the Proposed Project. The Functional Specifications include key design parameters for the Proposed Project, such as the use of direct current (DC) instead of alternating current (AC) for the Proposed Project's primary transmission line. As part of the Functional Specifications development, CAISO performed detailed system analysis in order to identify the best solution (i.e., best project). Therefore, because CAISO effectively performed an alternatives analysis as part of the TPP and Functional Specifications development for the Proposed Project, this PEA does not consider certain types of alternatives that would not meet the Functional Specifications. These alternatives and alternative types, many of which are commonly required for projects under consideration by the California Public Utilities Commission (CPUC), are described in **Section 4.3, *Rejected Alternatives*** below. Therefore, this PEA focuses on terminal site and transmission line route alternatives.

4.1 ALTERNATIVES CONSIDERED

As described above, consideration of alternatives for the Proposed Project centered on achieving the Functional Specifications. As discussed above, alternatives and alternative types, such as system alternatives, are not considered herein because they do not meet the Functional Specifications. These are grouped into the following alternative types, which are focused on transmission line routes and high-voltage direct current (HVDC) terminal sites:

- Albrae Terminal Site Alternatives
- Baylands Terminal Site Alternatives
- Albrae to Baylands 320 kilovolt (kV) DC Transmission Line Route Alternatives
- Newark to Albrae 230 kV AC Transmission Line Route Alternatives
- Baylands to Northern Receiving Station (NRS) 230 kV AC Transmission Line Route Alternatives

4.1.1 ALBRAE TERMINAL SITE ALTERNATIVES

4.1.1.1 Alternative Albrae 1

Alternative Albrae 1 proposes the northern HVDC terminal portion of the Proposed Project be constructed on a site approximately 300 feet northwest of the existing Pacific Gas and Electric Company (PG&E) Newark substation (refer to **Figure 4-1**, *Albrae Terminal Alternative Sites Map*). The size of the property would be sufficient for the needs of the Proposed Project at approximately six acres. The site is currently utilized as an automobile parking/storage lot. To the northwest and northeast are industrial and storage uses. To the southwest is undeveloped land with electrical transmission lines, and to the southeast are PG&E facilities, including the existing Newark substation. Alternative Albrae 1 would meet the general purpose of the project, would achieve the project objectives, and would result in similar impacts when compared to the Proposed Project. However, while Alternative Albrae 1 is technically feasible, the current landowner of the site is not receptive to leasing/selling as it would interrupt their current business.

4.1.1.2 Alternative Albrae 2

Alternative Albrae 2 proposes the northern HVDC terminal portion of the Proposed Project be constructed on a site located approximately 0.1 mile south of the existing Newark substation, located on PG&E property (refer to **Figure 4-1**). At approximately seven acres, the size of the site and its dimensions would be sufficient for the needs of the Proposed Project. The site is currently undeveloped land with multiple electrical transmission lines. This area is also used for grazing cattle. The Alternative Albrae 2 property is located south of the existing Newark substation, on the opposite side of the proposed Newark substation modification area. Therefore, existing transmission lines within and surrounding the substation may make interconnecting from this side difficult and would require potential relocation of several facilities within the existing Newark substation. Alternative Albrae 2 is technically feasible and would meet general purpose of the project and achieve its objectives. While not anticipated to have significant unavoidable impacts, Alternative Albrae 2 would have slightly more and greater impacts than the proposed Albrae terminal.

4.1.2 BAYLANDS TERMINAL ALTERNATIVE SITES

4.1.2.1 Alternative Baylands 1

Alternative Baylands 1 proposes the use of an undeveloped eight-acre lot approximately 3.8 miles northeast of the existing NRS substation in the City of San José (see **Figure 4-2**, *Baylands Terminal Alternative Sites Map*). The site is a soon-to-be retired drying pond used as part of the existing San José-Santa Clara Regional Wastewater Facility (RWF). The site is of adequate size for the proposed Baylands terminal and is considered technically feasible. Alternative Baylands 1 would require four DC overhead transmission structures and seven AC overhead terminal structures. While access is available to the site, it would most likely require improvements for construction traffic. In addition, the site would require significant amounts of fill to raise it out of the floodplain. The site is surrounded by Coyote Creek to the northeast and east, a dirt access road to the west and north followed by undeveloped parcels and drying ponds, and a dirt access road to the south followed by an undeveloped parcel and drying ponds. Alternative Baylands 1 would meet the general purpose of the project and would achieve the project objectives. Alternative Baylands 1 would have slightly greater impacts to air quality and GHG emissions.

4.1.2.2 Alternative Baylands 2

Alternative Baylands 2 proposes the use of an undeveloped 12.1-acre lot located northeast of the intersection of Zanker Road and McCarthy Lane in the City of San José, approximately 2.3 miles northeast of the existing NRS substation (refer to **Figure 4-2**). The site is located on the east side of Zanker Road, adjacent to the Silicon Valley Advanced Water Purification Center. The site is surrounded by Zanker Road to the west followed by the San José-Santa Clara RWF, McCarthy Lane followed by a dewatering facility to the south, and undeveloped land and drying ponds to the north and east. This site, while originally recommended by the City of San José, is not available due to the construction of a dewatering facility and potential associated uses. Alternative Baylands 2 would meet the general purpose of the project and achieve the project objectives. Impacts would be substantially similar to the Proposed Project, with the exception of impacts resulting from utility relocations based on the new dewatering facility that is under construction.

4.1.2.3 Alternative Baylands 3

Alternative Baylands 3 proposes the use of an undeveloped 4.7-acre lot approximately 1.5 miles north of the existing NRS substation in the City of San José (refer to **Figure 4-2**). At 4.7 acres, this site would present challenges to achieving the Functional Specifications. The lot is located southeast of the intersection of Liberty Street and North First Street in the City of San José. The lot is surrounded by residential uses to the west, northwest, south, and northeast. Alternative Baylands 3 would meet the general purpose of the project, and would achieve the project objectives. However, impacts from construction and operation of Alternative Baylands 3 would be greater than those of the Proposed Project.

4.1.3 ALBRAE TO BAYLANDS 320 KV DC TRANSMISSION LINE ROUTE ALTERNATIVES

4.1.3.1 Albrae to Baylands Alternative 1

The Albrae to Baylands Alternative 1 would follow the Proposed Project alignment underground out of the Albrae Terminal. The transmission line would diverge from the Proposed Project alignment along Fremont Boulevard, approximately 250 feet south of the intersection of Fremont and Lakeview Boulevard, at which point the Albrae to Baylands Alternative 1 would transition to an overhead position along Fremont Boulevard. Once in an overhead position, the transmission line would travel generally south before traveling west towards McCarthy Lane. The transmission line would then head south along Zanker Road then west towards the southern end of the proposed Baylands terminal (as shown in **Figure 4-3, Albrae to Baylands 320 kV DC Transmission Line Alternatives Map**). The total length of the Albrae to Baylands Alternative 1 would be approximately 8.8 miles (approximately 3.9 miles overhead and 4.9 miles underground), extending from the proposed Albrae terminal to the proposed Baylands terminal. Albrae to Baylands Alternative 1 would be technically feasible, and would meet the general purpose of the project and achieve the project objectives. However, Albrae to Baylands Alternative 1 would have more and greater impacts to biological resources and aesthetics when compared to the Proposed Project.

Albrae to Baylands Alternative 1 would be surrounded by commercial and industrial uses for the underground portions and vacant land and industrial uses for the overhead portions.

4.1.3.2 Albrae to Baylands Alternative 2

The underground segment of the Albrae to Baylands Alternative 2 from the proposed Albrae terminal to McCarthy Boulevard would be the same as the Proposed Project alignment (refer to **Figure 4-3**). The underground transmission line would then diverge from the Proposed Project Alignment and continue underground in McCarthy Boulevard. Albrae to Baylands Alternative 2 would then transition to an overhead position along McCarthy Boulevard, near a Coyote Creek Trail trailhead. The Albrae to Baylands Alternative 2 would travel south then west over Coyote Creek and cross two existing PG&E transmission lines before turning south again, roughly paralleling the existing PG&E transmission lines through the San José-Santa Clara RWF drying beds and around the Los Esteros Energy Center towards McCarthy Lane. The overhead transmission line would continue south along Thomas Foon Chew Way, adjacent to the Los Esteros Energy Center, then head west, adjacent to existing transmission lines and State Route (SR)-237, before crossing over Zanker Road. The line would continue traveling west adjacent to existing transmission lines, along SR-237, until turning north to the southern end of the proposed Baylands terminal. Before entering the Baylands Terminal, the Albrae to Baylands Alternative 2 would cross a burrowing owl habitat managed by the Santa Clara Valley Habitat Agency. The total length of Albrae to Baylands Alternative 2 would be approximately 9.8 miles (approximately 3.5 miles overhead and 6.3 miles underground), extending from the proposed Albrae terminal to the proposed Baylands terminal. Albrae to Baylands Alternative 2 would be technically feasible, and would meet the general purpose of the project and achieve the project objectives. However, Albrae to Baylands Alternative 2 would have more and greater impacts to biological resources and aesthetics when compared to the Proposed Project.

Albrae to Baylands Alternative 2 would be surrounded by commercial and industrial uses for the underground portions and mostly vacant/undeveloped land, transmission lines, a Burrowing Owl Conservation Easement, and SR-237 for the overhead portions.

4.1.4 NEWARK TO ALBRAE 230 kV AC TRANSMISSION LINE ROUTE ALTERNATIVES

4.1.4.1 Newark to Albrae Alternative 1

The Newark to Albrae Alternative 1 would exit the proposed Albrae terminal to the south and would include three overhead poles located on PG&E land, which contains existing transmission lines. The alignment would be located entirely overhead and would be approximately 0.3 mile in length (see **Figure 4-4**, *Newark to Albrae 230 kV AC Transmission Line Alternatives Map*).

Newark to Albrae Alternative 1 would be surrounded by PG&E uses to the west, south, and east and industrial uses to the north. Newark to Albrae Alternative 1 would require relocation of existing PG&E transmission lines and would likely utilize a three-pole structure to guide the Newark to Albrae Alternative 1 transmission line under an existing PG&E 230 kV transmission line. Newark to Albrae to Alternative 1 would be technically feasible and would meet the general purpose of the project and achieve the project objectives. However, Alternative Newark to Albrae Alternative 2 would have greater impacts to biological resources and utilities.

4.1.5 BAYLANDS TO NRS 230 kV AC TRANSMISSION LINE ALTERNATIVES

4.1.5.1 Baylands to NRS Alternative 1

Baylands to NRS Alternative 1 would exit the proposed Baylands terminal underground to the south and would include approximately 0.3 miles of horizontal directional drilling (HDD) through vacant land and then continue underground for approximately 0.3 miles in Nortech Parkway before connecting with the Proposed Project alignment (see **Figure 4-5 Baylands to NRS 230 kV AC Transmission Line Alternatives Map**). Baylands to NRS Alternative 1 is potentially feasible (see additional information below) and would meet the general purpose of the project and achieve the project objectives. Baylands to NRS Alternative 1 would have greater impacts to biological resources, and less impacts to air quality, noise, traffic, and utilities.

The Baylands to NRS Alternative 1 would be surrounded by vacant land (burrowing owl habitat¹) to the west and east, the proposed Baylands terminal to the north, and commercial and industrial uses to the south. This alternative would be surrounded by commercial and industrial uses to the north and south for the underground portion in Nortech Parkway.

4.1.5.2 Baylands to NRS Alternative 2

Baylands to NRS Alternative 2 would exit the proposed Baylands terminal underground in the same manner as the proposed Baylands to NRS transmission line and would follow the same route as the Proposed Project until reaching the private property parking lot at structure AC-4. The line would travel underground generally northwest for approximately 0.2 mile until reaching Gold Street. The alternative alignment would then travel south in Gold Street for approximately 0.1 mile before connecting with the Proposed Project alignment (see **Figure 4-5**). Baylands to NRS Alternative 2 is technically feasible and would meet the general purpose of the project and achieve the project objectives. Baylands to NRS Alternative 2 would have less impacts to biological resources, but more and greater impacts to hazardous waste, noise, traffic, and utilities.

The Baylands to NRS Alternative 2 would be surrounded by commercial uses to the north followed by residential uses, vacant land to the south and west, and commercial uses to the east.

4.1.6 TECHNOLOGY ALTERNATIVES

4.1.6.1 Technology Alternative 1 – Overhead versus Underground

The Proposed Project could utilize overhead or underground transmission lines. However, the Alternatives Study Area (refer to **Figure 4-6, 320 kV Transmission Line Routing Study Area**) is highly developed and urbanized where underground transmission lines are proposed. The only areas not currently highly developed within the Study Area are part of San Francisco Bay or the San José-Santa Clara RWF, where the Proposed Project includes overhead lines. Additionally, underground cables placed in public road rights-of-way would require only temporary construction impacts with negligible aesthetic impacts over the life of the Proposed Project operations. The

¹ The burrowing owl habitat is managed by the Santa Clara Valley Habitat Agency. LS Power has begun discussions with the Santa Clara Valley Habitat Agency, United States Fish and Wildlife Service, and California Department of Fish and Wildlife regarding the potential HDD through the burrowing owl habitat.

Proposed Project proposes overhead transmission lines in areas that are less developed, where existing overhead transmission lines are present.

4.2 NO PROJECT ALTERNATIVE

As required by the CPUC PEA Guidelines, the No Project Alternative is discussed herein, consistent with California Environmental Quality Act (CEQA) Guidelines Section 15126.6(e). The purpose of the No Project Alternative is to provide the decision maker with the opportunity to compare the impacts of a proposed project with the potential impacts of not approving the project. As stated above and in **Sections 2.0, Introduction** and **3.0, Proposed Project Description** of the PEA, the Proposed Project has been designed to achieve the Functional Specifications, which were developed by CAISO in order to fill the transmission planning forecast. In absence of the Proposed Project, CAISO would need to reassess the system needs and develop additional action or actions in place of the Proposed Project. Therefore, the No Project Alternative would not meet the Proposed Project objectives.

4.3 REJECTED ALTERNATIVES

4.3.1 TRANSMISSION LINE ALTERNATIVES

4.3.1.1 Transmission Line Alternative 1 – Alternating Current Transmission Line

A transmission line between the existing Newark and NRS substations could theoretically be either an AC or DC transmission line. However, an AC transmission line between the existing Newark and NRS substations would not meet the need defined by CAISO for the Proposed Project in the Functional Specifications. Within the 2021-2022 TPP, the CAISO concluded that a new AC transmission line was not a feasible alternative. The Proposed Project's DC transmission line would also provide additional operational controllability compared to an AC transmission line, allowing for better utilization of the electrical grid without overloads. Additionally, the proposed HVDC terminals' reactive power output would support the regional transmission system by providing voltage support to the electrical grid in the vicinity of the proposed HVDC terminals. Finally, the DC transmission line would have a reduced impact on nearby utilities from an induced current perspective. It would also have a smaller footprint compared to a similar AC transmission line since the DC transmission line would have two conductors while an AC transmission line requires three conductors, thereby requiring larger duct banks and splice vaults.

5.0 ENVIRONMENTAL ANALYSIS

5.1 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?			X	
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
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?			X	
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

This section describes the aesthetics within the vicinity of the Proposed Project as well as potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.1.1 ENVIRONMENTAL SETTING

5.1.1.1 Landscape Setting

The proposed Albrae terminal is located in the City of Fremont, and the proposed Baylands terminal would be located in the City of San José. The proposed Newark to Albrae 230 kilovolt (kV) transmission line would be located within the City of Fremont and span approximately 0.4 mile between the proposed Albrae terminal and the existing Pacific Gas and Electric Company (PG&E) Newark substation. The proposed Albrae to Baylands 320 kV direct current (DC) transmission line would span approximately 8.6 miles from the proposed Albrae terminal in the City of Fremont south through the Cities of Milpitas and San José to the proposed Baylands terminal. The proposed Baylands to Northern Receiving Station (NRS) 230 kV transmission line would begin in the City of San José and span approximately 3.5 miles from the proposed Baylands terminal to the existing Silicon Valley Power (SVP) NRS substation in the City of Santa Clara. Elevations within the Proposed Project site range from five to 22 feet above sea level.

The Diablo Mountain Range rises above the valley floor approximately five miles northeast of the proposed Baylands terminal site and four miles east of the proposed Albrae terminal site. The Santa Cruz Mountains rise to the southwest of the valley floor approximately 10.5 miles southwest of the proposed Baylands terminal. These mountains consist of gently sloping alluvial plains ranging up to 3,800 feet in the surrounding peaks. On clear days, when distant landscape elements are discernible, a number of the higher peaks and mountains of the Diablo and Santa Cruz Ranges are visible from some places in the general area.

Commercial, industrial, and undeveloped open land and wetlands surround the proposed Baylands terminal site. Developed industrial uses have long been the dominant land use in the area of the proposed Albrae terminal site. Warehouses, parking lots, staging areas, and office parks are characteristic features in this area. Various small waterways traverse the areas near both proposed high-voltage direct current (HVDC) terminal sites.

The proposed Newark to Albrae 230 kV transmission line would be located partially overhead and underground along industrial, open space, and undeveloped land. The overhead portion of the proposed Newark to Albrae 230 kV transmission line would run next to the existing Newark substation in an undeveloped area adjacent to existing overhead transmission lines on PG&E-owned property. The underground portion of the proposed Newark to Albrae 230 kV transmission line would run along Weber Road through a mostly industrial area. The proposed Albrae to Baylands 320 kV DC transmission line would be located partially underground and partially overhead along commercial, industrial, open space, roads, and undeveloped land. The majority of the proposed underground segments of the Albrae to Baylands 320 kV DC transmission line would run within or along Cushing Parkway, Fremont Boulevard, and Los Esteros Road and cross the arterial road Auto Mall Parkway. The overhead segment of the transmission line would parallel approximately 1,000 feet to the west of Interstate (I)-880 for approximately two miles. The proposed Baylands to NRS 230 kV transmission line would be located mostly underground, with a short overhead segment, along commercial, residential, industrial, open space/park/recreation, roads, and undeveloped land. The proposed Baylands to NRS 230 kV transmission line would run under Los Esteros Road, Disk Drive, Nortech Parkway, and Lafayette Street. It would cross State Route (SR)-237 as well as North First Street and would be overhead to cross the Guadalupe River.

5.1.1.2 Scenic Resources

Scenic resources generally can include designated vistas, scenic highways, or national scenic areas, as well as historic structures, trees, or other resources that contribute to the scenic values of an area (California Public Utilities Commission [CPUC], 2019). Planning documents prepared by local agencies often identify scenic resources within the agency's jurisdiction, and California Department of Transportation (Caltrans) and the U.S. Department of Transportation (USDOT) Federal Highway Administrative (FHWA) identify state and national scenic highways. For the Proposed Project, the City of Fremont General Plan (2011), City of Milpitas General Plan (2021), City of San José General Plan (2024), City of Santa Clara General Plan (2010), USDOT FHWA scenic byways map (2024), California State Scenic Highway System (Caltrans, 2023), and National Historic Landmark Registry (National Park Service, 2024) were reviewed for designated or eligible scenic resources within five miles of the Proposed Project area. Identified scenic resources within five miles of the Proposed Project are listed in **Table 5.1-1, Scenic Resources**. **Figure 5.1-1, Scenic Resources Map** illustrates the location of each identified scenic resource.

Table 5.1-1: Scenic Resources	
Scenic Resource	Description
I-880 & Stevenson Boulevard	City of Fremont gateway
I-880 & Fremont Boulevard (south)	City of Fremont gateway
I-880 & Mission Boulevard/Gateway Boulevard	City of Fremont gateway
I-880 & SR-84	City of Fremont gateway
I-880 & Mowry Avenue	City of Fremont gateway
I-880 & Milpitas border	City of Fremont gateway
I-680 & Milpitas border	City of Fremont gateway
SR-84 & Paseo Padre Parkway	City of Fremont gateway
Paseo Padre Parkway	City of Fremont-designated scenic corridor
Mission Boulevard	City of Fremont-designated scenic corridor
Bay Area Rapid Transit (BART) Line (Union City border to Milpitas border)	City of Fremont-designated scenic corridor
Sierra Road	City of San José-designated rural scenic corridor
U.S. Route 101	City of San José-designated rural scenic corridor and urban corridor
I-880	City of San José-designated urban corridor
SR-87	City of San José-designated urban corridor
SR-237	City of San José-designated urban corridor
I-680	City of San José-designated urban corridor
Santa Clara Valley	City of San José-designated scenic resource
City of San José Urban Skyline	City of San José-designated scenic resource
Santa Cruz Mountain Range	City of San José-designated scenic resource
Diablo Mountain Range	City of San José-designated scenic resource
Coyote Creek Trail	City of San José trail
Guadalupe River Trail	City of San José trail
Alviso Park	City of San José park
North First Street at SR-237	City of San José gateway
Montague Expressway at I-880	City of San José gateway
Charcot Avenue at I-880	City of San José gateway
Charcot Avenue at Orchard Parkway	City of San José gateway
North First Street at Charcot Avenue	City of San José gateway
North First Street at I-880	City of San José gateway
Berryessa Road at I-680	City of San José gateway
Skyport Drive at SR-87	City of San José gateway
Oakland Road at U.S. Route 101	City of San José gateway
Coleman Avenue at I-880	City of San José gateway
The Alameda at I-880	City of San José gateway
Great Mall	City of Milpitas landmark
Santa Clara Youth Soccer Park	City of Santa Clara park

Table 5.1-1: Scenic Resources	
Scenic Resource	Description
Ulistac Natural Area	City of Santa Clara-designated natural area
Unitary Plan Wind Tunnel	National Historic Landmark
Bay Trail	Multi-agency trail network
Don Edwards San Francisco Bay National Wildlife Refuge (NWR)	United States Fish and Wildlife Service (USFWS) wildlife refuge

The City of Fremont General Plan describes neighborhoods north of Mission Boulevard as largely defined by their panoramic views across the City of Fremont and the San Francisco Bay. Elsewhere in the City of Fremont, the East Bay hills form a scenic backdrop for neighborhoods and commercial centers. Fremont residents have voted to protect the hills as open space on several occasions, confirming their value as a scenic resource. The designation of scenic routes is another expression of the City and State commitment to maintain the City of Fremont's aesthetic qualities. The City of Fremont also recognizes many gateways that welcome people to the City, commercial districts, historic districts, business parks, and other subareas within the City. Corridors function as the gateways to the City of Fremont and its business districts. They often consist of high-volume traffic routes lined with auto-oriented uses, signage, parking lots, and landscaping. The City Fremont's corridors also include hundreds of residential, commercial, industrial, and public properties.

The City of San José General Plan states that scenic resources within the City of San José include the Santa Clara Valley, the hills and mountains which frame the valley floor, the baylands, and the urban skyline itself, including high-rise development. In addition, the City of San José identifies three types of scenic routes that contribute to the overall image of the City (City of San José, 2016): Rural Scenic Corridors, which are routes that afford especially aesthetic views to scenic resources; Urban Corridors, which are all state and interstate highways within the City; and Gateways, which are locations that announce to a visitor or resident that they are entering the City or a unique neighborhood.

The Cities of Milpitas and Santa Clara General Plans do not specifically identify scenic resources. The City of Milpitas General Plan notes the important scenic value of local hillsides, parks, open spaces, creeks, ponds, and natural drainages. The City of Santa Clara General Plan includes policies to improve the identity and visual character of the City, emphasizing urban design to shape the character and appearance of major corridors and identified focus areas within the City.

In addition to the scenic resources identified by the maps and plans mentioned above, there are a number of parks and trails in the surrounding area, as well as architecturally or historically significant properties. The parks and trails that are adjacent to the proposed HVDC terminal sites and overhead transmission lines are included in **Table 5.1-1** and analyzed in this section. **Section 5.16, Recreation** provides additional information on the parks and trails within a 0.5-mile buffer of the Proposed Project. **Section 5.5, Cultural Resources** provides additional information and analysis on the historic properties.

5.1.1.3 Viewshed Analysis

For purposes of describing the Proposed Project's visual setting and assessing potential visual impacts, the viewshed has been broken down into foreground, middle ground, and background distance zones. Background views extend to the visual horizon, which is approximately five miles

from the Proposed Project site; therefore, an analysis of the visual impact using a five-mile buffer was created. The foreground is defined as the zone within 0.25 to 0.5 mile of the viewer. Landscape detail is noticeable; objects are most prominent when seen in the foreground. The middle ground can be defined as the zone that extends from the foreground up to three to five miles from the viewer. The background extends from approximately three to five miles and beyond. **Figure 5.1-2, Viewshed Analysis and Landscape Units Map** provides buffers showing these distances.

The Proposed Project's viewshed is defined as the general area from which the Proposed Project is visible. Viewing distance is a key factor that affects the potential degree of the Proposed Project's visibility. Visual details generally become apparent to the viewer when they are observed in the foreground at a distance of 0.25 to 0.5 mile or less. Therefore, analysis of the Proposed Project considers primarily the potential effects of the Proposed Project's elements on foreground viewshed conditions, although consideration is also given to middle ground and background views. The proposed HVDC terminal sites would be visible from some nearby locations along public roads as well as nearby industrial lots, commercial lots, and nearby parks and trails. In addition, construction of the proposed transmission lines would be visible from residential, public recreation, open space, commercial, and industrial areas.

5.1.1.4 Landscape Units

A set of three distinct landscape units have been identified for the purposes of documenting and describing the Proposed Project's foreground viewshed. **Table 5.1-2, Summary of Landscape Units** summarizes the landscape units identified within the Proposed Project's viewshed. **Figure 5.1-2** illustrates the locations on an aerial map.

Table 5.1-2: Summary of Landscape Units		
Landscape Unit (Approximate length/size)	Primary Affected Viewers	Representative Viewpoint (RV) Numbers
1. Proposed Albrae terminal to the Fremont Boulevard Trail segment of the Bay Trail (4.7 miles)	Motorists, pedestrians	1-6
2. Fremont Boulevard Trail segment to Grand Boulevard and Spreckles Avenue (4.0 miles)	Motorists, pedestrians	7-18
3. Grand Boulevard and Spreckles Avenue to existing NRS substation (2.7 miles)	Motorists, pedestrians, and residents	20-29
Note: Figure 5.16-1 depicts the segments of the Bay Trail.		

Landscape Unit 1: Proposed Albrae Terminal to Fremont Boulevard Trail Segment

Located in the City of Fremont, Landscape Unit 1 is the most industrial part of the Proposed Project area. The unit includes segments of Weber Road, Boyce Road, Cushing Parkway, and Fremont Boulevard running west to east then south. The roads are primarily lined with parking lots, warehouses, offices, or undeveloped land. The proposed Albrae terminal sits within a largely industrial area within this landscape unit.

Landscape Unit 2: Fremont Boulevard Trail Segment to Grand Boulevard and Spreckles Avenue

Landscape Unit 2 is located in the Cities of Fremont, Milpitas, and San José along Fremont Boulevard, small access roads, San José-Santa Clara Regional Wastewater Facility (RWF) drying beds, and Los Esteros Road, running north to south then southwest. This unit runs through predominately industrial and undeveloped land. It is in the vicinity of landfills, waste treatment facilities, and other industrial warehouses and facilities. The proposed Baylands terminal sits in an undeveloped part of this unit, with the San José-Santa Clara RWF to the east and a recycling waste facility to the north.

Landscape Unit 3: Grand Boulevard and Spreckles Avenue to Existing NRS Substation

Landscape Unit 3 runs from the City of San José into the City of Santa Clara along Grand Boulevard, Disk Drive, Nortech Parkway, SR-237, and Lafayette Street. This unit travels through a mostly commercial area, crosses the Guadalupe River near SR-237, then goes south into an area with low density housing to the east and sports parks and Levi's Stadium to the west.

5.1.1.5 Viewers and Viewer Sensitivity

Motorists represent the largest affected viewer group, consisting primarily of those traveling along I-880, Cushing Parkway, Fremont Boulevard, and SR-237. The closest residence to the proposed Albrae terminal is located approximately 0.5 mile to the northwest, and the closest residence to the proposed Baylands terminal is located approximately 0.5 mile to the west. Motorists include a variety of roadway travelers, both local and regional travelers who are familiar with the visual setting, and travelers using the roadway on a less regular basis, such as those seeking alternate routes. I-880 and SR-237 have a speed limit of 65 miles per hour (mph); therefore, affected views are generally brief, typically lasting less than a few seconds depending on traffic volume. In addition, the speed limit on Cushing Parkway and Fremont Boulevard is 45 mph, with slightly longer yet similar viewing times. Viewer sensitivity of motorists is considered low.

In addition to motorists, other potential viewers would be visitors to the nearby parks and trails. The proposed overhead portion of the Albrae to Baylands 320 kV DC transmission line would be visible from users of the Coyote Creek Trail segment of the Bay Trail. The proposed overhead portion of the Baylands to NRS 230 kV transmission line crossing Guadalupe River would be visible from users of the Guadalupe River Trail. Additionally, most of the Proposed Project area would be visible from trails associated with the Bay Trail network. Viewer sensitivity is considered moderate.

5.1.1.6 Representative Viewpoints

A total of 29 representative viewpoints (RVs) were selected at key locations throughout the Proposed Project area. These RVs represent a range of views of the Proposed Project area from major roads, trails, recreational areas, and other scenic resources. **Figure 5.1-3, Location of Representative Viewpoints and Key Observation Points** illustrates the location of each RV. High-resolution photographs were taken at each of the 29 RVs and are included in **Figures 5.1-3A through 5.1-3AC**. In addition to the 29 RVs, five additional locations were selected as key observation points (KOPs). These KOPs were selected based on the following criteria: the location is a designated scenic resource, trail, park, or major road; a view of the Proposed Project would be visible; and viewers at this location may be particularly sensitive to visual change. The

location of each KOP is identified in **Figure 5.1-3**, and the photographs and visual simulations that were prepared at each are presented in **Figures 5.1-4 through 5.1-8**.

Table 5.1-3, Summary of RVs and KOPs provides the types of viewers, viewing direction, distance to nearest Proposed Project feature, and the capture time and date of the photograph. A description of the existing visual conditions and visibility of the Proposed Project area as seen from the RV location and shown in the RVs is described in the text below **Table 5.1-3**.

Table 5.1-3: Summary of RVs and KOPs				
RV and Location	Figure	Potentially Affected Viewer Type	Viewing Direction & Distance	Capture Time & Date
RV 1	Figure 5.1-3A	Motorists	Southwest – Approximately 410 feet east of proposed Albrae terminal (taken from Weber Road)	1/4/2024 8:00 am
RV 2	Figure 5.1-3B	Motorists	Southwest – Approximately 290 feet east of proposed Albrae terminal (taken from Weber Road)	1/4/2024 8:04 am
RV 3	Figure 5.1-3C	Motorists	Southwest – Approximately 50 feet southeast of proposed Albrae terminal (taken from Weber Road, which is where the proposed underground Albrae to Baylands 320 kV DC transmission line would be located)	1/4/2024 8:10 am
RV 4	Figure 5.1-3D	Motorists	Southwest – Adjacent to the proposed underground Albrae to Baylands 320 kV DC transmission line and Staging Area 2	1/4/2024 8:21 am
RV 5	Figure 5.1-3E	Motorists and Pedestrians	Northeast – Adjacent to the proposed underground Albrae to Baylands 320 kV DC transmission line	1/4/2024 2:04 pm
RV 6	Figure 5.1-3F	Motorists and Pedestrians	West – Adjacent to the proposed underground Albrae to Baylands 320 kV DC transmission line	1/4/2024 8:36 am
RV 7	Figure 5.1-3G	Motorists and Pedestrians	South – Adjacent to the proposed underground Albrae to Baylands 320 kV DC transmission line and Staging Area 4	1/4/2024 2:22 pm
RV 8	Figure 5.1-3H	Motorists	South – Adjacent to the proposed overhead and underground Albrae to Baylands 320 kV DC transmission line and Staging Area 4	1/4/2024 2:34 pm
RV 9	Figure 5.1-3I	Pedestrians	Northwest – Approximately 515 feet east of proposed overhead Albrae to Baylands 320 kV DC transmission line	1/4/2024 8:57 am

Table 5.1-3: Summary of RVs and KOPs

RV and Location	Figure	Potentially Affected Viewer Type	Viewing Direction & Distance	Capture Time & Date
RV 10	Figure 5.1-3J	Pedestrians	Northwest – Approximately 611 feet east of proposed overhead Albrae to Baylands 320 kV DC transmission line	1/4/2024 9:13 am
RV 11	Figure 5.1-3K	Pedestrians	West – Approximately 1,080 feet east of proposed overhead Albrae to Baylands 320 kV DC transmission line	1/4/2024 9:25 am
RV 12	Figure 5.1-3L	Motorists and Pedestrians	Northwest – Approximately 1,360 feet east of proposed overhead Albrae to Baylands 320 DC kV transmission line	1/4/2024 9:34 am
RV 13	Figure 5.1-3M	Pedestrians	Northwest – Approximately 1,248 feet east of proposed overhead Albrae to Baylands 320 DC kV transmission line	1/4/2024 9:36 am
RV 14	Figure 5.1-3N	Motorists and Pedestrians	Northeast – Approximately 425 feet south of proposed overhead Albrae to Baylands 320 kV DC transmission line	1/4/2024 1:26 pm
RV 15	Figure 5.1-3O	Motorists	Northwest – Approximately 425 feet south of proposed overhead and underground Albrae to Baylands 320 kV DC transmission line	1/4/2024 1:25 pm
RV 16	Figure 5.1-3P	Motorists	Northeast – Adjacent to the proposed underground Albrae to Baylands 320 kV DC transmission line	1/4/2024 1:19 pm
RV 17	Figure 5.1-3Q	Motorists	Southeast – Adjacent to the proposed underground Baylands to NRS 230 kV transmission line	1/4/2024 1:11 pm
RV 18	Figure 5.1-3R	Motorists	Northwest – Approximately 3,880 feet southeast of proposed Baylands terminal (adjacent to Staging Area 7)	1/4/2024 1:32 pm
RV 19	Figure 5.1-3S	Pedestrians	Southeast – Approximately 619 feet southwest of Staging Area 9	1/4/2024 12:50 pm
RV 20	Figure 5.1-3T	Pedestrians	Southeast – Approximately 525 feet southwest of Staging Area 9	1/4/2024 12:46 pm
RV 21	Figure 5.1-3U	Pedestrians	North – Approximately 835 feet south of proposed overhead Baylands to NRS 230 kV transmission line	1/4/2024 12:38 pm

Table 5.1-3: Summary of RVs and KOPs

RV and Location	Figure	Potentially Affected Viewer Type	Viewing Direction & Distance	Capture Time & Date
RV 22	Figure 5.1-3V	Pedestrians	Southeast – Approximately 858 feet north of proposed underground Baylands to NRS 230 kV transmission line	1/4/2024 12:16 pm
RV 23	Figure 5.1-3W	Pedestrians	North – Approximately 807 feet south of proposed overhead Baylands to NRS 230 kV transmission line	1/4/2024 12:27 pm
RV 24	Figure 5.1-3X	Motorists	Northeast – Approximately 300 feet southeast of proposed overhead Baylands to NRS 230 kV transmission line	1/4/2024 11:51 am
RV 25	Figure 5.1-3Y	Motorists and Pedestrians	South – Adjacent to the proposed underground Baylands to NRS 230 kV transmission line	1/4/2024 10:30 am
RV 26	Figure 5.1-3Z	Motorists and Pedestrians	Northwest – Approximately 272 feet east of proposed NRS substation modification	1/4/2024 10:22 am
RV 27	Figure 5.1-3AA	Motorists and Pedestrians	Northwest – Approximately 339 feet southeast of proposed NRS substation modification	1/4/2024 10:20 am
RV 28	Figure 5.1-3AB	Motorists and Pedestrians	Northwest – Approximately 422 feet southeast of proposed NRS substation modification	1/4/2024 10:17 am
RV 29	Figure 5.1-3AC	Motorists and Pedestrians	Northwest – Approximately 522 feet southeast of proposed NRS substation modification	1/4/2024 10:15 am
KOP 1	Figure 5.1-4	Motorists and Pedestrians	Southwest – Approximately 720 feet northeast of proposed Albrae terminal	1/4/2024 7:49 am
KOP 2	Figure 5.1-5	Motorists and Pedestrians	South – Adjacent to the proposed overhead Albrae to Baylands 320 kV DC transmission line	1/4/2024 1:35 pm
KOP 3	Figure 5.1-6	Pedestrians and Cyclists	Southwest – Approximately 611 feet east of proposed overhead Albrae to Baylands 320 kV DC transmission line	1/4/2024 9:14 am
KOP 4	Figure 5.1-7	Motorists and Cyclists	Northwest – Approximately 3,175 feet southeast of proposed Baylands terminal	1/4/2024 1:41 pm

Table 5.1-3: Summary of RVs and KOPs				
RV and Location	Figure	Potentially Affected Viewer Type	Viewing Direction & Distance	Capture Time & Date
KOP 5	Figure 5.1-8	Motorists	West – Approximately 360 feet southeast of proposed overhead Baylands to NRS 230 kV transmission line	1/4/2024 11:43 am

Figure 5.1-3A, RV 1 shows a view from Weber Road looking southwest towards the proposed Albrae terminal site from a motorist’s point of view. The foreground shows Weber Road with several cars parked on the side and utility poles overhead. The middle ground shows structures and warehouses of nearby facilities as well as larger utility poles. The background shows the mountains of the Santa Cruz Range.

Figure 5.1-3B, RV 2 shows a motorist’s perspective on Weber Road aimed southwest toward the proposed Albrae terminal site. Weber Road, vehicles, utility poles, and industrial facilities are seen in the foreground. The middle ground shows larger utility structures, and the background shows the Santa Cruz Mountain Range.

Figure 5.1-3C, RV 3 shows a motorist’s perspective on Weber Road aimed southwest toward the proposed Albrae terminal site. Weber Road, vehicles, utility poles, and the proposed Albrae terminal site are seen in the foreground. The middle ground shows larger utility structures, and the background shows the Santa Cruz Mountain Range.

Figure 5.1-3D, RV 4 shows a view from Boyce Road looking southwest from a motorist’s perspective towards the proposed underground Albrae to Baylands 320 kV DC transmission line as well as Staging Area 2. The foreground of the photo shows Boyce Road, gates that grant entry to Staging Area 2, and many large utility structures. The utility structures continue into the middle ground. The Santa Cruz Mountains can be seen in the background.

Figure 5.1-3E, RV 5 shows a motorist or pedestrian point of view on Cushing Parkway looking northeast toward the proposed underground Albrae to Baylands 320 kV DC transmission line. In the foreground of the image, the sidewalk and Cushing Parkway are visible, along with small plants and trees planted alongside the road and light poles. The middle ground shows warehouses and office buildings as well as larger utility structures. The Diablo Mountain Range can be seen in the background.

Figure 5.1-3F, RV 6 shows a motorist or pedestrian perspective on Cushing Parkway looking west toward the proposed underground Albrae to Baylands 320 kV DC transmission line. The foreground shows a part of Cushing Parkway, the sidewalk next to it, and plant life growing next to the sidewalk. The middle ground shows a larger segment of Cushing Parkway, office buildings, and larger utility structures. The background shows the Santa Cruz Mountain Range.

Figure 5.1-3G, RV 7 shows a view from Fremont Boulevard from a motorist or pedestrian point of view looking south along the proposed underground Albrae to Baylands 320 kV DC transmission line and Staging Area 4. The foreground shows the intersection of Fremont

Boulevard/McCarthy Boulevard and Dixon Landing Road with cars, traffic lights, and overhead utility poles. A few utility poles can be seen in the middle ground. The background shows the Diablo Mountain Range.

Figure 5.1-3H, RV 8 shows a motorist's point of view looking south on McCarthy Boulevard towards the proposed overhead and underground Albrae to Baylands 320 kV DC transmission line and Staging Area 4. McCarthy Boulevard, vehicles, a median, sidewalk, trees, and utility lines can be seen in the foreground. In the middle ground is undeveloped land where the proposed Albrae to Baylands 320 kV DC transmission line would transition from underground to overhead. In the background, the Diablo Mountain Range is visible.

Figure 5.1-3I, RV 9 shows a pedestrian's point of view looking northwest on the Coyote Creek Trail towards the proposed overhead Albrae to Baylands 320 kV DC transmission line. The foreground shows Coyote Creek Trail, plant life, and a nearby warehouse. The middle ground shows utility lines and more warehouses. The background shows a distant hillside.

Figure 5.1-3J, RV 10 shows a pedestrian's perspective on the Coyote Creek Trail looking northwest toward the proposed overhead Albrae to Baylands 320 kV DC transmission line. In the foreground, the Coyote Creek Trail and vegetation is visible. The middle ground displays utility poles and warehouses, and the Diablo Mountains are visible in the background.

Figure 5.1-3K, RV 11 shows a view from a pedestrian's perspective looking west towards the proposed overhead Albrae to Baylands 320 kV DC transmission line on a sidewalk along McCarthy Boulevard. In the foreground, a grassy undeveloped field is visible with utility poles at the edge. More utility poles are barely visible in the middle ground. A part of the Santa Cruz Mountain Range is visible in the background.

Figure 5.1-3L, RV 12 shows a view from the perspective of a motorist or pedestrian looking northwest on McCarthy Boulevard towards the proposed overhead Albrae to Baylands 320 kV DC transmission line. The foreground shows McCarthy Boulevard, the median, a sidewalk, trees, a vehicle, and open land beyond the road. The middle ground shows utility lines and larger trees. In the background, the Diablo Mountains can be seen.

Figure 5.1-3M, RV 13 shows a view from a pedestrian's point of view looking northwest on the sidewalk next to McCarthy Boulevard toward the proposed overhead Albrae to Baylands 320 kV DC transmission line. The foreground shows a grassy open field and trees at the edge with a person on a ridge. The middle ground shows large utility structures, and the background shows the Diablo Mountains.

Figure 5.1-3N, RV 14 shows a view from the perspective of a motorist or pedestrian looking northeast on Los Esteros Road towards the proposed overhead Albrae to Baylands 320 kV DC transmission line. In the foreground is a gate with miscellaneous items on the ground, and a road leads past the gate. The middle ground shows a ridge with utility poles on it, and the background shows mountains of the Diablo Range.

Figure 5.1-3O, RV 15 shows a view from Los Esteros Road looking northwest towards the proposed overhead and underground Albrae to Baylands 320 kV DC transmission line from a motorist point of view. In the foreground is Los Esteros Road, a guard rail, and utility poles. The middle ground shows a ridge, more utility poles, and the area where the proposed Albrae to

Baylands 320 kV DC transmission line would transition from overhead to underground. There is nothing visible in the background.

Figure 5.1-3P, RV 16 shows a view from the perspective of a motorist looking northeast on Los Esteros Road toward the proposed underground Albrae to Baylands 320 kV DC transmission line. In the foreground, Los Esteros Road, utility pipes, fencing, utility poles, and facility structures can be seen. The middle ground shows open, undeveloped land. The background shows the Diablo Mountain Range.

Figure 5.1-3Q, RV 17 shows a view from the point of view of a motorist looking southeast on Los Esteros Road toward the proposed underground Baylands to NRS 230 kV transmission line. In the foreground is Los Esteros Road, fencing, and utility poles. The middle ground shows utility poles and the site of the proposed Baylands terminal. The background shows the Diablo Mountain Range.

Figure 5.1-3R, RV 18 shows a view from a motorist's perspective looking northwest on Zanker Road toward the proposed Baylands terminal site. In the foreground, Zanker Road, fencing, and an open field is visible. In the middle ground, there are facility structures, access roads, and the site of the proposed Baylands terminal. The background shows utility poles and structures.

Figure 5.1-3S, RV 19 shows the perspective of a pedestrian looking southeast on the Guadalupe River Trail toward the proposed Baylands to NRS 230 kV transmission line. In the foreground is the trail, plant life along the river, and the Guadalupe River. The middle ground shows utility poles, SR-237, and commercial buildings. The Santa Cruz Mountain Range is barely visible in the background.

Figure 5.1-3T, RV 20 shows a view from the perspective of a pedestrian looking southeast on the Guadalupe River Trail toward the proposed Baylands to NRS 230 kV transmission line. The foreground shows the Guadalupe River Trail, the Guadalupe River, and the plant growth between them. The middle ground shows SR-237, utility poles, several large buildings, and Levi's Stadium. The background shows the Santa Cruz Mountain Range.

Figure 5.1-3U, RV 21 shows a view from the perspective of a pedestrian looking north on the Guadalupe River Trail toward the proposed overhead Baylands to NRS 230 kV transmission line. The foreground shows the Guadalupe River Trail, nearby houses, fencing, and plant growth. The middle ground shows SR-237, utility poles, and commercial buildings, including the poles and nets of a driving range. The background is not visible.

Figure 5.1-3V, RV 22 shows a view from the perspective of a pedestrian looking southeast on a trail along Channel Drive toward the proposed underground Baylands to NRS 230 kV transmission line. The foreground shows the trail with fencing in front of wetlands and a building. The middle ground shows SR-237, utility poles, and tree growth. The background shows the Diablo Mountain Range.

Figure 5.1-3W, RV 23 shows a view from the perspective of a pedestrian looking north on a trail along the west side of the Guadalupe River toward the proposed overhead Baylands to NRS 230 kV transmission line. The foreground shows the trail, fencing, Guadalupe River, and plant growth. The middle ground shows SR-237, the poles and nets of a driving range, and utility poles. The background shows the Diablo Mountain Range.

Figure 5.1-3X, RV 24 shows a view from the perspective of a motorist looking northeast on SR-237 toward the proposed overhead segment of the Baylands to NRS 230 kV transmission line. The foreground shows SR-237, vehicles going by, guardrails, signage, and utility poles. The middle ground shows the nets and poles of a driving range and other commercial buildings. The background shows the Diablo Mountain Range.

Figure 5.1-3Y, RV 25 shows a view from the perspective of a motorist or pedestrian looking south on Lafayette Street toward the proposed Baylands to NRS 230 kV transmission line and proposed NRS substation modification area. The foreground shows the intersection of Lafayette Street and Calle De Primavera with vehicles, traffic lights, and utility poles. The middle ground shows more utility poles and structures within the existing NRS substation. Nothing is visible in the background.

Figure 5.1-3Z, RV 26 shows a view from the perspective of a motorist or pedestrian looking northwest on Lafayette Street toward the proposed NRS substation modification area. The foreground shows Lafayette Street, a bike lane, a sidewalk, the median, trees, and utility poles. The middle ground shows structures within the existing NRS substation, other utility poles, and Levi's Stadium. Nothing is visible in the background.

Figure 5.1-3AA, RV 27 shows a view from the perspective of a motorist or pedestrian looking northwest on Lafayette Street toward the proposed NRS substation modification area. The foreground shows Lafayette Street, a bike lane, a sidewalk, the median, trees, railroad tracks, and utility poles. The middle ground shows structures within the existing NRS substation, other utility poles, and Levi's Stadium. Nothing is visible in the background.

Figure 5.1-3AB, RV 28 shows a view from the perspective of a motorist or pedestrian looking northwest on Lafayette Street toward the proposed NRS substation modification area. The foreground shows Lafayette Street, the median, trees, railroad tracks, houses, and utility poles. The middle ground shows structures within the existing NRS substation, other utility poles, and Levi's Stadium. Nothing is visible in the background.

Figure 5.1-3AC, RV 29 shows a view from the perspective of a motorist or pedestrian looking northwest on Lafayette Street toward the proposed NRS substation modification area. The foreground shows Lafayette Street, a bike lane, the median, trees, houses, and utility poles. The middle ground shows structures within the existing NRS substation, other utility poles, and Levi's Stadium. Nothing is visible in the background.

Figure 5.1-4, KOP 1 shows a view from Boyce Road and the Bay Trail segment, Boyce Road from Stevenson Boulevard to Auto Mall Parkway, looking southwest towards the proposed Albrae terminal from a motorist's or pedestrian's point of view. The foreground shows Boyce Road, sidewalks, pedestrians, trees, and an industrial yard with warehouses and equipment. The middle ground shows large utility structures and the Don Edwards San Francisco Bay NWR. The background shows the Santa Cruz Mountain Range.

Figure 5.1-5, KOP 2 shows a view from a motorist's or pedestrian's perspective looking south on McCarthy Boulevard and the North McCarthy Boulevard bridge segment of the Bay Trail toward the proposed overhead Albrae to Baylands 320 kV DC transmission line. The foreground shows McCarthy Boulevard, a median, fencing, cars, and utility structures. The middle ground shows warehouses, office buildings, and utility structures, as well as trees and other low-lying vegetation

within the Don Edwards San Francisco Bay NWR. The background shows the Santa Cruz Mountain Range.

Figure 5.1-6, KOP 3 shows a pedestrian's or cyclist's point of view looking southwest on the Coyote Creek Trail towards the proposed overhead Albrae to Baylands 320 kV DC transmission line. The foreground shows the trail, plants and grasslands, and overhead utility lines. The middle ground shows distant buildings and facilities, and the background shows the Santa Cruz Mountain Range.

Figure 5.1-7, KOP 4 shows a view from a motorist's perspective on SR-237 looking northwest towards the proposed Baylands terminal. The foreground shows fencing and open land with trees and grasses. The middle ground shows buildings and several trees, and the background shows the Diablo Mountain Range and utility poles.

Figure 5.1-8, KOP 5 shows a view looking west on SR-237 from a motorist's point of view toward the proposed overhead Baylands to NRS 230 kV transmission line. The foreground shows SR-237, utility poles, and fencing. The Guadalupe River and Guadalupe River Trail are also located in the foreground, though not visible in these photographs due to the elevation of SR-237. The middle ground shows office buildings, trees, and more utility poles. The structures in the middle ground obscure features within the background.

The set of visual simulations presented on **Figures 5.1-4** through **5.1-8** documents the Proposed Project-related visual changes that would occur at five KOPs and provides the basis for evaluating potential visual effects associated with the Proposed Project from these key public views. The methodology employed for preparing the simulations includes site photography, computer modeling, and digital rendering techniques. Photographs were taken using a full-frame digital camera with standard 50-millimeter lens, which represents an approximately 40-degree horizontal view angle. Photography RV locations were documented systematically using photo log sheet notation, global positioning system (GPS) recording, and base-map annotation. Digital aerial photographs and Proposed Project design information supplied by PG&E, SVP, and LS Power Grid California, LLC ("LS Power") provided the basis for developing a three-dimensional computer model of the new Proposed Project components. For each KOP simulation, viewer location was input from GPS data, using 5.5 feet as the assumed eye level. Computer "wireframe" perspective plots were overlaid on the simulation photographs to verify scale and viewpoint location. Digital visual simulation images then were produced based on computer renderings of a three-dimensional computer model matched to and combined with the selected digital site photographs. The simulations are presented as figures with two images designated "A" and "B," with the existing views shown on the "A" photo and the post-Proposed Project visual simulations shown on the "B" photo.

5.1.1.7 Representative Photographs

High-resolution photographs were taken at each of the 29 RVs and are included in **Figures 5.1-3A** through **5.1-3AC**. **Table 5.1-3** provides the capture time and date of each photograph. All photographs were taken on a 50-millimeter Canon EOS-5D at a height of five feet.

5.1.1.8 Visual Resource Management Areas

There are no classified Visual Resource Management Areas located within the Proposed Project area because it is not located on federal public lands (U.S. Department of the Interior Bureau of Land Management, 2024).

5.1.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.1.2.1 Aesthetics Regulatory Setting

Federal

Federal Highway Administration Guidelines for the Visual Impact Assessment of Highway Projects

FHWA Guidelines for the Visual Impact Assessment provide an approach and methodology for assessing visual impacts caused by federally funded highway projects (FHWA, 2015). The Guidelines represent the FHWA's process for analyzing and mitigating potential visual impacts and do not provide policies or binding regulations. The Guidelines are intended to be used as a step-by-step tool for authors of a visual impact assessment, as a training resource in a classroom or as a learning aid for self-taught individuals, and as a reference that details specific tasks, techniques, or terms for a more thorough understanding of visual quality and visual impact assessment. The FHWA process is outlined in four phases: establishment, inventory, analysis, and mitigation. Each phase considers the effected physical environment as well as the interaction between viewers and their surroundings.

Although the Guidelines do not explicitly provide recommendations for transmission line or regional utility infrastructure projects, the methodology is applied to this analysis because the Proposed Project is a linear project within public roadways that traverses urban areas, similar to a highway project. In addition, the FHWA's phased approach has been referenced by state and federal agencies such as Caltrans and the Bureau of Land Management (BLM) in the development of their own guidelines for National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) compliant visual impact assessment of various project types.

State

California's Scenic Highway Program, a provision of the Streets and Highways Code, was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway Program includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives the designation from Caltrans. A city or county may propose to add routes with outstanding scenic elements to the list of eligible highways; however, state legislation is required for a highway to be officially designated.

There are no designated state scenic highways in the Proposed Project area. The nearest eligible scenic highway is a segment of I-680 that ends at the southern border of the County of Alameda approximately 1.3 miles east of the Proposed Project area; and the nearest designated scenic

highway is a separate segment of I-680, which is located approximately 4.2 miles northeast of the proposed Albrae terminal.

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but these City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local aesthetics-related policies, plans, or programs for informational purposes. Although LS Power is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The City of Fremont General Plan states that Fremont's character is shaped in part by its vistas and aesthetics; therefore, the General Plan includes policies that provide a foundation to protect scenic resources, buffer unsightly uses, plant and maintain trees, designate key roads as "scenic routes," integrate art and sculpture into buildings and landscapes, and beautify the City. A summary of these goals and policies is provided below for informational purposes (City of Fremont, 2011).

Goal 4-5	City Beautiful. Protection and enhancement of Fremont's aesthetic and visual character
Policy 4-5.1	Buffering and Screening. Provide visual buffers or screening between adjacent uses which are potentially incompatible, such as industrial and residential uses. Buffers may consist of streets, setbacks, open space, landscaping, building design, reductions in height and bulk, and other site planning methods which minimize the impacts of a particular use on its neighbors. On a smaller scale, activities on individual development sites which could detract from the visual quality or enjoyment of a property—such as mechanical equipment and trash collection areas—should be appropriately screened and buffered.
Policy 4-5.3	Undergrounding Utility Lines. Reduce the visual impacts of utility lines and poles along corridors by continuing to underground overhead lines within existing development, and by requiring underground utilities in new development.
Implementation 4-5.3.A	Utility Lines in New Development. Place utility distribution lines, electrical boxes, and transformers underground in new

development and substantial redevelopment of existing properties consistent with the City's Utility Underground Ordinance.

Implementation 4-5.3.B Impacts of Utilities. Review planned utility undergrounding, sidewalk repair, and other infrastructure projects to avoid unnecessary removal of important design features, trees, or historic features.

Policy 4-5.5 Scenic Routes. Maintain a network of designated scenic routes through Fremont. The visual features which contribute to scenic designations should be protected through land use, transportation, and capital improvement decisions, as well as landscaping, operations, and maintenance activities along these corridors.

A particular road or corridor may be considered scenic by virtue of its design or amenities, the terrain and natural features it traverses, or the views and visual importance it commands. In Fremont's case, the designation expresses intent to maintain or improve visual quality but does not necessarily limit abutting uses. For example, the designation of an arterial as a locally scenic roadway could affect the City's decision to use landscaping versus sound walls, or could result in a particular gateway being assigned a higher priority for improvement.

Implementation 7-2.1.A Development Near Riparian Areas. Require proposed projects near riparian areas to protect the aesthetic, recreational, and biological benefits consistent with flood control and recharge objectives.

City of Milpitas General Plan

Policies from the City of Milpitas General Plan that relate to aesthetics and visual resources were reviewed, and a summary is provided below for informational purposes (City of Milpitas, 2021).

Goal CD-1	Strengthen Milpitas' identity and sense of place by reinforcing the community's distinctive, high-quality community form, natural landscape, and character.
Policy CD 1-5	Maintain and enhance pedestrian and bicycle access and views to and from all local creek corridors.
Policy CD 1-6	Emphasize landscaping as a fundamental design component, retaining mature landscaping when appropriate, to reinforce a sense of the natural environment and to maintain an established appearance.
Policy CD 1-10	Minimize the visual impacts of public and private communication, service, and utility facilities by requiring the provider to incorporate sensitive site design techniques, including, but not limited to, the placement of facilities in less conspicuous locations, the

	undergrounding of facilities wherever possible, and the screening of facilities.
Goal PROS-3	Ensure the provision and preservation of diverse and accessible open spaces throughout the planning area.
Policy PROS 3-3	The construction of any residential, commercial, or industrial buildings or structures on any land designated on the General Plan Land Use Map as Parks and Open Space (POS) shall be prohibited, unless the proposed construction is first approved by a two-thirds vote of the voters of Milpitas at a general or special municipal election. Undeveloped land that is designated for urban uses by the General Plan Land Use Map is not considered open space and may be developed consistent with the Land Use Map.
Policy PROS 3-5	Recognize and demonstrate through policy and practice that urban open space and hillside open space are essential to maintaining a high quality of life within the Milpitas Planning Area. Future planning decisions shall seek to preserve and maintain open space resources to the greatest extent feasible, as these resources are irretrievable.
Policy PROS 3-6	Support regional and local preservation plans and policies that retain and protect open space within the Milpitas Planning Area.
Policy PROS 3-7	Encourage public and private efforts to preserve open space.
Policy PROS 3-9	Encourage clustered development that preserves a sense of openness, particularly in areas adjacent to open spaces and scenic resources.

City of San José General Plan

Policies from the City of San José General Plan that relate to aesthetics and visual resources were reviewed, and a summary is provided below for informational purposes (City of San José, 2024).

Policy CD-9.1	Ensure that development within the designated Rural Scenic Corridors is designed to preserve and enhance attractive natural and man-made vistas.
Policy CD-9.3	Ensure that development along designated Rural Scenic Corridors preserves significant views of the Valley and mountains, especially in, or adjacent to, Coyote Valley, the Diablo Range, the Silver Creek Hills, the Santa Teresa Ridge, and the Santa Cruz Mountains.
Policy LU-17.5	Apply the following guidelines to the design and construction of public and private right-of-way improvements in order to preserve

and enhance the scenic and aesthetic qualities of hillside and rural areas:

- (1) Design streets in consideration of the natural topography and the landscape. Consider use of divided streets and grade separations.
- (2) Encourage use of crushed gravel walks and vegetation lined swales, and only construct concrete sidewalks, curbs, and gutters when required by the topography or other regulations.
- (3) Limit street lighting to intersections, and use low-intensity lighting appropriate for these areas.
- (4) Use finishes or colors that blend man-made materials within the public right-of-way with the natural surroundings.

City of Santa Clara General Plan

Policies from the City of Santa Clara General Plan that relate to aesthetics, scenic, and visual resources were reviewed, and a summary is provided below for informational purposes (City of Santa Clara, 2010).

- | | |
|-------------------------|--|
| 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. |

5.1.3 IMPACT QUESTIONS

5.1.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to aesthetics come from CEQA, Appendix G, Environmental Checklist. According to the CEQA Checklist, a project may cause a potentially significant impact if it, except as provided in Public Resources Code (PRC) Section 21099, would:

- Have a substantial adverse effect on a scenic vista; or
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; or
- 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; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

5.1.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for aesthetics.

5.1.4 IMPACT ANALYSIS

The visual impact analysis evaluates the visual changes that would occur from implementing the Proposed Project using the standards of quality, consistency, and symmetry typically used for a visual assessment. This assessment is based on a review of maps, site photographs, aerial photographs, Proposed Project-specific technical drawings, and the rendering of the Proposed Project. This analysis also focuses on those KOPs discussed above in **Section 5.1.1, *Environmental Setting***. Analysis of the impacts on existing visual resources from implementing the Proposed Project is based on evaluation of the extent and implications of the visual changes, considering the following factors:

- Specific changes in the visual character, and specifically valued qualities of the affected environment;
- Visual context of the affected environment; and
- Number of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by actions that would be taken under the Proposed Project.

The impact analysis below primarily focuses on aboveground Proposed Project components having the largest potential to impact the existing visual resources, including construction of the Proposed Project and permanent aboveground Proposed Project components. An assessment of visual quality is subjective, and reasonable disagreement can occur as to whether alterations in the visual character of the potentially affected area would be adverse or beneficial.

Methodology

The visual analysis is based on review of technical data, including Proposed Project maps and drawings provided by LS Power, PG&E, and SVP; aerial and ground-level photographs of the Proposed Project area; local planning documents; and computer-generated visual simulations. Field observations were conducted in August 2023 to take representative photos at each RV and document existing visual conditions in the Proposed Project area to identify potentially effected sensitive viewing locations.

The visual assessment methods are based, in part, on guidance from the FHWA and other accepted visual analysis techniques. **Section 5.1.1** documents the existing visual character in the Proposed Project vicinity, defines the area of visual affect, and establishes the potentially effected environment and population. **Section 5.1.4, *Impact Analysis*** provides the impact analysis and mitigation required to reduce any significant environmental effects. This study also addresses the CEQA Guidelines and Appendix G impact criteria for visual impact analysis. Documentation of the visual setting and an evaluation of visual changes associated with the Proposed Project are provided. To establish existing visual conditions, photographs are included that show representative public views of the Proposed Project area. A large portion of the Proposed Project would be installed underground in City streets or otherwise in urban areas, with some portions

located in disturbed open space lands. Therefore, the analysis focuses on short-term construction impacts as well as permanent impacts of the proposed aboveground structures.

Consistent with FHWA methods, this impact analysis describes change to existing visual resources and assesses viewer response to that change. Central to this assessment is an evaluation of RVs from which the Proposed Project would be visible to the public. Five KOPs have been selected to represent viewing locations where the Proposed Project could be most visible to the public. To document the visual change that would occur, visual simulations, presented as before and after images, show the Proposed Project from these KOPs. **Section 5.1.1.6, Representative Viewpoints** contains a description of the technical methods employed for digital site photography and to produce the visual simulations. The visual impact assessment is based on evaluation of the changes to the existing visual resources that would result from construction and operation of the Proposed Project. These changes were assessed, in part, by evaluating the KOP after views provided by the computer-generated visual simulations and comparing them to the existing visual environment.

5.1.4.1 Aesthetics Impact Analysis

Except as provided in PRC Section 21099, would the project have a substantial adverse effect on a scenic vista?

Less-Than-Significant Impact. For the purposes of this evaluation, a scenic vista is defined as a view of or from a scenic resource identified by the Cities of Fremont, Milpitas, San José, or Santa Clara. An analysis of RVs and KOPs as viewed from public roadways and trails is also provided below.

Temporary Construction Impacts

Section 5.1.1.2, Scenic Resources and **Figure 5.1-1** describe and identify scenic resources within a five-mile buffer of the Proposed Project area. **Section 5.1.1.3, Viewshed Analysis** describes the general area from which the Proposed Project is visible, including which of the scenic resources are likely to have a view of the Proposed Project, depending on their location within the foreground, middle ground, and background. Based on the definition of a scenic vista in this evaluation, the scenic vistas within five miles of the Proposed Project area that have a view of the Proposed Project include: high elevation points of the Diablo Mountain Range, the City of San José skyline, Don Edwards San Francisco Bay NWR, portions of the Bay Trail network, Guadalupe River Trail, Alviso Park, Santa Clara Youth Soccer Park, two City of Fremont gateways, and the City of San José-designated urban corridors I-880 and SR-237.

A substantial adverse effect on these scenic vistas would typically occur if the Proposed Project resulted in permanent changes to the visual landscape. While construction equipment may temporarily introduce visually unappealing structures to the visual landscape or result in temporary increases in noise and dust, these are not permanent changes. Upon completion of construction, the construction equipment would be removed, and excess dust from construction equipment would cease. Construction activities associated with the proposed transmission lines would progress in a generally linear fashion, with construction activities only occurring for a relatively brief period of time at a particular location. The limited duration reduces the severity of potentially significant effects to scenic vistas. In addition, **Applicant Proposed Measure (APM) AES-1, Maintenance of Construction Areas** would be implemented to maintain an orderly site and

return temporary staging and work sites to their pre-project conditions, further reducing the visual impacts during construction.

Permanent Visual Impacts

The Diablo Mountain Range is between three and five miles from the Proposed Project area and is, therefore, located within the background zone. As discussed in **Section 5.1.1.3**, the general landscape within the Proposed Project area is visible from this scenic vista; however, individual structures are not visible due to the distance. Portions of the Bay Trail network, Don Edwards San Francisco Bay NWR, Guadalupe River Trail, Alviso Park, Santa Clara Youth Soccer Park, two City of Fremont gateways, and the City of San José-designated urban corridors I-880 and SR-237 are within the foreground zone, and the Proposed Project area is visible from these scenic vistas. However, the portions of the Proposed Project that are within the viewshed of Alviso Park, Santa Clara Youth Soccer Park, and the City of Fremont gateways would be underground and, therefore, not visible.

In order to illustrate the visual change that would result from implementation of the Proposed Project, five visual simulations were prepared based on photographs taken at the identified KOPs and include areas of the Proposed Project that are visible from these scenic vistas. **Section 5.1.1.6** provides a summary of the existing visual conditions and visibility of the Proposed Project area from the KOPs, as well as the representative photographs.

The visual change at each KOP is described below and summarized in **Table 5.1-4, Summary of Visual Change at KOPs**, which provides an overview of the potential visual change at each KOP including RV location with corresponding visual sensitivity factor(s) (per FHWA Visual Impact Assessment Guidelines), approximate viewing distance, and summary of visible change and potential effect that would occur at each KOP location.

Table 5.1-4. Summary of Visual Change at KOPs			
KOP Number; Corresponding Figure¹	Visual Sensitivity Factor(s)	Approximate Viewing Distance (to nearest Proposed Project feature)	Visual Change and Effect
KOP 1 Figure 5.1-4	<ul style="list-style-type: none"> View from Boyce Road, northeast of proposed Albrae terminal. Views include sidewalks and trees, existing industrial buildings, utility structures, and limited view of mountains in the background. Viewers are motorists and pedestrians on Boyce Road. Low visual sensitivity. 	720 feet	<ul style="list-style-type: none"> New Albrae terminal structures (switchyard enclosure, HVDC equipment enclosure, transformers) Proposed enclosure structures would be non-reflective gray or neutral earth-tone colors. Existing limited view to background mountains would be obscured by proposed structures. Given presence of existing utility structures and industrial development, new Proposed Project structures would not dominate view and would not significantly alter existing landscape character at this location.

Table 5.1-4. Summary of Visual Change at KOPs			
KOP Number; Corresponding Figure¹	Visual Sensitivity Factor(s)	Approximate Viewing Distance (to nearest Proposed Project feature)	Visual Change and Effect
KOP 2 Figure 5.1-5	<ul style="list-style-type: none"> • View looking south towards McCarthy Boulevard. • Views include existing roadway and sidewalks, some vegetation, chain-link fences, existing powerlines and light poles, and stoplights, with mountains in the background. • Viewers are motorists and pedestrians on McCarthy Boulevard. • Low visual sensitivity. 	Adjacent to the proposed underground Albrae to Baylands 320 kV transmission line	<ul style="list-style-type: none"> • New overhead Albrae to Baylands 320 kV DC transmission line, new overhead structures ranging in height from 95 to 150 feet. • Foreground views to existing vegetation and background views to mountains would still be visible. • Given the presence of existing powerlines, overhead structures, and light poles, new Proposed Project structures would not dominate view and would not significantly alter existing landscape character at this location.
KOP 3 Figure 5.1-6	<ul style="list-style-type: none"> • View from Coyote Creek Trail looking southwest. • Views include vegetation and trees in the foreground and middle ground, existing overhead powerlines and transmission structures, and mountains in the background. • Viewers are pedestrians and cyclists. • Moderate visual sensitivity. 	611 feet	<ul style="list-style-type: none"> • New overhead Albrae to Baylands 320 kV DC transmission line, new overhead structures ranging in height from 95 to 150 feet. • Foreground views to existing vegetation and background views to mountains would still be visible. • Given the presence of existing powerlines, overhead structures, and light poles, new Proposed Project structures would not dominate view and would not significantly alter existing landscape character at this location.
KOP 4 Figure 5.1-7	<ul style="list-style-type: none"> • View from SR-237 looking northwest • Views include a chain-link fence and open land with trees and vegetation in the foreground, existing buildings related to the San José-Santa Clara RWF in the middle ground, and mountains in the background. • Viewers are motorists SR-237 and cyclists. • Moderate visual sensitivity. 	3,175 feet	<ul style="list-style-type: none"> • New Baylands terminal structures (switchyard enclosure, HVDC equipment enclosure, transformers) • Proposed enclosure structures would be non-reflective gray or neutral earth-tone colors. • Existing limited view to background mountains would not be obscured by proposed structures. • New Proposed Project structures' height would be lower than existing trees, would not dominate or significantly obscure views, and would not significantly alter existing landscape character at this location.
KOP 5 Figure 5.1-8	<ul style="list-style-type: none"> • View from SR-237 looking west. • Views include the SR-237 roadway, concrete barrier, 	360 feet	<ul style="list-style-type: none"> • New overhead Baylands to NRS 230 kV transmission line, new overhead structures ranging in height from 100 to 120 feet.

Table 5.1-4. Summary of Visual Change at KOPs

KOP Number; Corresponding Figure ¹	Visual Sensitivity Factor(s)	Approximate Viewing Distance (to nearest Proposed Project feature)	Visual Change and Effect
	existing overhead transmission lines and structures, riparian vegetation and the Guadalupe River, and existing commercial buildings in the background. <ul style="list-style-type: none"> • Viewers are motorists on SR-237. • Low visual sensitivity. 		<ul style="list-style-type: none"> • Views to existing vegetation and the Guadalupe River would still be visible. • Given the presence of existing powerlines and overhead structures, new Proposed Project structures would not dominate view and would not significantly alter existing landscape character at this location.

¹Refer to **Figures 5.1-4** through **5.1-8**.

As shown in **Figure 5.1-4** (KOP 1), the view of the Proposed Project area, and specifically the proposed Albrae terminal site, from the Bay Trail segment—Boyce Road from Stevenson Boulevard to Auto Mall Parkway—currently includes sidewalks, trees, industrial buildings, utility structures, and equipment, with a sliver of Don Edwards San Francisco Bay NWR and mountains visible in the background. The addition of the proposed Albrae terminal would obscure the background views; however, the building and other structures would be consistent with the existing, industrial nature of the area. The general nature and use of the area would not substantially change with the addition of the Proposed Project.

As shown in **Figure 5.1-5** (KOP 2), the view of the Proposed Project area from the McCarthy Boulevard bridge segment of the Bay Trail currently includes McCarthy Boulevard, a median, fencing, light posts, and numerous utility structures. The middle ground and background also include industrial structures, as well as natural features including Don Edwards San Francisco Bay NWR and Santa Cruz Mountain Range. The addition of the proposed overhead Albrae to Baylands 320 kV DC transmission line would add new utility structures to the visual landscape. However, these proposed structures would be similar to the existing structures and would not substantially block views or change the general nature and use of the area.

As shown in **Figure 5.1-6** (KOP 3), the view of the Proposed Project area from the Coyote Creek Trail segment of the Bay Trail currently includes vegetation and utility poles in the foreground, with industrial structures and mountains in the middle ground and background. The addition of the proposed overhead Albrae to Baylands 320 kV DC transmission line would add new utility structures to the visual landscape. However, as illustrated in the visual simulation, these new structures would blend in with the existing poles and would be minimally noticeable. Views of the wildlife refuge and mountains would not change. I-880 is further east from the Proposed Project area than the Coyote Creek Trail segment; therefore, views from that interstate would also not change substantially from implementation of the Proposed Project.

As shown in **Figure 5.1-7** (KOP 4), the view of the Proposed Project area, and specifically the proposed Baylands terminal, from SR-237 currently includes open land with trees and grass and a chain-link fence in the foreground. Middle ground and background views include buildings, trees, utility poles, and the Diablo Mountain Range. The addition of the proposed Baylands terminal would add buildings and other structures to the middle ground view from SR-237. However, there are no existing views that would be obscured by the proposed buildings, and the height of the buildings would be lower than the existing trees. The proposed poles would be minimally visible at this distance.

Figure 5.1-8 (KOP 5) illustrates the portion of the proposed Baylands to NRS 230 kV transmission line that is overhead in order to cross the Guadalupe River. The photograph was taken from SR-237 and represents the views that would be seen by users of the Guadalupe River Trail. The current visual landscape in this area includes the interstate highway, utility poles, office buildings, and vegetation that line the river. The buildings and other structures in the middle ground currently obscure any views of the background. The Proposed Project would add new utility structures to the existing landscape. While these new structures are noticeable in the visual simulation that was prepared for KOP 5, they would be consistent with the other utility structures and would not add a new element to the visual landscape. The proposed structures would minimally obscure some of the vegetation around the Guadalupe River.

As discussed previously, the Proposed Project would introduce new structures to the views from scenic vistas, particularly the Coyote Creek Trail segment of the Bay Trail and the Guadalupe River Trail. As illustrated in KOP 1 through KOP 4, most changes are minor and consistent with the existing visual landscape, which currently includes utility structures. The addition of overhead poles near the Guadalupe River Trail, as shown on **Figure 5.1-8** (KOP 5), would be most noticeable; however, as shown in RV 19 through RV 23 (**Figure 5.1-3S** through **Figure 5.1-3W**), users of the Guadalupe River Trail currently view numerous industrial structures, including utility structures. Therefore, the addition of the two new overhead poles in this area would not substantially change the current views. Additionally, the majority of the views of the Proposed Project would be seen from roadways and interstates where the view time would not be extensive. Therefore, the Proposed Project would not result in a substantial adverse effect on a scenic vista. Visual impacts from construction and O&M of the Proposed Project under this criterion would be less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of the Newark substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited time. The location of the Newark substation modifications, including the new Newark to Albrae 230 kV transmission line, would be located adjacent to and surrounded by existing electrical utilities, including numerous overhead transmission lines. As such, the Newark substation modifications would not result in a substantial adverse effect on a scenic vista. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. Construction of these NRS substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited time. The NRS substation modifications would not result in a substantial adverse effect on a scenic vista. No impacts would occur under this criterion as a result of the NRS substation modifications.

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. As illustrated in **Figure 5.1-1** and discussed in **Section 5.1.2, Regulatory Setting**, the nearest eligible state scenic highway is a segment of I-680 that is located approximately 1.3 miles east of the proposed underground Albrae to Baylands 320 kV DC transmission line. The closest designated state scenic highway is another segment of I-680 that is further north and approximately 4.2 miles northeast of the proposed Albrae terminal. The Proposed Project area would not be visible from these state scenic highways due to the distance and being underground. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation modifications would not be visible from these state scenic highways due to the distance. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The NRS substation modifications would not be visible from these state scenic highways due to the distance. No impacts would occur under this criterion as a result of the NRS substation modifications.

In non-urbanized areas, would the project 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?

Less-Than-Significant Impact. The Proposed Project area is located within an urban area; therefore, this analysis focuses on if there would be conflicts with applicable zoning and other regulations governing scenic quality. Details on the applicable land use and zoning regulations are discussed in **Section 5.11, Land Use and Planning**. Regulations specific to scenic quality are also discussed above in **Section 5.1.2**. While the Proposed Project is not regulated by the Cities of Fremont, Milpitas, San José, and Santa Clara, this analysis considers those agencies' regulations. The applicable zoning and other local regulations related to scenic quality within

these four Cities generally encourage the protection of scenic resources, public views, and overall visual characteristics.

Temporary Construction Impacts

Construction-related visual impacts associated with the Proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings. Construction-related visual impacts would result from the presence of equipment, materials, and work crews along the Proposed Project alignment. Although these effects are relatively short-term, they would be most noticeable to residents or employees who live or work in close proximity to the Proposed Project area, as well as motorists and visitors to nearby parks and trails. However, because of their short-term and temporary nature, impacts would not substantially degrade the existing visual quality of the site and its surroundings. In addition, **APM AES-1** would be implemented to further reduce the visual impacts during construction by ensuring that the construction areas are kept clean and orderly, such as with regular trash pickup. Construction of the Proposed Project would not conflict with City of Fremont, Milpitas, San Jose, or Santa Clara policies to preserve and enhance natural open space and preserve scenic routes. Therefore, construction of the Proposed Project would not conflict with applicable zoning and other regulations governing scenic quality.

Permanent Visual Impacts

The response to the first impact criterion above, **Section 5.1.1**, and **Figures 5.1-3A** through **5.1-AC** provide details on and photographs of the existing visual landscape within the Proposed Project area. Also as discussed above, the addition of the two proposed terminal sites and the proposed overhead and underground transmission lines would not substantially change the visual character of the area or degrade the scenic quality of the scenic resources. The Proposed Project would be remotely monitored daily and in general would only require monthly inspections. These O&M activities would not change the character or decrease the quality of any visual or scenic resources in the area. The Proposed Project and associated O&M activities would typically use trucks and other equipment that is not unlike the equipment that is currently used in the area.

Therefore, the changes brought about by implementing the Proposed Project would not substantially degrade the existing visual character or quality of the Proposed Project area and its surroundings. Implementation of the Proposed Project would also not conflict with applicable zoning and other regulations governing scenic quality. For example, the Cities of Fremont, Milpitas, and Santa Clara General Plans include policies that encourage undergrounding utility lines, which the Proposed Project does wherever feasible. Further, equipment and enclosures at the proposed HVDC terminal sites would be non-reflective as practicable and neutral gray or neutral earth-tone colors. The HVDC terminals would be fenced-in to provide a visual barrier and are designed to reduce the visual impact of utility infrastructure, consistent with the Cities of Fremont and Santa Clara's policies to provide screening of above-ground utility equipment. The Proposed Project is also not located near a City of San José-designated rural scenic corridor. As such, while the Proposed Project area would be noticeable to some viewers, the changes would be generally consistent with the existing structures and color palette in the viewshed. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing Newark substation (located entirely within PG&E fee-owned property). Construction-related visual

impacts would result from the presence of equipment, materials, and work crews at the existing Newark substation. Once constructed, the Newark substation modifications would be consistent with the appearance of facilities within the existing Newark substation and, therefore, would not substantially change the existing visual character or quality of public views of the Proposed Project area and its surroundings. Less-than-significant impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction-related visual impacts would result from the presence of equipment, materials, and work crews at the existing NRS substation. Once constructed, the NRS substation modifications would be consistent with the appearance of facilities within the existing NRS substation and, therefore, would not substantially change the existing visual character or quality of public views of the Proposed Project area and its surroundings. Less-than-significant impacts would occur.

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 Impact. Lighting would be installed at the proposed HVDC terminal locations and would conform to National Electric Safety Code (NESC) requirements and other applicable outdoor lighting codes. The proposed HVDC terminal facilities are not anticipated to require nighttime illumination. Terminal station lighting would be photocell and motion controlled to provide illumination for security. Light emitting diode (LED) lights would be mounted on A-frames, H-frames, structures, poles, and enclosures as required. All lighting provided would be shielded and pointed down to minimize new sources of light onto surrounding properties and habitats.

Glare

Glare exists when a high degree of contrast occurs between bright and dark areas in a field of view, making it difficult for the human eye to adjust to differences in brightness. As stated in **Section 3.3.4, Proposed Facilities**, equipment and enclosures at the proposed HVDC terminal sites would be non-reflective, as practicable, and neutral gray or neutral earth-tone colors. This would minimize the potential effect of glare.

Nighttime Lighting

No nighttime construction is anticipated to be necessary as part of the Proposed Project. However, given the large amount of construction proposed within existing roads, local municipalities may dictate that transmission line construction occurs at nighttime within certain areas of the Proposed Project. The most likely areas for nighttime construction are within commercial and industrial areas and not residential areas. Additionally, in the case of an emergency or to support continuous operations such as trenchless crossings, nighttime construction may be required. If work must be accomplished at night, portable temporary lighting would be directed exclusively to on-site locations and used to illuminate the immediate work area. Current Proposed Project plans call for construction activities to take place during daylight hours and for nighttime construction activities to be avoided, whenever possible. Nighttime maintenance activities are not expected to occur more than once per year or on an emergency basis.

If nighttime lighting were to occur during construction, **APM AES-1** would be implemented to ensure new sources of substantial light or glare would be avoided, and security lighting at the proposed terminal sites would be directed on-site and hooded to reduce potential visibility from off-site locations. With the implementation of **APM AES-1**, the impacts under this criterion would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of the Newark substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited time. The Newark substation modifications would be consistent with the appearance of facilities within the existing substation. The Newark substation modifications would not introduce new sources of light or glare that are substantially different from the existing environment. Therefore, the PG&E facility modifications would not adversely affect day or nighttime views in the area. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction of the NRS substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited time. The NRS substation modifications would be consistent with the appearance of facilities within the existing substation. The NRS substation modifications would not introduce new sources of light or glare that are substantially different from the existing environment. Therefore, the SVP facility modifications would not adversely affect day or nighttime views in the area. No impacts would occur under this criterion as a result of the NRS substation modifications.

5.1.5 CPUC DRAFT ENVIRONMENTAL MEASURES

The CPUC recommended a Draft Environmental Measure for aesthetics. The recommended APM has been included in **Section 5.1.6, Applicant Proposed Measures** as **APM AES-1**.

5.1.6 APPLICANT PROPOSED MEASURES

The following aesthetics specific APMs would be implemented for the Proposed Project.

APM AES-1: Maintenance of Construction Areas

All Proposed Project construction sites shall be maintained in a clean and orderly state. Temporary construction and permanent security nighttime lighting shall be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of Proposed Project construction, Proposed Project staging and temporary work areas shall be returned to pre-project conditions, including regrading of the site and revegetation or repaving of disturbed areas to match pre-existing contours and conditions.

5.1.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for aesthetics would be implemented for PG&E's scope of work.

5.1.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for aesthetics would be implemented for SVP's scope of work.

5.2 AGRICULTURE AND FORESTRY RESOURCES

<p>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 Dept. 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:</p>	<p>Potentially Significant Impact</p>	<p>Less Than Significant with Mitigation Incorporated</p>	<p>Less Than Significant Impact</p>	<p>No Impact</p>
<p>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?</p>				<p>X</p>
<p>b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>				<p>X</p>
<p>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))?</p>				<p>X</p>
<p>d. Result in the loss of forest land or conversion of forest land to non-forest use?</p>				<p>X</p>
<p>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?</p>				<p>X</p>

This section describes the agriculture and forestry resources in the area of the Proposed Project, as well as potential impacts resulting from construction and operation and maintenance (O&M) of the Proposed Project.

5.2.1 ENVIRONMENTAL SETTING

5.2.1.1 Agricultural Resources

Agricultural uses were previously prevalent in the Cities of Fremont, Milpitas, San José, and Santa Clara; however, over the past 60 years there has been a substantial transformation from agricultural uses to urban uses, and a large portion of the land has been converted to residential, office, and commercial uses.

Over the past six decades, the City of Fremont has evolved from an agricultural community to a diverse City and large employment center with many land uses, including housing, open space, industry, and commerce (City of Fremont, 2023). The City of Fremont originally consisted of thousands of acres of farmland, but now it has been transformed into an urban, tech-based City.

In the latter part of the 19th century, the City of Milpitas emerged as a marketing center for farmers widely scattered along the plains and hills. Fruit orchards began to spring up in the 1870s, and later the area became known for hay growing (City of Milpitas, 2023). The City of Milpitas has experienced rapid urban growth over the years and has developed into a suburban center of technology (City of Milpitas, 2021).

In the 19th century, orchard products dominated agricultural production in the City of San José. Fruit production in the City of San José peaked in the 1920s, and the canning and packing industry quickly grew. The City of San José was historically known as the “Valley of the Heart’s Delight” for its high concentration of orchards, flowering trees, and plants. The boundaries of the City and its urban development have since spread, and residential land uses dominate the City of San José’s landscape. Little agricultural production remains in the City of San José; however, the community and the City have a renewed recognition of the importance of local agriculture for food security, access to healthful foods, groundwater recharge, and environmental benefits of local food production and consumption (City of San José, 2024).

Primarily an agricultural community through the mid-1900s focusing on orchards, the City of Santa Clara transitioned to a suburban community of neighborhoods in the post-World War II era and as the heart of Silicon Valley in the electronics industry boom of the 1970s. Since the urban boom took over the City, the agricultural production operations were relocated more than 30 miles from the City of Santa Clara. The only farming operation in the City has been the Bay Area Research Extension Center, a part of the University of California’s agricultural studies (City of Santa Clara, 2010).

There are no existing active agricultural uses within the Proposed Project’s limits of construction.

Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

The California Department of Conservation (DOC), Division of Land Resource Protection Farmland Mapping and Monitoring Program (FMMP) provides data for use in planning for the present and future use of California’s agricultural land resources. **Table 5.2-1, Inventory of FMMP-Designated Farmland Within One Mile of the Proposed Project** provides acreages of designated

farmland within one mile of the Proposed Project area (California DOC, 2022a). Designated farmland or potential farmland within one mile of the Proposed Project totals 489.65 acres, including 474.44 acres of Farmland of Local Importance, 0.02 acres of Unique Farmland, and 15.19 acres of Farmland of Local Potential. **Figure 5.2-1, Prime Farmlands Resources Map** illustrates the location of FMMP-designated farmland in the vicinity of the Proposed Project area.

Table 5.2-1: Inventory of FMMP-Designated Farmland Within One Mile of the Proposed Project		
Description	Acres	Percent¹
Prime Farmland	0	0
Unique Farmland	0.02	0.0001
Farmland of Statewide Importance	0	0
Farmland of Local Importance	474.44	2.60
Farmland of Local Potential ²	15.19	0.08
Grazing Land	261.40	1.43
Urban and Built-up Land	12263.33	67.26
Other Land	5201.72	28.53
Water	16.63	0.09
Total	18,232.72	100

Notes:
¹ Percentages rounded to the nearest percent. These values represent individual category percentages of the total lands inventoried within one mile of the Proposed Project. Percentages may not summate under "Total" as shown due to rounding.
² In a few counties, the local advisory committee has elected to additionally define areas of Local Potential farmland. This land includes soils which qualify for Prime Farmland or Farmland of Statewide Importance, but generally are not cultivated or irrigated (California DOC, 2023).
 Source: California DOC, 2022a

Table 5.2-2, Inventory of FMMP-Designated Farmland Within the Proposed Project Boundary provides acreages of Proposed Project components that overlap with designated farmland (California DOC, 2022a). Farmland of Local Importance within the Proposed Project boundary totals approximately 51.6 acres (Staging Area 7). There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Proposed Project boundary.

Table 5.2-2: Inventory of FMMP-Designated Farmland Within the Proposed Project Boundary		
Description	Acres	Percent¹
Prime Farmland	0	0
Unique Farmland	0	0
Farmland of Statewide Importance	0	0
Farmland of Local Importance	51.60	19.1
Farmland of Local Potential	0	0
Grazing Land	0	0
Urban and Built-up Land	168.58	62.6
Other Land	50.00	18.6
Total	270.19	100

Notes:

Table 5.2-2: Inventory of FMMP-Designated Farmland Within the Proposed Project Boundary		
Description	Acres	Percent ¹
¹ Percentages rounded to the nearest percent. These values represent individual category percentages of the total lands inventoried within one mile of the Proposed Project. Percentages may not calculate precisely as shown due to rounding. Source: California DOC, 2022a		

Williamson Act

There are no Williamson Act contract lands within the Proposed Project area, as shown on **Figure 5.2-2, Agricultural Resources Map** (California DOC, 2022b). Land designated under Williamson Act contracts within one mile of the Proposed Project site includes Salt Pond A-8, located approximately 0.55 mile north of the proposed underground Baylands to Northern Receiving Station (NRS) 230 kilovolt (kV) transmission line and approximately 1.5 miles west of the proposed Baylands terminal; and Salt Pond A-18, located approximately 0.6 mile west of the proposed overhead Albrae to Baylands 320 kV direct current (DC) transmission line and approximately 0.7 mile north of the proposed Baylands terminal (Santa Clara Valley Audubon Society [SCVAS], 2022).

Local Agricultural Resources

The Cities of San José and Santa Clara include land use and zoning designations specific to agricultural resources. The City of Milpitas does not have any land use designations for agricultural use; however, there are zoning designations for agricultural use. There are no lands within the City of Fremont zoned for agricultural use nor are there any land use designations for agricultural use. The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project; therefore, the Proposed Project is not subject to local land use and zoning regulations or other discretionary permits (see **Section 5.2.2, Regulatory Setting** for more information). For informational purposes, agricultural resources applicable to the Cities of Fremont, Milpitas, San José, and Santa Clara are discussed here.

Table 5.2-3, Agriculture Zoning Designations Within the Proposed Project provides a summary of the area zoned for agricultural resources within the Proposed Project area. The Proposed Project components would not overlap land with agricultural zoning designations in the Cities of Santa Clara, Fremont, or Milpitas. As shown in **Table 5.2-3**, approximately 66.8 acres of the Proposed Project would be within agricultural zoning designations in the City of San José. There is no land within the Proposed Project boundary with agricultural general plan land use designations. Please see **Figure 5.2-2** for more information.

Table 5.2-3: Agriculture Zoning Designations Within the Proposed Project		
Designation	Acres	Permitted Uses
City of San José Zoning		
Planned Development Agriculture Base District (A[PD])	66.39	Permitted uses for areas zoned for agricultural use are any use or improvement for the conservation of water, reclamation, and erosion control, farmer's market, dairy, grazing, livestock ranch, wildlife refuge, child day care, wireless communication antenna (building mounted), solar power. Other uses are permitted with a conditional use permit. This zoning designation has an overlay of

Table 5.2-3: Agriculture Zoning Designations Within the Proposed Project		
Designation	Acres	Permitted Uses
City of San José Zoning		
		Planned Development, meaning the area may be developed for any use or combination of uses permitted through a development permit.
Agriculture (A)	0.39	Permitted uses include any use or improvement for the conservation of water, reclamation, and erosion control, animal breeding, small certified farmers' markets, dairies, livestock ranch (excluding hogs), pasture, planting, cultivating, growing, harvesting, and drying of crops, trails and paths, home occupations, wireless communication antenna (building mounted), and solar photovoltaic power systems. Other uses are permitted with a conditional use permit.
Sources: City of San José, 2023; City of San José, 2023; City of Santa Clara, 2010; City of Fremont, 2011a		

5.2.1.2 Forestry Resources

There are no applicable forestry resources, forest land, timberland, or timberland zoned Timberland Production areas in the Proposed Project area as defined by the Public Resources Code (PRC) 12220(g), PRC 4526, or Government Code Section 51104(g) (City of San José, 2024; City of Santa Clara, 2010; City of Fremont, 2011a). According to California PRC Section 12220(g), "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. According to California PRC Section 4526, "Timberland" refers to land, other than land owned by the Federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. According to Government Code Section 51104(g) "Timberland production zone" or "TPZ" means an area which has been zoned for growing and harvesting timber or for growing and harvesting timber and compatible uses.

The proposed Baylands terminal site is zoned for Single-Family Residential (R-1-8), and the proposed Albrae terminal site is zoned for Industrial – General. As such, the proposed Baylands terminal, Albrae terminal, transmission line alignments, and the surrounding areas are not zoned forest land, timberland, or timberland production (City of San José, 2023; City of Fremont, 2011b).

5.2.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.2.2.1 Agriculture and Forestry Resources Regulatory Setting

Federal

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures, to the extent possible, that federal programs are administered to be compatible with state and local units of government, as well as private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. For the purpose of FPPA, farmland includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land (United States Department of Agriculture [USDA], 2023).

State

Farmland Mapping and Monitoring Program

The DOC, under the Division of Land Resource Protection, has established the FMMP to monitor the conversion of the State's farmland to and from agricultural use. The FMMP maps agriculturally viable lands and designates specific categories, including Prime, Unique, non-Prime, or Farmland of Statewide Importance.

Williamson Act

The California Land Conservation Act, better known as the Williamson Act, is designed to preserve agricultural and open space land (California Government Code Section 51200 et seq.). It establishes a program of private landowner contracts that voluntarily restrict land to agricultural and open space uses. In return, Williamson Act parcels receive a lower property tax rate consistent with their actual use instead of their market rate value. Lands under contract may also support uses that are "compatible with the agricultural, recreational, or open-space use of [the] land" subject to the contract (California Government Code Section 51201[e]).

Agricultural Preserves (California Government Code Section 51230)

According to California Government Code Section 51230, any county or city with a general plan or by a resolution, and after a public hearing, may establish an agricultural preserve. The preserves shall be established for the purpose of defining the boundaries of those areas within which the city or county will be willing to enter into contracts pursuant to this act (i.e., Williamson Act). An agricultural preserve may contain land other than agricultural land, but the use of any land within the preserve and not under contract shall within two years of the effective date of any contract on land within the preserve be restricted by zoning, including appropriate minimum parcel sizes that are at a minimum consistent with this Section, in such a way as not to be incompatible with the agricultural use of the land, the use of which is limited by contract in accordance with this Section. Failure on the part of the board or council to restrict the use of land within a preserve but not subject to contract shall not be sufficient reason to cancel or otherwise invalidate a contract.

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local agriculture and forestry resources-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following relevant agricultural policies from the City of Fremont General Plan (City of Fremont, 2011a) are provided for informational purposes.

Policy 2-6.6 **Agriculture.** Allow most agricultural uses in the City's open space districts and allow community gardening and "urban" agriculture in a wide range of settings. As defined by zoning, more intense agricultural uses in the hills may require a conditional use permit, consistent with the Hill Area Initiative of 2002.

Implementation 2-6.6.A Regulations for Vineyards and Orchards. Adopt and maintain regulations for private vineyards and orchards which require consideration of the environmental impacts associated with these activities, along with measures to mitigate potential adverse effects.

City of Milpitas General Plan

The City of Milpitas General Plan does not contain policies that are relevant to agricultural resources (City of Milpitas, 2021).

City of San José General Plan

The City of San José General Plan was adopted on November 1, 2011, and amended on January 31, 2024. The General Plan indicates that sites in the Agriculture designation are intended for a variety of agricultural uses, including grazing, dairying, raising of livestock, feedlots, orchards, row crops, nursery stock, flower growing, ancillary residential uses, ancillary commercial uses such as fruit stands, and the processing of agricultural products (City of San José, 2024).

The following relevant agricultural goals and policies from the City of San José General Plan are provided for informational purposes.

- Goal LU-12** **Urban Agriculture.** Expand the cultivation and sale of locally grown agriculture as an environmentally sustainable means of food production and as a source of healthy food for San José residents.
- Policy LU-12.3** Protect and preserve the remaining farmlands within San José's sphere of influence that are not planned for urbanization in the timeframe of the Envision General Plan through the following means:
- Limit residential uses in agricultural areas to those which are incidental to agriculture.
 - Encourage contractual protection for agricultural lands, such as Williamson Act contracts, agricultural conservation easements, and transfers of development rights.
 - Strictly maintain the Urban Growth Boundary in accordance with other goals and policies in this Plan.
 - Prohibit land uses within or adjacent to agricultural lands that would compromise the viability of these lands for agricultural uses.
 - Restrict and discourage subdivision of agricultural lands.
- Policy LU-12.4** Preserve agricultural lands and prime soils in non-urban areas in order to retain the aquifer recharge capacity of these lands.
- Goal LU-20** **Rural Agriculture.** Provide and protect sufficient agricultural land to facilitate local food production, to provide broad community access to healthful foods, to add to a distinct community image, and to promote environmental, fiscal, and economic benefits of rural agricultural lands
- Policy LU-20.1** Protect and preserve the remaining farmlands within San José's sphere of influence that are not planned for urbanization in the timeframe of the Envision General Plan, such as mid- and south Coyote Valley, through the following means.
- Strongly discourage conversion of agricultural lands outside the Urban Growth Boundary to non-agricultural uses.
 - Restrict land uses within and adjacent to agricultural lands that would compromise the agricultural viability of these lands. Require new adjacent land uses to mitigate any impacts on the use of agricultural lands.
 - Require ancillary non-agricultural land uses on agricultural lands to be ancillary to and compatible with agricultural land uses, agricultural production, and the rural character of the area, and to enhance the economic viability of agricultural operations.
- Policy LU-20.2** Preserve agricultural lands and prime soils in non-urban areas in order to provide local and regional fresh food supplies, reduce dependence on foreign products, conserve energy, and retain the aquifer recharge capacity of these lands.

- Policy EC-7.11** Require sampling for residual agricultural chemicals, based on the history of land use, on sites to be used for any new development or redevelopment to account for worker and community safety during construction. Mitigation to meet appropriate end use such as residential or commercial/industrial shall be provided.

City of Santa Clara General Plan

The City of Santa Clara General Plan does not contain policies that are relevant to agricultural resources (City of Santa Clara, 2010).

5.2.3 IMPACT QUESTIONS

5.2.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to agriculture and forestry resources come from the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, 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. A project may cause a potentially significant impact if it would:

- 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; or
- Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- 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)); or
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- 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.

5.2.3.2 Additional CEQA Impact Questions

Pursuant to *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for agriculture and forestry resources.

5.2.4 IMPACT ANALYSIS

5.2.4.1 Agriculture and Forestry Resources Impact Analysis

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 Dept. 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 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 would not require conversion of any amount of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. Therefore, the Proposed Project creates no impact under this criterion.

PG&E Substation Modifications

In order to integrate the proposed high-voltage direct current (HVDC) terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Pacific Gas and Electric Company (PG&E) would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation does not currently support agricultural uses, as it is an active substation and completely developed. Therefore, the Newark substation modifications would not convert existing, usable Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. No impacts would occur.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Silicon Valley Power (SVP) would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur with the existing substation. The existing NRS substation does not currently support agricultural uses, as it is an active substation and completely developed. Therefore, the NRS substation modifications would not convert existing, usable Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. No impacts would occur.

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

No Impact. There are no Williamson Act contract lands within the Proposed Project areas. In addition, the proposed uses of the Proposed Project are consistent with the existing zoning related to agriculture, as utilities are considered exempt uses (see **Section 5.2.1.1, Agricultural Resources** for more information). Furthermore, the areas where the Proposed Project components are within agricultural zoning districts have an overlay of Planned Development, meaning the area may be developed for any use or combination of uses permitted through a development permit (see **Figure 5.2-2**). Therefore, the Proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property), which is not located in an agricultural zoning district or within Williamson Act contract lands. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, which is not located in an agricultural zoning district or within Williamson contract lands. No impacts would occur under this criterion as a result of the NRS substation modifications.

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. No areas of forest land, timberland, or timberland zoned Timberland Production are located within the Proposed Project area. The Proposed Project would not conflict with the zoning or cause the rezoning of forest lands or result in the conversion of timberland. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property), which is not located in an area of forest land, timberland, or a timberland zoned Timberland Production area. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, which is not located in an area of forest land, timberland, or a timberland zoned Timberland Production area. No impacts would occur under this criterion as a result of the NRS substation modifications.

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

No Impact. No areas of forest land are located within the Proposed Project area. The Proposed Project would not result in the loss or conversion of forest land to non-forest use. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely on PG&E fee-owned property), which is not located in an area of forest land. No impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, which is not located in an area of forest land. No impacts would occur under this criterion.

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 or conversion of forest land to non-forest use?

No Impact. No areas of existing farmland or forest land are located within the Proposed Project area. The Proposed Project would not result in the loss or conversion of forest land to non-forest use and would not result in the loss or conversion of existing farmland to non-agricultural use. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely on PG&E fee-owned property), which is not located within forest, farmland, or agricultural land. No impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, which is not located in an area of forest, farmland, or agricultural land. No impacts would occur under this criterion.

5.2.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for agriculture and forestry resources.

5.2.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures (APMs) for agriculture and forestry resources would be implemented for the Proposed Project.

5.2.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for agriculture and forestry resources would be implemented for PG&E's scope of work.

5.2.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for agriculture and forestry resources would be implemented for SVP's scope of work.

5.3 AIR QUALITY

Where available, the significance criteria by the applicable air quality management district or air pollution control district may be relied upon to 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?			X	
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?			X	
c.	Expose sensitive receptors to substantial pollutant concentrations?			X	
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

This section describes the existing air quality within the vicinity of the Proposed Project as well as potential impacts to air quality that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.3.1 ENVIRONMENTAL SETTING

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, California, and the Proposed Project encompasses four zonal areas to include two new high-voltage direct current (HVDC) terminals (the proposed Albrae and Baylands terminals) and associated transmission lines between the existing Pacific Gas and Electric Company (PG&E) Newark substation and the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation approximately seven miles apart.

Albrae Terminal and Newark Substation

The Proposed Project seeks to construct the Albrae terminal approximately 0.2 mile northeast of the existing Newark substation. The proposed Albrae terminal site and the existing Newark substation are located in the City of Fremont. The proposed Albrae terminal site is approximately 6.1 acres. The site is located north of Weber Road and west of Boyce Road, approximately 0.8 mile west of Interstate (I)-880.

The Proposed Project would include an approximately 0.4-mile 230 kilovolt (kV) transmission line between the proposed Albrae terminal and existing Newark substation. The proposed transmission line would leave the proposed Albrae terminal in an underground position for approximately 0.2 mile and would then transition to an overhead position for approximately 0.2 mile to enter into the existing Newark substation.

In order to facilitate the proposed Newark to Albrae 230 kV transmission line, PG&E would need to relocate existing distribution structures within their property to accommodate the new connection. Additionally, to provide a point of interconnection for the new Newark to Albrae 230 kV transmission line, PG&E would need to add electrical infrastructure to support the termination of the new transmission line within the existing Newark substation fence line.

The sites for the proposed Albrae terminal and the existing Newark substation are relatively close and are treated as one area for this analysis. The combined sites are surrounded by general industrial uses. General aerial images showing the proposed Albrae terminal and the existing Newark substation are provided in **Figures 5.3-1, Albrae Terminal and Newark Substation** and **3-7a, Albrae Terminal General Arrangement**.

Baylands Terminal

The Proposed Project seeks to construct the Baylands terminal within a 9.2-acre site located approximately 0.5 mile north of State Route (SR)-237, approximately 1.8 miles west of I-880, and approximately 1.77 miles northeast of the existing NRS substation. The proposed Baylands terminal would be located south of Los Esteros Road and west of the San José-Santa Clara Regional Wastewater Facility (RWF). The site is located within the City of San José and is zoned for Planned Development Single Family Residential uses.

Surrounding land uses consist of Los Esteros Road and a recycling trash center to the north, San José-Santa Clara RWF to the east, and undeveloped land to the south and west. The closest sensitive receptors are the residences approximately one mile west and northwest of the Proposed Project site. The construction around the proposed Baylands was modeled separately within this air quality analysis. General aerial images showing the proposed Baylands terminal location are provided in **Figures 5.3-2, Baylands Terminal** and **3-7b, Baylands Terminal General Arrangement**.

NRS Substation

To provide a point of interconnection for the new Baylands to NRS 230 kV transmission line (see below), SVP needs to add electrical infrastructure to support the termination of the new transmission line within the existing NRS substation, located approximately 1.77 miles southwest of the proposed Baylands terminal. The existing NRS substation is surrounded by Levi's Stadium and a training facility to the north, the City of Santa Clara's water utilities to the west, and residential developments to the south and east. This area is analyzed separately within this analysis. An aerial image showing the existing NRS substation is provided in **Figure 5.3-3, NRS Substation**.

Transmission Lines

The Proposed Project includes the new Albrae to Baylands 320 kV direct current (DC) transmission line that would connect the proposed Albrae terminal to the proposed Baylands terminal (refer to **Figures 3-3, Project Overview** and **3-4, Project Route Map**). The proposed Albrae to Baylands 320 kV DC transmission line would be approximately 8.6 miles in length and includes both overhead and underground segments. The underground alignment would start at the proposed Albrae terminal and continue southeast for approximately 6.7 miles. The overhead alignment would be approximately 1.9 miles in length, starting south of McCarthy Boulevard (approximately 0.1 mile south from its intersection with Dixon Landing Road) and would continue

in a south/southwest direction towards Los Esteros Road to span across the San José-Santa Clara RWF existing wastewater drying ponds. The alignment would transition back underground within Los Esteros Road for approximately 0.9 mile to its terminus at the proposed Baylands terminal site.

The proposed Newark to Albrae 230 kV transmission line would be approximately 0.4 mile in length (approximately 0.2 mile of underground alignment and approximately 0.2 mile of overhead alignment) and would connect the proposed Albrae terminal to the existing Newark substation. Starting from the proposed Albrae terminal, the new Newark to Albrae 230 kV transmission line would exit in an underground position and would follow Weber Road south, until turning east and transitioning to an overhead position until connecting with the existing Newark substation.

The proposed Baylands to NRS 230 kV transmission line would be approximately 3.5 miles and would connect the proposed Baylands terminal to the existing NRS substation. The new Baylands to NRS 230 kV transmission line would consist of approximately 0.2 mile of overhead alignment and approximately 3.3 miles of underground alignment. The underground portions of the proposed Baylands to NRS 230 kV transmission line would be located mainly within existing roads, parking lots, and other disturbed or developed areas. The overhead proposed Baylands to NRS 230 kV transmission line would span over the Guadalupe River and would consist of two tubular steel poles.

The transmission line alignment, which includes all portions of the transmission lines from the Newark substation to the NRS substation, are analyzed as one area that would traverse the Cities of Fremont, Milpitas, San José, and Santa Clara, California. The closest sensitive receptors would be residential uses approximately 20 feet from the proposed underground Baylands to NRS 230 kV transmission line near the existing NRS substation. General aerial images showing the transmission line alignment for this Proposed Project are provided in **Figures 5.3-4**, *Transmission Line Alignment* and **3-4**.

Staging Areas

Construction equipment along the proposed transmission line corridor would be stored within staging areas along the alignment (see **Figure 5.3-4**). No significant construction activities would occur at these locations. These locations would be expected to have a crane and rough terrain forklift to unload and load materials. Given this, sensitive receptors located near the fixed construction areas (such as the proposed terminals and existing substations) that do include significant construction activities would be considered worst-case. Short-term air quality emissions demonstrated at these locations shown in **Figures 5.3-1** through **5.3-3** could be assumed to represent any potential receptors on the alignment. No long-term air quality impacts, such as health risk, would be anticipated at the staging areas.

5.3.1.1 Air Quality Plans

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as “non-attainment areas” for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for particulate matter (PM) 2.5 micron and smaller standard, and many areas are in nonattainment for PM10 micron and smaller standard as well. As a result, the State of

California created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The Proposed Project encompasses various areas located within the Cities of Fremont, Milpitas, San José, and Santa Clara, which are all located within the Bay Area Air Quality Management District (BAAQMD) jurisdictional entity that is responsible for implementing the SIP. The BAAQMD developed an air quality management plan along with ambient air quality standards for ozone (O₃), carbon monoxide (CO), particulate matter (PM₁₀), and certain toxic air pollutants (BAAQMD, 2017) and attainment of pollutants. The attainment status of pollutants managed by the BAAQMD are shown in **Table 5.3-1, BAAQMD Attainment Status by Pollutant**.

Table 5.3-1: BAAQMD Attainment Status by Pollutant		
Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Non-attainment	Non-attainment
PM ₁₀	Unclassified	Non-attainment
PM _{2.5}	Unclassified/Attainment	Non-attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Status Not Reported	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility	No Federal Standard	Unclassified

Source: BAAQMD, 2017

5.3.1.2 Air Quality

Criteria Pollutants

The Proposed Project is located within the San Francisco Air Basin (SFAB). Criteria pollutants are measured using monitoring equipment in various locations (stations) throughout the SFAB. This data is used to determine attainment status when compared to the NAAQS and CAAQS. The BAAQMD is responsible for monitoring and reporting monitoring data, and the California Air Resources Board (CARB) data is updated yearly (CARB, 2020). **Table 5.3-2, Three-Year Ambient Air Quality Summary SFAB** identifies the criteria pollutants monitored by BAAQMD within the Cities of Fremont, Milpitas, San José, and Santa Clara.

Pollutant	Averaging Time	CAAQS	NAAQS	2020	2021	2022
O ₃ (parts per million [ppm])	1 Hour	0.09 ppm	No Standard	0.116	0.113	0.122
	8 Hour	0.070 ppm	0.070 ppm	0.092	0.086	0.079
PM ₁₀ (µg/m ³)	24 Hour	50 µg/m ³	150 µg/m ³	165.4	42.8	41.1
	Annual Arithmetic Mean	20 µg/m ³	No Standard	23.3	20.1	21.3
PM _{2.5} (µg/m ³)	24 Hour	No Standard	35 µg/m ³	167.7	45.0	37.3
	Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³	12.5	10.9	10.1
NO ₂ (ppm)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.013	0.012	0.013
	1 Hour	0.18 ppm	0.100 ppm	0.065	0.051	0.051
Source: CARB, 2023a						

5.3.1.3 Sensitive Receptor Locations

Albrae Terminal and Newark Substation

Based on review of the Proposed Project area at both the proposed Albrae terminal and the existing Newark substation, no sensitive receptors are identified in the immediate area (refer to **Figure 5.3-1**). However, the closest sensitive receptors are residences located approximately 0.3 mile to the northwest.

Baylands Terminal

Based on review of the Proposed Project area at the proposed Baylands terminal, no sensitive receptors are identified in the immediate area (refer to **Figure 5.3-2**). However, the closest sensitive receptors are residences located approximately 0.5 mile to the west.

NRS Substation

Based on review of the Proposed Project area, residential uses exist to the east and south of the existing NRS substation. The closest sensitive receptors are the residences approximately 82 feet to the south. There are also residences approximately 227 feet to the east. The Proposed Project construction on-site would have the potential to expose sensitive receptors to construction emissions. A graphical representation of the existing NRS substation site is shown in **Figure 5.3-5, NRS Substation Nearby Sensitive Receptors**. Receptor locations 1 through 4 represent the closest sensitive receptor locations (residences) to the existing NRS substation.

Transmission Lines

Construction of the proposed transmission lines would occur along the alignment shown in **Figure 5.3-4**. Due to the quick transitory movement for work within the proposed transmission line corridor, equipment would be moving linearly over short durations at any given location. The closest sensitive receptors are residential uses approximately 20 feet from the proposed underground Baylands to NRS 230 kV transmission line near the existing NRS substation. Sensitive receptors located near the fixed construction areas (the proposed terminals and existing substations) would be considered worst-case, and any short-term air quality emissions demonstrated at locations near the existing NRS substation and underground line shown in **Figure 5.3-5** could be assumed to represent any potential receptors on the alignment. No long-term air quality impacts, such as health risks, would be anticipated to occur along the proposed transmission line routes because construction activities would only occur in proximity to individual receptors for short periods of time.

Staging Areas

Construction equipment along the proposed transmission line corridor would be stored within staging areas along the alignment. No significant construction activities would occur at these locations. These locations would be expected to have a crane and rough terrain forklift to unload and load materials. Given this, sensitive receptors located near the fixed construction areas, such as that expected surrounding the existing NRS substation, would be considered worst-case. Any short-term air quality emissions demonstrated at these locations shown in **Figures 5.3-1** through **5.3-3** could be assumed to represent any potential receptors on the alignment. No long-term air quality impacts, such as health risk, would be anticipated at the staging areas.

5.3.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.3.2.1 Air Quality Regulatory Setting

Federal

Federal Clean Air Act

The Federal Air Quality Standards were developed per the requirements of the Federal Clean Air Act (CAA), which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the CAA included the development of NAAQS for major air pollutants.

The CAA established two types of air quality standards, otherwise known as primary and secondary standards. Primary standards set limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The Environmental Protection Agency (EPA) Office of Air Quality Planning and Standards has set NAAQS for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

- **Carbon Monoxide (CO)** is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. CO usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.
- **Lead (Pb)** is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.
- **Nitrogen Dioxide (NO₂)** is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO₂ is usually visible as a reddish-brown air layer over urban areas. NO₂ along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness, and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.
- **Particulate Matter (PM₁₀ or PM_{2.5})** is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size, and chemical composition and can be made up of multiple materials, such as metal, soot, soil, and dust. PM₁₀ particles are 10 microns (µm) or less and PM_{2.5} particles are 2.5 µm or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies, such as asthma and respiratory illness.
- **Ozone (O₃)** is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects, such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics, and plastics.
- **Sulfur Dioxide (SO₂)** is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO₂ exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may

include wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO₂ results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

State

California Air Resources Board

CARB sets the laws and regulations for air quality on the state level. CAAQS is similar to the NAAQS and also restricts four additional contaminants. **Table 5.3-3, Ambient Air Quality Standards** below identifies both the NAAQS and CAAQS.

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Table 5.3-3: Ambient Air Quality Standards

Pollutant	Duration	California Standards ¹		Federal Standards ²			
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷	
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry	
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)			
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		-			
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12 µg/m ³			15 µg/m ³
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	-	Non-Dispersive Infrared Photometry	
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)			
Nitrogen Dioxide (NO ₂) ¹⁰	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescenc e	0.053 ppm (100 µg/m ³) ⁸	Same as Primary Standard	Gas Phase Chemiluminescenc e	
	1 Hour	0.18 ppm (339 µg/m ³)		0.100 ppm ⁸ (188/ µg/m ³)			
Sulfur Dioxide (SO ₂) ¹¹	Annual Arithmetic Mean	-	Ultraviolet Flourescence	0.030 ppm ¹⁰ (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method) ⁹	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm ¹⁰ (for Certain Areas) (See Footnote 9)			
	3 Hour	-		-			0.5 ppm (1300 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)			-
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	-	Same as Primary Standard	High Volume Sampler and Atomic Absorption	
	Calendar Quarter	-		1.5 µg/m ³			
	Rolling 3-Month Average	-		0.15 µg/m ³			
Visibility Reducing Particles	8 Hour	See footnote 14					
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Flourescence				
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				

- California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
- On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- In 1989, the CARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.

CARB, 2016

The additional contaminants regulated by the CAAQS are defined below:

- **Visibility Reducing Particles** are particles in the air that obstruct visibility.
- **Sulfates** are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.
- **Hydrogen Sulfide (H₂S)** is a colorless, toxic, and flammable gas with a recognizable smell of rotten eggs or flatulence. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H₂S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of H₂S may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of H₂S (greater than 500 parts per million [ppm]) can cause a loss of consciousness and possibly death.
- **Vinyl Chloride**, also known as chloroethene, is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).

Assembly Bill 203

Assembly Bill (AB) 203 is an amendment to the California Labor Code that addresses worker awareness training relating to Valley fever. Specifically, AB 203 requires construction employers who work in counties with high rates of Valley fever (i.e., endemic counties) to train their employees on awareness and minimizing the risks of Valley fever (State of California, 2019).

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local air quality-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as required.

Governing General Plan

The Proposed Project is located within the Cities of Fremont, Milpitas, San José, and Santa Clara. These Cities provide general jurisdictional guidance (General Plan) for land development planning as necessary to meet regulatory requirements into the future. Each General Plan has policies designed to improve air quality within the region and are outlined below.

City of Fremont General Plan

Chapter 7 of the City of Fremont's General Plan (City of Fremont, 2011) outlines general air quality goals and policies geared towards reducing air quality impacts within the City. This document includes several air quality-related policies with implementation measures (IMP) that pertain to this Proposed Project located within the City.

- Goal 7-7** **Air Quality.** Air quality improved over current conditions that meets or exceeds State and Regional standards.
- Policy 7-7.1** **Cooperation to Improve Regional Air Quality.** Support and coordinate air quality planning efforts with other local, regional, and State agencies to improve regional air quality.
- IMP 7-7.1.A** **Monitor and Control Air Pollutants.** Support BAAQMD efforts to monitor and control air pollutants from stationary and non-stationary sources.
- IMP 7-7.1.B** **Permits for Projects that may Impact Air Quality.** Require new stationary sources with potential air quality impacts to obtain necessary permits from the BAAQMD.
- IMP 7-7.1.C** **Annual Review of Air Quality Data.** Monitor available air quality data for the City of Fremont relative to State standards on an annual basis.
- IMP 7-7.1.D** **Include Air Quality in Environmental Impact Process.** Review proposed projects for their potential to affect air quality conditions during the environmental impact process.
- IMP 7-7.1.E** **Clean Air Plan.** Review and comment on the Clean Air Plan and other documents prepared by BAAQMD.
- IMP 7-7.1.F** **Impacts from Projects in Neighboring Communities.** Review environmental impact reports of large projects in neighboring communities with the potential to affect Fremont's air quality and request appropriate mitigations.
- IMP 7-7.1.G** **Air Emission Standards.** Promote enforcement of air emission standards by BAAQMD.
- IMP 7-7.1.H** **Better Transportation, Lower Emissions.** Support efforts by Metropolitan Transit Commission (MTC) and Association of Bay Area Governments (ABAG) to help reduce traffic congestion and provide greater efficiency in the regional transportation system.
- Policy 7-7.2** **Reduce Air Pollution Levels.** Reduce City of Fremont air contaminant levels and particulate emissions below BAAQMD attainment levels, in particular, ozone and particulate matter levels.

- IMP 7-7.2.A Construction Practices.** Require construction practices that reduce dust and other particulate emissions and require watering of exposed areas at construction sites.
- Policy 7-7.3 Land Use Planning to Minimize Health Impacts from Toxic Air Contaminants.** Coordinate land use planning with air quality data and local transportation planning to reduce the potential for long-term exposure to toxic air contaminants (TAC) from permanent sources that affect the community.
- IMP 7-7.3.A Limit New TAC Sources.** Evaluate new sources of TAC emissions pursuant to BAAQMD guidelines and thresholds for an increased health risk of no more than 10 additional incidents of cancer per million exposures or contribute to a cumulative risk in excess of 100 additional incidents of cancer per million exposures.
- IMP 7-7.3.C Incorporate TAC Controls with New Development.** New development projects with sensitive receptors within 1,000 feet of a freeway or major TAC source shall assess the TAC health risk for the site and incorporate, to the maximum extent feasible, risk reduction measures to reduce exposure to TAC. Risk reduction measures may include, but not be limited to, project phasing, site orientation, distance separations, landscape buffering, building air filtration systems, modified building design or building type, or off-site improvements at a TAC source.
- Policy 7-7.4 Air Quality Impact of Industry.** Reduce the air quality impacts created by truck traffic, hazardous materials, and industry.
- IMP 7-7.4.A Alternative-Fuel Vehicles.** Encourage other agencies and private industry to use alternative-fuel vehicles.
- IMP 7-7.4.B Enforcement of Air Quality Regulations.** Encourage stationary air pollutant sources to reduce emissions and encourage enforcement by the relevant regulatory agencies when attainment levels are not met.
- IMP 7-7.4.C Review and Update Hazardous Materials Policy.** Enforce City policies and regularly review and update policies on the use, transport, and storage of hazardous materials with potential for impacts on air quality and health.
- IMP 7-7.4.D Review Truck and Train Routes.** Review truck and train routes for the potential to affect sensitive receptors in the event of an accident involving hazardous materials.

City of Milpitas General Plan

The Conservation and Sustainability chapter of the of the City of Milpitas General Plan (City of Milpitas, 2021) outlines general air quality goals (CON-7), policies, and actions geared towards reducing air quality impacts within the City. This document includes several air quality-related policies that pertain to this Proposed Project located within this City.

- Goal CON-7** Implement a proactive approach to maintain and improve air quality within Milpitas and the region.
- Policy CON 7-1** Ensure that land use and transportation plans support air quality goals through a logical development pattern that focuses growth in and around existing urbanized areas, locates new housing near places of employment, encourages alternative modes of transportation, supports efficient parking strategies, reduces vehicle miles traveled, and requires projects to mitigate significant air quality impacts.
- Policy CON 7-2** Minimize exposure of the public to toxic or harmful air emissions and odors through requiring an adequate buffer or setback distance between residential and other sensitive land uses and land uses that typically generate air pollutants, toxic air contaminants, or obnoxious fumes or odors, including, but not limited to, industrial, manufacturing, and processing facilities, high-volume roadways, and industrial rail lines. New sensitive receptors, such as residences (including residential care and assisted living facilities for the elderly), childcare centers, schools, playgrounds, churches, and medical facilities shall be located away from existing point sources of air pollution such that excessive levels of exposure do not result in unacceptable health risks. Compliance shall be verified through the preparation of a Health Risk Assessment when deemed necessary by the Planning Director.
- Policy CON 7-4** Require projects to adhere to the requirements of the BAAQMD.
- Policy CON 7-5** Use the City's development review process and the California Environmental Quality Act (CEQA) to evaluate and mitigate the local and cumulative effects of new development on air quality.
- Policy CON 7-6** Coordinate with the CARB and the BAAQMD to properly measure air quality emission sources and enforce the standards of the Clean Air Act.
- Policy CON 7-7** Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.
- Policy CON 7-8** Consider the health risks associated with TACs when reviewing development applications.
- Policy CON 7-9** Coordinate with Santa Clara County and nearby cities to implement regional greenhouse gas (GHG) reduction plans and to consolidate efforts to reduce GHGs throughout the county as appropriate.
- Policy CON 7-11** Encourage improvements and design features that reduce vehicle delay such as bus turnouts, and synchronized traffic signals for new development to reduce excessive vehicle emissions caused by idling.
- Policy CON 7-12** Encourage and prioritize infrastructure investments and improvements that promote safe walking, bicycling, and increased transit ridership.

Policy CON 7-13 Implement energy policies and actions that have co-benefits of reduced air pollution and greenhouse gases by increasing energy efficiency, conservation, and the use of renewable resources.

Action CON-7d Continue to seek the cooperation of the BAAQMD to monitor emissions from identified point sources that impact the community. In addition, for sources not within the regulatory jurisdiction of the City, seek cooperation from the applicable regulatory authority to encourage the reduction of emissions and dust from the pollutant source.

Action CON-7e Require dust control measures, including those included in the Santa Clara Valley Non-point Source Pollution Control Program, and BAAQMD's Best Management Practices for fugitive dust control during construction.

Action CON-7f Use the BAAQMD "Air Quality Guidelines", as amended, or replaced, in identifying thresholds, evaluating the potential project and cumulative impacts, and determining appropriate mitigation measures.

Review development, infrastructure, and planning projects for consistency with BAAQMD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address BAAQMD, and General Plan requirements, which includes analysis and identification of:

- Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions;
- Potential exposure of sensitive receptors to toxic air contaminants;
- Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions; and
- Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.

Action CON-7i Require construction activity plans and grading and drainage plans to include and/or provide for dust management to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Project applicants, or their assigned agents/contractors, shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project grading and construction.

City of San José General Plan

The City of San José General Plan addresses air quality and climate change (City of San José, 2024). The General Plan sets guiding policies for minimizing impacts on resources and ensuring that the City of San José is able to maintain the infrastructure and services necessary to sustain its economy and quality of life.

- Goal MS-10** Minimize air pollutant emissions from new and existing development.
- Policy MS-10.1** Assess projected air emissions from new development in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
- Policy MS-10.2** Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and state law.
- Policy MS-10.3** Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.
- Policy MS-10.4** Encourage effective regulation of mobile and stationary sources of air pollution, both inside and outside of San José. In particular, support federal and state regulations to improve automobile emission controls.
- Policy MS-10.7** Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.
- Policy MS-10.8** Minimize vegetation removal required for fire prevention. Require alternatives to discing, such as mowing, to the extent feasible. Where vegetation removal is required for property maintenance purposes, encourage alternatives that limit the exposure of bare soil.
- Policy MS-10.10** Actively enforce the City's ozone-depleting compound ordinance and supporting policy to ban the use of chlorofluorocarbon compounds (CFCs) in packaging and in building construction and remodeling. The City may consider adopting other policies or ordinances to reinforce this effort to help reduce damage to the global atmospheric ozone layer.
- Policy MS-10.12** Increase the City's alternative fuel vehicle fleet with the co-benefit of reducing local air emissions. Implement the City's Environmentally Preferable Procurement Policy (Council Policy 4-6) and Pollution Prevention Policy (Council Policy 4-5) in a manner that reduces air emissions from municipal operations. Support policies that reduce vehicle use by City employees.
- Policy MS-10.14** Review and evaluate the effectiveness of site design measures, transit incentives, and new transportation technologies and encourage those that most successfully reduce air pollutant emissions.
- Policy MS-11.2** For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of

TACs to be located an adequate distance from residential areas and other sensitive receptors.

- Policy MS-11.7** Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.
- Policy MS-13.1** Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.
- Policy MS-13.2** Construction and/or demolition projects that have the potential to disturb asbestos (from soil or building material) shall comply with all the requirements of the CARB's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.
- Policy MS-13.4** Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.
- Policy MS-13.5** Prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
- Policy MS-13.6** Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.

City of Santa Clara General Plan

Chapter 5 of the City of Santa Clara's 2010-2035 General Plan (City of Santa Clara, 2010) outlines general air quality goals and policies geared towards reducing air quality impacts within the City. This document includes several air quality-related policies that pertain to the Proposed Project located within the City.

- 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-P1** Support alternative transportation modes and efficient parking mechanisms to improve air quality.
- Policy 5.10.2-P2** Encourage development patterns that reduce vehicle miles traveled and air pollution.

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.

Bay Area Air Quality Management District Significance Thresholds

The BAAQMD has established significance thresholds for Criteria Pollutants for use within the County of Santa Clara and Alameda including many cities within the BAAQMD boundaries. These thresholds can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. The thresholds for construction and daily operations are shown in **Table 5.3-4, BAAQMD Significance Thresholds for Criteria Pollutants** (BAAQMD, 2022).

Non-criteria pollutants such as Hazardous Air Pollutants (HAP) or TACs are also regulated by BAAQMD for operational fixed-source emission generators. These are broken out into carcinogens and non-carcinogens (acute and chronic). A project's fixed-source operations which increases the cancer risk to greater than one per one million exposed would be required to install Best Available Control Technology (T-BACT) equipment. Diesel Particulate Matter (DPM) is a known carcinogen and can increase health hazards when a person is exposed. DPM would be expected on a short-term basis during construction and is further analyzed below.

In addition, the BAAQMD indicates that odor impacts could occur if the project proposes a new odor source near existing receptors. Projects that expect to generate odors need to disclose this and provide analysis demonstrating that odor impacts would not exist at the property line.

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Table 5.3-4: BAAQMD Significance Thresholds for Criteria Pollutants			
Criteria Air Pollutants and Precursors (Regional)	Construction Related	Operational	
	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Annual Average Emissions (tons per year [tpy])
Reactive Organic Gases (ROG)	54	54	10
NO ₂	54	54	10
PM10	82 (Exhaust)	82	15
PM2.5	54 (Exhaust)	54	10
PM10/ PM2.5 (Fugitive Dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Health Risks and Hazards	Individual Project	Cumulative	
Increased Cancer Risk	>10.0 individuals per one million exposed	>100 individuals per one million exposed	
Increased Non-Cancer Hazard (Acute or Chronic)	>1.0	>10.0	
Incremental Annual PM2.5	>0.3 µg/m ³	>0.8 µg/m ³	
Source: BAAQMD, 2022			

5.3.2.2 Air Permits

The Proposed Project does not propose any stationary emission source equipment and would, therefore, not require any air quality permits.

5.3.3 IMPACT QUESTIONS

5.3.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to air quality come from the CEQA, Appendix G Environmental Checklist. Where available, the significance criteria by the applicable air quality management district or air pollution control district may be relied upon to the following determinations. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality; or
- 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; or
- Expose sensitive receptors to substantial pollutant concentrations; or

- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

5.3.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for air quality.

5.3.4 IMPACT ANALYSIS

5.3.4.1 Air Quality Impact Analysis

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

Less-Than-Significant Impact. The BAAQMD has developed an air quality plan consistent with California's SIP. As part of the plan, projects are required to show that project-related emissions would generate less-than-significant air quality emissions.

Potential air quality impacts related to the Proposed Project construction and operations were calculated using the latest California Emissions Estimator Model (CalEEMod Version 2022.1) air quality model, which was developed by South Coast Air Quality Management District (SCAQMD) in 2022. Since the Proposed Project is spread out over a large geographical area, it was analyzed in four parts, which include the proposed Albrae terminal and the existing Newark substation, the proposed Baylands terminal, the existing NRS substation, and the proposed transmission lines. The CalEEMod input/output model for each specific area is provided as Attachments 1A, 1B, 1C, and 1D in **Appendix 5.3-A, Air Quality and GHG Modeling Files**.

Health risks and hazard increases related to DPM were calculated using emission concentrations calculated by Air Quality Dispersion Modeling (AERMOD), which is a dispersion model software prepared by the U.S. EPA. The closest sensitive receptors exposed to DPM concentrations are shown in **Figure 5.3-5**. The remaining three areas would not expose sensitive receptors to high enough levels of DPM to cause human health risk effects. The AERMOD input/output model is provided as Attachment 2A in **Appendix 5.3-A**.

Once the dispersed concentrations of DPM are estimated in the surrounding air, they are used to evaluate estimated risks to people including sensitive residential receptors and also off-site worker receptors. The Office of Environmental Health Hazard Assessment (OEHHA) recommends different methodologies for both types of receptors which include age sensitivity factors from the third trimester to 70 years old, exposure durations, breathing rates, and averaging time. Worker receptors are assumed to be at least 16 years of age and would be limited to exposure for only the workday.

Chronic non-cancer risks are also known with respect to DPM and are determined by the hazard index. To calculate the hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL), which is five $\mu\text{g}/\text{m}^3$ (OEHHA, 2015). Since all calculated exposure levels are less than five $\mu\text{g}/\text{m}^3$, the hazard index would be less than one, and a less-than-significant

non-cancer risk is expected. Cancer risk outputs as well as AERMOD concentration levels used in the analysis are provided in Attachments 3A and 3B in **Appendix 5.3-A**.

The Proposed Project plans to start grading and construction in 2026, with work assumed to be scheduled to occur six days per week and be completed in 2028. Material hauling/truck details along with worker trips are provided in **Section 3.0, Proposed Project Description** (see **Table 3-8, Estimated Average Daily Construction Traffic**) and was manually updated within the CalEEMod software. **Appendix 5.3-A** includes detailed equipment and usage as provided by the Proposed Project engineer. In addition, the CARB regulations require that, starting in 2012, off-road equipment produced needs to meet the basic requirements for Tier 4 compliance (CARB, 2023b). Off-road equipment fleets are managed by CARB and are typically based on total horsepower owned. Owners are limited to what types of equipment they must maintain as their fleet and can include equipment from rental companies. For this reason, it is assumed that the project equipment would conservatively be made up of at least 75 percent Tier 4 during the construction years of 2026 through 2028. This assumption is viable and would be reasonably achievable because most equipment operators already maintain fleets consisting of mostly Tier 4 equipment. **Applicant Proposed Measure (APM) AQ-1, Construction Fleet Minimum Requirements and Tracking** has been incorporated into the Proposed Project to ensure that the assumed construction fleet specifications are tracked and achieved consistent with the analysis.

Table 5.3-5, Expected Construction Emissions Summary (Pounds per Day) – Albrae Terminal and Newark Substation summarizes the construction emissions in pounds per day at the proposed Albrae terminal and the existing Newark substation based on the construction activities and equipment identified in **Section 3.0** and **Appendix 5.3-A**. Based on the modeling for the unmitigated case, the Proposed Project would not exceed BAAQMD significance thresholds. It is assumed that the Proposed Project would implement Best Management Practices (BMPs) in all four areas consistent with BAAQMD Guidelines during construction to reduce fugitive dust generation. The BMPs are further discussed below. This would, at a minimum, include wetting exposed soils, sweeping dirt and debris from the Proposed Project site, and implementing measures to reduce trucks from bringing dirt onto the City of Fremont’s roadways.

Table 5.3-5: Expected Construction Emissions Summary (Pounds per Day) – Albrae Terminal and Newark Substation				
	ROG	NO_x	PM10 (Exhaust)	PM2.5 (Exhaust)
Average Maximum Daily Emissions	1.37	12.9	0.30	0.29
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	NO	NO	NO	NO
Source: Appendix 5.3-A				

Table 5.3-6, Expected Construction Emissions Summary (Pounds per Day) – Baylands Terminal summarizes the construction emissions in pounds per day at the proposed Baylands terminal based on the construction activities and equipment identified in **Section 3.0** and **Appendix 5.3-A**. Based on the modeling for the unmitigated case, the Proposed Project would not exceed BAAQMD significance thresholds.

Table 5.3-6: Expected Construction Emissions Summary (Pounds per Day) – Baylands Terminal				
	ROG	NO_x	PM10 (Exhaust)	PM2.5 (Exhaust)
Average Maximum Daily Emissions	1.32	12.5	0.29	0.28
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	NO	NO	NO	NO
Source: Appendix 5.3-A				

Table 5.3-7, Expected Construction Emissions Summary (Pounds per Day) – NRS Substation summarizes the construction emissions in pounds per day at the existing NRS substation based on the construction activities and equipment identified in **Section 3.0** and **Appendix 5.3-A**. Based on the modeling for the unmitigated case, the Proposed Project would not exceed BAAQMD significance thresholds.

Table 5.3-7: Expected Construction Emissions Summary (Pounds per Day) – NRS Substation				
	ROG	NO_x	PM10 (Exhaust)	PM2.5 (Exhaust)
Average Maximum Daily Emissions	0.53	4.5	0.10	0.09
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	NO	NO	NO	NO
Source: Appendix 5.3-A				

Table 5.3-8, Expected Construction Emissions Summary (Pounds per Day) – Transmission Lines summarizes the construction emissions in pounds per day within the proposed transmission line area based on the construction activities and equipment identified in **Section 3.0** and **Appendix 5.3-A**. Based on the modeling for the unmitigated case, the Proposed Project would not exceed BAAQMD significance thresholds.

Table 5.3-8: Expected Construction Emissions Summary (Pounds per Day) – Transmission Lines				
	ROG	NO_x	PM10 (Exhaust)	PM2.5 (Exhaust)
Average Maximum Daily Emissions	2.43	20.4	0.69	0.64
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	NO	NO	NO	NO
Source: Appendix 5.3-A				

Regional emissions from all four construction areas combined could be considered additive even though the construction of the proposed Albrae terminal and existing Newark substation, proposed Baylands terminal, and existing NRS substation are each separated by distances of approximately 1.7 miles (NRS substation to Baylands terminal) to approximately five miles

(Baylands terminal to Albrae terminal/Newark substation), with the proposed transmission lines geographically between the various sites identified. Given this, the total cumulative emissions from all three areas and the proposed transmissions lines are added and shown in **Table 5.3-9, Combined Expected Construction Emissions Summary (Pounds per Day)**. Based on the expected emissions output, the cumulative unmitigated emission would not exceed BAAQMD thresholds.

Table 5.3-9: Combined Expected Construction Emissions Summary (Pounds per Day)				
	ROG	NO_x	PM10 (Exhaust)	PM2.5 (Exhaust)
Albrae Terminal and Newark Substation Construction	1.37	12.9	0.30	0.29
Baylands Terminal Construction	1.32	12.5	0.29	0.28
NRS Substation Construction	0.53	4.5	0.10	0.09
Transmission Line Construction	2.43	20.4	0.69	0.64
Combined Total Emissions	5.65	50.3	1.38	1.3
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	NO	NO	NO	NO
Source: Appendix 5.3-A				

Therefore, the Proposed Project construction would not conflict with any air quality management plans, and construction-related impacts would be less than significant under this criterion.

The Proposed Project would implement **APM AQ-2, Dust Control BMPs** during construction activities. **APM AQ-2** would include BMPs consistent with BAAQMD Guidelines during construction to reduce fugitive dust generation as follows:

- BMP-1** All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. The watering regiment may be adjusted during rain events as needed.
- BMP-2** All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- BMP-3** All visible mud or dirt tracked 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.
- BMP-4** All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- BMP-5** All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- BMP-6** Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- BMP-7** All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- BMP-8** All trucks and equipment, including their tires, shall be washed off or otherwise cleaned prior to leaving the site if dirty.
- BMP-9** Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- BMP-10** Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Operations

Proposed Project operations are expected to begin in June 2028. Once operational, the Proposed Project would generate very low air quality emissions from daily operations. Anticipated operations emissions are limited to sources such as worker trips, area sources such as landscaping, and energy usage from on-site HVDC cooling equipment and auxiliary equipment usage (e.g., control room heating, ventilation, and air conditioning [HVAC] units, communications equipment, and facility lighting). The total demand at each terminal location site would be approximately 200 kilowatts (kW) continuous, which would consume 1,752,000 kilowatt hours (kWh) annually, or a combined 3,504,000 kWh annually for the entire Proposed Project.

Since the Proposed Project would use only electrical energy, the energy source air quality emissions would be zero. Mobile vehicle visits to the Proposed Project site associated with periodic O&M would also generate air emissions. It is estimated that monthly O&M visits would not be greater than 10,000 vehicle miles per year per site or 20,000 miles annually. These annual emissions were included within the analysis. The expected daily pollutant generation from these sources is estimated in CalEEMod using the assumptions above and shown in Attachments 1A and 1B in **Appendix 5.3-A**.

The average daily operational emissions during operations for each area are summarized in **Table 5.3-10, Combined Expected Average Daily Emissions During Operations (Pounds per Day)** below. Based upon these calculations, the Proposed Project operations would produce less-than-significant air quality impacts during operations.

Table 5.3-10: Combined Expected Average Daily Emissions During Operations (Pounds per Day)				
	ROG	NO_x	PM10 (Exhaust)	PM2.5 (Exhaust)
Albrae Terminal	0.29	0.01	0.02	0.01
Baylands Terminal	0.29	0.01	0.02	0.01
Combined Operational Emissions	0.58	0.02	0.04	0.02
BAAQMD Air Quality Thresholds	54	54	82	54

Table 5.3-10: Combined Expected Average Daily Emissions During Operations (Pounds per Day)				
	ROG	NO_x	PM10 (Exhaust)	PM2.5 (Exhaust)
Exceeds Thresholds?	NO	NO	NO	NO
Source: Appendix 5.3-A				

As shown in **Table 5.3-10**, the Proposed Project would not exceed BAAQMD air quality thresholds for emissions of criteria pollutants during the operations phase. Therefore, the Proposed Project operations would not conflict with any air quality management plans, and operations-related impacts would be less than significant under this criterion.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely on PG&E fee-owned property – see **Figure 5.3-1**). PG&E would implement construction **BMPs AQ-1** through **AQ-4** relating to air quality emissions. **BMP AQ-1, Vehicle Idling** would place restrictions on construction vehicles idling, which would reduce emissions. **BMP AQ-2, Fugitive Dust – General** would be implemented to ensure fugitive dust emissions from PG&E construction are minimized. **BMP AQ-3, Portable Equipment Registration Program** would require PG&E construction crews and contractors to only use applicable equipment registered in the CARB Statewide Portable Equipment Registration Program. **BMP AQ-3** would ensure that equipment is registered and older, high emission equipment is not used. Finally, **BMP AQ-4, Tier 4 Construction Equipment** would ensure that PG&E construction fleets would be consistent with the emissions modeling completed for this Proponent’s Environmental Assessment (PEA), which concluded that impacts related to air quality would be less than significant. Specifically, implementation of **BMP AQ-4** would ensure that emission of criteria pollutants remain below BAAQMD thresholds. . By the nature of criteria pollutant emissions and impact analysis, all Proposed Project activities are modeled cumulatively for comparison to daily emissions thresholds (refer to **Table 5.3-9**). Emissions from the Newark substation modifications were modeled with the Albrae terminal construction (refer to **Table 5.3-5**). Impacts at the Newark substation would be less than significant, as are impacts from all Proposed Project construction combined. Therefore, impacts associated with construction of the Newark substation modifications would be less than significant if considered individually.

Impacts from operation of the Newark substation modifications are not anticipated to change from existing conditions, as the operational sources of emissions, such as inspections, repairs, and maintenance, would not change following the substation modifications. Impacts would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. SVP would implement Proposed Project **APM AQ-1** to ensure that construction fleet engine tiers are consistent with the emissions

modeling performed for this PEA, and impacts would remain less than significant. By the nature of criteria pollutant emissions and impact analysis, all Proposed Project activities are modeled cumulatively for comparison to daily emissions thresholds (refer to **Table 5.3-9**). Emissions from the NRS substation were modeled separately due to the proximity to sensitive receptors (refer to **Table 5.3-7**). Emissions of criteria pollutants from construction of the NRS substation modifications would be below applicable thresholds. Therefore, impacts associated with construction of the NRS substation modifications would be less than significant if considered individually.

Impacts from operation of the NRS substation modifications are not anticipated to change from existing conditions, as the operational sources of emissions, such as inspections, repairs, and maintenance, would not change following the substation modifications. Impacts would be less than significant.

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 Impact. The Proposed Project was analyzed for construction and operational air quality emissions. Under this analysis, the Proposed Project would generate less-than-significant air quality direct impacts. With respect to an analysis of the Proposed Project's impacts under this criterion, it is important to note that air quality impacts relating to criteria pollutants are inherently cumulative. Emissions from various sources throughout the SFAB are additive and cumulatively contribute to the basin's attainment status with respect to NAAQS and CAAQS.

Because of this, most significance thresholds are developed such that an individual project's significance determination can also determine its cumulative impact. Thus, if a project's individual emissions exceed applicable significance thresholds, such impact would be considered individually significant as well as resulting in a cumulatively considerable contribution to a significant cumulative impact. The BAAQMD thresholds of significance that are used as the basis for determining the Proposed Project's impacts relating to criteria pollutants were developed with respect to the fact that air quality impacts are inherently cumulative.

Therefore, while additional projects and other emissions sources would be active concurrently with the Proposed Project (see **Section 7.0, Cumulative and Other CEQA Considerations**), the severity of the Proposed Project's cumulative effect on air quality can be determined by its comparison to the BAAQMD significance thresholds. As described above and summarized in **Tables 5.3-5 through 5.3-10**, the Proposed Project would not exceed any of the BAAQMD thresholds which would ensure compliance with the Cities of Fremont, Milpitas, San José, and Santa Clara CEQA requirements.

Additionally, as described above, the Proposed Project would be required to implement BMPs per BAAQMD requirements during construction. BMPs identified above, which would be implemented during construction, would typically reduce emissions further below what was captured within the Proposed Project modeling and also below the applicable CEQA thresholds. Therefore, the Proposed Project's contribution to potential significant cumulative criteria pollutant impacts is considered to be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely on PG&E fee-owned property). By the nature of criteria pollutant emissions and impact analysis, all Proposed Project activities are modeled cumulatively for comparison to daily emissions thresholds (refer to **Table 5.3-9**). Emissions from the Newark substation modifications were modeled with the proposed Albrae terminal construction (refer to **Table 5.3-5**). Impacts at the Newark substation would be less than significant, as are impacts from all Proposed Project construction combined. PG&E would implement **BMPs AQ-1** through **AQ-4**, which would further reduce impacts. Therefore, impacts associated with construction of the Newark substation modifications would be less than significant if considered individually. As described above and summarized in **Tables 5.3-5** and **5.3-9**, the PG&E substation modifications would not exceed any of the BAAQMD thresholds which would ensure compliance with the City of Fremont CEQA requirements. Therefore, the PG&E substation modifications contribution to potential significant cumulative criteria pollutant impacts is considered to be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. By the nature of criteria pollutant emissions and impact analysis, all Proposed Project activities are modeled cumulatively for comparison to daily emissions thresholds (refer to **Table 5.3-9**). Emissions from the NRS substation were modeled separately due to the proximity to sensitive receptors (refer to **Table 5.3-7**). SVP would implement Proposed Project **APM AQ-1**, and emissions of criteria pollutants from construction of the NRS substation modifications would be below applicable thresholds. Therefore, impacts associated with construction of the NRS substation modifications would be less than significant if considered individually. Thus, the SVP substation modifications would not exceed any of the BAAQMD thresholds which would ensure compliance with the City of Santa Clara CEQA requirements, and the modifications contribution to potential significant cumulative criteria pollutant impacts is considered to be less than significant.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Less-Than-Significant Impact. The BAAQMD thresholds of significance were used as the basis for determining the Proposed Project's impacts relating to air quality pollutants and were developed to identify when pollutant concentrations would expose sensitive receptors to substantial pollutant concentrations. As described above and summarized in **Table 5.3-9**, the Proposed Project would not exceed any of the BAAQMD thresholds of significance, which would ensure compliance with the local jurisdictions identified in this analysis. Therefore, the Proposed Project's air quality emissions would not expose sensitive receptors to substantial pollutant concentrations, and a less-than-significant air quality impact is expected.

The BAAQMD has a requirement to ensure health risks and health hazards are also less than significant. The only Proposed Project site which would include prolonged construction activities or other activities resulting in emissions located near sensitive residential receptors is the existing NRS substation. Potential impacts associated with the NRS substation modifications are discussed below.

Since the Proposed Project would not expose sensitive residential receptors to either significant cancer or significant chronic non-cancer risks during operations, impacts under this criterion would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely on PG&E fee-owned property). The existing Newark substation is not located within proximity to any sensitive receptors. Therefore, the Newark substation modifications would not expose sensitive receptors to substantial pollutant concentrations. No impacts would occur.

Impacts from operation of the Newark substation modifications are not anticipated to change from existing conditions, as the operational sources of emissions, such as inspections, repairs, and maintenance, would not change following the substation modifications. No impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. As shown on **Figure 5.3-5**, the existing NRS substation is located in close proximity to sensitive receptors. Therefore, the potential for human health impacts was analyzed for construction of the NRS substation modifications. As noted above, SVP would implement Proposed Project **APM AQ-1** during construction at the existing NRS substation. Based on calculations shown in **Appendix 5.3-A**, the highest DPM concentrations at the existing NRS substation location would be at Receptor 3, which is approximately 82 feet south of the NRS substation as identified in **Figure 5.3-5**. Emission concentrations at this location are $0.036 \mu\text{g}/\text{m}^3$. Based on this, the increased cancer risk is 9.23 people per million exposed at the closest sensitive receptor, which is below the threshold of 10 in one million. Given this, all cancer risks at all other receptors would be less than 9.23 per million exposed (30-year exposure). In addition, non-cancer risks are less than one ($0.036 \mu\text{g}/\text{m}^3 / 5 \mu\text{g}/\text{m}^3 < 1$). It should also be noted that the highest risk during the construction duration at Receptor 3 is 7.76 per one million exposed, which is below the threshold of 10 in one million.

Therefore, the SVP NRS substation modifications would not expose sensitive residential receptors to either significant cancer or significant chronic non-cancer risks during construction and impacts under this criterion would be less than significant.

DPM from construction could also expose off-site workers not affiliated with the Proposed Project. Calculations for health risks for off-site workers are similar, though do not include age sensitivity factors between the third trimester up to age 16. In addition, the exposure concentration is for only a typical workday (eight hours) which would significantly reduce health risks compared to residential uses. Based on review of the construction sites, the potential for off-site workers not affiliated with the Proposed Project working either adjacent to or closer than identified sensitive residential receptors is not expected. Given this, since the calculated health risks for sensitive residential receptors is less than significant, any potential risks to off-site workers would also be less than significant assuming workers may exist at the nearby residential homes.

Cumulative cancer risk thresholds established by BAAQMD are less than 100 people per million exposed. Based upon modeling, as distances are increased beyond the Proposed Project site, cancer risks drop quickly. A cumulative health risk during construction could exist if a large project was occurring simultaneously to the Proposed Project using diesel construction equipment in addition, equipment would essentially need to be as much as 10 times more intense to generate emissions close to 100 per million exposed. Based on review of the site, no nearby construction

projects would be expected to meet these diesel equipment conditions. Given this, a less-than-significant cumulative health risk would be expected during SVP NRS modifications.

Impacts from operation of the SVP NRS modifications are not anticipated to change from existing conditions, as the operational sources of emissions, such as inspections, repairs, and maintenance, would not change following the substation modifications. Impacts would be less than significant. **Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

Less-Than-Significant Impact. The Proposed Project may create temporary construction odors resulting from combustion engine equipment but would not be considered significant due to the highly dispersive nature of diesel exhaust and the short-term nature of construction.

The Proposed Project is not anticipated to result in emissions that could cause odors or other adverse effects during O&M. Therefore, construction and operation impacts related to odors would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely on PG&E fee-owned property). While construction of the Newark substation modifications would result in temporary construction odors from combustion engine equipment, the area surrounding the existing Newark substation is undeveloped with only industrial and heavy commercial and manufacturing land uses in the vicinity. Therefore, impacts from other emissions, such as those leading to odors, would be less than significant for construction of the Newark substation modifications.

Impacts from operation of the Newark substation modifications are not anticipated to change from existing conditions, as the operational sources of other emissions, such as inspections, repairs, and maintenance, would not change following the substation modifications. Impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. While the existing NRS substation is located in close proximity to residential and recreational land uses, the temporary construction odors from combustion engine equipment would not be considered significant due to the highly dispersive nature of diesel exhaust and the short-term nature of construction. Impacts from other emissions, such as those leading to odors, would be less than significant for construction of the NRS substation modifications.

Impacts from operation of the NRS substation modifications are not anticipated to change from existing conditions, as the operational sources of other emissions, such as inspections, repairs, and maintenance, would not change following the substation modifications. Impacts would be less than significant.

5.3.5 CPUC DRAFT ENVIRONMENTAL MEASURES

While the CPUC includes a Draft Environmental Measure for dust control within the Proponent's Environmental Assessment Guidelines document (CPUC, 2019), it is not included within this

document. Rather, the Proposed Project has included **APM AQ-2**, which incorporates required BMPs identified by BAAQMD. All building plans and grading drawings would specifically have these measures included within the notes. Since fugitive dust emissions, as demonstrated by the construction modeling, do not exceed BAAQMD significance thresholds, mitigation was not specifically called out in **Section 5.3.4, Impact Analysis**.

5.3.6 APPLICANT PROPOSED MEASURES

The Proposed Project includes the following APMs relating to air quality, as outlined below.

APM AQ-1: Construction Fleet Minimum Requirements and Tracking

LS Power shall ensure that at least 75 percent of equipment horsepower hours related to off-road construction equipment include Tier 4 interim or Tier 4 final emissions controls. An initial listing that identifies each off-road unit's certified tier specification to be operated on the Proposed Project shall be submitted to the CPUC before the start of construction activities. Construction activities shall not begin until the equipment listing has been submitted to the CPUC.

As LS Power requires new or replacement construction equipment on the Proposed Project, LS Power shall document verification of the certified engine tier before their use on Proposed Project sites. Before the start of construction, LS Power shall develop a diesel-powered equipment-use hours tracking tool and procedure. The tracking tool shall be utilized by LS Power to keep track of the certified engine tier and daily equipment use hours of all off-road diesel-powered equipment. If all diesel-powered equipment is Tier 4 certified, the tracking tool is not required. The tracking tool shall be maintained by LS Power, and tracking updates shall be submitted to the CPUC on a monthly basis to track the Proposed Project's compliance. The updated tracking tool shall be submitted to the CPUC no later than the tenth day of the following month.

APM AQ-2: Dust Control Best Management Practices

LS Power shall implement the following measures to control fugitive dust during construction activities:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. The watering regiment may be adjusted during rain events as needed.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

- All trucks and equipment, including their tires, shall be washed off or otherwise cleaned prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

5.3.7 PG&E BEST MANAGEMENT PRACTICES

The following air quality-specific BMPs would be implemented by PG&E for the activities to be completed by PG&E and/or their contractors.

BMP AQ-1: Vehicle Idling

A vehicle operator is prohibited from idling an on-road diesel-fueled vehicle with a Gross Vehicle Weight of $\geq 10,001$ pounds, or an off-road diesel-fueled vehicle with a primary engine ≥ 25 horsepower, in excess of 5 minutes unless conducting one or more of the following activities:

- Doing work for which the vehicle was intended;
- Powering equipment necessary to perform a job function
- Operating lights or signals to direct traffic at a PG&E job site;
- Service, testing or maintenance on the vehicle;
- Regenerating an exhaust filter;
- Idling for safety reasons, including providing light when working after dark, defrosting windows, keeping the cabin warm to avoid a health hazard, and providing air conditioning to avoid heat illness;
- Idling due to traffic conditions beyond the vehicle operator's control;
- Warming an engine up to operating temperatures, as specified by the equipment manufacturer;
- Queuing, such as when a line of off-road trucks forms to receive materials from an excavator. Queuing does not include a vehicle waiting for another vehicle to perform a task. Idling while queuing is not allowed within 100 feet of a residential home.

BMP AQ-2: Fugitive Dust – General

Field crews must limit fugitive dust from PG&E project work at all times. Types work activities where water trucks or other dust abatement methods are typically required include:

- Construction;
- Demolition;
- Excavation;

- Trenching;
- Grading;
- Sand blasting;
- and other earthmoving activities

Visible emissions of fugitive dust from PG&E project activities must be maintained within the project boundary. The crew shall abate dust by:

- Applying water to disturbed areas and to storage stockpiles;
- Covering and securing stockpiled soil at the end of each workday;
- Applying water in sufficient quantities to prevent dust plumes during activities such as clearing & grubbing, backfilling, trenching and other earth moving activities;
- Limit vehicle speed to 15 miles per hour within approved unpaved work areas and along unpaved roads;
- Vehicles and equipment used to transport bulk materials must be wetted, covered, and provide at least 6 inches of free board (space between top of truck and load) during transport;
- Clean-up track-out at least daily;
- Escalate preventative measures as needed to match conditions
- Consider postponing construction activities during high wind events; and
- The crew shall not generate dust in amounts that create a nuisance to wildlife or people, particularly where sensitive receptors such as neighborhoods, schools, and hospitals are located nearby or down-wind. During inactive periods (e.g. after normal working hours, weekends, and holidays), the crew shall apply water or other approved material to form a visible crust on the soil and restrict vehicle access.

BMP AQ-3: Portable Equipment Registration Program

PG&E requires that portable engines be registered into the Statewide Portable Equipment Registration Program (PERP) administered by the California Air Resources Board (CARB), if:

- the engine is portable (mounted on a truck, trailer, skids, or wheels);
- the engine is 50 brake horsepower or greater, and;
- the engine does not provide motive force for a vehicle.

Auxiliary engines mounted on vehicles need to be registered if they are 50 brake horsepower or greater. For PG&E-owned units, PG&E Environmental Management Air Program is responsible for maintaining valid PERP registration with support from Transportation Services. For rental units, the rental vendor is responsible for the PERP registration and to provide PG&E with a copy of the current registration, permit, and placard before use.

Greenhouse Gas (GHG) Facility Requirements:

If diesel portable engines greater than 50 brake horsepower (bhp) are operated onsite at a GHG facility subject to the Mandatory Reporting Rule for GHGs (MRR) at any time, the AB617 PERP Log must be completed.

BMP AQ-4: Tier 4 Construction Equipment

At least 75 percent of construction equipment with a rating between 100 and 750 hp would be required to use engines compliant with EPA Tier 4 non-road engine standards. In the event enough Tier 4 equipment are not available to meet the 75-percent threshold, documentation of the unavailability would be provided and engines utilizing a lower standard would be used.

5.3.8 SVP BEST MANAGEMENT PRACTICES

SVP would implement Proposed Project **APM AQ-1**, as described above. No SVP BMPs for air quality would be implemented for SVP's scope of work.

5.4 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?			X	
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?			X	
c.	Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
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?			X	
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?			X	

Would the project:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g.	Create a substantial collision or electrocution risk for birds or bats?			X	

This section describes the biological resources within the vicinity of the Proposed Project as well as potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.4.1 ENVIRONMENTAL SETTING

5.4.1.1 Biological Resources Technical Report

The analysis presented in this section is based in part on the Proposed Project-specific Biological Resources Technical Report (BRTR) (**Appendix 5.4-A**)(Heritage Environmental Consultants, 2024), which documents existing conditions, the potential for occurrence of special-status species, and the findings of biological surveys. Most of the information on the regulatory setting, methods, environmental setting, and impact analysis has been summarized from the BRTR. Prior to conducting field surveys, a literature review and records search for information on occurrences of special-status species in the vicinity of the Proposed Project was conducted.

5.4.1.2 Survey Area (Local Setting)

The Proposed Project was given a 1,000-foot buffer, which is referred to as the Biological Resources Survey Area (“Survey Area”) (**Figure 5.4-1, Biological Survey Area Map**). The approximately 3,889.7-acre Survey Area includes the area in which the potential for occurrence of special-status species was analyzed. A large portion of the Survey Area is located within heavily populated urban, developed, or disturbed areas within the Cities of Fremont, Milpitas, San José, and Santa Clara. All of the common species that were observed in the Survey Area were typical species that occur in urban, riparian, estuary, woodland, and grassland habitats. A full list of observed plant and animal species is included in **Appendix 5.4-A**. The only native habitats that exist in the Proposed Project area are located along Cushing Parkway and along the overhead alignments for the proposed Newark to Albrae 230 kilovolt (kV) transmission line, Albrae to Baylands 320 kV direct current (DC) transmission line, and the Baylands to Northern Receiving Station (NRS) 230 kV transmission line. Photographs of the Survey Area are included in the BRTR provided as **Appendix 5.4-A**.

Biological Surveys

Biological assessment reconnaissance surveys were conducted over the course of six survey days (September 22, 2023, October 20, 2023, December 19, 2023, January 24 and 25, 2024, and March 15, 2024). The intent of the surveys was to map vegetation communities and analyze the potential for occurrence of special-status species. Potential jurisdictional water features were also investigated and preliminarily mapped throughout the Survey Area for potential occurrence. A full formal wetland delineation and mapping was conducted for the jurisdictional water features that had the potential to be impacted by the Proposed Project, which included two areas: the area along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara Regional

Wastewater Facility (RWF) (i.e., from the southern side of McCarthy Boulevard bridge to the proposed overhead structure DC-3), and both north and south sides of Cushing Parkway bridge. All areas within native habitats were surveyed where access was granted, and the urban and disturbed areas were surveyed from public roads and paths where possible due to safety concerns and access limitations.

5.4.1.3 Vegetation Communities and Land Cover

Vegetation community types are based on field observations and the California Department of Forestry and Fire Protection ("CAL FIRE") Fire and Resource Assessment Program (FRAP), in cooperation with California Department of Fish and Wildlife (CDFW) VegCamp program and extensive use of the United States Department of Agriculture (USDA) Forest Service Region 5 Remote Sensing Laboratory (RSL) data and descriptions in the California Native Plant Society (CNPS) Manual of California Vegetation Online (MCV) (CNPS, 2024a). Natural communities were evaluated using NatureServe's Heritage Methodology, which is the same system used to assign global and state rarity ranks for plant and animal species in the California Natural Diversity Database (CNDDB).

The Survey Area supports primarily developed and disturbed, non-vegetated areas or areas that are nonnative and associated with development (i.e., parks, residential and industrial development, and wastewater treatment ponds). There are a few areas of native vegetated habitat throughout the Survey Area primarily in association with the Don Edwards San Francisco Bay National Wildlife Refuge (NWR). The Survey Area is dominated by disturbed/urban areas that are associated with the urban and suburban areas within the Cities of Fremont, Milpitas, San José, and Santa Clara, but there are other vegetation communities, primarily in the vicinity of streams, creeks, rivers, and the Don Edwards San Francisco Bay NWR, including annual grassland, hardwood woodland, riparian, and wetland. The components of the Proposed Project would be located primarily within disturbed/urban areas, but small portions would be located in hardwood woodland and annual grassland land cover types (**Figure 5.4-2, Vegetation Communities within the Survey Area Map**).

The approximate acreage of each of the vegetation communities and land cover types that were mapped within the Survey Area is summarized in **Table 5.4-1, Vegetation Communities and Land Cover Types within the Survey Area**. Brief descriptions of each land cover type are provided following the table. Vegetation community and land cover mapping is shown on **Figure 5.4-2**.

Table 5.4-1: Vegetation Communities and Land Cover Types within the Survey Area		
Vegetation Community/Land Cover Type	Approximate Acreage in Survey Area	Approximate Percent of Total Acreage
Disturbed/Urban	2,573.04	66%
Annual Grassland	474.21	12%
Wetland	263.49	7%
Wastewater Treatment Pond	249.07	6%

Vegetation Community/Land Cover Type	Area (Acres)	Percentage
Annual Grassland/Wetland	138.51	4%
Riparian	93.08	3%
Water	65.50	2%
Hardwood Woodland	31.77	<1%
Vernal Pool	1.06	<1%
Total	3,889.7	

Disturbed/Urban

Disturbed/urban land cover type dominates the Survey Area (approximately 66 percent). Proposed Project components that occur within disturbed/urban areas include the proposed Newark substation modification area; the proposed Albrae terminal site; a portion of proposed Staging Areas 2, 6, 7, and 8; Staging Areas 1, 9, 10, and 11; and the NRS substation modification area (**Figure 5.4-2**). This cover type includes all areas associated with significant human disturbance, including all urban areas (e.g., buildings, roads, parking lots, substations, San José–Santa Clara RWF infrastructure, railways, etc.), suburban areas (e.g., houses, apartment buildings, lawns, parks, etc.), and disturbed areas (e.g., disturbed fields, vacant lots, etc.). Some native and nonnative trees, shrubs, and grasses may be present in association with the urban/suburban development, primarily as decorative vegetation. Nonnative and invasive weeds may also be present in association with disturbed areas (such as stinkwort [*Dittrichia graveolens*], horseweed [*Erigeron canadensis*], wild oat [*Avena fatua*], Kentucky bluegrass [*Poa pratensis*], tumbleweed [*Kali tragus* ssp. *tragus*], shortpod mustard [*Hirschfeldia incana*], cheeseweed mallow [*Malva parviflora*], rose clover [*Trifolium hirtum*], star-thistle [*Centaurea* sp.], and smilo grass [*Stipa miliacea*]).

Annual Grassland

Annual grassland habitat exists in small areas throughout the Survey Area (approximately 12 percent of the Survey Area) associated with the hills to the east and west of the Proposed Project. Proposed Project components that occur within annual grassland include proposed overhead structures AC-1 and AC-2 and the overhead Newark to Albrae 230 kV transmission line alignment, overhead structures DC-1 through DC-3 and DC-11, Staging Areas 2 through 8, and the Baylands terminal site (**Figure 5.4-2**). These areas are dominated by nonnative and native annual grasses such as wild oat, rat's-tail fescue, cheatgrass, soft brome (*Bromus hordeaceus*), and purple needlegrass (*Stipa pulchra*)—the dominant grass species—and many clover species (*Trifolium* sp.), filaree species, mustards, common fiddleneck (*Amsinckia menziesii*), stinkwort (*Dittrichia graveolens*), cheeseweed mallow (*Malva parviflora*), rose clover (*Trifolium hirtum*), smilo grass, and starthistle species (*Centaurea* sp.)—the dominant forb species in this habitat. Some of these areas are moderately disturbed or mowed and may be grazed.

Wetland

Wetland habitat within the Survey Area (approximately seven percent of the Survey Area) occurs in the vicinity of creeks, streams, and estuaries associated with the San Francisco Bay. No Proposed Project components occur within wetland habitat. However, the following Proposed Project components occur adjacent to or within the vicinity of wetland habitats: Staging Area 6; the Albrae to Baylands 320 kV DC transmission line (both underground and overhead portions of the alignment); and portions of the Baylands to NRS 230 kV transmission line underground segments (**Figure 5.4-2**). These areas are typically inundated with water and support hydrophilic vegetation species, such as softstem bulrush, hardstem bulrush (*Schoenoplectus acutus*), tall flatsedge, giant reed, broadleaf cattail, and saltgrass (*Distichlis* sp.). Some tree species, such as willows (*Salix* sp.), elderberry (*Sambucus nigra*), California fan palm (*Washingtonia filifera*), and oaks (*Quercus* sp.), can be located along the wetland edges. The wetland habitat type contains some areas that could include salt marsh habitats, but these areas could not be surveyed in detail to confirm this. Once permission is provided to conduct the survey, salt marsh areas would be clearly delineated.

Wastewater Treatment Ponds

Wastewater treatment ponds (approximately six percent of the Survey Area) are located in the vicinity of the San José-Santa Clara RWF. Proposed Project components that occur within wastewater treatment ponds include approximately 6,000 feet of the Albrae to Baylands 320 kV DC transmission line overhead alignment (**Figure 5.4-2**). These ponds range from dirt bottom ponds that are infrequently disturbed to concrete or plastic lined ponds that are frequently disturbed. The dirt bottom ponds support some vegetation species (primarily weed species) along the edges, but these areas are maintained and mowed to keep vegetation from overgrowing the ponds.

Annual Grassland/Wetland

The annual grassland/wetland habitat type occurs within the Don Edwards San Francisco Bay NWR in the vicinity of the Cushing Parkway bridge (approximately four percent of the Survey Area). Proposed Project components that occur adjacent to annual grassland/wetland include approximately 2,000 feet of the Albrae to Baylands 320 kV transmission line underground alignment along Cushing Parkway (**Figure 5.4-2**). This area is covered by annual grasses but is also within a floodplain area that contains a mosaic of potential wetlands that are inundated at certain times of the year. These potential wetlands have not been mapped at this time. This habitat type combines the annual grassland and wetland habitat types.

Riparian

Riparian habitat within the Survey Area (approximately three percent of the Survey Area) is located along the larger creeks, streams, and rivers such as Coyote Creek and the Guadalupe River. The proposed Albrae to Baylands 320 kV transmission line crosses or is adjacent to riparian areas in three locations near Coyote Creek and the proposed overhead segment of the Baylands to NRS 230 kV transmission line near the Guadalupe River (**Figure 5.4-2**). These areas have perennially or intermittently running water associated with creeks and streams and support trees and vegetation species that are accustomed to intermittent flooding. These areas generally support less tree species than hardwood woodland areas and are generally more covered by shrubs and grasses/forbs. Tree species may include Fremont cottonwood, narrowleaf willow, red

willow, coast live oak, northern California black walnut, western sycamore, and California buckeye. Associated shrub species may include Pacific poison oak, coyote brush, elderberry, Himalayan blackberry, and mulefat. The ground cover consists of forbs (such as dove weed, filaree, and perennial pepperweed) and annual native and nonnative grasses (such as wild oat, rat's-tail fescue, lop grass, wall barley, tufted hairgrass, and cheatgrass). Wetland species may be present as well.

Water

Water habitats are associated with lakes and ponds within the Survey Area (approximately two percent of the Survey Area). The proposed Baylands to NRS 230 kV transmission line overhead alignment crosses open water adjacent to overhead structures AC-3 and AC-4, west of Staging Area 11 (**Figure 5.4-2**). These areas include large expanses of open water.

Hardwood Woodland

Hardwood woodland habitat (less than one percent of the Survey Area) includes hardwood trees and associated shrubs and is primarily associated with streams and riparian areas. Hardwood woodland is located along the Cushing Parkway bridge and east of the proposed Albrae to Baylands 320 kV DC transmission line overhead alignment (**Figure 5.4-2**). Fremont cottonwood (*Populus fremontii*) is the dominant tree species, with a mixture of narrowleaf willow (*Salix exigua*), red willow (*Salix laevigata*), Coast live oak (*Quercus agrifolia*), northern California black walnut (*Juglans hindsii*), western sycamore (*Platanus racemosa*), and California buckeye (*Aesculus californica*) as associated hardwood trees. Associated shrub species include Pacific poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), elderberry (*Sambucus nigra*), Himalayan blackberry (*Rubus armeniacus*), and mulefat (*Baccharis salicifolia*). The ground cover consists of forbs (such as dove weed [*Croton setigerus*], filaree [*Erodium* sp.], and perennial pepperweed [*Lepidium latifolium*]) and annual native and nonnative grasses (such as wild oat, rat's-tail fescue [*Vulpia myuros*], lop grass [*Bromus hordeaceus*], wall barley [*Hordeum murinum*], tufted hairgrass [*Deschampsia cespitosa*], and cheatgrass [*Bromus tectorum*]). Some wetland plants are also associated with this habitat type and occur along the margins of the lakes, ponds, and streams (such as softstem bulrush [*Schoenoplectus tabernaemontani*], tall flatsedge [*Cyperus eragrostis*], giant reed [*Arundo donax*], and broadleaf cattail [*Typha latifolia*]).

Vernal Pools

Vernal pool habitat within the Survey Area (less than one percent of the Survey Area) is located within annual grassland habitats near the existing Newark substation. Proposed Project components that occur near vernal pools include the proposed Newark to Albrae 230 kV transmission line overhead alignment and overhead structures AC-1 and AC-2, north of the existing Newark substation (**Figure 5.4-2**). Vernal pools are depressions in areas where a hard underground layer prevents rainwater from draining downward into the subsoils. When rain fills the pools in the winter and spring, the water collects and remains in the depressions. In the springtime, the water gradually evaporates away, until the pools become completely dry in the summer and fall. None of the vernal pools in the Survey Area were filled with water during field surveys in October 2023. Vernal pools support many plant species, some of which are wetland plants and some that are characteristic to the surrounding grasslands. The vegetation in vernal pools consists primarily of annuals with low cover and a short life cycle such as *Navarettias* and *Lasthenias*. Vernal pools support a distinctive flora with a high number of endemic and rare species. Once permission is provided to conduct a formal delineation of the vernal pool habitat

type, these areas will be clearly delineated.

Sensitive Natural Vegetation Communities

Sensitive natural vegetation communities are natural communities with ranks of S1, S2, or S3 (community ranks are listed below). All of the hardwood woodland and wetland habitats associated with riparian corridors, lakes, ponds, wetlands, vernal pools, and streams and all of the estuaries associated with San Francisco Bay would be considered sensitive natural communities.

- **S1 = Critically Imperiled**—Critically imperiled in the State because of extreme rarity (often five or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
- **S2 = Imperiled**—Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
- **S3 = Vulnerable**—Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
- **S4 = Apparently Secure**—Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
- **S5 = Secure**—Common, widespread, and abundant in the State.

5.4.1.4 Aquatic Features

Preliminary aquatic resources delineation surveys were conducted on September 22, 2023, and January 24 and 25, 2024, for a large portion of the Survey Area with potential wetlands. These surveys were conducted to map where potential aquatic resources occur within the Survey Area. A formal jurisdictional survey was conducted along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara RWF on December 12, 2023 (from the southern end of the McCarthy Boulevard bridge to the proposed overhead structure DC-3). In addition, on March 15, 2024, a formal delineation was performed along the north and south sides of Cushing Parkway as it crosses a marsh on a low bridge. National Wetlands Inventory (NWI) maps were reviewed for the areas (United States Fish and Wildlife Service [USFWS], 2024a), and there are several NWI drainages and wetlands that are mapped within the 1,000-foot buffer Survey Area (**Figure 5.4-3, NWI Wetlands Map**). Most of these features were verified in the field within the Survey Area. Several wetlands were mapped using field observations (**Figure 5.4-4, Aquatic Resources Map**).

Some of the streams, ponds, and wetlands described above may meet the criteria to be considered jurisdictional under both current State and Federal Clean Water Act (CWA) laws and under CDFW's Lake and Streambed Alteration Program. As required for state and federal wetland permitting, a detailed wetland delineation would be prepared for any areas that may be impacted by the Proposed Project, and verification of this delineation with all applicable agencies would be sought prior to any earth moving activities in potential "waters of the United States" or "waters of the State."

5.4.1.5 Habitat Assessment

Special-status species are plants and wildlife that require special consideration or protection and have been listed as rare, threatened, or endangered by federal, state, or other agencies because of their rarity, vulnerability to habitat loss, population decline, or other factors. Species listed as threatened or endangered are protected under federal or state law. Other species have been designated as special status by state resource agencies or by policy of local agencies to meet conservation objectives.

Special-status plant and wildlife species identified during the literature and database search (five-mile buffer) were analyzed with the following definitions of their potential to occur within the Survey Area:

- **Not Expected; None:** The Survey Area does not support suitable habitat for a particular species, and the known range for a particular species is outside of the Survey Area.
- **Low Potential:** The Survey Area provides limited suitable habitat for a particular species. The known range for a particular species may be outside of the Survey Area.
- **Moderate Potential:** The Survey Area provides some suitable habitat for a particular species or high-quality habitat is located near the Survey Area. The known range for a particular species may include the Survey Area.
- **High Potential:** The Survey Area provides moderate to high quality habitat conditions for a particular species or known populations occur in the immediate vicinity.
- **Present:** Species was observed within the Survey Area during biological surveys or other site visits.

Special-Status Plants

All special-status plant species found in the Information for Planning and Consulting (IPaC) (USFWS, 2023), CNPS (CNPS, 2024b), and CNDDDB (CDFW, 2024a) occurrence records within the Survey Area and a five-mile buffer were evaluated for their potential to occur based on the presence of suitable habitat, elevation, and soils. The IPaC report is provided in the BRTR (**Appendix 5.4-A**). All plants that have CNPS records within the United States Geological Survey (USGS) 7.5-minute quadrangles that the Survey Area lies within are included in **Table 5.4-2, CNPS Plant Species**. Additionally, CNDDDB records are shown on **Figure 5.4-5a, CNDDDB Map (Flora)** and presented in **Appendix 5.4-A**.

Based on the literature review (CNDDDB data), 21 special-status plant species and one sensitive vegetation community were evaluated for their potential to occur within the Survey Area; of the 21 special-status plant species and one sensitive vegetation community, eight have a low potential to occur or are not expected to occur, and 14 plant species have moderate or high potential to occur in the Survey Area (as shown in **Table 5.4-2**). Full analysis of the potential to occur within the Survey Area is provided in **Appendix 5.4-A**. Several of these plants could occur within impact areas in the vicinity of the Don Edwards San Francisco Bay NWR.

Table 5.4-2: CNPS Plant Species			
Common Name	Scientific Name	Status	Potential to Occur
Alkali milkvetch	<i>Astragalus tener</i> var. <i>tener</i>	1B.2	Moderate
Brittle scale	<i>Atriplex depressa</i>	1B.2	Moderate
Lesser saltscale	<i>Atriplex minuscula</i>	1B.1	Moderate
Congdon's tarplant	<i>Centromadia parryi</i> ssp. <i>congdonii</i>	1B.1	High
Point Reyes salty birds beak	<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	1B.2	Moderate
Robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	1B.1, FE	Low
Santa Clara red ribbons	<i>Clarkia concinna</i> ssp. <i>automixa</i>	4.3	Low
Small spikerush	<i>Eleocharis parvula</i>	4.3	Low
Bay buckwheat	<i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>	4.2	Low
Hoover's button celery	<i>Eryngium aristulatum</i> var. <i>hooveri</i>	1B.1	Moderate
San Joaquin spearscale	<i>Extriplex joaquinana</i>	1B.2	Moderate
Contra Costa goldfields	<i>Lasthenia conjugens</i>	1B.1, FE	High
Hall's bush mallow	<i>Malacothamnus hallii</i>	1B.2	Low
Prostrate vernal pool navarettia	<i>Navarretia prostrata</i>	1B.2	Moderate
California alkali grass	<i>Puccinellia simplex</i>	1B.2	Moderate
Chaparral harebell	<i>Ravenella exigua</i>	1B.2	Low
Long-styled sand-spurrey	<i>Spergularia macrotheca</i> var. <i>longistyla</i>	1B.2	Moderate
Most beautiful jewelflower	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	1B.2	Low
Northern slender pondweed	<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	2B.2	Low
California seablite	<i>Suaeda californica</i>	1B.1, FE	Moderate
Saline clover	<i>Trifolium hydrophilum</i>	1B.2	Moderate
Northern coastal salt marsh	N/A	Sensitive Vegetative Community	Moderate
<p>CNPS:</p> <ul style="list-style-type: none"> • 1B = Plants rare, threatened, or endangered in California or elsewhere • 2B = Plants rare, threatened, or endangered in California but more common elsewhere • 3 = Review List: Plants about which more information is needed • 4 = Watch List: Plants of limited distribution • 0.1 = Plants seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) • 0.2 = Plants moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat) • 0.3 = Plants not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known) <p>Federal Status:</p> <ul style="list-style-type: none"> • FE = Federally Endangered 			

Special-Status Wildlife

All special-status wildlife species listed in the IPaC (USFWS, 2023), CNDDDB (CDFW, 2024a) occurrence records, and Western Bat Working Group (WBWG) (WBWG, 2023a) priority bats, which were determined to have an overlapping range with the Proposed Project five-mile buffer (WBWG, 2024b), were evaluated for their potential to occur within the Survey Area based on the presence of suitable habitat (**Appendix 5.4-B**). The IPaC report is provided in **Appendix 5.4-A**, and CNDDDB records are shown on **Figure 5.4-5b, CNDDDB Map (Fauna)**. Based on the literature review, 14 mammals, 42 avian species, six invertebrate species, three amphibian species, three fish species, and three reptile species were evaluated for their potential to occur within the Survey Area (**Appendix 5.4-A**).

Of the 71 species that were evaluated for their potential to occur, 39 species were identified as having a moderate or high potential to occur within the Survey Area or were observed during field surveys: three fish species, six invertebrate species, one mammal species, 26 avian species, one reptile species, and two amphibian species (as shown in **Table 5.4-3, Special-Status Wildlife**). Raptors (protected by the Migratory Bird Treatment Act [MBTA] and the California Fish and Game Code [CFGC]) were also observed during field surveys and were identified as having a high potential to occur within the Survey Area. The remainder of the species that were analyzed for occurrence in the Survey Area are not expected to occur or are considered to have a low potential to occur. No special-status bat species were identified as having a moderate or high potential to occur. The species that have a moderate or high potential to occur within the Survey Area, and have the potential to occur within impact areas, are those for which additional surveys would likely be required. The following species are those that were determined to have a moderate or high potential to occur or were observed within the Survey Area and are further analyzed in **Appendix 5.4-A**.

Table 5.4-3: Special-Status Wildlife				
Common Name	Scientific Name	Status	Suitable Habitat within the Proposed Project Area	Potential to Occur
Fish Species				
Steelhead	<i>Oncorhynchus mykiss irideus</i>	FT, ST	Within Coyote Creek which crosses the proposed Albrae to Baylands 320 kV DC transmission line and Guadalupe River which crosses the proposed Baylands to NRS 230 kV transmission line.	High
Longfin smelt	<i>Spirinchus thaleichthys</i>	FC, ST	Within Coyote Creek which crosses the proposed Albrae to Baylands 320 kV DC transmission line and Guadalupe River which crosses the proposed Baylands to NRS 230 kV transmission line.	Moderate
Green sturgeon (Southern distinct population segment [DPS])	<i>Acipenser medirostris</i>	FT	Within Coyote Creek, San Tomas Aquino Creek, the Guadalupe River, near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, and along a tributary to Coyote Creek that passes under Cushing Parkway just east of the Fremont Boulevard – Cushing Parkway intersection within the Survey Area.	Moderate

Table 5.4-3: Special-Status Wildlife				
Common Name	Scientific Name	Status	Suitable Habitat within the Proposed Project Area	Potential to Occur
Invertebrate Species				
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE	In the vicinity of the existing Newark substation and Don Edwards San Francisco Bay NWR along Cushing Parkway.	Moderate
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	In the vicinity of the existing Newark substation and Don Edwards San Francisco Bay NWR along Cushing Parkway.	Moderate
Western bumblebee	<i>Bombus occidentalis</i>	SC	Suitable open grassland habitat with nectar-producing plant species in open space areas and the Don Edwards San Francisco Bay NWR.	Moderate
Crotch's bumblebee	<i>Bombus crotchii</i>	SC	Suitable open grassland habitat with nectar-producing plant species in open space areas and the Don Edwards San Francisco Bay NWR.	Moderate
Monarch butterfly	<i>Danaus plexippus</i>	FC	Flowering plants within the Proposed Project area.	Moderate
Large marble butterfly	<i>Euchloe ausonides ausonides</i>	N/A	Suitable grassland and open meadows occur along Coyote Creek and the Guadalupe River.	Moderate
Mammal Species				
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE, SE	Suitable saline or subsaline marsh habitats occur west of the proposed Albrae to Baylands 320 kV DC transmission line in the vicinity of Coyote Creek Lagoon, north of the San José-Santa Clara RWF wastewater disposal ponds, northwest of the proposed Baylands terminal, and west of the Survey Area in the Don Edwards San Francisco Bay NWR.	High
Avian Species				
Burrowing owl	<i>Athene cunicularia</i>	BCC, CSSC	Suitable native and non-native grassland habitat occurs within the area surrounding the existing Newark substation, Don Edwards San Francisco Bay NWR along Cushing Parkway, the Santa Clara Police Activities League (SCPAL) Bicycle Motor-Cross (BMX) Track and areas that used to be the Santa Clara golf and tennis club, and the proposed Baylands terminal.	Nesting: High Foraging: High
Western snowy plover	<i>Charadrius nivosus nivosus</i>	FT, CSSC	The diked salt evaporation ponds in the Don Edwards San Francisco Bay NWR south of Cushing Parkway and north and west of the proposed Baylands terminal site.	Nesting: High Foraging: High
Tricolored blackbird	<i>Agelaius tricolor</i>	BCC, ST	Within saline and subsaline marshland, annual grasslands, salt and sewage ponds, and the riparian areas of Coyote Creek and the Guadalupe River immediately adjacent to and up to a mile from the proposed Baylands terminal site.	Nesting: High Foraging: High

Table 5.4-3: Special-Status Wildlife				
Common Name	Scientific Name	Status	Suitable Habitat within the Proposed Project Area	Potential to Occur
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	BCC, CSSC	Within saline and subsaline marshland and salt and sewage ponds around Artesian and Mud Sloughs and the riparian areas of Coyote Creek occurs within and adjacent to the Survey Area.	Nesting: Moderate Foraging: Moderate
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	BCC, CSSC	Occurs north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon.	Nesting: Moderate Foraging: Moderate
California black rail	<i>Laterallus jamaicensis coturniculus</i>	ST, BCC, CFP	Occurs north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon.	Nesting: Moderate Foraging: Moderate
Yellow rail	<i>Coturnicops noveboracensis</i>	BCC, CSSC	Occurs north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon.	Nesting: Moderate Foraging: Moderate
White-tailed kite	<i>Elanus leucurus</i>	CFP, BCC	Occurs in the grasslands surrounding the proposed Baylands terminal site and in Don Edwards San Francisco Bay NWR near Cushing Parkway; and the native and non-native trees suitable for nesting.	Nesting: High Foraging: High
Golden eagle	<i>Aquila chrysaetos</i>	BGEP A, BCC, CFP	Occurs in grasslands surrounding the proposed Baylands terminal site, and native and non-native trees in the Survey Area.	Present Nesting: High Foraging: High
California clapper rail	<i>Rallus longirostris obsoletus</i>	FE, SE, CFP	Occurs north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon.	Nesting: Moderate Foraging: Moderate
Northern harrier	<i>Circus hudsonius</i>	CSSC, BCC	Occurs in the marsh areas of Artesian and Coyote Creek Sloughs and in the grasslands around the proposed Baylands terminal site and Don Edwards San Francisco Bay NWR near Cushing Parkway.	Nesting: Moderate Foraging: Moderate
American peregrine falcon	<i>Falco peregrinus anatum</i>	BCC	Occurs on towers and ground nesting on the salt evaporation pond dikes. An adult peregrine was observed perched and vocalizing on a tower near the existing Newark substation during 2023 field surveys.	Nesting: High Foraging: High
Great blue heron	<i>Ardea herodias</i>	BCC	Foraging habitat exists along the entire length of the Survey Area. Nesting habitat exists within the Survey Area along Coyote Creek.	Present Nesting: High Foraging: High
Allen's hummingbird	<i>Selasphorus sasin</i>	BCC	Within the riparian scrubland along Coyote Creek and the Guadalupe River.	Nesting: Moderate Foraging: Moderate

Table 5.4-3: Special-Status Wildlife				
Common Name	Scientific Name	Status	Suitable Habitat within the Proposed Project Area	Potential to Occur
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEP A, BCC, SE, CFP	Suitable breeding and foraging habitat is largely absent from the Survey Area but is located within the vicinity in San Francisco Bay. Suitable nesting habitat is sparse within the Survey Area and may include tall trees.	Present Nesting: Low Foraging: Low
Black tern	<i>Chlidonias niger</i>	BCC	Suitable habitat exists near the Artesian and Coyote Soughs.	Nesting: Moderate Foraging: Moderate
Bullock's oriole	<i>Icterus bullockii</i>	BCC	Suitable habitat is within the riparian area along Coyote Creek.	Nesting: Moderate Foraging: Moderate
California gull	<i>Larus californicus</i>	BCC, SWL	Suitable foraging habitat exists near the Artesian and Coyote Soughs.	Present Nesting: High Foraging: High
Clark's grebe	<i>Aechmophorus clarkii</i>	BCC	Suitable habitat is present along the creeks and rivers as well as within ponds and in the vicinity of Don Edwards San Francisco Bay NWR.	Nesting: Moderate Foraging: Moderate
Common yellowthroat	<i>Geothlypis trichas sinuosa</i>	BCC, CSSC	Suitable habitat occurs along Coyote Creek and in wetland areas.	Nesting: Moderate Foraging: Moderate
Marbled godwit	<i>Limosa fedoa</i>	BCC	Suitable foraging habitat exists near the Artesian and Coyote Soughs. Sightings have occurred from the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway.	Nesting: Moderate Foraging: Moderate
Nuttall's woodpecker	<i>Picoides [Dryobates] nuttallii</i>	BCC	Suitable habitat exists along Coyote Creek in hardwood woodland areas. There have been sightings in the vicinity of Coyote Creek, the San José-Santa Clara RWF, and in the vicinity of Disk Drive west of the proposed Baylands terminal site.	Nesting: Moderate Foraging: Moderate
Short-billed dowitcher	<i>Limnodromus griseus</i>	BCC	Suitable overwinter foraging habitat exists near the Artesian and Coyote Soughs, and in Don Edwards San Francisco Bay NWR.	Nesting: Low Foraging: Moderate
Western grebe	<i>Aechmophorus occidentalis</i>	BCC	Suitable habitat is present along the creeks and rivers in the Survey Area as well as within ponds and in the vicinity of Don Edwards San Francisco Bay NWR.	Nesting: Moderate Foraging: Moderate
Willet	<i>Tringa semipalmata</i>	BCC	Suitable foraging habitat exists near the Artesian and Coyote Soughs, Coyote Creek, and in the vicinity of other wetland habitat. There have been observations from Coyote Creek, San José-Santa Clara RWF, and Don	Present Nesting: High Foraging: High

Table 5.4-3: Special-Status Wildlife				
Common Name	Scientific Name	Status	Suitable Habitat within the Proposed Project Area	Potential to Occur
			Edwards San Francisco Bay NWR in the Survey Area during field surveys in 2024.	
Wrentit	<i>Chamaea fasciata</i>	BCC	Suitable habitat occurs within the scrub along the fringes of the grassland habitat between Coyote Creek and the Guadalupe River.	Nesting: High Foraging: Moderate
Reptile Species				
Western pond turtle	<i>Emys marmorata</i>	FC, CSSC	Suitable open water habitats exist along Coyote Creek, Agua Caliente Creek, Guadalupe River, and numerous ponds and lakes in the Survey Area. Additionally, brackish estuarine areas exist in the vicinity of Don Edwards San Francisco Bay NWR and the San Francisco Bay.	High
Amphibian Species				
California tiger salamander	<i>Hydromantes shastae</i>	FT, ST	Suitable ponds and vernal pools occur within the Don Edwards San Francisco Bay NWR, near Coyote Creek, and upland dispersal habitats exist in the vicinity.	Moderate
California red-legged frog	<i>Rana draytonii</i>	FT, ST	Suitable breeding habitats and upland dispersal habitats exist the vicinity of Coyote Creek and associated lakes and ponds, though these areas are in the vicinity of areas of high development.	Moderate
<p>State Status:</p> <ul style="list-style-type: none"> • CFP = California Fully Protected Species • CSSC = California Species of Special Concern • SC = State Candidate Species • SE = State Endangered • ST = State Threatened • SWL = State Watchlist Species <p>Federal Status:</p> <ul style="list-style-type: none"> • BGEPA = Bald and Golden Eagle Protection Act Protected Species • BCC = USFWS Bird of Conservation Concern • FC = Federal Candidate Species • FE = Federally Endangered • FT = Federally Threatened 				

5.4.1.6 Critical Habitat

The USFWS and National Marine Fisheries Service (NMFS) designate critical habitat for endangered and threatened species under the Endangered Species Act (ESA). Critical habitat is designated for the survival and recovery of Federally listed endangered or threatened species. Protected habitat includes areas for foraging, breeding, roosting, shelter, and movement or migration. There is USFWS-designated critical habitat for the Contra Costa goldfields, western snowy plover, and vernal pool tadpole shrimp located within the Don Edwards San Francisco Bay NWR in the northern portion of the Survey Area and extending into the Proposed Project impact area along Cushing Parkway (USFWS, 2023; **Figure 5.4-6, Critical Habitat Map**). There is also NMFS-designated critical habitat for the Central California Coast distinct population segment (DPS) of steelhead and for the Southern DPS of green sturgeon. The critical habitat for steelhead

occurs along Coyote Creek and the Guadalupe River within the Proposed Project area. The critical habitat for the green sturgeon occurs within the Proposed Project area along Coyote Creek, San Tomas Aquino Creek, Guadalupe River, near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, and along a tributary to Coyote Creek that passes under Cushing Parkway just east of the Fremont Boulevard and Cushing Parkway intersection. Additionally, some critical habitat for green sturgeon occurs within estuary areas associated with the San Francisco Bay (NMFS, 2024; **Figure 5.4-6**).

5.4.1.7 Native Wildlife Corridors and Nursery Sites

Native wildlife corridors are migration areas that connect suitable wildlife habitats in a region that would otherwise be fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features (e.g., canyon drainages, ridgelines, or areas with vegetation cover) provide corridors for wildlife travel. Impacts to wildlife corridors, such as human disturbance and development, can cause harm to migrating species, cause species to exceed population thresholds in fragmented patches, or prevent healthy gene flow between populations.

Wildlife species migrate through both upland areas and drainage areas, depending on the species. Species that need protective cover from predators (e.g., mammals, reptiles, and smaller avian species) tend to migrate along natural drainages and riparian corridors that have high vegetative cover. These areas also serve as important sources of food resources (e.g., insects and seeds) for these species.

The California Essential Habitat Connectivity (CEHC) Project maintains a Statewide Essential Habitat Connectivity Map, which broadly depicts large, relatively natural habitat blocks that support native biodiversity (Natural Landscape Blocks) and areas essential for ecological connectivity between them (Essential Connectivity Areas) (Spencer et al., 2010). There are no Essential Connectivity Areas within the Survey Area (Spencer et al., 2010; CDFW, 2024b). The riparian corridor associated with Coyote Creek is mapped as a potential riparian connection (Spencer et al., 2010; CDFW, 2024b). This area could act as a local migration corridor for various terrestrial species as well as a watercourse for aquatic species.

The Proposed Project lies within the Pacific Flyway—an important north-south migration corridor that runs along the Pacific coast of the Americas from Alaska to Patagonia, including all of North America lying west of the Rocky Mountains. The Pacific Flyway links breeding grounds to the north with wintering areas to the south and is used by many different species of birds during migration. Many birds (especially waterfowl) use locations in California's Sacramento Valley as a stopover point or wintering area. A majority of the Survey Area is located in the vicinity of significant fresh and saltwater resources that could be used by waterfowl and contain potential foraging areas during migration for a variety of avian species.

The portions of the Proposed Project area and Survey Area in the vicinity of the Don Edwards San Francisco Bay NWR and along Coyote Creek may provide potential wildlife nursery sites within hardwood woodland, annual grassland, wetland, estuary, and vernal pool habitat types.

The South Bay salt ponds are frequented by migrating and resident avian species and provide habitat for countless other plants and animals. The multi-agency South Bay Salt Pond Restoration Project aims to restore 15,100 acres of salt ponds in the vicinity of the Proposed Project to a rich mosaic of tidal wetlands and other habitats, more accurately mimicking the way these habitats used to be prior to the development of the salt ponds (Santa Clara Valley Open Space Authority,

2014). The Don Edwards San Francisco Bay NWR includes approximately 30,000 acres of open bay, salt pond, salt marsh, mudflat, upland, and vernal pool habitats in the southern portion of San Francisco Bay. These areas are used as nursery, migratory stop-over points, and as habitat of all types for a wide variety of plant and animal species, including special-status species.

5.4.1.8 Biological Resource Management Areas

The Don Edwards San Francisco Bay NWR is a 30,000-acre area managed by the USFWS as part of the San Francisco Bay NWR Complex. The Don Edwards San Francisco Bay NWR aims to protect and restore a resilient bayland ecosystem. This area is located generally to the west of the Proposed Project within the San Francisco Bay. It also has several areas that extend into or adjacent to the Proposed Project, including along both sides of Cushing Parkway and to the north of Los Esteros Road, west of the San José-Santa Clara RWF. A Comprehensive Conservation Plan (CCP) was developed by the USFWS to guide refuge management and address legal mandates, policies, goals, and National Environmental Policy Act (NEPA) compliance. Goals, objectives, and strategies outlined in the Don Edwards San Francisco Bay NWR CCP aim to protect and restore the refuge's tidal marsh, mudflat, open bay, vernal pool, grassland, and upland habitats and provide habitat for protected and sensitive species (USFWS, 2012). The San Francisco Bay is divided into three units: North Bay, Central Bay, and South Bay. The Proposed Project is located within the South Bay sub-region.

5.4.2 REGULATORY SETTING

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

5.4.2.1 Biological Resources Regulatory Setting

Federal

Federal Endangered Species Act of 1973

The ESA of 1973 (16 United States Code [U.S.C.] 1531–1544), as amended, protects Federally listed threatened and endangered species from unlawful take. “Take” under the ESA includes activities such as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The USFWS regulations define harm to include some type of “significant habitat modification or degradation.”

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703 et seq.) makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess; offer to or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any native migratory bird, part, nest, egg, or product. Nearly all North American avian species are classified as “migratory birds” and are subject to protection under this act, including all avian species that are discussed in this document.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668c), enacted in 1940 and as amended, prohibits anyone, without a permit issued by the USFWS, from “taking” bald and

golden eagles, including their parts, nests, or eggs. The BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." For the purposes of these guidelines, "disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available:

- injury to an eagle; or
- a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or
- nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Clean Water Act

The CWA (33 U.S.C. 1251 et seq.), as amended, provides a structure for regulating the discharge of pollutants into the "waters of the United States." Through this Act, the Environmental Protection Agency (EPA) is given the authority to implement pollution control programs. These include setting wastewater standards for industry and water quality standards for contaminants in surface waters. The discharge of any pollutant from a point source into navigable waters is illegal unless permitted under the Act's provisions.

Section 404 of the CWA regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other "waters of the United States." The United States Army Corps of Engineers (USACE) is the federal agency authorized to issue Section 404 permits for certain activities conducted in wetlands or other "waters of the United States". Section 401 of the CWA grants each state the right to ensure that the state's interests are protected in relation to any Federally permitted activity resulting in any discharge into navigable "waters within the State." In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing Section 401 of the CWA. For a proposed project that requires a USACE CWA Section 404 permit, the RWQCB must certify that such discharge complies with state water quality standards through a Water Quality Certification determination under Section 401 of the CWA.

The EPA and USACE have jurisdiction over wetlands and other "waters of the United States" that are subject to Section 404 of the CWA or Section 10 of the Rivers and Harbors Act.

State

California Endangered Species Act

The CDFW administers the California Endangered Species Act (CESA) of 1984, which prohibits the "taking" of listed species except as otherwise provided in state law. Section 86 of the CFGC defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Under certain circumstances, the CESA applies these take prohibitions to species petitioned for listing (State candidates). Pursuant to the requirements of CESA, state lead agencies (as defined under CEQA Public Resources Code Section 21067) are required to consult with the CDFW to ensure that any action or project is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Additionally, the CDFW encourages informal consultation on any proposed project that may impact a candidate species. The CESA requires the CDFW to maintain

a list of threatened and endangered species. The CDFW also maintains a list of candidates for listing under the CESA and of species of special concern (or watch list species).

State Fully Protected Species

CFGF Sections 3511, 4700, 5050, and 5515 designate 37 species of wildlife as Fully Protected in California. The classification of Fully Protected was the State's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles, birds, and mammals. Most Fully Protected species have also been listed as threatened or endangered species under ESA or CESA. Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the avian species for the protection of livestock.

California Fish and Game Code Section 1602

Under Section 1602 of the CFGF, CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. Section 1602 of the CFGF requires any person who proposes a project that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the CDFW before beginning the project. If the CDFW determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) is required.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (CFGF Section 1900-1913) prohibits the taking, possessing, or sale within the State of any plant listed by CDFW as rare, threatened, or endangered. An exception to this prohibition allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW at least ten days prior to the initiation of activities that would destroy them. The NPPA exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way."

Porter-Cologne Water Quality Control Act

The Porter-Cologne Quality Control Act grants the SWRCB and the RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. Any person proposing to discharge waste to "waters of the State" within any region must file a report of waste discharge with the appropriate regional board.

California Migratory Bird Protection Act

Assembly Bill (AB) 454 is an act to amend, repeal, and add Section 3513 of the CFGF, relating to migratory birds. This act was approved by the Governor on September 27, 2019. This AB amends Section 3513 to read: "It is unlawful to take or possess any migratory nongame bird as designated in the Federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.) before January

1, 2017, any additional migratory nongame bird that may be designated in that federal act after that date, or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act before January 1, 2017, or subsequent rules or regulations adopted pursuant to that federal act, unless those rules or regulations are inconsistent with this code.”

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) is a California state commission dedicated to the protection, enhancement, and responsible use of the San Francisco Bay. Under the McAteer-Petris Act, BCDC has authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within its jurisdiction (San Francisco BCDC, 2020). The San Francisco Bay Plan was originally completed and adopted by the BCDC in 1968 and was transmitted to the California legislature and the Governor in 1969. BCDC is responsible for implementing and updating the San Francisco Bay Plan, which provides policy guidance for development within its jurisdiction and delineates Priority Use Areas that should be reserved for certain land uses on the San Francisco Bay shoreline. Priority Use Areas include ports, water-related industry, water-oriented recreation, airports, and wildlife refuges. The San Francisco Bay Plan outlines major conclusions and policies, which focus on guiding shoreline development and protecting and enhancing ecosystems that provide aquatic habitat. Major plan proposals include maintaining wildlife refuges such as the Don Edwards San Francisco Bay NWR.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters” (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local biological resources-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC (“LS Power”) is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following goals and policies from the City of Fremont General Plan (City of Fremont, 2011) are relevant to biological resources and have been provided for informational purposes.

- Goal 7-1** **Biological Resources.** A thriving natural environment with protected habitat that enhances the biological value of the City and preserves the open space frame.

- Policy 7-1.1** **Preservation of Natural Habitat.** Preserve and protect fish, wildlife, and plant species and their habitats including wetlands, creeks, lakes, ponds, saltwater bodies, and other riparian areas. Maintain these areas for their critical biological values and to help improve water quality.
- Policy 7-1.2** **Protection of Species.** Preserve and protect rare, threatened, endangered, and candidate species and their habitats consistent with State and Federal law.
- Policy 7-1.5** **Promotion of Interagency Coordination.** Promote interagency coordination for the protection and preservation of biological resources.
- Policy 7-1.7** **Mitigate Development Impacts.** Mitigate the impacts of development on the natural environment to the extent possible through sound planning, design, and management of development projects.
- Policy 7-1.8** **Urban Forest.** Promote and protect the City's urban forest and maintain healthy tree resources within the City.
- Goal 7-2** **Water Resources.** A protected water resource system that offers natural habitat and enhances the biological value of the City.
- Policy 7-2.1** **Preservation of Water Resources.** Water resources such as the Niles Cone Groundwater Basin, wetlands, flood plains, recharge zones, riparian areas, open space, and native habitats should be identified, preserved and restored as valued assets for flood protection, water quality improvement, groundwater recharge, habitat, and overall long term water resource sustainability.
- Goal 7-3** **Water Quality.** High quality water protected from pollutants and managed to improve the quality of the San Francisco Bay and groundwater resources.
- Policy 7-3.1** **Protect and Improve Water Quality.** Protect and improve water quality in all Fremont's creeks, streams, water courses, and water bodies.

City of Fremont Municipal Code

The City of Fremont Municipal Code Section 12.30.070 Streets, Sidewalks and Public Property, Maintenance of Street Trees and Sidewalks provides regulation for the removal of street trees. Section 12.30.080 outlines the criteria for removal permit, which applies to the nonemergency removal of street trees. In accordance with Section 12.30.120 Application for street tree permit (City of Fremont, 2024):

- (a) A person desiring to obtain a permit to plant, prune, or remove a street tree must submit a complete application in compliance with Section 12.30.130 to the city manager and pay applicable fees as established by the city council.
- (b) A person doing business as a public utility, subject to the jurisdiction of the State Public Utilities Commission, and any public agency providing utility service may apply as set forth

in subsection (a) of this section for a permit valid for six months from the date of issuance permitting such person to trim, brace, remove, or perform other such acts with respect to trees or shrubs growing adjacent to the public streets of the city or which grow upon private property to the extent that they encroach upon such public streets, as may be necessary to comply with the safety regulations of such commission and as may be necessary to maintain the safe operations of its business. (Ord. 11-2010 § 5, 5-25-10. 1990 Code § 6-2111.)

In accordance with the Municipal Code, only an approved City of Fremont tree contractor can apply for a Tree Permit and perform maintenance on, remove, and/or replace street trees.

City of Milpitas General Plan

The following goals and policies from the City of Milpitas General Plan (City of Milpitas, 2021) are relevant to biological resources and have been provided for informational purposes.

- Goal CON-2** Protect and enhance native trees and vegetation throughout the City.
- Policy CON 2-1** Conserve existing native trees and vegetation where possible and integrate regionally native trees and plant species into development and infrastructure projects where appropriate.
- Policy CON 2-3** Avoid removal of large, mature trees that provide wildlife habitat, visual screening, or contribute to the visual quality of the environment through appropriate project design and building siting. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.
- Policy CON 2-5** Facilitate the preservation of existing trees, the planting of additional street trees, and the replanting of trees lost through disease, new construction, or by other means.
- Policy CON 2-7** Facilitate planting and retention of street trees in landscaped street medians and along City streets.
- Goal CON-3** Protect and maintain waterways and other sensitive habitat for plant and animal species throughout Milpitas and to protect the health of the San Francisco Bay.
- Policy CON 3-1** Preserve and enhance biological communities that contribute to Milpitas' and the region's biodiversity including, but not limited to, wetlands, riparian areas, and aquatic habitat.
- Policy CON 3-2** Preserve and enhance the aesthetic and habitat value of riparian corridors including, but not limited to Coyote, Berryessa, and Penitencia Creeks.

- Policy CON 3-3** Limit the disturbance of natural water bodies and drainage systems in Milpitas by conserving natural open space areas, protecting channels, and minimizing the impacts and pollutants from stormwater and urban runoff.
- Policy CON 3-5** Work with the Santa Clara Valley Water District (SCVWD or “Valley Water”) to preserve wetlands, riparian corridors, and buffer zones in Milpitas by continuing to require that new development follow the “Guidelines and Standards for Land Use Near Streams” to protect streams and riparian habitats. Encourage the use of Green Stormwater Infrastructure such as water quality wetlands, bioretention swales, watershed-scale retrofits, and other low-impact development techniques, etc., consistent with the City’s Green Stormwater Infrastructure Plan and where such measures are likely to be effective and technically and economically feasible.

City of Milpitas Municipal Code

The City of Milpitas Municipal Code Ordinance 201.5, Section 7 requires a permit to be obtained to remove a protected tree on specified property types once it reaches a certain size in circumference. A permit is required to remove a protected tree of any size on residential commercial/industrial, zoning/subdivision, and vacant lots. Trees planted in the public right-of-way (ROW) and tree planting easements conform to the City street tree planting standard detail. Street trees are located in the public ROW between the curb and sidewalk. The City’s Public Works Department personnel are responsible for removing and pruning street trees. A service request must be submitted to the City’s Public Works Department to prune or remove a City street tree (City of Milpitas, 2024).

City of San José General Plan

The following goals and policies from the City of San José General Plan (City of San José, 2024a) are relevant to biological resources and have been provided for informational purposes.

- Goal MS-8** **Environmental Stewardship.** Establish San José as a local, regional, and statewide model for responsible management of resources.
- Policy MS-10.8** Minimize vegetation removal required for fire prevention. Require alternative to discing such as mowing to the extent feasible. Where vegetation removal is required for property maintenance purposes, encourage alternatives that limit the exposure of bare soil.
- Goal MS-21** **Community Forest.** Preserve and protect existing trees and increase planting of new trees within San José to create and maintain a thriving Community Forest that contributes to the City’s quality of life, its sense of community, and its economic and environmental well-being.
- Policy MS-21.1** Manage the Community Forest to achieve San José’s environmental goals for water and energy conservation, wildlife habitat preservation, stormwater retention, heat reduction in urban areas, energy conservation, and the removal of carbon dioxide from the atmosphere.

- Policy MS-21.4** Encourage the maintenance of mature trees, especially natives, on public and private property as an integral part of the community forest. Prior to allowing the removal of any mature tree, pursue all reasonable measures to preserve it.
- Policy MS-21.5** As part of the development review process, preserve protected trees (as defined by the Municipal Code) and other significant trees. Avoid any adverse effect on the health and longevity of protected or other significant trees through appropriate design measures and construction practices. Special priority should be given to the preservation of native oaks and native sycamores. When tree preservation is not feasible, include appropriate tree replacement, both in number and spread of canopy.
- Policy MS-21.6** As a condition of new development, require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies, or guidelines.
- Policy MS-21.7** Manage infrastructure to ensure that the placement and maintenance of street trees, streetlights, signs, and other infrastructure assets are integrated. Give priority to tree placement in designing or modifying streets.
- Policy MS-21.9** Where urban development occurs adjacent to natural plant communities (e.g., oak woodland, riparian forest), landscaping plantings shall incorporate tree species native to the area and propagated from local sources (generally from within 5-10 miles and preferably from within the same watershed).
- Policy MS-21.10** Prohibit London plane trees from being planted in the Coyote Planning Area, which is located near the most significant stands of sycamore alluvial woodland in the City. Planting of this species is discouraged elsewhere, particularly near riparian areas. Prohibit holly-leaved oaks from being planted in areas containing stands of native oaks or in proximity to native oak woodland habitat.
- Goal ER-1** **Grassland, Oak Woodlands, Chaparral, and Coastal Scrub.** Preserve, protect, and restore the ecological integrity and scenic characteristics of grasslands, oak woodlands, chaparral, and coastal scrub in hillside areas.
- Policy ER-1.3** Cooperate with other agencies in the preservation and management of native hillside vegetation.
- Policy ER-1.4** Minimize the removal of ecologically valuable vegetation such as serpentine and non-serpentine grassland, oak woodlands, chaparral, and coastal scrub during development and grading for project within the City.
- Policy ER-1.5** Preserve and protect oak woodlands and individual oak trees. Any loss of oak woodland and/or native oak trees must be fully mitigated.

- Goal ER-2** **Riparian Corridors.** Preserve, protect, and restore the City's riparian resources in an environmentally responsible manner to protect them for habitat value and recreational purposes.
- Policy ER-2.1** Ensure that new public and private development adjacent to riparian corridors in San José are consistent with the provisions of the City's Riparian Corridor Policy Study and any adopted Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP).
- Policy ER-2.2** Ensure that a 100-foot setback from riparian habitat is the standard to be achieved in all but a limited number of instances, only where no significant environmental impacts would occur.
- Policy ER-2.3** Design new development to protect adjacent riparian corridors from encroachment of lighting, exotic landscaping, noise, and toxic substances into the riparian zone.
- Policy ER-2.4** When disturbances to riparian corridors cannot be avoided, implement appropriate measures to restore, and/or mitigate damage and allow for fish passage during construction.
- Policy ER-2.5** Restore riparian habitat through native plant restoration and removal of nonnative/invasive plants along riparian corridors and adjacent areas.
- Goal ER-4** **Special-Status Plants and Animals.** Preserve, manage, and restore habitat suitable for special-status species, including threatened and endangered species.
- Policy ER-4.1** Preserve and restore, to the greatest extent feasible, habitat areas that support special-status species. Avoid development in such habitats unless no feasible alternatives exist, and mitigation is provided of equivalent value.
- Policy ER-4.3** Prohibit planting of invasive nonnative plant species in natural habitats that support special-status species.
- Policy ER-4.4** Require that development projects incorporate mitigation measures to avoid and minimize impacts to individuals of special-status species.
- Goal ER-5** **Migratory Birds.** Protect migratory birds from injury or mortality.
- Policy ER-5.1** Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.
- Policy ER-5.2** Require that development projects incorporate measures to avoid impacts to nesting migratory birds.

- Goal ER-6** **Urban Natural Interface.** Minimize adverse effects of urbanization on natural lands adjacent to the City's developed areas.
- Policy ER-6.3** Employ low-glare lighting in areas developed adjacent to natural areas, including riparian woodlands. Any high-intensity lighting used near natural areas will be placed as close to the ground as possible and directed downward or away from natural areas.
- Policy ER-6.7** Include barriers to animal movement within new development and, when possible, within existing development, to prevent movement of animals (e.g., pets and wildlife) between developed areas and natural habitat areas where such barriers will help to protect sensitive species.
- Policy ER-6.8** Design and construct development to avoid changes in drainage patterns across adjacent natural areas and for adjacent native trees, such as oaks.
- Goal ER-7** **Wildlife Movement.** Minimize adverse effects of future development on wildlife movement and remove or reduce existing impediments to wildlife movement.
- Policy ER-7.3** Where new road crossings of streams are constructed, or existing culverts are replaced or improved, design them to allow movement of aquatic species present in any watercourse crossed by the road. Use clear-span bridges in place of culverts where feasible.

City of San José Municipal Code

Street trees are those located in the public ROW between the curb and sidewalk; in some locations, the public ROW may be up to 12 feet from the curb. The City's Department of Transportation (DOT) provides permits for pruning street trees and oversees their removal. It is illegal to prune or remove a street tree without a permit (City of San José, 2024b).

City of Santa Clara General Plan

The following goals and policies from the City of Santa Clara General Plan (City of Santa Clara, 2010) are relevant to biological resources and have been provided for informational purposes.

- Policy 5.3.1-P10** Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.
- Goal 5.10.1-G1** The protection of fish, wildlife, and their habitats, including rare and endangered species.
- Goal 5.10.1-G2** Conservation and restoration of riparian vegetation and habitat.

- 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.
- Policy 5.10.1-P2** Work with Santa Clara Valley Water District and require that new development follow the "Guidelines and Standards for Lands Near Streams" to protect streams and riparian habitats.
- Policy 5.10.1-P4** Protect all healthy cedars, redwoods, oaks, olives, bay laurel, and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way.
- Policy 5.10.1-P5** Encourage enhancement of land adjacent to creeks in order to foster the reinstatement of natural riparian corridors where possible.
- Policy 5.10.1-P11** Require use of native plants and wildlife-compatible non-native plants, when feasible, for landscaping on City property.
- Policy 5.10.1-P12** Encourage property owners and landscapers to use native plants and wildlife-compatible non-native plants, when feasible.
- Policy 5.10.4-P5** Prohibit new development that would reduce water quality below acceptable State and local standards.

City of Santa Clara Municipal Code

The City of Santa Clara Municipal Code Section 12.35.050 provides the following in regards to City tree planting, maintenance, and removal that is relevant to the Proposed Project (City of Santa Clara, 2023).

- (a) No person shall plant or cause to be planted any tree or plant in a public place, apart from park strip landscaping as indicated in Santa Clara City Code (SCCC) 12.35.060.
- (b) The City shall have jurisdiction and control of the planting and placement of all city trees, and shall have supervision, direction, and control of the structural pruning of the canopy, removal determination, relocation, and replacement thereof. Planting and maintenance shall conform to American National Standards Institute (ANSI) A300 standards and follow all tree care best management practices published by International Society of Arboriculture (ISA).
- (c) Property owners are responsible for watering city trees within their property, clearing the sidewalk of city tree debris, and removing all debris associated with the normal growth cycle of city trees including, but not limited to, fallen leaves and needles, small fallen branches, fruit debris, and seeds.
- (d) Property owners are responsible for notifying the City of hazardous or damaged city trees within their property, and in the park strip in front of their property.

- (e) The City shall maintain criteria for evaluating city tree removals that may be updated from time to time.
- (h) The City may authorize the pruning or removal of a city tree by a property owner, at the property owner's own expense, if the removal or pruning meets the established criteria but has been deemed a lower priority for action by the City. The City's authorization of such action by a property owner is conditioned upon the property owner first obtaining a permit from the City. All pruning and removal work must conform to ANSI A300 standards and follow all tree care best management practices published by ISA.
- (i) If a vacant site where a street tree was removed is suitable to support a new street tree, the site shall be replanted with a suitable tree species from the City tree list. (Ord. 2036 § 2, 12-7-21).

5.4.2.2 Habitat Conservation Plan

The Proposed Project lies within the Pacific Gas and Electric Company (PG&E) San Francisco Bay Area Operations and Maintenance Habitat Conservation Plan ("Bay Area O&M HCP") (PG&E, 2017), the Santa Clara Valley Habitat Conservation Plan (HCP) (County of Santa Clara et al., 2012), the Don Edwards San Francisco Bay NWR CCP (USFWS, 2012), and the Alameda County Resource Conservation District (ACRCD) Voluntary Local Program (VLP) (ACRCD, 2012). The area covered for each of these conservation plans is depicted on **Figure 5.4-7, Conservation Plan Areas**.

PG&E's San Francisco Bay Area Operations and Maintenance Habitat Conservation Plan

PG&E's Bay Area O&M HCP for their San Francisco Bay Area activities covers 18 wildlife and 13 plant species, and the purpose is to enable PG&E to continue to conduct current and future O&M activities within the nine counties of the San Francisco Bay Area while avoiding, minimizing, and mitigating for temporary and permanent impacts on threatened- and endangered-species habitat that could result from PG&E's ongoing O&M activities (PG&E, 2017). LS Power is not a stakeholder of PG&E's Bay Area O&M HCP. Furthermore, the Bay Area O&M HCP does not cover the type of activities that are associated with the Proposed Project.

Santa Clara Valley Habitat Conservation Plan

The Cities of Gilroy, Morgan Hill, and San José, the County of Santa Clara, the Santa Clara Valley Transportation Authority, and the SCVWD, in association with the USFWS and the CDFW, conducted a collaborative process to prepare and implement an HCP known as the Santa Clara Valley HCP. The Santa Clara Valley HCP is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth on approximately 500,000 acres, or two-thirds of southern Santa Clara County. The Santa Clara Valley Habitat Agency implements the plan. The Santa Clara HCP is a long-range plan to protect and enhance ecological diversity and function within a large section of the County of Santa Clara, while allowing for currently planned development and growth. This HCP provides a framework for the protection of natural resources while streamlining and improving the environmental permitting process for both private and public development, including activities such as road, water, and other infrastructure construction and maintenance work. The Santa Clara Valley HCP is intended to provide environmental benefit by resulting in the creation of a number of new habitats reserves larger in scale and more ecologically valuable than the fragmented, piecemeal habitats yielded

by mitigating projects on an individual basis.

The Proposed Project is located within the permit area for the Santa Clara Valley HCP. The Santa Clara Valley HCP covers public and private utility activities within the planning limits of urban growth (as defined by the HCP) such as those that are associated with the Proposed Project. A majority of the Proposed Project occurs within the planning limits of urban growth and may be included as covered activities under this HCP. The Santa Clara Valley HCP requires permits for project-specific impacts on Santa Clara Valley HCP-listed species and removes the need to obtain approvals from the wildlife agencies and reduces the number and scope of required biological studies. The Santa Clara Valley HCP covers public and private utility activities, but coverage of the Proposed Project has not been confirmed. LS Power would confirm whether the Proposed Project is covered by the Santa Clara Valley HCP as the Proposed Project could potentially opt into and be covered by this HCP.

Don Edwards San Francisco Bay National Wildlife Refuge Comprehensive Conservation Plan

The USFWS manages the National Wildlife Refuge System and develops CCPs that contain refuge-specific programs for conserving natural resources, stewarding wildlife habitat, and engaging the community in conservation (USFWS, 2012). The National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd) requires that all refuges be managed in accordance with an approved CCP by 2012. The Don Edwards San Francisco Bay NWR CCP and accompanying Environmental Assessment (EA) guide refuge management for 15 years and address service legal mandates, policies, goals, and National Environmental Policy Act (NEPA) compliance. As discussed therein, refuges are guided by the purposes of the individual refuge, the mission and goals of the Refuge System, USFWS policy, laws, executive orders (EOs), treaties, interstate compacts, and policies pertaining to the conservation and protection of natural and cultural resources. As described in the CCP's Compatibility Policy, lands within the Refuge System are different from other multiple use public lands in that they are closed to all public uses unless deemed compatible and formally allowed.

Goals, objectives, and strategies outlined in the Don Edwards San Francisco Bay NWR CCP aim for the USFWS to protect and restore the refuge's tidal marsh, mudflat, open bay, vernal pool, grassland, and upland habitats and provide habitat for protected and sensitive species. Objectives provide implementation measures to achieve the CCP's goals to protect and contribute to the recovery of species, conserve, enhance, and create habitats to support migratory birds and native flora and fauna, and increase community stewardship and environmental education. Portions of the Proposed Project would be located adjacent to the Don Edwards San Francisco Bay NWR. The Don Edwards San Francisco Bay NWR CCP does not provide regulations or take authorization for private development or utility infrastructure projects. Therefore, the CCP is provided for informational purposes.

Alameda County Resource Conservation District Voluntary Local Program

The ACRCDD developed the Alameda County VLP in collaboration with CDFW and the Natural Resources Conservation Service to encourage farmers and ranchers to voluntarily enhance, restore, and maintain habitat for sensitive, candidate, threatened, and endangered species that benefit from habitat maintenance and agricultural activities (ACRCDD, 2012). The program was authorized by Senate Bill 231 (Costa, 1997), which required CDFW, in cooperation with the California Department of Food and Agriculture (CDFA), to adopt regulations to create locally

designed voluntary programs for agricultural activities on farms or ranches that encourage habitat conservation and minimize take of threatened, endangered, and candidate species, and wildlife in general. The Alameda County VLP provides take authorization, under CESA, to participating farmers and ranchers while following the management practices for two species listed as threatened in California, the California tiger salamander (CTS) and the Alameda whipsnake. The VLP covers the entire County of Alameda but primarily serves residents conducting routine and on-going agricultural activities in the eastern, rural portion of the County of Alameda and within properties adjoining or encompassing creeks in rural-urban interface areas. The VLP also excludes projects in salt marsh and estuary habitats in the County's bayfront area, including land and waterways under BCDC jurisdiction. As mapped by the VLP Land Use figure, the Proposed Project would be located within Urban and Buildup Land and Other (rural development, mined land, etc.) in the County of Alameda and would not be eligible for participation in the VLP. However, this program is discussed for informational purposes.

5.4.3 IMPACT QUESTIONS

5.4.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to biological resources come from the CEQA, Appendix G, Environmental Checklist. According to the CEQA Checklist, a project may cause a potentially significant impact if it would:

- 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; or
- 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; or
- Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; or
- 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; or
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.4.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), the following additional CEQA impact question is required for biological resources. Would the project:

- Create a substantial collision or electrocution risk for birds or bats?

5.4.4 IMPACT ANALYSIS

5.4.4.1 Biological Resources Impact Analysis

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 Impact. The Proposed Project would result in approximately 15.65 acres of permanent disturbance and approximately 238.65 acres of temporary disturbance for the proposed terminal sites and transmission lines project features outside of PG&E and SVP property. Impacts to vegetation communities within PG&E and SVP property are discussed further below. Impacts associated with the proposed terminal sites, transmission line alignments, and staging areas are broken down by habitat type in **Table 5.4-4, Impacts to Vegetation Communities by Location (for non-PG&E/SVP-owned Property)** and shown in **Figure 5.4-8, Biological Impact Area Map**.

Table 5.4-4: Impacts to Vegetation Communities by Location (for non-PG&E/SVP-owned Property)			
Location of Temporary Impacts	Temporary Impact (Acreage)	Location of Permanent Impacts	Permanent Impact (Acreage)
Annual Grassland			
Overhead Work Areas	2.70	Baylands Terminal	8.60
Underground Work Areas	1.25	Overhead Structures	0.03
Staging Areas	77.59	N/A	0.00
Temporary Subtotal	81.53	Permanent Subtotal	8.63
Riparian			
Overhead Work Areas	0.07	N/A	<0.01
Underground Work Areas	0.01	N/A	0.00
Staging Areas	0.04	N/A	0.00
Temporary Subtotal	0.12	Permanent Subtotal	<0.01
Disturbed/Urban			
Overhead Work Areas	5.21	Overhead Structures	0.05
Underground Work Areas	85.98	Albrae Terminal	6.11
Staging Areas	39.52	Baylands Terminal	0.60
Albrae Terminal	19.29	AC-3 Access Road	0.24
Temporary Subtotal	150.00	Permanent Subtotal	7.0
Wastewater Treatment Pond			
Overhead Work Areas	6.69	Overhead Structures	0.02
Wetland			
Overhead Work Areas	0.21	N/A	0.00

Table 5.4-4: Impacts to Vegetation Communities by Location (for non-PG&E/SVP-owned Property)			
Location of Temporary Impacts	Temporary Impact (Acreage)	Location of Permanent Impacts	Permanent Impact (Acreage)
Underground Work Areas	0.10	N/A	0.00
Temporary Subtotal	0.31	Permanent Subtotal	0.00
Temporary Total	238.65	Permanent Total	15.65
¹ The total acreage of the Survey Area in this table does not include the area for water within the Survey Area (as open water is not a vegetation community). Therefore, the total acreage of the Survey Area in this table does not match other tables in this Proponent's Environmental Assessment (PEA) that include open water. Note: Totals in this table may not sum accurately due to rounding.			

As described in **Applicant Proposed Measure (APM) BIO-1, Restoration of Disturbed Areas**, LS Power would restore all sensitive areas that are temporarily disturbed by Proposed Project activities to approximate preconstruction conditions. Restoration could include recontouring, reseeding, and planting replacement vegetation, as appropriate. Temporarily disturbed areas would be revegetated with appropriate weed-free native seed mixes or species that are characteristic of the plant community that was disturbed. All areas would be carefully assessed to be sure all residual construction debris and waste is removed and transported off-site to an approved disposal facility. LS Power would conduct a final inspection to ensure that cleanup activities are successfully completed as required. Areas that are disturbed by grading, auguring, or equipment movement would be restored to their original contours and drainage patterns. Work areas would be recompacted, and salvaged topsoil materials would be respread following recontouring to aid in restoration of temporarily disturbed areas. Additionally, the Proposed Project would be required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that would outline an approach for the use of erosion control measures, such as stormwater Best Management Practices (BMPs) and groundwater BMPs.

Special-Status Plant Species

Direct impacts to special-status plant species and sensitive vegetation communities could include destruction of individual plants, and indirect impacts could include loss of areas that contain suitable microhabitat conditions for special-status plants and introduction of nonnative weed species that may out-compete these plants. **Table 5.4-4** lists the total area of temporary and permanent impact by vegetation community associated with implementation of the Proposed Project.

Thirteen special-status plant species have the potential to occur within the Survey Area, but none are expected to occur within temporary or permanent impact areas. Most of these plants are likely to occur within wetland, riparian, vernal pool, or estuary areas (with the exception of Congdon's tarplant, lesser saltscale, San Joaquin spearscale, Contra Costa goldfields, and saline clover, which can occur in grassland habitats as well); all of which are considered sensitive vegetation communities. Small portions of Coyote Creek and its associated riparian habitat is expected to be impacted by construction, likewise for a small portion of the Guadalupe River and its associated riparian habitat north of the State Route (SR)-237 overpass. This would likely impact an area of riparian and wetland habitat associated with Coyote Creek and the Guadalupe River, depending on construction methods (a total of approximately 0.12 acre of riparian habitat and 0.31 acre of wetlands is anticipated to be temporarily impacted). Additionally, disturbed habitat associated with

the Don Edwards San Francisco Bay NWR alongside Cushing Parkway would be mowed/maintained for Proposed Project implementation would also be impacted by construction. Impacts at the Cushing Parkway bridge crossing would depend on whether the proposed transmission line is attached to the underside of the bridge or trenched adjacent to the bridge within a 10-foot utility easement (and 30-foot operational and maintenance utility easement). Either way, the Proposed Project would result in temporary impacts to this area within the easement. It is less likely that sensitive plant species would be located in this area due to its disturbed nature, but focused rare plant surveys would still be conducted during appropriate blooming periods (February 1 through June 15) (**APM BIO-2, Rare Plant Surveys**). If sensitive plant species within the Don Edwards San Francisco Bay NWR along Cushing Parkway would be impacted by the Proposed Project, LS Power would coordinate with the USFWS to determine if applicable permits would be required (**APM BIO-3, Preconstruction Sweeps**). There are no CDFW-listed species that were analyzed, but CNPS species would require surveys (**APM BIO-2**) and potentially mitigation if they cannot be avoided. The Proposed Project would cause the loss of sensitive vegetation communities and could cause a loss of areas that contain suitable microhabitat conditions for the special-status plants. Focused surveys for rare plants would be conducted (February 1 through June 15) (**APM BIO-2**), and any populations that are found would be avoided to the extent practicable (**APMs BIO-2, BIO-3, and BIO-4, Sensitive Area Demarcation**). Any riparian habitat, wetlands, vernal pools, and estuary areas and other water features would be avoided to the extent practicable by construction activities (**APM BIO-4**); preconstruction sweeps would occur within disturbance areas (**APM BIO-3**); and vehicles would be cleaned prior to arriving on-site in sensitive natural areas (**APM BIO-5, Vehicle Cleaning Prior to Entering Natural Areas**), limiting the potential spread of noxious weeds within the Proposed Project area. Therefore, with the implementation of APMs, direct and indirect impacts on special-status plant species and sensitive vegetation communities would be less than significant.

Special-Status Wildlife Species

Several special-status wildlife species were observed during habitat assessment and jurisdictional waters surveys: Bald eagle (BGEPA-protected, State-endangered), peregrine falcon, red-tailed hawk, turkey vulture, (raptors; MBTA and CFGC protected), California gull, willet, and great blue heron (Birds of Conservation Concern [BCC] and MBTA protected).

The current level of disturbance and human activity associated with the Cities of Fremont, Milpitas, San José, and Santa Clara is very high within a majority of the Proposed Project impact areas. Even in areas that contain native habitats, such as along Coyote Creek near the San José-Santa Clara RWF, along Fremont Boulevard, the Don Edwards San Francisco Bay NWR alongside Cushing Parkway and Los Esteros Road, in the vicinity of the proposed Baylands terminal site, and the Guadalupe River and associated riparian habitat north of SR-237, disturbance and human activity in the immediate vicinity is presently at a high level. A small amount of direct impacts to special-status species, such as potential for direct mortality, destruction of nesting or breeding habitat, and loss of foraging habitat may occur in association with the construction of the Proposed Project in the vicinity of the above natural habitat areas. The temporary nature of the construction of the Proposed Project would only slightly increase the levels of disturbance and human activity that may indirectly impact wildlife species. The level of disturbance associated with long-term operation would be low due to the majority of the proposed transmission lines being underground and the current level of disturbance in the area associated with overhead portions, including other overhead transmission lines in the vicinity. Additionally, because a majority of the Proposed Project is expected to be constructed within existing disturbed roadways, and temporary work areas are also expected to be primarily within previously disturbed

habitats, the new disturbance is expected to be minimal. There is a large amount of similar habitat in the vicinity of Coyote Creek and the Don Edwards San Francisco Bay NWR, therefore, temporary impacts to approximately 88.65 acres and permanent loss of approximately 8.66 acres of potentially suitable habitat (annual grassland, wastewater treatment ponds, riparian, and wetlands habitat types) would be less than significant. See **Table 5.4-4** for impact numbers to each vegetation community. Additionally, a majority of the temporary impacts are associated with the 11 staging areas, most of which are not expected to be used by construction.

Salt Marsh Harvest Mouse

Potential salt marsh harvest mouse (SMHM) habitat is shown on **Figure 5.4-9, Potentially Impacted Species Habitat** and is located west of the proposed alignment in the vicinity of Coyote Creek Lagoon, north of the San José-Santa Clara RWF wastewater disposal ponds, northwest of the proposed Baylands terminal, and west of the Survey Area in the Don Edwards San Francisco Bay NWR (**Appendix 5.4-B**). Direct impacts to salt marsh harvest mouse could result from potential vehicle strikes during Proposed Project construction and operation if individuals disperse from their typical habitat, destruction of vegetation during clearing activities, and entrapment in excavations. The coastal salt marsh habitat in which this species occurs would not be directly impacted, but construction would take place in some areas that are adjacent to potential coastal salt marsh habitat. These potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6, Vehicle Speed Limits; BIO-7, SMHM Surveys; BIO-8, Excavation Wildlife Safety BMPs; BIO-9, Workers Environmental Awareness Program (WEAP) Training; BIO-3; BIO-4; and BIO-1**, as further discussed below.

A majority of the impacts would be limited to previously disturbed roadways and grassland habitat, and any temporary impacts would be restored (**APM BIO-1**). Protocol surveys and preconstruction sweeps (**APMs BIO-3 and BIO-7**) would identify any suitable habitat in which SMHM could occur that are close to Proposed Project construction areas. Because protocol surveys using standard guidelines are not limited to a particular survey window, surveys can be conducted year-round by a USFWS-approved biologist.

If sensitive coastal salt marsh habitat is identified within wetland habitat types, it would be clearly marked and avoided by Proposed Project construction activities to the extent practicable (**APMs BIO-4 and BIO-7**). Coastal salt marsh habitat occurs in close vicinity to the Survey Area within wetland habitat types, but no impacts to coastal salt marsh are expected to occur. A qualified biological monitor would be present during construction activities that would occur within 500 feet of SMHM habitat, including the area west of Coyote Creek and south of Staging Area 5 and any other areas within 500 feet of identified habitat (**APM BIO-7**). The number of vehicles during construction of the Proposed Project would be substantially higher than during operation, but the number of vehicles associated with construction would not substantially increase the total number of public vehicles that move through these areas during any given time period. Throughout construction and operation, vehicles would stay on established roadways, and the speed limit would be 15 miles per hour (mph) (**APM BIO-6**), minimizing the risk of vehicle strikes. SMHM would likely avoid the construction area during construction activities due to the increased noise and activity. All trenches and holes that could create an entrapment hazard for SMHM would be covered or have wildlife escape ramps installed (**APM BIO-8**) to minimize the potential for mortality due to entrapment. If SMHM habitat cannot be avoided by construction activities, CDFW and USFWS would be consulted, and any additional necessary permit(s) or authorizations would be obtained prior to disturbance.

Indirect impacts to SMHM during construction could include decreased suitability of habitat in the vicinity of the Proposed Project caused by factors such as increased noise from construction activities, vehicles, and O&M activities, as well as increased human activity. Impacts from lighting are not anticipated as nighttime construction is not proposed near SMHM habitat. Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of **APMs BIO-9** and **BIO-1**. Noise from construction activities can affect wildlife in multiple ways, such as depressing breeding success by acoustical masking and interfering with hunting activities. Construction activities could disrupt breeding and foraging activities. Noise during construction activities in the vicinity of potentially suitable areas is expected to be short-term in nature and minimal and would be even lower during operation. Additionally, the area is already heavily populated and has a high background noise level to begin with. A WEAP training would be administered to all workers that would educate them on the potential for indirect impacts to this mammal and ways to reduce these impacts (**APM BIO-9**). Additionally, all temporary impacts would be restored per **APM BIO-1**, minimizing the impact of decreased suitability of habitat.

The SMHM is not a covered species under the Santa Clara Valley HCP. If impacts are identified during species-specific surveys, the take for this species would be covered under a Federal and/or State Incidental Take Permit (ITP) in consultation with CDFW and USFWS. The above measures would reduce impacts to any other sensitive mammal species that have a low chance to occur within the Survey Area.

Avian Species

California Ridgway's Rail and California Black Rail

Direct impacts to California Ridgway's rail and California black rail could occur in marsh habitat north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon (**Figure 5.4-9**). Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, removal of nesting habitat from construction and vegetation clearing activities, potential impacts to foraging or breeding behavior from increased noise and human presence (including potential nest abandonment/failure), and collision and electrocution risk from Proposed Project structures during operation. There would be up to 0.31 acre of temporary impacts and no permanent impacts to suitable nesting or foraging habitat.

The existing urban development within the Proposed Project vicinity already creates collision risks for avian species, and the number of tall towers and other potential obstacles in the area would only be increased slightly by the construction of the Proposed Project (in association with the two new high-voltage direct current [HVDC] terminals and limited sections of overhead transmission line). The risks of collision and electrocution associated with this increase would be minimized by using appropriate Avian Power Line Interaction Committee (APLIC) methods included in the Proposed Project design.

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-1, BIO-3, BIO-4, BIO-6, BIO-9, BIO-11** (*Special-Status Bird Surveys*), and **BIO-12** (*Nesting Bird Protection Measures*), as further discussed below. California Ridgway's rail and California black rail protocol surveys using standard guidelines should be conducted between January 15 and April 15 (surveys for other marsh-dwelling special-status birds may be able to be conducted simultaneously).

Western Snowy Plover and California Least Tern

Direct impacts to western snowy plover and least tern within suitable habitat associated with diked salt evaporation ponds in the areas within Don Edwards San Francisco Bay NWR south of Cushing Parkway and north and west of the proposed Baylands terminal site (**Figure 5.4-9**) are not expected to occur. While there is potential nesting habitat within the Survey Area, there is no nesting habitat near any construction work areas and none would be disturbed; there is no potential to impact active nests. Furthermore, due to the distance from construction activities to potentially suitable habitat indirect impacts would not be expected.

Potential direct and indirect impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-1, BIO-3, BIO-4, BIO-6, BIO-9, BIO-11, and BIO-12**, as further discussed below.

Burrowing Owl

Direct impacts to burrowing owl could result within suitable native and non-native grassland habitat in the area surrounding the existing Newark substation, Don Edwards San Francisco Bay NWR along Cushing Parkway, the SCPAL BMX Track and areas that used to be the Santa Clara golf and tennis club, and the proposed Baylands terminal (**Figure 5.4-9**). Burrowing owls are known to nest in the vicinity of the proposed Baylands terminal site at a nearby burrowing owl conservation area.

Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, removal of nesting habitat from construction and vegetation clearing activities, and collision and electrocution risk from Proposed Project structures during operation. However, risks of collision and electrocution associated with this increase would be minimized by using appropriate APLIC methods included in the Proposed Project design. Potential indirect impacts to foraging or breeding behavior from increased noise and human presence (including potential nest abandonment/failure) could result from the Proposed Project. The Proposed Project would result in up to approximately 82.51 acres of temporary impacts to potentially suitable nesting and foraging habitat and permanent loss of up to approximately 8.65 acres of potentially suitable nesting and foraging habitat (native and nonnative grassland habitat). Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-1, BIO-3, BIO-4, BIO-6, BIO-9, BIO-11, and BIO-12**, as further discussed below.

Additional burrowing owl protections may be required in the vicinity of the proposed Baylands terminal site, such as constructing berms or placing haybales to block construction activities from the known burrowing owl breeding and foraging areas (**APM BIO-11**). Impacts from night lighting at the proposed HVDC terminal facilities are expected to be minimal because burrowing owls are diurnal, meaning they are active during the day and during the short dawn and dusk periods. They are typically in their burrows at night and lighting would not impact them. Burrowing owl protocol surveys using standard guidelines should be conducted between April 15 and July 15.

Indirect impacts are expected to be minimal given the amount of existing infrastructure and high levels of human activity in the immediate vicinity of suitable habitat throughout the Study Area, although construction of the fence could deter burrowing owls from nesting in grassland habitat near the existing Newark substation and proposed Baylands terminal.

Golden Eagle

Impacts to golden eagles could occur south of the proposed Baylands terminal (**Figure 5.4-9**). There is a known nest approximately 1,000 feet south of the proposed Baylands terminal site. Indirect impacts from noise and increased human activity are expected to be low given the current high levels of industrial facilities and human activity east, north, and southwest of the proposed Baylands terminal. Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, nest abandonment from construction activities, and collision and electrocution risk from Proposed Project structures during operation. Direct impacts from potential vehicle strikes would be low due to the reduced speeds of construction equipment vehicles on the local roads. The risks of collision and electrocution would be minimized by using appropriate APLIC methods that have been included in the project design. The Proposed Project would result in up to approximately 82.51 acres of temporary impacts to foraging habitat and a permanent loss of approximately 8.65 acres of foraging habitat (native and nonnative grassland habitat).

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-1, BIO-3, BIO-4, BIO-6, BIO-9, BIO-11, BIO-12, BIO-13** (*Raptor Surveys*), and **BIO-14** (*Golden Eagle Protection*), as further discussed below. Protocol surveys using standard guidelines for bald and golden eagles require aerial surveys within two miles of impact areas between February 1 and May 15 (ground-based surveys may be considered in lieu of aerial surveys) (USFWS, 2021).

Other Raptors

Direct impacts to other raptors could occur south in the survey area near trees that could be used for nesting in hardwood woodland habitat. Raptors could nest within urban and disturbed areas as well. Direct impacts could include potential vehicle strikes during Proposed Project operation, potential impacts to foraging or breeding behavior from increased noise and human presence (including potential nest abandonment/failure), and collision and electrocution risk from Proposed Project structures during operation. The Proposed Project would result in up to approximately 82.51 acres of temporary impacts to potentially suitable nesting and foraging habitat and permanent loss of approximately 8.65 acres of potentially suitable nesting and foraging habitat (hardwood woodland habitat).

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-1, BIO-3, BIO-4, BIO-6, BIO-9, BIO-11, BIO-12, and BIO-13**, as further discussed below. Raptor surveys would be conducted concurrently with bald and golden eagle surveys.

Tri-colored Blackbird

Direct impacts to tri-colored blackbird could occur in saline and subsaline marshland, annual grasslands, salt and sewage ponds, and the riparian areas of Coyote Creek and the Guadalupe River immediately adjacent to and up to a mile from the proposed Baylands terminal site and Coyote Creek near the San José-Santa Clara RWF and near Alviso within the Don Edwards San Francisco Bay NWR (**Figure 5.4-9**). Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, removal of nesting habitat from construction and vegetation clearing activities, potential impacts to foraging or breeding behavior from increased noise and human presence (including potential nest abandonment/failure), and collision and electrocution risk from Proposed Project structures during operation. The Proposed Project would

result in up to approximately 7.01 acres of temporary impact to potentially suitable nesting and foraging habitat and permanent loss of approximately 0.02 acre of potentially suitable nesting and foraging habitat.

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-1, BIO-3, BIO-4, BIO-6, BIO-9, BIO-11, and BIO-12**, as further discussed below. Tricolored blackbird protocol nesting surveys using standard guidelines should be conducted between February 1 and June 15 (surveys for other marsh-dwelling special-status birds may be able to be conducted simultaneously).

The permanent loss of approximately 0.02 acre of potentially suitable foraging and potential nesting habitat (including annual grassland, wastewater treatment ponds, riparian, and wetland habitat types) for special-status avian species is unavoidable, but temporary impact areas would be restored (**APM BIO-1**). The high quantity of similar habitat (annual grassland, wetland and marsh, and riparian) in the region would minimize the potential for impacts to special-status avian species caused by the loss of these habitats. Additional similar nesting sites exist within these habitats. Focused surveys and preconstruction sweeps (**APMs BIO-3, BIO-11, BIO-13, and BIO-15, Nesting Bird Surveys**) would identify any trees or other vegetation that may be housing nests, and nests would be clearly marked with appropriate buffers and avoided by construction activities (**APMs BIO-4, BIO-12, BIO-13, and BIO-15**). A qualified biological monitor would be present during all construction activities that could potentially impact special-status birds (**APMs BIO-11, BIO-13, and BIO-15**). During the migratory bird nesting or breeding season (generally February 15 through August 31), vegetation removal would be avoided, if feasible. If it is not feasible to avoid those activities during the breeding season, then a nesting bird survey would be conducted in advance of those activities (**APMs BIO-12 and BIO-15**). Additionally, the majority of the Proposed Project is expected to be constructed within existing disturbed roadways, and temporary work areas are also expected to be within previously disturbed habitats; therefore, disturbance to previously undisturbed areas is expected to be minimal.

The number of vehicles associated with the Proposed Project during construction would be substantially higher than during operation, but the existing background level of vehicles within the work area is already very high; therefore, the Proposed Project would not contribute substantially to this level. Throughout construction and operation, vehicles would stay on established roadways and the speed limit would be 15 mph (**APM BIO-6**), minimizing the risk of vehicle strikes or crushing of ground-nesting bird nests. Avian species would likely temporarily avoid the work area during construction activities due to the increased noise and activity. The existing urban development within the Proposed Project vicinity already create collision risks for avian species, and the number of tall towers and other potential obstacles in the area would only be increased slightly by the construction of the Proposed Project (in association with the two new HVDC terminals and limited sections of overhead transmission line). The risks of collision and electrocution associated with this increase would be minimized by using appropriate APLIC methods included in the project design. A WEAP would be administered to all workers and would include information to educate them on special-status avian species, nests, and appropriate buffers (**APM BIO-9**).

Indirect impacts to special-status avian species during construction and operation could include decreased suitability of habitat in the vicinity of the Proposed Project caused by factors such as increased noise from construction activities and vehicles, as well as increased human activity. Indirect impacts would be less than significant and would be avoided or further minimized by the

implementation of **APMs BIO-1, BIO-9, and BIO-10, Outdoor Lighting Measures**. Noise from construction activities could affect avian species in multiple ways, such as depressing breeding success by acoustical masking, interfering with intra-specific communication, and interfering with the detection of predators. Indirect impacts from lighting are not expected because nighttime construction is not proposed near suitable habitat. Construction activities could disrupt breeding and foraging activities, prevent birds from tending to nests, or cause birds to flush from their nests, endangering eggs and chicks. Noise during construction activities is expected to be short-term in nature and minimal and would not substantially differ from the high levels of noise disturbance already associated with the Proposed Project area. Night lighting would be motion detecting, which would reduce potential light-related impacts to birds that may be active at night (**APM BIO-10**). A WEAP training would be administered to all workers that would educate them on the potential for indirect impacts to special-status birds and ways to reduce these impacts (**APM BIO-9**). Additionally, all temporary impacts would be restored per **APM BIO-1**, minimizing the impact of decreased suitability of habitat.

The above measures would also reduce potential risk to other special-status avian species that have a potential to occur within the Survey Area as well as any bat species that may have the potential to occur within the Survey Area to less than significant.

Tricolored blackbird and burrowing owl are a covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific surveys, the take for these species would be covered either under the HCP or covered under a State ITP in consultation with CDFW. If impacts are identified during species-specific surveys for the other State-listed avian species that are not covered under the Santa Clara Valley HCP (western snowy plover, California black rail, California clapper rail, burrowing owl, bald eagle, and any other avian species that are identified), the take would likely be covered under a Federal or State ITP in consultation with USFWS and CDFW.

Invertebrate Species

USFWS-designated critical habitat for Contra Costa goldfields and vernal pool tadpole shrimp could be directly impacted by the Proposed Project in the vicinity of the Don Edwards San Francisco Bay NWR along Cushing Parkway, where a mapped section of designated critical habitat extends along Cushing Parkway. This area would be directly impacted alongside the Cushing Parkway bridge, but the impacts would be less than significant in this area since all impacts would be within a designated 10-foot utility easement next to the bridge (and 30-foot operational and maintenance utility easement). Focused surveys and preconstruction sweeps would be conducted for these species, and qualified biological monitors would be present during all construction activities (**APMs BIO-2, BIO-3, and BIO-16 [Special-Status Invertebrate Species Surveys]**). All wetlands and other aquatic resources including vernal pools would be delineated (**APM BIO-19, Wetland and Aquatic Resources Delineations**), and construction activities in the vicinity of wetlands and waterways would be restricted to the dry season to the maximum extent practicable, reducing the potential for impacts to vernal pools that are occupied by vernal pool tadpole shrimp (**APM BIO-16**). Furthermore, LS Power would coordinate with the USFWS and other applicable agencies to determine if permits would be required (**APM BIO-16**).

Direct impacts to the special-status invertebrate species (Monarch butterfly, large marble butterfly, Crotch's bumblebee, Western bumblebee [grassland and disturbed grassland habitat], vernal pool tadpole shrimp, and vernal pool fairy shrimp) could include potential vehicle strikes or crushing during construction and operation, removal of suitable flowering vegetation for butterflies and bees during construction and vegetation clearing activities, and permanent loss of

approximately 8.63 acres of potentially suitable habitat (annual grassland) (**Figure 5.4-9**). Suitable habitats for each of the invertebrate species would be more refined after protocol surveys and wetland delineations have been conducted (**APMs BIO-4, BIO-16, and BIO-19**). Potential for direct impacts would be low and avoided or further minimized by the implementation of **APMs BIO-1, BIO-3, BIO-4, BIO-6, BIO-9, and BIO-16**, as further discussed below. Additionally, **APM BIO-17, Wetland, Vernal Pool, and Waterway Construction Timing Restrictions** would be implemented to minimize the chance of encountering vernal pool tadpole and fairy shrimp. Vernal pool tadpole shrimp have mapped CNDDDB occurrences in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway.

The permanent loss of approximately 8.63 acres of potentially suitable grassland is unavoidable, but temporary impact areas (88.53 acres of annual grassland, riparian, and wetland habitat types; see **Table 5.4-4** for impact numbers by community) would be restored (**APM BIO-1**). The high quantity of similar habitat (annual grassland, wetland, and riparian) in the region would minimize the potential for impacts to special-status butterfly and bee species caused by the loss of these habitats, but vernal pool tadpole and fairy shrimp are not as mobile, and temporary impacts may be as harmful as permanent impacts. These areas would be avoided to the maximum extent practicable by construction activities per **APM BIO-4**. Protocol surveys using standard guidelines during the appropriate time periods for fairy shrimp, tadpole shrimp, and bumblebees and butterflies (all grasslands identified in **Table 5.4-4**) and preconstruction sweeps (**APMs BIO-3 and BIO-16**) would identify any vernal pools, host plants, butterfly roosting sites, and bumblebee nests, which would then be clearly marked for avoidance during construction activities, as necessary (**APMs BIO-4 and BIO-16**). If these areas cannot be avoided, USFWS and/or CDFW would be consulted. A qualified biological monitor would be present during all construction activities that could potentially impact special-status invertebrates (**APM BIO-16**). Additionally, the majority of the Proposed Project is expected to be constructed within existing disturbed roadways, and temporary work areas are also expected to be within previously disturbed habitats; therefore, the disturbance to previously undisturbed areas is expected to be minimal. Throughout construction and operation, vehicles would stay on established roadways and the speed limit would be 15 mph (**APM BIO-6**), minimizing the risk of vehicle strikes or crushing of suitable flowering plant species. A WEAP would be administered to all workers and would include information to educate them on special-status invertebrate species, their habitats, and their preferred flowering plants (**APM BIO-9**).

Indirect impacts to special-status invertebrate species during construction and operation could include decreased suitability of grassland and disturbed grassland habitat in the vicinity of the Proposed Project caused by factors such as runoff, sedimentation, invasive species proliferation, increased noise from construction activities and vehicles, as well as increased human activity. A WEAP training would be administered to all workers that would educate them on the potential for indirect impacts to special-status invertebrates and ways to reduce these impacts (**APM BIO-9**). Additionally, all temporary impacts would be restored per **APM BIO-1**, minimizing the impact of decreased suitability of habitat. A SWPPP would be implemented for the Proposed Project, which would reduce impacts from runoff and sedimentation. Additionally, all vehicles would be washed prior to entering natural areas on the Proposed Project (**APM BIO-5**), reducing the potential for introduction of invasive weeds that could spread. Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of these APMs.

If impacts are identified during species-specific surveys for vernal pool tadpole shrimp, vernal pool fairy shrimp, Monarch butterflies, Western bumblebee, or Crotch's bumblebee which are not covered under the Santa Clara Valley HCP, the take would be covered under a Federal ITP

(vernal pool tadpole shrimp, Federally endangered species; vernal pool fairy shrimp, Federally threatened species; monarch butterfly, Federal candidate species) or State ITP (Western bumblebee, State candidate species; Crotch's bumblebee, State candidate species) in consultation with CDFW or USFWS.

Fish Species

There is NMFS-designated critical habitat for the Central California Coast DPS of steelhead along Coyote Creek and the Guadalupe River, and designated critical habitat for the Southern DPS of green sturgeon occurs within Coyote Creek, San Tomas Aquino Creek, the Guadalupe River near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, along a tributary to Coyote Creek that passes under Cushing Parkway just east of the Fremont Boulevard and Cushing Parkway intersection, and within estuary areas associated with San Francisco Bay. Longfin smelt are also known to use Coyote Creek and may use the Guadalupe River for breeding purposes. The proposed transmission line would be bored underneath several of these critical habitat areas using horizontal directional drilling (HDD), which would not impact any of the waterways that are critical habitats. Additionally, construction activities would take place in close proximity to NMFS-designated critical habitat for steelhead and green sturgeon along the main branch of Coyote Creek.

Direct impacts to the special-status fish species (steelhead, longfin smelt, green sturgeon) are not anticipated due to the fact that all Proposed Project construction impact areas are outside of waterways. Some construction activities would either cross or be in the vicinity of Coyote Creek, Guadalupe River, Lower Penitencia Creek, Agua Caliente Creek, Mallard Slough, and several other unnamed streams or drainage ditches that could be used by these fish species. It is anticipated that all creeks, rivers, and streams would be spanned by overhead lines (Guadalupe River) or drilled under using HDD or jack-and-bore trenchless techniques under these waterways. Potential direct impacts would be avoided or further minimized by the implementation of **APMs BIO-1, BIO-4, and BIO-9**, as further discussed below.

A WEAP would be administered to all workers and would include information to educate them on steelhead, longfin smelt, green sturgeon, and their potential for occurrence within waterways (**APM BIO-9**). Any sensitive areas for steelhead, longfin smelt, and green sturgeon (including Coyote Creek and the Guadalupe River in areas where construction activities are not planned) would be clearly marked and avoided to the extent practicable by construction activities (**APM BIO-4**). Once construction activities are completed, all temporary impact areas would be restored, to reduce impacts to habitats in the vicinity of the waterways (**APM BIO-1**). Impacts to streams that are also NMFS-designated critical habitat are not planned, but the Proposed Project would aerially cross or go underneath several of these critical habitat areas, such as the Guadalupe River, Coyote Creek, and several unnamed streams in the vicinity of Coyote Creek. If any impacts to these streams are identified during any preconstruction surveys or during the planning process, permits and consultations with CDFW and NMFS may be required to address potential impacts to steelhead, longfin smelt, and green sturgeon and steelhead- and green sturgeon-designated critical habitat.

Indirect impacts to steelhead, longfin smelt, and green sturgeon during construction and operation could include decreased water quality and suitability of habitat in the vicinity of the Proposed Project caused by factors such as spills/leaks into waterways, increased noise from construction activities, as well as increased human activity. A WEAP training would be administered to all workers (**APM BIO-9**) to educate them on the potential for indirect impacts and to ensure that no

spills, leaks, or trash dumping occurs within waterways, reducing the potential for water quality issues. Temporary impact areas within the vicinity of Coyote Creek and other waterways would be restored following construction, further reducing the potential impacts to habitat suitability (**APM BIO-1**). With the implementation of **APM BIO-17**, construction activities would be performed during the dry season to the maximum extent practicable when there is a very low chance for any of the special-status fish species to be using Coyote Creek or the Guadalupe River, further reducing the potential for indirect impacts related to increased noise and human activity. Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of these APMs.

Amphibian and Reptile Species

Direct impacts to the special-status amphibian and reptile species, such as California red-legged frog (CRLF) (vicinity of Coyote Creek and associated lakes and ponds) (**Figure 5.4-9**), western pond turtle (WPT) (open water habitats exist along Coyote Creek, Agua Caliente Creek, Guadalupe River, and numerous ponds and lakes; brackish estuarine areas exist in the vicinity of Don Edwards San Francisco Bay NWR and the San Francisco Bay) (**Figure 5.4-9**), and CTS could include potential direct mortality due to vehicle strikes during Proposed Project construction and operation, removal of vegetation that could be used for breeding and cover during construction and vegetation clearing activities, and temporary loss of approximately 88.65 acres and permanent loss of approximately 8.66 acres of potentially suitable breeding and upland dispersal habitat (annual grassland, wastewater treatment ponds, riparian, and wetland habitat types; see **Table 5.4-4** for impacts to each habitat type). The areas with the potential for occurrence of these species are in Proposed Project work areas near Coyote Creek and associated lakes and ponds, as well as among vernal pools and annual grassland/wetland of the Don Edwards San Francisco Bay NWR near Cushing Parkway, though these areas are in the vicinity of highly developed areas. Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6, BIO-18, (Special-Status Amphibian Surveys), BIO-1, BIO-3, BIO-4, BIO-9, BIO-10, and BIO-17**, as further discussed below. Protocol surveys following standard CDFW guidelines for CRLF and CTS would be conducted in March, April, and May, as required. They would be conducted in potential breeding habitats within 0.6 mile of potential impact areas.

The permanent loss of approximately 8.66 acres of potentially suitable upland dispersal habitat is unavoidable, but temporary impact areas (approximately 88.65 acres of annual grassland, wastewater treatment ponds, riparian, and wetland habitat types; see **Table 5.4-4** for impacts to each habitat type) would be restored (**APM BIO-1**). The high quantity of similar habitat (riparian areas, annual grassland, and wetlands) in the region would minimize the potential for impacts to special-status amphibian and reptile species caused by the loss of these habitats. Protocol or focused surveys following standard guidelines (**APM BIO-18**) and preconstruction sweeps (**APM BIO-3**) would identify areas where these species may occur, and any sensitive areas for these species (such as wetlands and waterways) that are identified would be clearly marked and avoided to the extent practicable by construction activities (**APM BIO-4**). If these areas are determined to contain the species and cannot be avoided, USFWS and/or CDFW would be consulted. A qualified biological monitor would be present during all construction activities that could potentially impact special-status amphibians and reptiles (**APM BIO-18**). Additionally, the majority of the Proposed Project is expected to be constructed within existing disturbed roadways, and temporary work areas are also expected to be within previously disturbed habitats; therefore, the disturbance in previously undisturbed areas is expected to be minimal.

The number of vehicles during construction would be higher than during operation, but the existing background level of vehicles within the work area is already very high; therefore, the Proposed Project would not substantially contribute to this level. Throughout construction and operation, vehicles would stay on established roadways and the speed limit would be 15 mph (**APM BIO-6**), minimizing the risk of vehicle strikes or crushing individuals and breeding sites. A WEAP would be administered to all workers and would include information to educate them on special-status amphibian and reptile species and refuge locations (**APM BIO-9**). Additionally, night work would be avoided to the extent practicable during construction and is not expected during operations except during emergencies (**APM BIO-10**), which is when the amphibian species can be more active. The construction in the vicinity of waterways, wetlands, and vernal pools, such as along Cushing Parkway in the vicinity of the Don Edwards San Francisco Bay NWR, would be timed for the dry season to the extent practicable (**APM BIO-17**), when these amphibians and reptiles are less likely to be using these areas for movement and/or breeding purposes.

Indirect impacts to reptiles and amphibians during construction and operation could include decreased water quality and suitability of habitat and movement corridors in the vicinity of the Proposed Project caused by factors such as spills/leaks into waterways, runoff, sedimentation, invasive species proliferation, increased noise from construction activities and increased human activity, and modification of the waterway. A WEAP training would be administered to all workers (**APM BIO-9**) to educate them on the potential for direct impacts and to ensure that no spills, leaks, or trash dumping occurs within waterways, wetlands, or vernal pools, reducing the potential for water quality issues. A SWPPP would be implemented for the Proposed Project, which would reduce impacts from runoff, spills/leaks, and sedimentation. Additionally, all vehicles would be washed prior to entering natural areas on the Proposed Project site (**APM BIO-5**), reducing the potential for invasive weeds to spread. Temporary impact areas within wetland, vernal pool, and riparian habitats would be restored following construction, further reducing the potential impacts to habitat suitability (**APM BIO-1**). Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of these APMs.

CRLF, WPT, and CTS are all covered species under the Santa Clara Valley HCP; if these species are confirmed to be present during species-specific surveys, the take for these species would be covered either under the HCP or under a Federal and/or State ITP in consultation with USFWS and CDFW.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation facility does not currently support candidate, sensitive, or special-status species or habitats; however, the area within PG&E property north of the substation fence, where overhead structure AC-1 is proposed, consists of annual grasslands and vernal pools that house potential habitat for special-status species such as CTS, vernal pool fairy shrimp, and vernal pool tadpole shrimp (there have been mapped CNDDDB occurrences of vernal pool tadpole shrimp in the vicinity of existing Newark substation), as well as foraging habitat for raptors and potential breeding and foraging habitat for burrowing owl. Construction of the overhead structure adjacent to the substation fence would result in approximately 1.07 acres of temporary impacts and 0.50 acre of

permanent impacts (see **Table 5.4-5, Impacts by Vegetation Community for PG&E-owned Property** for impact numbers by habitat type).

Habitat Type	Proposed Project Component	Temporary Impact Acreage	Permanent Impact Acreage
Annual Grassland	Newark Substation Modification	0	<0.01
	Overhead Structure (AC-1)	0	<0.01
	Overhead Work Area	0.92	0
	Distribution Span to be transferred to Underground	0.06	0
Disturbed/ Urban	Newark Substation Modification	0	0.50
	Overhead Work Area	<0.01	0
Vernal Pool	Overhead Work Area	0.09	0
Totals	N/A	1.07	0.50

Note: Totals in this table may not sum accurately due to rounding.

PG&E would implement **Field Protocols (FPs) FP-1** through **FP-18** that are derived from the PG&E Bay Area O&M HCP as well as construction BMPs. The PG&E FPs include standard measures aimed at avoiding or minimizing potential adverse effects on biological resources, especially indirect effects as could occur during their scope of work. The FPs address potential biological resources impacts including nesting birds, wetlands and vernal pool impacts, revegetation of disturbed areas, indirect and nuisance impacts, and water quality. The full FPs are listed in **Section 5.4.7, PG&E Field Protocols and Best Management Practices**. In addition, PG&E would implement **BMPs BIO-1** Burrowing Owl and **BIO-2, Nesting Birds**. Therefore, impacts would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Silicon Valley Power (SVP) would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation facility within paved, disturbed, and developed areas. The existing NRS substation facility is entirely developed, consisting of 13.52 acres of urban/disturbed areas, and does not currently support candidate, sensitive, or special-status species or habitats. Therefore, no impacts would result.

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less-Than-Significant Impact.

Riparian habitat and other sensitive habitat areas are present within the Survey Area and within impact areas (riparian, wetland, and vernal pool). These areas would be impacted by construction of the Proposed Project: 0.12 acre of temporary impacts are proposed to riparian habitats; and 0.31 acre of temporary impacts are proposed to wetlands. These temporary impacts are associated with the clearing of vegetation to construct the poles, for stringing conductor at proposed overhead structures DC-1 and DC-2, and for underground work areas (**Figure 5.4-4**).

All wetlands and other aquatic resources including vernal pools would be delineated prior to construction (**APM BIO-19**), and impacts would be avoided to the extent practicable (**APM BIO-4**). All temporary impacts would be restored per **APM BIO-1**, minimizing the impact to these sensitive vegetation communities.

No other riparian or sensitive habitat areas would be impacted by the Proposed Project. Therefore, with the implementation of APMs, direct and indirect impacts on riparian habitat or other sensitive vegetation communities would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The existing PG&E substation facility does not currently support riparian habitat or other sensitive vegetation communities. The area north of the substation fence within PG&E property, where overhead structure AC-1 is proposed, would be impacted by construction of the Proposed Project, including 0.09 acre of temporary impacts to vernal pools (see **Table 5.4-5** for exact impact numbers). Implementation of **FP-01** through **FP-04**, **FP-10**, **FP-11**, **FP-12**, **FP-14** through **FP-16** would minimize these impacts. The vernal pools would be avoided to the maximum extent practicable by implementing a buffer from construction (**FP-16**), and implementing spill prevention BMPs (**FP-15**). Training (**FP-01**) would educate workers on the vernal pools as sensitive areas and measures to minimize impacts. Temporary impacts to this area would also be restored (**FP-14**). No other sensitive vegetation communities or critical habitats occur within PG&E areas. Therefore, impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility. The existing NRS substation facility does not currently support riparian habitat or other sensitive vegetation communities. The proposed NRS substation modification work would occur in paved, disturbed, and developed areas only. Therefore, no impacts would result.

Would the project have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-Than-Significant Impact. There are multiple mapped streams, creeks, rivers, and drainage ditches that cross the path of the Proposed Project alignment (**Figure 5.4-4**). All of the mapped streams would be avoided by using HDD trenchless techniques under these waterways or by constructing overhead lines that would span the waterways. Several other areas have the potential to be impacted, such as riparian areas, wetlands, and vernal pools that would likely be CDFW, RWQCB, and/or USACE jurisdictional areas. Wetland reconnaissance surveys were conducted throughout the Study Area. Detailed wetland delineations were conducted in areas where potential impacts to wetlands could occur. A full formal wetland delineation and mapping was conducted for the jurisdictional water features with the potential to be impacted by the Proposed Project at two locations where access was granted: the area along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara RWF (i.e., from the southern side of McCarthy Boulevard bridge to the proposed overhead structure DC-3), and both north and south sides of Cushing Parkway bridge. The impacts to CDFW and RWQCB/USACE for work

areas associated with proposed overhead structures DC-1 and DC-2 are shown in **Table 5.4-6, Impact Areas to Jurisdictional Waters** below. These temporary impacts are associated with the clearing of vegetation to construct the poles and for stringing conductor at proposed overhead structures DC-1 through DC-2. (**Figure 5.4-8**). A third location with potential jurisdictional water features, located west of proposed overhead structure AC-4 and north of SR-237, that could potentially be impacted by the Proposed Project was not included in the formal wetland delineation as access was not obtained. A wetland and aquatic resources delineation would be conducted within this area prior to construction to determine exact impact acreages and determine if permits would be needed (**APM BIO-19**).

Table 5.4-6: Impact Areas to Jurisdictional Waters¹		
	Approximate CDFW Impact Area (Sq. Ft./Acres)	Approximate RWQCB/USACE Impact Area (Sq. Ft./Acres)
Permanent Impacts	0	0
Temporary Impacts	9,051/0.2	9,051/0.2
Total Impacts	9,051/0.2	9,051/0.2

¹ Not all potential impact areas to jurisdictional waters have been mapped in detail. A wetland survey would be conducted within areas with potential wetland habitat prior to construction to determine exact impact acreages and determine the proper permits that would be needed.

State and federal aquatic permits would be required for any change to existing channel, bed, or bank; removal or deposit of material; or diverting or obstructing the natural flow of a jurisdictional water feature. Currently, anticipated construction activities associated with structures being placed in the vicinity of Coyote Creek may result in one or more of these permit triggers. Therefore, the following permits may be required: Section 1602 LSAA from CDFW; CWA Section 401 Water Quality Certification from the RWQCB; and CWA Section 404 Permit from USACE (Nationwide or individual, depending on the impact acreage).

The proposed HVDC terminal locations do not have any known aquatic or jurisdictional waters on-site, and they would be built to drain stormwater to an on-site detention system. Stormwater would react as it normally does along a majority of the transmission line alignments and would be drained into roadside drains. Stormwater runoff during construction and O&M activities would be managed according to a stormwater management plan and BMPs established in the associated SWPPP.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The existing Newark substation facility does not contain aquatics or jurisdictional waters. However, construction of the proposed overhead structure AC-1 would occur within undeveloped areas north of the existing substation. The construction of proposed overhead structure AC-1 in this undeveloped area would result primarily in impacts to areas that are not jurisdictional, but there are proposed temporary impacts (0.09 acre) to vernal pools that would likely be CDFW jurisdictional features. Implementation of **FP-01** through **FP-04**, **FP-10**, **FP-11**, **FP-12**, and **FP-14** through **FP-16** would minimize these impacts. The vernal pools would be avoided to the maximum extent practicable by implementing a buffer from construction (**FP-16**), and implementing spill prevention BMPs (**FP-15**). Training (**FP-01**) would educate workers on the vernal pools as sensitive areas and measures

to minimize impacts. Temporary impacts to this area would also be restored (**FP-14**). Therefore, impacts to waters or wetland would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility. The existing NRS substation facility does not currently support aquatics or jurisdictional waters. The proposed NRS substation modification work would occur in paved, disturbed, and developed areas only. Therefore, no impacts to waters or wetlands would result.

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 native wildlife nursery sites?

Less-Than-Significant Impact. Significant impacts on wildlife movement could occur if a wildlife movement corridor were to be interrupted by a feature that physically blocks wildlife movement (e.g., a roadway) or if suitable habitat that supports wildlife in the movement corridor were to be directly removed during construction or indirectly affected by construction noise or dust.

A large portion of the Proposed Project is located within the Cities of Fremont, Milpitas, San José, and Santa Clara where there are no large wildlife movement corridors, but there are numerous riparian corridors and waterways that could be used by wildlife for movement and nursery sites. These waterways and riparian corridors would be largely avoided, but direct impacts to wildlife movement, specifically creation of barriers to wildlife movement, could result from the Proposed Project.

The Proposed Project would mostly be constructed along and within existing public road ROWs and would not create any additional barriers to movement along the road. These areas would not result in barriers to movement and would only potentially impact wildlife movement for a short period during construction activities. The overhead portions of the line would be constructed outside of the public road ROWs, but they all exist in close vicinity to previously disturbed areas, such as the San José-Santa Clara RWF, existing public utilities infrastructure, SR-237, and the existing Newark substation.

The proposed Baylands terminal site would be located immediately west of the San José-Santa Clara RWF in an annual grassland that is currently fenced, and the fence acts as a barrier to movement of wildlife species. The construction of the proposed Baylands terminal would remove some potentially suitable habitat within the grassland; however, because existing fencing already restricts the movement of wildlife species through the site, wildlife movement conditions would remain unchanged. Additionally, the relatively small impact area would not have a large effect on overall wildlife movement through the area.

The construction along the Cushing Parkway bridge that runs through the Don Edwards San Francisco Bay NWR would impact wildlife movement in the short term by creating a potential barrier under and alongside the bridge when construction is occurring. An existing chain-link fence is located along the existing utility O&M easement; however, the chain-link fence does not fully restrict wildlife movement. Construction and maintenance activities associated with the Proposed Project would remain within the existing utility easement and the associated O&M utility easement. With implementation of **APM BIO-17**, construction in this area would occur during the dry season and would limit impacts to movement of sensitive species. Additionally, this area

already sees regular traffic and maintenance activities, and animal species that use the area for movement are accustomed to disturbance.

Speed limits within construction areas would be kept to 15 mph, and workers would be advised to take care when commuting to and from the site, reducing the potential for vehicle strikes to moving wildlife (**APM BIO-6**). Vehicles would also be kept to disturbance areas only, and sensitive areas (such as the Coyote Creek riparian corridor) would be clearly marked and avoided, reducing potential impacts to suitable movement habitats for wildlife (**APMs BIO-4** and **BIO-6**). Night work and nighttime lighting would be reduced to the extent practicable (**APM BIO-10**), which would reduce potential impacts to wildlife movement which tends to be higher at night. Vegetation removal would be kept to a minimum, and all temporary impact areas would be restored (**APM BIO-1**), keeping habitats intact for wildlife movement in the area.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The existing Newark substation facility does not currently support candidate, sensitive, or special-status species or habitats. The proposed Newark substation modification work would occur within PG&E's existing property, which is surrounded by a security fence and in close proximity to the substation; therefore, the proposed modifications would not result in new restrictions to wildlife movement. There is a potential for impacts to wildlife nursery sites in the vernal pools in this area that could be used as breeding areas for vernal pool tadpole shrimp and CTS. PG&E would implement erosion and sediment control BMPs (**FP-11** and **FP-12**), spill prevention BMPs (**FP-15**), and provide markings/flagging and buffers from the edge of the vernal pools (**FP-16**). PG&E would minimize areas of disturbance to sensitive species by implementing **FP-01** through **FP-04**, **FP-06**, and **FP-10**. Implementation of PG&E **BMP BIO-2** would address potential impacts to nesting birds. The vernal pools would be avoided to the maximum extent practicable and marked as sensitive areas (**FP-15**), and construction would be timed for the dry season to the maximum extent practicable (**FP-16**) when pools are more likely to be dry and these amphibians and invertebrates are less likely to be using these areas for movement and/or breeding purposes. Training (**FP-01**) would educate workers on the potential for special-status birds, amphibians, and invertebrates to occur and measures to minimize impacts. Temporary impacts to this area would also be restored (**FP-14**). Therefore, impacts to wildlife movement corridors and nursery sites would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility. The existing NRS substation facility does not currently support candidate, sensitive, or special-status species or habitats. As perimeter walls and existing development is currently located around the existing substation facilities, the proposed modifications would not result in new restrictions to wildlife movement. Therefore, no impacts to wildlife movement corridors or nursery sites would result.

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

Less-Than-Significant Impact. The CPUC has exclusive jurisdiction over the Proposed Project's siting, design, and construction, and the Proposed Project is not subject to local land use and

zoning regulations or discretionary permits. However, local regulations relating to biological resources were reviewed to ensure that the Proposed Project would not be in conflict with local policies or ordinances protecting biological resources. The Cities of Fremont, Milpitas, San José, and Santa Clara General Plans were reviewed, and the Proposed Project is being designed to be consistent with these local policies. The Proposed Project would result in the removal of approximately 24 trees; the majority of which are landscaped trees in the vicinity of proposed overhead structures. Although not required, LS Power would coordinate with the Cities of Fremont, Milpitas, San José, and Santa Clara to obtain applicable tree removal permits for the removal of existing trees. Therefore, implementation of the Proposed Project would comply with local policies or ordinances relating to biological resources. Impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The proposed Newark substation modifications would not conflict with local policies or ordinances relating to biological resources. Therefore, no impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility. The proposed NRS substation modifications would not conflict with local policies or ordinances relating to biological resources. Therefore, no impacts would occur.

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

Less-Than-Significant Impact. The Proposed Project lies within PG&E's Bay Area O&M HCP (PG&E, 2017), Don Edwards San Francisco Bay NWR CCP, Alameda County VLP, and the Santa Clara Valley HCP (County of Santa Clara et al., 2012).

The PG&E Bay Area O&M HCP covers 18 wildlife and 13 plant species, and its purpose is to enable PG&E to continue to conduct current and future O&M activities within the nine counties of the San Francisco Bay Area while avoiding, minimizing, and mitigating for temporary and permanent impacts on threatened- and endangered-species habitat that could result from PG&E's ongoing O&M activities (PG&E, 2017). LS Power is not a stakeholder of PG&E's Bay Area O&M HCP, and the activities proposed are not covered activities under this HCP.

The Don Edwards San Francisco Bay NWR CCP is a refuge-specific program for conserving natural resources, stewarding wildlife habitat, and engaging the community in conservation. Portions of the Proposed Project would be located adjacent to the Don Edwards San Francisco Bay NWR; however, in these areas the proposed transmission line would be located entirely within existing public roadways or an existing utility easement adjacent to Cushing Parkway. Therefore, the Proposed Project would not be an incompatible use within the Don Edwards San Francisco Bay NWR. The Proposed Project would be consistent with policies pertaining to the conservation and protection of natural and cultural resources and the CCP's goals and objectives. Furthermore, LS Power is not a stakeholder of the Don Edwards San Francisco Bay NWR CCP, and it does not cover the type of activities that are associated with the Proposed Project.

The Alameda County VLP provides take authorization, under CESA, to participating farmers and ranchers while following the management practices for two species listed as threatened in California: the CTS and the Alameda whipsnake. The VLP covers the entire County but primarily serves residents conducting routine and on-going agricultural activities in the eastern, rural portion of the County of Alameda and within properties adjoining or encompassing creeks in rural-urban interface areas. The VLP also excludes projects in salt marsh and estuary habitats in the County's bayfront area, including land and waterways under BCDC jurisdiction. As mapped by the VLP Land Use figure, the Proposed Project would be located within Urban and Buildup Land and Other (rural development, mined land, etc.) in the County of Alameda. Furthermore, the VLP does not cover the type of activities that are associated with the Proposed Project, and LS Power is not a stakeholder of the VLP.

The Santa Clara Valley HCP provides a framework for promoting the protection and recovery of natural resources, including endangered species, while streamlining the permitting process for planned development, infrastructure, and maintenance activities (County of Santa Clara et al., 2012). The Santa Clara Valley HCP covers public and private utility activities within the planning limits of urban growth (as defined by the HCP) such as those that are associated with the Proposed Project. A majority of the Proposed Project occurs within the planning limits of urban growth and may be covered activities. The Santa Clara Valley HCP covers many of the same species that were analyzed within this PEA: CRLF, WPT, CTS, burrowing owl, and tricolored blackbird. If impacts are identified to these species, LS Power would coordinate with the stakeholders of the Santa Clara Valley HCP to obtain coverage for the Proposed Project, as required. In the event that LS Power is unable to opt into coverage from the Santa Clara Valley HCP, LS Power would consult with the wildlife agencies to obtain project-specific permits. The Proposed Project's APMs generally align with the measures that are proposed to reduce impacts to these species in the HCPs so no conflicts with approved HCPs would occur. Impacts would be less than significant.

The Proposed Project would cross the jurisdiction of the BCDC (refer to **Figure 5.11-3, BCDC Jurisdiction and Priority Use Areas**) and is adjacent to the Don Edwards San Francisco Bay NWR, which is designated by the BCDC as a Priority Use Area for Wildlife. As discussed in **Section 5.11, Land Use and Planning**, LS Power has initiated coordination with BCDC, and it was confirmed that, at a minimum, an administrative permit would be required for any transmission line crossings under or over BCDC jurisdiction. LS Power would continue to coordinate with BCDC for their continued review of the Proposed Project to confirm and obtain the necessary permits prior to construction to ensure compliance with the policies of both the McAteer-Petris Act and the San Francisco Bay Plan.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facilities (located entirely within PG&E fee-owned property). The existing substation facility consists of disturbed, paved, or currently developed areas. There are no sensitive resources within the existing substation where modifications would occur, and utilization of their Bay Area O&M HCP is not anticipated to be required. The area adjacent to the existing substation within PG&E property consists of disturbed undeveloped land. Construction of proposed overhead structure AC-1 in this undeveloped area would result in approximately 1.07 acres of temporary impacts and approximately 0.02 acre of permanent impacts to sensitive vegetation and communities (approximately 0.09 acre of temporary impacts to vernal pools; and 0.98 acre of temporary impacts and 0.02 acre of permanent impacts to annual grasslands). PG&E could utilize

their Bay Area O&M HCP to address potential impacts to species covered under their HCP; however, PG&E would implement **FP-01** through **FP-07**, **FP-10** through **FP-16**, and **FP-18** as well as construction **BMP BIO-2**. The PG&E FPs are derived directly from the Bay Area O&M HCP, and the BMP is consistent with the PG&E HCP documents. Therefore, no impacts related to conflicts with approved HCPs would result.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facilities, in areas that are disturbed, paved, or currently developed. There are no sensitive resources within these existing facilities where modifications would occur. Therefore, no impacts would result.

Would the project create a substantial collision or electrocution risk for birds or bats?

Less-Than-Significant Impact. Direct impacts to bird and bat species (no special-status bat species are expected to occur, but common bat species could occur) could include collision and electrocution associated with the proposed HVDC terminal facilities. Impacts would be less than significant because the proposed Albrae to Baylands 320 kV DC, Newark to Albrae 230 kV, and Baylands to NRS 230 kV transmission lines would be primarily constructed underground, with specific sections switching to overhead before returning to underground. Avian species would likely temporarily avoid the work areas during construction activities due to the increased noise and activity. The existing urban development within the Proposed Project vicinity already creates collision risks for avian species, and the number of tall towers and other potential obstacles in the area would only be increased slightly by the construction of the Proposed Project (in association with the two new HVDC terminals and limited overhead transmission line segments). The risks of collision and electrocution associated with this slight increase would be minimized by using appropriate APLIC methods (incorporated into the design of the Proposed Project). A WEAP would be administered to all workers and would include information to educate them on special-status avian species, nests, and appropriate buffers (**APM BIO-9**). Therefore, impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The risks of collision and electrocution associated with the proposed modifications, including the construction of two new overhead structures would be minimized by using appropriate APLIC methods that have been incorporated into the Proposed Project design. These structures would be constructed in close proximity to other large structures associated with the existing Newark substation and would not create a large collision risk. Furthermore, PG&E would implement **FP-18** and **BMP BIO-2**, which would address potential impacts to nesting birds. Finally, **FP-01** ensures that all PG&E construction workers receive WEAP and HCP training. Therefore, impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility. The risks of collision and electrocution associated with the proposed modifications would be minimized by using appropriate APLIC methods that have been incorporated into the Proposed Project design. These structures would be constructed in close proximity to other large structures

associated with the existing NRS substation and would not create a large collision risk. Impacts would be less than significant.

5.4.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for biological resources.

5.4.6 APPLICANT PROPOSED MEASURES

The following biological resources-specific APMs would be implemented for the Proposed Project.

APM BIO-1: Restoration of Disturbed Areas

Once construction is complete in a given area, natural vegetation areas (annual grassland, annual grassland/wetland, riparian, wetland, and vernal pools) that are temporarily disturbed by Proposed Project activities shall be restored to approximate preconstruction conditions. Areas that are temporarily disturbed by grading, augering, or equipment movement shall be restored to their original contours and drainage patterns. Work areas shall be decompacted, and salvaged topsoil materials shall be respread following recontouring to aid in restoration of temporarily disturbed areas. Revegetation activities shall be conducted in accordance with the Proposed Project SWPPP and APMs. Restoration could include recontouring, reseeding, and planting replacement of natural vegetation, as appropriate. Temporarily disturbed natural vegetation areas shall be revegetated with appropriate weed-free native seed mixes or species that are characteristic of the plant community that was disturbed.

APM BIO-2: Rare Plant Surveys

Protocol surveys following standard guidelines shall be conducted within suitable habitat areas for special-status plants that may occur within the Proposed Project impact areas during the appropriate blooming period to determine the location and extent of populations of rare plants, if present. In the event of the discovery of a rare plant, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, LS Power shall consult with the USFWS for ITP, as required. There are no CDFW-listed species that were analyzed, but CNPS species would require surveys and potential mitigation if they cannot be avoided. Construction activities that may impact rare plants, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Upon the discovery of sensitive plants, the qualified biologist shall have the authority to stop work activities and, following the identification and implementation of steps required to avoid or minimize impacts to sensitive plants, direct construction work to commence once more.

APM BIO-3: Preconstruction Sweeps

Prior to initial vegetation clearance and ground-disturbing activities, a qualified biologist shall conduct preconstruction survey sweeps of the Proposed Project work area for special-status wildlife and plants in potentially suitable habitats. In the event of the discovery of a special-status plant, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, LS Power shall seek coverage from the Santa Clara Valley HCP, or shall consult with the USFWS and/or CDFW for take ITP or other authorization as well as any additional mitigation. Any other construction activities that may impact sensitive biological

resources, including movement of construction equipment and other activities outside of the fenced/paved areas within wildlife habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources. These surveys shall be conducted within 30 days of the start of construction activities and after protocol surveys for individual species have been conducted. These surveys serve to double-check populations, nesting/breeding areas, and sensitive habitats that would be identified during protocol surveys and to ensure that these areas will be avoided by construction activities.

APM BIO-4: Sensitive Area Demarcation

All sensitive biological areas (including creeks, rivers, wetlands, vernal pools, riparian areas, and special-status species habitats) within the Proposed Project work area shall be clearly marked prior to construction commencement to restrict construction activities and equipment from entering these areas, except as necessary for construction activities. These markings shall be inspected regularly to ensure that they remain in place.

APM BIO-5: Vehicle Cleaning Prior to Entering Natural Areas

Vehicles and equipment shall be cleaned prior to use in native habitat on the Proposed Project areas to avoid the spread of noxious weeds and nonnative invasive plant species.

APM BIO-6: Vehicle Speed Limits

Speed of vehicles driving along proposed access roads and on the Proposed Project site during construction and operation shall be limited to 15 mph, except in the case of legal roadgoing vehicles traveling on portions of the Proposed Project site that are public roadways which shall be limited to posted speed limits. In addition, construction and maintenance employees shall be required to stay on established and clearly marked and existing roads, except where not feasible due to physical or safety constraints and shall be advised that care should be exercised when commuting to and from the Proposed Project area.

APM BIO-7: Salt Marsh Harvest Mouse Surveys

Protocol surveys following standard guidelines shall be conducted within all proposed impact areas and suitable buffers within suitable habitat areas for SMHM by an approved biologist. In the event of the discovery of SMHM individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted prior to construction activity. Any other construction activities that may impact SMHM including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to SMHM, such as allowing individuals to leave on their own or temporarily halting construction in areas where SMHM is present. All adjacent known SMHM preserve areas shall be clearly marked as well and avoided. This APM would be applied along the transmission line west of the proposed alignment in the vicinity of Coyote Creek Lagoon.

APM BIO-8: Excavation Wildlife Safety BMPs

Excavated holes/trenches that are not within areas that have wildlife exclusion fencing or that are not filled at the end of a workday shall be covered, or a wildlife escape ramp shall be installed to prevent the inadvertent entrapment of wildlife species.

APM BIO-9: WEAP Training

A WEAP shall be developed and implemented to educate all on-site construction workers on site-specific biological and non-biological resources and proper work practices to avoid harming wildlife during construction activities. This WEAP shall include measures to reduce trash buildup during construction.

APM BIO-10: Outdoor Lighting Measures

The use of outdoor lighting during construction and O&M shall be minimized whenever practicable. Photocell and motion detection-controlled lighting shall be provided at a level sufficient to provide safe entry and exit to the Proposed Project terminals and control enclosures and for security purposes. All lighting shall be selectively placed, shielded, and directed downward to the extent practicable. All lighting near sensitive species habitat shall be directed away from these areas to the extent practicable. Night work shall be avoided as practicable; however, given the large amount of construction proposed within existing roads, local municipalities may dictate that transmission line construction occurs at nighttime within certain areas of the Proposed Project. The most likely areas for nighttime construction are within commercial and industrial areas and not residential or potentially sensitive biological areas. Night work is not anticipated during O&M except during emergencies.

APM BIO-11: Special-Status Bird Surveys

Protocol surveys following standard guidelines shall be conducted for California black rail, tricolored blackbird, California clapper rail, burrowing owl, golden eagle, and bald eagle, and focused surveys shall be conducted for western snowy plover, white-tailed kite, and other raptors. In the event of the discovery of suitable habitats, nests, or live individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted. Tricolored blackbird and burrowing owl are covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific protocol surveys, the take for this species shall be covered either under the HCP or covered under a State ITP in consultation with CDFW. If impacts are identified during species-specific protocol surveys for the other State-listed avian species that are not covered under the Santa Clara Valley HCP (California black rail, California clapper rail, Western snowy plover, bald eagle, and any other avian species that are identified), the take shall be covered under a State ITP in consultation with CDFW. Any other construction activities that may impact special-status birds, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Additionally, qualified biologists shall monitor all active nests to ensure that construction activities are not disturbing the nest. The monitor/inspector shall have the authority to stop work activities upon the discovery of nests or live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive birds. Additional burrowing owl protections may be required in the vicinity of the proposed Baylands terminal site depending on proximity of construction to active burrows. These measures may

include constructing berms or placing haybales between the known burrowing owl burrows and active construction areas and having additional monitors to make sure the owls are not being stressed by construction activities.

APM BIO-12: Nesting Bird Protection Measures

If feasible, LS Power shall avoid certain construction activities such as vegetation trimming/removal during the migratory bird nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season (generally February 15 through August 31) **APM BIO-15** shall be used. Any construction activities that may impact nesting birds, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Additionally, biologists shall monitor all active nests to ensure that construction activities are not disturbing the nest. The monitor/inspector shall have the authority to stop work activities upon the discovery of nests or live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to nesting birds.

APM BIO-13: Raptor Surveys

If a raptor nest is observed within 500 feet of the Proposed Project during protocol or preconstruction surveys, a qualified biologist shall determine if it is active. If the nest is determined to be active, the qualified biologist shall establish an appropriately sized no construction buffer around the nest and shall monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated with the Proposed Project are disturbing or disrupting nesting or breeding activities, the monitor shall make recommendations to reduce noise or disturbance in the vicinity of the nest. If the nest is determined to be inactive, the nest shall be removed under direct supervision of the qualified biologist.

APM BIO-14: Golden Eagle Protection

The USFWS recommends a one mile no disturbance buffer around active nests during the active nesting season (USFWS, 2021). LS Power shall conduct an eagle nest survey within suitable nesting habitat prior to construction. If preconstruction surveys determine that there is an active golden eagle nest within the Survey Area, LS Power shall consult with the agencies to identify an appropriate disturbance buffer based on existing conditions, including existing visual barriers, existing noise levels, existing high levels of human activity and vehicle traffic, and other factors. In lieu of placing an avoidance buffer, LS Power could construct a barrier wall, outside of the nesting season, to obstruct construction activities from line of site from the nest. The barrier would also dampen noise from construction activities. A full-time biological monitor shall monitor the bird(s) for signs of distress. If signs of distress are identified, the biological monitor shall require construction to cease until the birds exhibits normal behavior.

APM BIO-15: Nesting Bird Surveys

Preconstruction nest surveys shall be conducted during the nesting or breeding season (generally February 15 through August 31) within all proposed impact areas and suitable buffers within suitable habitat areas for MBTA-protected birds. This survey shall be performed to determine the presence or absence of nesting birds and roosting bats. If roosting bats or active nests (i.e., containing eggs or young) are identified, a suitable construction avoidance buffer shall be

implemented to ensure that the nesting or breeding activities are not affected. If the nesting or breeding activities by a Federal- or State-listed species are observed, LS Power shall consult with the USFWS and CDFW as necessary. Monitoring of the nest shall continue until the birds have fledged or construction is no longer occurring on the site.

APM BIO-16: Special-Status Invertebrate Surveys

Protocol surveys following standard guidelines and during appropriate seasons shall be conducted within all proposed impact areas and suitable buffers within potentially suitable habitat areas for vernal pool tadpole shrimp, vernal pool fairy shrimp, monarch butterfly, Western bumblebee, and Crotch's bumblebee. In the event of the discovery of suitable habitat, host plants, or individuals of these special-status invertebrates, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If impacts are identified during species-specific surveys for vernal pool tadpole shrimp, vernal pool fairy shrimp, monarch butterfly, Western bumblebee, or Crotch's bumblebee, which are not covered under the Santa Clara Valley HCP, the take shall be covered under a Federal ITP (vernal pool tadpole shrimp, Federally Endangered; vernal pool fairy shrimp, Federally Threatened; monarch butterfly, Federal candidate species) or State ITP (Western bumblebee and Crotch's bumblebee, State candidate species) in consultation with CDFW or USFWS. Any other construction activities that may impact special-status invertebrates or their habitats, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of individuals or host plants and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive invertebrates.

APM BIO-17: Wetland, Vernal Pool, and Waterway Construction Timing Restrictions

Construction in the vicinity of waterways, wetlands, and vernal pools, such as along the Cushing Parkway bridge that borders the Don Edwards San Francisco Bay NWR, near vernal pools north of the existing Newark substation, and in the vicinity of Coyote Creek and the Guadalupe River, shall be restricted to occur during the dry season (generally from May 1 through October 15) to the maximum extent practicable. This would minimize the chance of encountering and impacting sensitive species such as vernal pool tadpole shrimp and CTS that can be found in annual grassland/wetland, wetland, and vernal pool habitat present in these areas as well as fish species such as steelhead, longfin smelt, and green sturgeon that could be using waterways. If construction cannot be conducted during the dry season in the vicinity of waterways, wetlands, and vernal pools, they shall be clearly marked and avoided to the maximum extent practicable and biological monitors shall be present to ensure that no impacts occur.

APM BIO-18: Special-Status Amphibian Surveys

Protocol surveys shall be conducted for CTS and CRLF, and preconstruction surveys shall be conducted within all proposed impact areas and suitable buffers within potentially suitable habitat areas for CTS and CRLF. In the event of the discovery of suitable habitats or live individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted. CTS and CRLF are covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific surveys, the take for this species shall be covered either under the HCP or covered under a State ITP in consultation with CDFW. Any other construction activities that may impact special-status amphibians, including movement of construction equipment and other

activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive amphibians.

APM BIO-19: Wetland and Aquatic Resources Delineations

Pursuant to property owner approval, a wetland and aquatic resources delineation shall be conducted for the portion of the proposed Baylands to NRS 230 kV transmission line within California Department of Transportation ("Caltrans") ROW containing potential State or Federal jurisdictional waters. Accurate acreages of vernal pools and RWQCB, CDFW, and USACE jurisdictional waters shall be defined from these delineations. Vernal pools and jurisdictional waters shall be marked as a sensitive area and shall be avoided to the extent practicable. If these areas cannot be avoided, applicable permits shall be obtained.

5.4.7 PG&E FIELD PROTOCOLS AND BEST MANAGEMENT PRACTICES

The following biological resources FPs and BMPs would be implemented by PG&E for the activities to be completed by PG&E and/or their contractors. The FPs are derived directly from PG&E's Bay Area HCP, and the FPs and BMPs are consistent with the Bay Area O&M HCP.

FP-01: Hold annual training on habitat conservation plan requirements for employees and contractors performing covered activities in the Plan Area that are applicable to their job duties and work.

FP-02: Park vehicles and equipment on pavement, existing roads, or other disturbed or designated areas (barren, gravel, compacted dirt).

FP-03: Use existing access and ROW roads. Minimize the development of new access and ROW roads, including clearing and blading for temporary vehicle access in areas of natural vegetation.

FP-04: Locate off-road access routes and work sites to minimize impacts on plants, shrubs, and trees, small mammal burrows, and unique natural features (e.g., rock outcrops).

FP-05: Notify conservation land owner at least 2 business days prior to conducting covered activities on protected lands (state and federally owned wildlife areas, ecological reserves, or conservation areas); more notice will be provided if possible or if required by other permits. If the work is an emergency, as defined in PG&E's Utility Procedure ENV-8003P-01, PG&E will notify the conservation land owner within 48 hours after initiating emergency work. While this notification is intended only to inform conservation land owner, PG&E will attempt to work with the conservation land owner to address landowner concerns.

FP-06: Minimize potential for covered species to seek refuge or shelter in pipes and culverts. Inspect pipes and culverts, of diameter wide enough to be entered by a covered species that could inhabit the area where pipes are stored, for wildlife species prior to moving pipes and culverts. Immediately contact a biologist if a covered species is suspected or discovered.

FP-07: Vehicle speeds on unpaved roads will not exceed 15 miles per hour.

FP-08: Prohibit trash dumping, firearms, open fires (such as barbecues), hunting, and pets (except for safety in remote locations) at work sites.

FP-09: During fire season in designated State Responsibility Areas, equip all motorized equipment with federally approved or state-approved spark arrestors. Use a backpack pump filled with water and a shovel and fire-resistant mats and/or windscreens when welding. During fire "red flag" conditions as determined by Cal Fire, curtail welding. Each fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C. Clear parking and storage areas of all flammable materials.

FP-10: Minimize the activity footprint and minimize the amount of time spent at a work location to reduce the potential for take of species.

FP-11: Utilize standard erosion and sediment control BMPs (pursuant to the most current version of PG&E's Stormwater Field Manual for Construction Best Management Practices) to prevent construction site runoff into waterways.

FP-12: Stockpile soil within established work area boundaries and locate stockpiles so as not to enter water bodies, stormwater inlets, other standing bodies of water. Cover stockpiled soil prior to precipitation events.

FP-13: Fit open trenches or steep-walled holes with escape ramps of plywood boards or sloped earthen ramps at each end if left open overnight. Field crews will search open trenches or steep-walled holes every morning prior to initiating daily activities to ensure wildlife are not trapped. If any wildlife are found, a biologist will be notified and will relocate the species to adjacent habitat or the species will be allowed to naturally disperse, as determined by a biologist.

FP-14: If the covered activity disturbs 0.1 acre or more of habitat for a covered species in grasslands, the field crew will revegetate the area with a commercial "weed free" seed mix.

FP-15: Prohibit vehicular and equipment refueling 250 feet from the edge of vernal pools, and 100 feet from the edge of other wetlands, streams, or waterways. If refueling must be conducted closer to wetlands, construct a secondary containment area subject to review by an environmental field specialist and/or biologist. Maintain spill prevention and cleanup equipment in refueling areas.

FP-16: Maintain a buffer of 250 feet from the edge of vernal pools and 50 feet from the edge of wetlands, ponds, or riparian areas. If maintaining the buffer is not possible because the areas are either in or adjacent to facilities, the field crew will implement other measures as prescribed by the land planner, biologist, or HCP administrator to minimize impacts by flagging access, requiring foot access, restricting work until dry season, or requiring a biological monitor during the activity.

FP-17: Directionally fell trees away from an exclusion zone, if an exclusion zone has been defined. If this is not possible, remove the tree in sections. Avoid damage to adjacent trees to the extent possible. Avoid removal of snags and conifers with basal hollows, crown deformities, and/or limbs over 6 inches in diameter.

FP-18: Nests with eggs and/or chicks will be avoided: contact a biologist, land planner or the Avian Protection Program manager for further guidance.

BMP BIO-1: Burrowing Owl. A survey for evidence of burrowing owl (sign or presence) should be conducted prior to initial ground-disturbance. The survey can occur within the best detection timeframe and within two weeks of construction. If burrowing owl are detected, consult with the California Department of Fish and Wildlife.

BMP BIO-2: Nesting Birds. If work is anticipated to occur within the nesting bird season (February–August), nesting birds, including raptors and other species protected under the Migratory Bird Treaty Act, may be impacted. If active nests are discovered, exclusionary measures and/or designated avoidance buffers may be required and implemented according to the guidance in the PG&E Nesting Bird Management Plan. The project biologist determines if the construction action will impact the nest, and if so, identifies whether alternative actions or monitoring can be implemented to avoid impacts. If active nests are observed during construction, crews must immediately alert the PG&E project biologist.

5.4.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for biological resources would be implemented for SVP's scope of work.

5.5 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 resources pursuant to §15064.5?			X	
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			X	
c.	Disturb any human remains, including those interred outside of dedicated cemeteries?			X	

This section describes the cultural resources within the Proposed Project area, as well as potential impacts resulting from construction and operation and maintenance (O&M) of the Proposed Project.

5.5.1 ENVIRONMENTAL SETTING

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara. The Proposed Project includes the construction of two new high-voltage direct current (HVDC) terminals and associated transmission lines between two existing substations: the Pacific Gas and Electric Company (PG&E) Newark substation and the Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation. The Proposed Project would include modifications to the existing Newark and NRS substations. The land surrounding the Proposed Project area is primarily heavily developed light industry.

Proposed Project Area

The Proposed Project area covers approximately 269.4 acres, including 25.3 acres for the proposed Albrae terminal site, 9.2 acres for the proposed Baylands terminal site, 75.4 acres for the proposed Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line, 3.1 acres for the proposed Newark to Albrae 230 kV transmission line, 25.1 acres for the proposed Baylands to NRS 230 kV transmission line, modifications to the existing PG&E Newark and SVP NRS substations (0.5 acre and 13.5 acres, respectively), and temporary staging areas (117.1 acres). Refer to **Section 3.0, Proposed Project Description** for further information regarding the Proposed Project's limits of disturbance, including depth of excavation and heights of structures.

5.5.1.1 Cultural Resource Reports

The Cultural Resources Technical Report (Mengers et al., 2024) is included in **Appendix 5.5-A, Cultural Resources Technical Report**. The confidential version of this appendix was submitted separately to California Public Utilities Commission (CPUC) staff under Public Utilities Code Section 583.

5.5.1.2 Cultural Resources Summary

Information on the character and location of cultural resources in the Proposed Project area and local vicinity was requested by PanGIS, Inc. and compiled from background and archival research at the California Historical Resources Information System (CHRIS) through the Northwest Information Center (NWIC). The Native American Heritage Commission (NAHC) and interested Native American individuals were also contacted. The research and Native American outreach were supplemented by an intensive survey of the Proposed Project area. The information was then used to evaluate the Proposed Project against the California Environmental Quality Act (CEQA) Appendix G Environmental Checklist significance criteria to determine potential impacts.

Background research included a record search review, historic map review, Sacred Lands File (SLF) search, and Native American Tribal outreach (see **Section 5.18, Tribal Cultural Resources**). The record search identified no previously recorded resources that intersect with the Proposed Project area. The SLF search was positive for resources within the search area, with instructions to contact the North Valley Yokuts Tribe and the Ohlone Indian Tribe. Responses to outreach were received from the Ohlone Indian Tribe, but no information was provided about Tribal resources in the Proposed Project area.

The surface survey was conducted by PanGIS on September 11, November 7 and 8, 2023; and January 24 and 25, and March 14 and 23, 2024. Surface survey results include two new isolated prehistoric resources within the Proposed Project area. No other archaeological or Tribal cultural resources (TCRs) were located during the surface survey. The majority of the survey area is asphalt pavement and landscaped sidewalks in a developed suburban environment with good ground visibility.

Records Search and Historical Research

A record search was conducted to determine if any cultural resources listed or potentially eligible for listing on the National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR) were present within or immediately adjacent to the Proposed Project area. The record search request was submitted by PanGIS to NWIC on May 16, 2023, and was fulfilled on June 20, 2023. Materials consulted by NWIC included prehistoric and historic archaeological resources and report databases, NRHP, CRHR, California Historical Landmark, California Point of Historical Interest (CPHI), California Inventory of Historic Resources, Archaeological Determinations of Eligibility, the California Office of Historic Preservation (OHP) Built Environment Resources Directory, and the California Department of Transportation ("Caltrans") Bridge Survey. The record search area included a one-mile buffer of the Proposed Project area.

The NWIC record search identified ten studies conducted within the past ten years that intersect the Proposed Project area and had a field component (pedestrian survey, archaeological monitoring, or data recovery), covering approximately 82.85 acres (32 percent) (not including overlapping acreages associated with these study areas) of the Proposed Project area (**Table 5.5-1, Previous Cultural Resource Studies within the Last 10 Years Intersecting the Proposed Project Area**). An additional 91 studies were identified that intersect the Proposed Project area that either did not have a field component or were older than 10 years, and a further 398 studies were identified outside of the Proposed Project area but within the one-mile search buffer (**Appendix 5.5-A**).

Table 5.5-1: Previous Cultural Resource Studies within the Last 10 Years Intersecting the Proposed Project Area

Report Number	Year	Author (Company)	Report Title	Acreage in Proposed Project Area
S-046337	2014	Whitaker, Adrian (Far Western)	State Route 237 Express Lanes Phase 2 Project, HPSR, Including ASR, XPI, and ESA Plan	4.66
S-046399	2015	Leach-Palm, Laura, and Chandra Miller (Far Western)	Historic Property Survey Report for the MTC Interstate 880 Express Lane Phase I Project	0.89
S-046599	2015	Kajankowski, Philip, et al. (Far Western)	Extended Phase I Investigation for the Alameda Interstate 880 Median Barrier Replacement Project	0.84
S-046753	2015	Koenig, Heidi (Environmental Science Associates [ESA])	San José-Santa Clara Regional Wastewater Facility (RWF), Zanker Road Development Area, Cultural Resources Survey Report	51.24
S-047097	2015	Psota, Sunshine (Holman & Associates)	Archaeological Survey Report of Approximately 36 Acres at 4701 N. 1st Street in the Alviso Area of San Jose in Santa Clara County, California	3.79
S-048562	2015	Koenig, Heidi (ESA)	6970 - Fiber Optic Connection, San Jose / Santa Clara Regional Wastewater Facility Archaeologically Sensitive Area and Cultural Resources Monitoring	1.10
S-049327	2016	Brennan, Eryn, et al. (ESA)	San José-Santa Clara RWF Capital Improvement Program, Cultural Resources Survey Report	19.43
S-050028	2015	Archeo-Tec, Inc.	Phase I Cultural Resources Evaluation for the Digester and Thickener Facilities Upgrade Project	0.26
S-050374	2015	Kelly, John (LSA Associates)	Cultural Resources Study SpringHill Suites and Office Complex Project Fremont, Alameda County, California	3.01
S-051983	2018	Psota, Sunshine (Holman & Associates)	Results of Presence/Absence Exploration for the Shops at Terra Project on North First Street in Alviso	3.37

The NWIC record search identified no previously recorded resources that intersect with the Proposed Project area. Two previously recorded resources were identified adjacent to the Proposed Project area (**Table 5.5-2, *Previously Recorded Cultural Resources Identified***). Both of these are modern built environment resources and do not qualify as historical resources pursuant to Section 15064.5. The record search identified an additional 62 previously recorded resources outside of the Proposed Project area but within the one-mile search buffer.

Table 5.5-2: Previously Recorded Cultural Resources Identified

Resource	Description	Proposed Project Component	Status	Comments
P-43-003602	Summerset Estates mobile homes	Baylands to NRS right-of-way (ROW) (adjacent to Proposed Project)	Not eligible	Modern
P-43-003605	United, Inc. farm structures	Staging Area 7 (adjacent to Proposed Project)	Not eligible	Modern

PanGIS consulted historical maps and documents of the record search area, including original survey plats and land patents for Township 5 South Range 1 West (unsectioned) and Township 6 South Range 1 West (Sections 2, 3, 9, 10, and 22) of the Public Land Survey System (PLSS) (Bureau of Land Management [BLM], 2024); historical topographic maps (United States Geological Survey [USGS] 1:250,000 San Jose 1947, 1956, 1962, and 1966; USGS 1:125,000 San Jose 1978 and Stockton 1989; 1:62,500 Pleasanton 1906 and 1941, Livermore 1953 and 1961, and San Jose 1889, 1897, 1899, 1953, and 1961; and USGS 1:24,000 Milpitas 1953, 1961, 1968, 1973, and 1980, and Niles 1953, 1961, 1968, 1973, and 1980) (USGS, 2024); and aerial photographs (1946, 1948, 1956, 1958, 1959, 1960, 1966, 1968, and 1979) (NETROnline, 2024).

A review of historic maps and aeriels agrees with the development history presented herein regarding this portion of the Counties of Alameda and Santa Clara. The Proposed Project area is shown on the original survey plat maps of 1866 and 1869 and plat updates through 1897. At that time, the Proposed Project areas consisted of salt marsh and tidal regions and a portion of the Rancho Rincon de los Esteros and Rancho Ulistac. These maps show waterways near the Proposed Project area, as well as the Southern Pacific Santa Cruz Division railroad just east of the existing SVP NRS substation; no other development is detailed.

Near the proposed Albrae terminal, a dirt road is depicted on the 1906 map approximately 300 feet northwest of the proposed Albrae terminal location; surrounding land is shown as farmland and Southern Pacific property, with minimal development until the 1950s. By 1961, the Southern Pacific diverts to connect with the Santa Cruz division to the northeast. The four-lane Nimitz Freeway is constructed in 1966, 0.8 mile northeast of the proposed Albrae terminal. Near the proposed Baylands terminal, topographical maps from the late 1800s show the nearby towns of Berryessa and Alviso, but no other development is shown.

Near the proposed Baylands to NRS 230 kV transmission line, a residential suburb is shown west of Disk Road in 1948 and continues to expand through 1968. The area along Lafayette Street remains undeveloped between 1948 and 1956. By 1953, roads develop all along the proposed Albrae to Baylands 320 kV DC transmission line area. The East Shore Freeway, which would become known as Interstate (I)-880, is labeled as under construction 1.35 miles to the east. Southwest of the proposed Albrae to Baylands 320 kV DC transmission line running from State Route (SR)-237 to Lafayette Street, development is shown in 1956 and increases as SR-237 expands. Between 1956 and 1968, further industrial and commercial developments emerge along Lafayette Street. Residential development also grows along the proposed Albrae to Baylands 320 kV DC transmission line on the eastern side of I-880. By 1966, further areas begin developing near areas running parallel to I-880 as well as industrial areas just north of Los Esteros Road.

The area in and around Los Esteros Road industrially develops as processing facilities appear, including the San José-Santa Clara RWF, in operation by 1968.

Cultural Resource Survey

A cultural resource pedestrian survey of the Proposed Project components was conducted on November 7 and 8, 2023, January 24 and 25, and March 14 and 23, 2024, by PanGIS staff archaeologists under the direction of PanGIS Director of Cultural Resources, Douglas Mengers. The cultural resource survey area is described below in **Section 5.5.1.3, Cultural Resource Survey Boundaries** and shown in **Figure 5.5-1, Cultural Survey Area Map**.

The survey plan entailed five-to-ten meter-wide transects depending on ground visibility and accessibility. Previously unrecorded resources encountered would be recorded on digital State of California DPR 523 resource forms, and their locations would be recorded using a handheld device running Environmental System Research Institute (ESRI) Field Maps software. Pen and paper field logs served as a backup. Photographs were taken with a 12-megapixel digital camera. No cultural materials were collected during the surface survey. Photographs and field notes are held by PanGIS.

The entire proposed Albrae terminal site is asphalt pavement with no bare ground. The proposed Baylands terminal site is on former agricultural land with uneven terrain due to spoils piles; ground visibility was generally poor due to invasive tall grasses and small shrubs. The majority of the proposed transmission line limits of construction is asphalt pavement and landscaped sidewalks in a developed suburban environment. Survey areas are flat; ground visibility varied from zero percent in paved areas to 10 to 100 percent in road shoulders, depending on ground cover. A 1.6-mile portion of the proposed overhead Albrae to Baylands 320 kV DC transmission line limits of construction is situated on gravel dikes between drying ponds of the San José-Santa Clara RWF, with a flat survey area and excellent ground visibility. A 0.4-mile portion of the proposed Albrae to Baylands 320 kV DC transmission line limits of construction is situated on a paved pedestrian and cycling trail on Santa Clara Valley Water District property with a flat survey area; ground visibility varied from zero percent in paved areas to 10 to 100 percent in road shoulders, depending on ground cover.

Two new prehistoric archaeological resources were located during the surface survey, as shown in **Table 5.5-3, Archaeological Survey Results**. Resource CP-Iso-01 is a potential groundstone artifact with unifacial wear, and resource SA-10-Iso-02 is a small green chert core with evidence of flake removal; both are isolated finds in a disturbed context and, therefore, do not qualify as historical resources as defined in Section 15064.5. No additional archaeological resources or TCRs, as defined in Section 15064.5, were located during the surface survey. Detailed survey methods and results are described in the *Cultural Resource Technical Report for the Power the South Bay Project, Santa Clara County, California* (Mengers et al., 2024), which is included as **Appendix 5.5-A**.

Table 5.5-3: Archaeological Survey Results

Resource	Description	Proposed Project Component	Within Proposed Project?	Comments
CP-Iso-01	Prehistoric groundstone	Cushing Parkway horizontal directional drilling (HDD)	Yes	Newly recorded
SA10-Iso-02	Prehistoric lithic core	Staging Area 10	Yes	Newly recorded

The majority of the Proposed Project area is highly developed, but unrecorded subsurface resources are likely to be present within the Proposed Project area. A discussion of prehistoric, ethnohistoric, and historic era resource types common to the region is included in the Methods section of **Appendix 5.5-A**. Unanticipated resources may be discovered during ground-disturbing activities, which would then need to be evaluated in order to assess Proposed Project impacts.

5.5.1.3 Cultural Resource Survey Boundaries

The cultural resource survey area was confined to those portions of the Proposed Project area where access was available. This included the proposed Albrae terminal site; the proposed Baylands terminal site; the PG&E-owned property surrounding the existing PG&E Newark substation, including the limits of construction for the proposed overhead structures AC-1, AC-2, and AC-4; the proposed Albrae to Baylands 320 kV DC transmission line limits of construction (including the area along the northern side of Cushing Parkway bridge); the proposed Baylands to NRS 230 kV transmission line limits of construction (and a portion of the areas associated with proposed overhead structures DC-1 through DC-11); proposed Staging Areas 2 and 11; and a portion of proposed Staging Area 10; totaling approximately 326.7 acres (see **Figure 5.5-1**). A visual survey of additional components was conducted from the public ROW where pedestrian access was not available, including the existing PG&E Newark substation; the existing SVP NRS substation; proposed Staging Areas 3, 4, 5, 6, 8, and the remainder of 10; overhead structures AC-3; and the remainder of proposed overhead structures DC-1 through DC-11. No pedestrian or visual survey was conducted at proposed Staging Areas 1, 7, or 9. Unsurveyed Proposed Project areas would be surveyed prior to construction (see **Applicant Proposed Measure [APM] CUL-4, Cultural Resources Inventory**). See **Figure 5.5-1**.

5.5.2 REGULATORY SETTING

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

5.5.2.1 Cultural Resources Regulatory Setting

Federal

There are no applicable federal regulations for cultural resources that apply to the Proposed Project. Section 106 of the National Historic Preservation Act (NHPA) does not apply to the Proposed Project because no federal agency discretionary action is required, and no federal lands or monies are involved.

State**California Health and Safety Code and Public Resources Code**

Broad provisions for the protection of Native American cultural resources are contained in the California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010 through 8030). Several provisions of the Public Resources Code (PRC) also govern archaeological finds of human remains and associated objects. Procedures are detailed under PRC Section 5097.98 through 5097.996 for actions to be taken whenever Native American remains are discovered. Furthermore, Section 7050.5 of the California Health and Safety Code states that any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in PRC Section 5097.99. Any person removing human remains without authority of law or written permission of the person or persons having the right to control the remains under PRC Section 7100 has committed a public offense that is punishable by imprisonment.

PRC Chapter 1.7, Section 5097.5/5097.9 (Stats. 1965, c. 1136, p. 2792), entitled Archaeological, Paleontological, and Historical Sites, defines any unauthorized disturbance or removal of a fossil site or remains on public land as a misdemeanor. A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

Assembly Bill 52

Assembly Bill (AB) 52 established that TCRs must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. A TCR is a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American Tribe. A TCR is either:

- On the CRHR or a local historic register;
- Eligible for the CRHR or a local historic register; or
- The lead agency determines that the resource meets the register criteria.

A project that has potential to impact a TCR such that it would cause a substantial adverse change constitutes a significant effect on the environment unless mitigation reduces such effects to a less-than-significant level. On July 30, 2016, the California Natural Resources Agency adopted the final text for TCRs update to Appendix G of the CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016. AB 52 amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact or a Tribal representative of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in

writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification, and the lead agency must begin consultation within 30 days of receiving the Tribe's request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of TCRs; the significance of the project's impacts on the TCRs; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American Tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American Tribe has failed to request consultation within 30 days, the lead agency may certify an Environmental Impact Report (EIR) or adopt a Mitigated Negative Declaration (MND) (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the TCRs, that is submitted by a California Native American Tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the Tribe that provided the information. If the lead agency publishes any information submitted by a California Native American Tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the Tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Confidentiality does not, however, apply to data or information that are, or become, publicly available, are already in lawful possession of the project applicant before the provision of the information by the California Native American Tribe, are independently developed by the project applicant or the project applicant's agents, or are lawfully obtained by the project applicant from a third party that is not the lead agency, a California Native American Tribe, or another public agency (PRC Section 21082.3(c)(2)(B)).

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local cultural resources-related policies,

plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

Cultural resources are addressed in the Community Character Element of the City of Fremont General Plan (City of Fremont, 2011). The General Plan identifies the following goals, policies, and implementation measures pertaining to cultural resources.

Implementation 4-5.3.B Impacts of Utilities. Review planned utility undergrounding, sidewalk repair, and other infrastructure projects to avoid unnecessary removal of important design features, trees, or historic features.

Goal 4-6 Historic Preservation and Cultural Resources. Conservation and enhancement of Fremont's historic sites, buildings, structures, objects, and landscapes into the 21st Century and beyond.

Policy 4-6.1 Protection of Historic Resources. Identify, preserve, protect, and maintain buildings, structures, objects, sites, and districts which are reminders of past eras, events, and persons important in local, state, or national history. Historic structures which provide significant examples of architectural periods and styles of the past are irreplaceable assets. They should be protected to provide present and future generations with examples of the physical environments in which past generations lived and worked. The needless destruction and impairment of significant historic resources must be prevented so that opportunities for public enjoyment and economic utilization of such resources are not diminished or lost.

Policy 4-6.4 Historic Settings and Landscapes. Identify and pursue measures to protect the historic settings and landscapes that contribute to Fremont's historic resources. The City shall review proposed development and redevelopment projects to ensure their compatibility with existing historic settings. In particular, such review shall address the scale, massing, and on-site improvements of proposed development as it relates to historic settings. This policy recognizes that the historic value of a site may extend beyond structures and include the landscape and setting around a structure. This could include heritage trees, gardens, historic plantings, significant landscape elements, fences and outbuildings, and other character-defining features.

Policy 4-6.6 Historic Preservation Regulations. Observe local, State, and federal historic preservation laws, regulations, and codes to ensure conservation of Fremont's significant historic resources. These laws include but are not limited to Mills Act Historic Property contracts, the California Historical Building Code, and State laws related to archaeological resources.

- Policy 4-6.10** **Protection of Native American Remains.** Coordinate with representatives of local Native American organizations to ensure the protection of Native American resources and to follow appropriate mitigation, preservation, and recovery measures in the event such resources could be impacted by development.

City of Fremont Historic Resources Ordinance

Chapter 18.175 of the City of Fremont Municipal Code provides Fremont's Historic Resources Ordinance (City of Fremont, 2023). The purpose of the Historic Resources Ordinance is to safeguard the City's heritage by encouraging the protection of historic resources that have important associations with past eras, events, and persons important in local, state, or national history, or which provide significant examples of architectural styles of the past or are historical architectural resources. Historic resources also may include structures that are unique and irreplaceable assets to the City and its neighborhoods, or which provide examples of the physical surroundings in which past generations lived. Components of the Historic Resources Ordinance include its purpose and intent, overview of the historical architecture review board, Fremont register of historic resources, historic overlay districts, evaluation of buildings, structures, or objects, approach to historic preservation, and procedures for permitting minor alterations or demolition of historic resources.

City of Milpitas General Plan

The City of Milpitas General Plan (City of Milpitas, 2021) identifies the following goals and policies pertaining to cultural resources.

- Policy CD 1-4** Recognize, enhance, celebrate, and preserve, where possible, natural features and ecosystems, and protect cultural and historic resources.
- Goal CON-4** Preserve and protect prehistoric, historic, archaeological, and paleontological resources in Milpitas.
- Policy CON 4-1** Review proposed developments and work in conjunction with the California Historical Resources Information System, Northwest Information Center at Sonoma State University, to determine whether project areas contain known archaeological resources, either prehistoric and/or historic-era, or have the potential for such resources.
- Policy CON 4-2** If found during construction, ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.
- Policy CON 4-3** Work with Native American representatives to identify and appropriately address, through avoidance or mitigation, impacts to Native American cultural resources and sacred sites during the development review process.

- Policy CON 4-4** Consistent with State, local, and tribal intergovernmental consultation requirements such as Senate Bill 18 and AB 52, the City shall consult as necessary with Native American Tribes that may be interested in proposed new development and land use policy changes.
- Goal CON-5** Protect and enhance historic resources- including places, buildings, or landmarks with historic, architectural, cultural, and/or aesthetic significance.
- Policy CON 5-1** Protect significant historic resources and use these resources to promote a sense of place and history in Milpitas through implementation of the Milpitas Cultural Resources Preservation Program (Municipal Code, Title XI, Chapter 4), the Conceptual Historic Resources Master Plan, the conservation and preservation of the City's historical collection at the Milpitas Community Museum, and other applicable codes, regulations, and area plans.

City of Milpitas Cultural Resources Preservation Program

Title XI, Chapter 4 of the City of Milpitas Municipal Code provides the City's Cultural Resources Preservation Program (City of Milpitas, 2023). The Cultural Resources Preservation Program aims to balance the needs of the community for preservation and development by creating a Parks, Recreation, and Cultural Resources Commission, setting forth procedures to allow the inventory and classification of community cultural resources, and providing guidance to owners in the preservation of valuable cultural assets. Components in the Cultural Resources Preservation Program include general objectives; purpose; definitions; Parks, Recreation, and Cultural Resources Commission; powers and duties; designation criteria and procedures; permits; permit procedures; maintenance and repair; showing of hardship; rules and regulations; and violations.

City of San José General Plan

The City of San José General Plan sets forth a vision and a comprehensive road map to guide the City's continued growth through the year 2040 (City of San José, 2024). The various elements of the City of San José General Plan have been combined into a consistent and meaningful plan and organized in a manner designed to meet public needs. The following policies and goals related to cultural resources have been provided for informational purposes only:

- Policy CD-1.26** Apply the Historic Preservation Goals and Policies of this Plan to proposals that modify historic resources or include development near historic resources.
- Goal ER-10** Preserve and conserve archaeological significant structures, sites, districts, and artifacts in order to promote a greater sense of historic awareness and community identity.
- Policy ER-10.1** For proposed development sites that have been identified as archaeologically or paleontologically sensitive, require investigation during the planning process in order to determine whether potentially significant archaeological or paleontological information may be affected by the

project and then require, if needed, that appropriate mitigation measures be incorporated into the project design.

- Policy ER-10.2** Recognizing that Native American human remains may be encountered at unexpected locations, impose a requirement on all development permits and tentative subdivision maps that upon their discovery during construction, development activity will cease until professional archaeological examination confirms whether the burial is human. If the remains are determined to be Native American, applicable state laws shall be enforced.
- Policy ER-10.3** Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.
- Goal LU-13** Preserve and enhance historic landmarks and districts in order to promote a greater sense of historic awareness and community identity and contribute toward a sense of place.
- Policy LU-13.12** Develop and encourage public/public and public/private partnerships as a means to support, expand, and promote historic preservation.
- Policy LU-13.15** Implement City, State, and Federal historic preservation laws, regulations, and codes to ensure the adequate protection of historic resources.
- Policy LU-13.16** Alert property owners, land developers, and the building industry to historic preservation goals and policies and their implications early in the development process.
- Goal IP-10** Use the Site Development permit process to implement the Environ General Plan goals and policies.
- Policy IP-10.3** In addition to a Site Development permit, require an Historic Preservation permit for modifications to a designated Historic Landmark structure. This permit process fosters the implementation of Historic Preservation goals and policies of the Envision General Plan.

No City of San José Standard Conditions of Approval related to cultural resources were available for review.

City of San José Historic Preservation

The Council of the City of San José adopted the Historic Preservation Ordinance (Section 13.48 of the City's Municipal Code) to promote a harmonious outward appearance of structures in the historic styles and a general harmony as to style, form, color, proportion, texture, and material between buildings of historic design and those of more modern design; that such purpose is advanced through the preservation and protection of the old historic or architecturally worthy structures and neighborhoods which impart a distinct aspect to the City of San José and which serve as visible reminders of the historical and cultural heritage of the City of San José. Basic

components of the ordinance include purpose, definitions, historic landmark commission, historic resource inventory, historic preservation officer, procedures for designation of a landmark, procedures for designation of historic districts, notice of amendment or rescission of designation, historic preservation permits, historic property contracts, and conservation areas.

City of Santa Clara General Plan

The City of Santa Clara General Plan sets forth policies and goals to provide direction for City development through 2035 (City of Santa Clara, 2010). A list of architecturally or historically significant resources is maintained as Appendix 8.9 of the General Plan, which provides a list of the names and locations of the historic properties in the City of Santa Clara including the Areas of Historic Sensitivity, defined as 100 feet from the property line of an identified historically significant property. Appendix 8.9 of the General Plan also provides the Criteria for Local Significance, which establish evaluation measures that help to determine significance for properties not yet included on the list. The following goals and policies related to cultural resources are provided for informational purposes only:

- Policy 5.5.1-P12** For City historically or architecturally significant properties, listed in Appendix 8.9, allow alternate uses from those on the General Plan Land Use Diagram in order to encourage preservation of the resource, provided that the alternate use is compatible with planned uses on neighboring properties and consistent with other applicable General Plan policies.
- Goal 5.6.1-G1** Preservation of historic resources and neighborhoods.
- Goal 5.6.1-G2** Public awareness of the City's historic preservation programs.
- Policy 5.6.1-P1** Discourage the demolition or inappropriate alterations of historic buildings and ensure the protection of historic resources through the continued enforcement of codes and design guidelines.
- Policy 5.6.1-P3** Protect historic resources from demolition, inappropriate alterations and incompatible development.
- Goal 5.6.2-G1** New development that is compatible with nearby historic resources.
- Policy 5.6.2-P1** Evaluate any proposed changes to properties within 100 feet of historic resources on the City's list of Architecturally or Historically Significant Properties for potential negative effects on the historic integrity of the resource or its historic context.
- 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.
- Policy 5.6.3-P1** Require that new development avoid or reduce potential impacts to archaeological, paleontological, and cultural resources.

- Policy 5.6.3-P4** Require that a qualified paleontologist/archaeologist monitor all grading and/or excavation if there is a potential to affect archeological or paleontological resources, including sites within 500 feet of natural water courses and in the Old Quad neighborhood.
- Policy 5.6.3-P5** In the event that archaeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archaeologist/paleontologist.
- Policy 5.6.3-P6** In the event that human remains are discovered, work with the appropriate Native American representative and follow the procedures set forth in State law.

City of Santa Clara Historic Preservation Ordinance

The City of Santa Clara adopted the Historic Preservation Ordinance (Chapter 18.106 of the City's Municipal Code) to promote the identification, protection, enhancement, and perpetuation of buildings, structures, and properties within the City (City of Santa Clara, 2023). The Historic Preservation Ordinance outlines the designation criteria for a property to be placed on the Historic Resources Inventory (HRI). Designated properties reflect special elements of the City's social, economic, historical, architectural, engineering, archaeological, cultural, natural, or aesthetic heritage. Components of the ordinance include definitions, intent, identification of HRI properties, HRI property designation, permits required for property alterations, demolition permits, and Historical and Landmarks Commission referral for projects near HRI properties.

5.5.3 IMPACT QUESTIONS

5.5.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to cultural resources come from the CEQA Appendix G, Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5; or
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
- Disturb any human remains, including those interred outside of dedicated cemeteries.

5.5.3.2 Additional CEQA Impact Questions

Pursuant to CPUC's *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (2019), there are no additional CEQA Impact Questions required for cultural resources.

5.5.4 IMPACT ANALYSIS

5.5.4.1 Cultural Resources Impact Analysis

Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Less-Than-Significant Impact. There are no known historical resources, as defined in Section 15064.5, located within the Proposed Project area. Two previously recorded built environment resources were identified adjacent to the Proposed Project area (**Table 5.5-2**). Both are modern resources and do not qualify as historical resources as defined in Section 15064.5. However, unrecorded historical resources may exist within or adjacent to the Proposed Project area. While unanticipated, the Proposed Project would involve activities that have the potential to encounter historical resources that are eligible for listing in the CRHR or in a local register. Should previously unidentified historical resources be encountered during construction, the following APMs would reduce impacts to less than significant by ensuring that all Proposed Project construction personnel can recognize historical resources, avoid known resources, and appropriately respond to unanticipated discoveries. **APM CUL-1, Worker Environmental Awareness Program (WEAP) Training** requires the development and implementation of a WEAP; **APM CUL-2, Archaeological and Native American Monitoring** requires archaeological monitoring to assist in identification and evaluation of potential historical resources, and **APM CUL-3, Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources** specifies the procedures needed to occur if a previously unidentified historical resource is uncovered during implementation of the Proposed Project. **APM CUL-4** would require a cultural survey prior to construction at the temporary construction staging areas, which would reduce impacts to less than significant by ensuring that any newly identified historical resources are either avoided by project redesign or evaluated and treated.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction on the Newark substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited duration. The area just north of the existing Newark substation within PG&E's property is undeveloped, and construction of overhead structure AC-1 would involve earthmoving activities that may have the potential to encounter historic resources that are eligible for listing in the CRHR or a local register. Implementation of PG&E **Best Management Practices (BMPs) CULT-1, Worker Awareness Training** and **CULT-2, Inadvertent Discovery** would reduce potential impacts by ensuring that all Proposed Project personnel can recognize historical resources and appropriately respond to unanticipated discoveries of any newly identified historic resources. Therefore, impacts to historic resources would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. Construction on the NRS substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a similarly limited duration. The existing NRS substation is entirely developed, and no additional information would be gained from a pedestrian survey. Furthermore, no previously recorded prehistoric or ethnohistoric resources are known to occur within the existing substation facility. Therefore, no impacts would occur under this criterion.

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

Less-Than-Significant Impact. There are no known archaeological resources, as defined in Section 15064.5, located within the Proposed Project area. The two new prehistoric archaeological resources encountered during the surface survey are both isolated finds in a disturbed context and, therefore, do not qualify as historical resources as defined in Section 15064.5. The Proposed Project would involve earthmoving activities that may have the potential to uncover unrecorded subsurface archaeological resources that are eligible for listing in the CRHR or in a local register. Should previously unidentified archaeological resources be encountered during construction, the following APMs would reduce impacts to less than significant by ensuring that all Proposed Project construction personnel can recognize archaeological resources, avoid known resources, and appropriately respond to unanticipated discoveries. **APM CUL-1** requires the development and implementation of a WEAP; **APM CUL-2** requires archaeological monitoring to assist in identification and evaluation of potential archaeological resources; and **APM CUL-3** specifies the procedures needed to occur if a previously unidentified archaeological resource is uncovered during implementation of the Proposed Project. **APM CUL-4** would require a cultural survey prior to construction at the temporary construction staging areas, which would reduce impacts to less than significant by ensuring that any newly identified archaeological resources are either avoided by project redesign or evaluated and treated.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). There are no known archaeological resources, as defined in Section 15064.5, located within the PG&E facility modification area. Similar to the Proposed Project, modifications to the existing Newark substation would involve earthmoving activities that may have the potential to encounter archaeological resources that are eligible for listing in the CRHR or in a local register. The area just north of the existing substation within PG&E property is undeveloped, and construction of overhead structure AC-1 could result in potential impacts to unanticipated discoveries of cultural resources. Implementation of PG&E **BMPs CULT-1** through **CULT-2**, would reduce potential impacts by ensuring that all Proposed Project personnel can recognize archaeological resources; and appropriately respond to unanticipated discoveries of any newly identified archaeological resources. Therefore, impacts to archaeological resources would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation is entirely developed, and no additional information would be gained from a pedestrian survey. Since there are no known resources within the existing NRS substation and the modification area is already developed, no impacts to archaeological resources would result.

5.5.4.2 Human Remains

Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less-Than-Significant Impact. There are no known human remains located within the Proposed Project vicinity. However, based on the unknown nature of the sacred sites reported to exist in the area, unrecorded human remains may be present within the Proposed Project area. Because the Proposed Project would involve earthmoving activities, while unlikely, there would be potential for these activities to uncover unrecorded human remains. If encountered, **APMs CUL-1, CUL-2, CUL-3, and CUL-5, Unanticipated Discovery of Human Remains** would be implemented to ensure that all Proposed Project personnel can recognize human remains, avoid known human remains, appropriately respond to unanticipated discoveries of any newly identified human remains, and that impacts to human remains are reduced to less than significant by ensuring that appropriate personnel are present and appropriate procedures are followed.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Similar to the Proposed Project, upgrades to the existing substations would involve earthmoving activities that may have the potential to encounter resources associated with human remains that are eligible for listing in the CRHR or in a local register. Implementation of PG&E **BMPs CULT-1 through CULT-3 Human Remains** would reduce potential impacts by ensuring that all Proposed Project personnel can recognize human remains; appropriately respond to unanticipated discoveries of any newly identified human remains; and ensure that appropriate personnel are present and appropriate procedures are followed. Therefore, impacts to resources associated with human remains would be less than significant.

SVP Substation Modifications

The SVP NRS modifications would occur within the existing substation. The existing NRS substation is entirely developed, and no additional information would be gained from a pedestrian survey. Since there are no known resources within the existing NRS substation and the modification area is already developed, no impacts to human remains would result.

5.5.4.3 Resource Avoidance

LS Power would implement **APMs CUL-1, CUL-2, and CUL-4**; and PG&E would implement **BMP CULT-1**, as described in **Sections 5.5.6, Applicant Proposed Measures** and **5.5.7, PG&E Best Management Practices** below, to avoid impacts to known resources.

5.5.5 CPUC DRAFT ENVIRONMENTAL MEASURES

The CPUC recommends a Draft Environmental Measure for cultural resources associated with the discovery of human remains. The recommended Draft Environmental Measure has been included in **Section 5.5.6** as **APM CUL-5**.

5.5.6 APPLICANT PROPOSED MEASURES

The following cultural resource-specific APMs would be implemented for the Proposed Project.

APM CUL-1: WEAP Training

LS Power shall obtain a qualified archaeologist to design the cultural resources component of a WEAP that shall be provided to all Proposed Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. The WEAP shall be submitted to the CPUC prior to construction. No construction worker shall be involved in ground-disturbing activities without having participated in the WEAP. The WEAP shall include, at a minimum:

- Training on how to identify potential cultural resources and human remains during the construction process;
- A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to historic preservation;
- A discussion of procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Proposed Project;
- A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and LS Power policies; and
- A statement by the construction company or applicable employer agreeing to abide by the WEAP, LS Power policies, and other applicable laws and regulations.

The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Proposed Project, provided that the program elements pertaining to cultural resources are designed by a qualified archaeologist, which is defined as an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology (36 CFR Part 61).

APM CUL-2: Archaeological and Native American Monitoring

Archaeological and Native American monitoring shall be conducted during initial ground disturbance associated with the Proposed Project when within 100 feet (30 m) of previously recorded prehistoric or ethnohistoric resources, or after unanticipated discovery of same. Archaeological monitoring shall be conducted during ground disturbance associated with the Proposed Project when within 100 feet (30 m) of previously recorded historic-period resources, or after unanticipated discovery of same. Prehistoric and/or ethnohistoric archaeological sites have been recorded adjacent to the Proposed Project area, and the SLF search and Tribal outreach indicate that lands sacred to the North Valley Yokuts Tribe and the Ohlone Indian Tribe

are present within the Proposed Project search area. In addition, historic-era archaeological sites have been recorded within 100 feet (30 m) of the Proposed Project area. A qualified archaeologist, or an archaeological monitor under the supervision of a qualified archaeologist, shall be retained by LS Power to monitor excavation in each work area for the Proposed Project in accordance with the above monitoring criteria to ensure that there is no impact to any significant unanticipated historical resource. A qualified archaeologist, and a Native American monitor if determined during Tribal consultation, shall be retained by LS Power to monitor excavation in each work area for the Proposed Project in accordance with the above monitoring criteria to ensure that there is no impact to any significant unanticipated cultural resource. Procedures to be followed in the event that a Native American monitor is not available shall be determined during Tribal consultation. Native American monitoring requirements established in this APM may be superseded by government-to-government consultation conducted between the CPUC and Tribal organizations as part of the AB 52 process or otherwise.

APM CUL-3: Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources

In the event that previously unidentified cultural resources are uncovered during implementation of the Proposed Project, all work within 100 feet (30 m) of the discovery shall be halted and redirected to another location. LS Power's qualified archaeologist shall inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts shall occur, the resource shall be documented on State of California DPR cultural resource records, and no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, LS Power's qualified archaeologist shall evaluate the significance and CRHR eligibility of the resources and, in consultation with the CPUC, determine appropriate treatment measures. Preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, LS Power's qualified archaeologist, in consultation with the CPUC and, if the unearthed resource is prehistoric or Native American in nature, the Native American monitor shall develop additional treatment measures, such as data recovery consistent with CEQA Guidelines 15126.4(b)(3)(C)-(D). Archaeological materials recovered during any investigation shall be curated at an accredited curation facility or transferred to the appropriate Tribal organization.

APM CUL-4: Cultural Resources Inventory

The limits of construction for proposed overhead structure AC-3, limits of construction for the area west of overhead structure AC-4 within Caltrans ROW, the remainder of proposed overhead structures DC-1 through DC-11, and temporary construction Staging Areas 1, 3 through 9, and part of 10 shall be surveyed prior to construction. If additional proposed facilities and ground-disturbing activities move outside the previously surveyed acreage, the new areas shall be subjected to a cultural resources inventory to ensure that any newly identified cultural resources are either avoided by project redesign or evaluated and treated.

APM CUL-5: Unanticipated Discovery of Human Remains

Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy where feasible and otherwise managed pursuant to the standards of CEQA Guidelines 15064.5(d) and (e). If human remains are discovered during construction or O&M activities, all work shall be diverted from the area of the discovery and the CPUC shall be

informed immediately. LS Power's qualified archaeologist shall contact the appropriate County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner shall contact the NAHC. The NAHC shall then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn shall make recommendations for the appropriate means of treating the human remains and any associated funerary objects. No part of the Proposed Project is located on federal land and no federal monies are involved; therefore, the Proposed Project is not subject to the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990.

5.5.7 PG&E BEST MANAGEMENT PRACTICES

The following cultural resource-specific BMPs would be implemented for the activities to be completed by PG&E and/or their contractors.

BMP CULT-1: Worker Awareness Training

PG&E will provide environmental awareness training on archeological cultural and paleontological resources protection. This training may be administered by the PG&E cultural resources specialist (CRS) or a designee as a stand-alone training or included as part of the overall environmental awareness training as required by the project and will at minimum include: types of cultural resources or fossils that could occur at the project site; types of soils or lithologies in which the cultural resources or fossils could be preserved; procedures that should be followed in the event of a cultural resource, human remain, or fossil discovery; and penalties for disturbing cultural or paleontological resources.

BMP CULT-2: Inadvertent Discovery

If any new cultural resources are encountered during project activities, all work must be suspended in the vicinity (approximately 100 ft.) of the resource and the (CRS): shall be immediately notified. At that time, the CRS will coordinate any necessary investigations of the site with appropriate specialists, as needed. PG&E may be required to implement protective measures deemed necessary for the protection of the cultural resources.

Prehistoric resources that may be identified during project implementation may include, but are not limited to, stone tools and manufacturing debris made of obsidian, basalt and other lithic materials, milling equipment such as bedrock mortars, portable mortars, and pestles and locally darkened soils (midden) that may contain dietary remains such as shell and bone, as well as human remains. Historic resources that may be identified include, but are not limited, to small cemeteries or burial plots, structural foundations, cabin pads, cans with soldered seams or tops, bottles or fragments of clear and colored glass, cut (square) nails, and ceramics.

BMP CULT-3: Human Remains

In keeping with the provisions provided in 7050.5 of the California Health and Safety Code (CHSC) and Public Resource Code 5097.98, if human remains are encountered (or are suspected) during any project-related activity, PG&E shall:

- Stop all work within 100 ft.;
- Immediately contact: CRS, who will then notify the county coroner;

- Secure location, but do not touch or remove remains and associated artifacts;
- Do not remove associated spoils or pick through them;
- Record the location and keep notes of all calls and events; and
- Treat the find as confidential and do not publicly disclose the location.

If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. The most likely descendant shall work with the CRS to develop a program for re-interment or other disposition of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the appropriate actions have been implemented.

5.5.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for cultural resources would be implemented for SVP's scope of work.

5.6 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?			X	
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X
c.	Add capacity for the purpose of serving a non-renewable energy source?				X

This section describes the energy resources within the vicinity of the Proposed Project, as well as the potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.6.1 ENVIRONMENTAL SETTING

The existing Pacific Gas and Electric Company (PG&E) Newark substation and the Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation are integral parts of the Greater Bay Area transmission system that deliver electricity in the region. The Proposed Project is a reliability-driven project that would support the regional transmission system by providing an additional controllable high-voltage direct current (HVDC) transmission path between these two existing substations. This new HVDC transmission path would allow for better utilization of the electrical grid by resolving and preventing additional overloads. Additionally, the Proposed Project would provide reduced local capacity requirements in the areas of the Cities of Fremont, Milpitas, San José, and Santa Clara as well as the overall Greater Bay Area, which would provide greater grid stability and reduce reliance on local gas-fired generation (California Independent System Operator [CAISO], 2023).

O&M of the existing PG&E Newark and SVP NRS substations requires little or no use of energy and instead serve to convert and deliver energy. The existing substations are unmanned and remotely controlled with workers being on-site for required inspections or as needed in emergency situations. Similarly, the Proposed Project facilities, including the two proposed HVDC terminals, would include one new full-time technician to support the Proposed Project and other California projects operated by LS Power Grid California, LLC ("LS Power").

5.6.1.1 Existing Energy Use

The City of Santa Clara owns and operates the municipal electric utility known as SVP. SVP maintains over 380 miles of underground and 187 miles of overhead distribution lines (City of Santa Clara, 2023). Electricity is provided from various sources, including natural gas, wind, and hydroelectric generation resources in California and other western states. Based on the

requirements of Senate Bill (SB) 100 (State of California, 2018), utility providers are required to have 60 percent of their energy portfolio supplied by renewable energy sources by 2030. The City of Santa Clara offers Santa Clara Green Power, a voluntary clean energy program offered by SVP that gives commercial customers in the City of Santa Clara the ability to cover up to 100 percent of their electricity usage with renewable sources of power for minimal additional cost. When businesses enroll in the program, SVP purchases renewable energy certificates from western solar facilities or wind facilities in an amount equal to the entire electricity demand. Businesses also have the option to enroll in SVP Non-Residential, which is sourced from approximately 40 percent renewable and/or greenhouse gas (GHG)-free sources. Residential customers are automatically enrolled in SVP Residential, which consists of 100 percent renewable and/or GHG-free energy (SVP, 2023). The existing SVP NRS substation would be modified to accommodate the Proposed Project interconnection to the SVP network via the proposed Baylands terminal (described further in **Section 3.0, Proposed Project Description**).

The majority of PG&E's renewable energy comes from contracts with third-party developers. As of February 2022, PG&E's Renewable Portfolio Standard (RPS)-eligible portfolio included 263 contracts for more than 6,500 megawatts (MW) of contracted capacity. PG&E also has 49 utility-owned RPS-eligible generation facilities representing more than 430 MW of additional capacity. PG&E's renewable portfolio is estimated to be ahead of the State requirement by 2030 at 70 percent (PG&E, 2022). The ratio of renewable energy from both San José Clean Energy (SJCE) and PG&E would be expected to increase each year until reaching 100 percent by 2045 as required by California's RPS. The existing PG&E Newark substation would be modified to accommodate the Proposed Project interconnection to the PG&E network via the proposed Albrae terminal (described further in **Section 3.0**).

The City of San José provides access to programs for providing energy service throughout the City: SJCE GreenSource and SJCE TotalGreen. The service provided to most of the City of San José residents and businesses is GreenSource, which consists of 60 percent renewable energy, 35 percent non-renewable carbon-free energy, and five percent unspecified energy (City of San José, 2023). SJCE TotalGreen provides 100 percent renewable energy service to those who choose this service. For those who opted out of SJCE's services, electricity is provided from PG&E. As of 2021, PG&E had achieved an approximately 54 percent renewable portfolio (California Public Utilities Commission [CPUC], 2021).

PG&E provides energy to the residents and businesses in the City of Fremont, contracting with RPS-eligible sources whenever possible as described above. PG&E brings power into the City of Fremont on overhead transmission lines. These high-voltage lines, which carry 115 kilovolt (kV) to 230 kV each, feed into the existing PG&E Newark substation. The Fremont substation at Paseo Padre Parkway and Grimmer Road and the Jarvis substation on Decoto Road in Union City also serve the City of Fremont. Power is stepped down at the substations and fed into supply lines throughout the City of Fremont. The power is then distributed through overhead and underground electric lines, which provide service to individual residences and businesses (City of Fremont, 2011).

Electrical and natural gas infrastructure within the City of Milpitas is owned and operated by PG&E. Electricity delivered to consumers in the City is generated from a mix of power sources from elsewhere in the region and State, as well as on-site generation of electricity from local public and private facilities. The City is a member of Silicon Valley Clean Energy (SVCE), a local community-choice aggregator, that partners with PG&E and supplies carbon-free electricity to its members (City of Milpitas, 2022).

PG&E also provides natural gas energy infrastructure in the Cities of Fremont, Milpitas, San José, and Santa Clara and throughout the Counties of Alameda and Santa Clara. Natural gas is provided through an interconnected network of underground pipelines and distribution mains from a variety of sources across North America (PG&E, 2024). Natural gas usage by County is tracked by the California Energy Commission (CEC) and is measured in therms, a unit of heat energy where one therm is equal to the energy of approximately 100 cubic feet of natural gas. The total gas consumption in 2022 in the County of Alameda (including the City of Fremont) was 377.3 millions of therms, including 210.4 millions of therms of residential consumption and 166.9 millions of therms of non-residential consumption. In the County of Santa Clara (including the Cities of Milpitas, San José, and Santa Clara), total gas consumption in 2022 was 423.9 millions of therms, including 234.1 millions of therms of residential consumption and 189.8 millions of therms of non-residential consumption (CEC, 2024).

Diesel and regular unleaded gasoline are utilized within the Cities of Fremont, Milpitas, San José, Santa Clara, and across all parts of the PG&E service territory. Regular unleaded gasoline is typically used to fuel passenger cars and small trucks, whereas diesel fuel is used in large trucks and construction equipment. The estimated gasoline sales in 2022 for the Cities of Fremont, Milpitas, San José, and Santa Clara totaled 58 million gallons, 22 million gallons, 254 million gallons, and 41 million gallons, respectively (CEC, 2023).

5.6.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.6.2.1 Energy Regulatory Setting

Federal

Energy Policy and Conservation Act and Energy Independence and Security Act

The Energy Policy and Conservation Act (EPCA) was enacted in 1975 in response to an oil shortage crisis that occurred in 1973. The intent of the EPCA was to stabilize the national energy supply by increasing domestic production and storage and reducing demand through energy conservation. One of the key components of the EPCA was the establishment of Corporate Average Fuel Economy (CAFE) standards, which are further discussed below. The EPCA was amended in 2007 by the Energy Independence and Security Act (EISA). The function of the EISA is to bolster energy security in the United States by implementing energy efficiency standards for federal agencies and facilities, improving vehicle fuel economy, implementing sustainable building practices for federal facilities and renovations, and requiring increased use of renewable energy.

Corporate Average Fuel Economy Standards

As part of the EPCA, the CAFE standards were required to reduce the demand for gasoline by increasing the fuel efficiency (i.e., miles per gallon) of passenger cars and light trucks sold in the U.S. Specifically, these standards require automakers to achieve fleet-wide average fuel efficiencies, starting in the year 1978. The U.S. Department of Transportation, National Highway Traffic and Safety Administration regulates the CAFE standards, including setting the standards and enforcing compliance. The U.S. Environmental Protection Agency (EPA) assists by providing technical support for the CAFE standards, including calculating the average fuel economy levels.

Energy Policy Act of 2005

The Energy Policy Act of 2005 addresses energy production in the Nation and covers such topics as energy efficiency, renewable energy, oil and gas, coal, Tribal energy, nuclear matters and security, vehicles and motor fuels (including ethanol), hydrogen, electricity, energy tax incentives, hydropower and geothermal energy, and climate change technology. The Energy Policy Act of 2005 provides incentives to reduce demand on non-renewable energy sources, such as tax credits for fuel-efficient vehicles or appliances.

American Recovery Reinvestment Act of 2009

As part of a larger stimulus package, the Recovery Act authorized federal funding to the U.S. Department of Energy (DOE) to forward specific energy priorities, including modernizing the Nation's electric transmission grid. Funding also allowed states to hire new staff and retrain existing employees to ensure they can quickly and effectively review proposed electricity projects, support the development of interoperability standards, and allowed 47 states, Washington DC, and 43 cities to develop energy assurance plans for natural disasters.

Energy Act of 2020

The Energy Act of 2020 prioritizes research, development, and demonstration across a broad spectrum of energy technologies within the DOE, including solar and wind power, energy storage, grid modernization, energy efficiency, nuclear power, carbon capture utilization and storage, and more. The Energy Act of 2020 provides a down payment on the technologies that will be critical to reducing GHG emissions in the power sector, industry, and buildings and addressing climate change. This focus on research, development, and demonstration is intended to create high quality jobs and keep energy affordable while working towards a clean energy future.

State

California Building Standards Code

Part 11, Title 24 of the California Building Standards Code (CBSC), the California Green Building Code ("CALGreen"), was developed to enhance the design and construction of buildings and sustainable construction practices. CALGreen is a mandatory code that regulates the design and construction of buildings to reduce negative environmental impacts and promote sustainable practices. It covers aspects such as energy efficiency, water efficiency, material conservation, and environmental quality.

California Integrated Energy Policy

SB 1389 was passed in 2002, requiring the CEC to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The report provides an assessment of the status of the major energy sectors and provides policy recommendations to conserve resources, protect the environment, ensure reliability, enhance the State's economy, and protect public health. The CEC has adopted the 2022 Integrated Energy Policy Report Update, which focuses on a variety of issues facing California, including climate adaptation and California's clean energy economy.

California Renewables Portfolio Standard

The State of California adopted standards to increase the percentage that retail sellers of electricity, including investor-owned utilities (IOUs), electric service providers (ESPs), and community choice aggregators (CCAs), must provide from renewable resources. The standards are referred to as the RPS. The RPS requires all load-serving entities in California to procure a portion of their electricity sales from eligible renewable resources. SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable resources by 2030. In 2018, SB 100 was signed into law, which increased the RPS to 60 percent by 2030 and requires all the State's electricity to come from carbon-free resources by 2045. The CPUC implements and administers RPS compliance rules for California's retail sellers of electricity. The CEC is responsible for the certification of electrical generation facilities as eligible renewable energy resources and adopting regulations for the enforcement of RPS procurement requirements for public-owned utilities (POUs) (CPUC, 2021).

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. Since that time, the CPUC and CEC have overseen the plans, policies, and programs for prioritizing the preferred resources, including energy efficiency and renewable energy. The plan also notes that investment in conventional transmission infrastructure is crucial to helping the State meet its renewable energy goals.

California Advanced Clean Cars Program/Zero Emission Vehicle Program

The California Advanced Clean Cars Program ("ACC I") was adopted by the California Air Resources Board (CARB) in 2012 with the goal of reducing emissions of criteria pollutants and GHGs and packaging criteria pollutant (i.e., smog) and GHG reduction regulations into a single program. The Low-Emission Vehicle (LEV) regulations and Zero Emission Vehicle (ZEV) regulations were both rolled into the ACC I in 2012. The LEV regulations include emission standards that are anticipated to reduce vehicle emissions of criteria pollutants by 75 percent in 2025 when compared to 2012 average vehicles. The ZEV regulations require vehicle manufacturers to steadily increase the production of ZEVs, such as fuel cell cars, battery powered cars, and plug-in hybrid electric cars. In November 2020, Executive Order N-79-20 was published, which expressly adopted the goal of 100 percent ZEVs sold in California by 2035.

CARB Heavy-Duty Engine and Vehicle Omnibus Regulation

The Truck and Bus Regulation was enacted to reduce mobile source emission of toxic air contaminants, which represent a large risk to human health within the State. Nearly all trucks and buses are required to have 2010 or newer engines by the year 2023. Key reductions within the post-2010 engines are emissions of particulate matter and oxides of nitrogen (NO_x). After the year 2020, only vehicles that are compliant with the Truck and Bus Regulation will be registered by the California Department of Motor Vehicles.

Off-road vehicles, such as construction equipment, are regulated by the In-Use Off-Road Diesel-Fueled Regulations. These regulations apply to all self-propelled off-road diesel vehicles with a horsepower rating of 25 or higher. As with the Truck and Bus Regulations, the purpose of the Off-Road Regulations is to reduce the emissions of particulate matter and NO_x. Applicable equipment must be registered with CARB, and the information is stored and tracked through the Diesel Off-Road Online Reporting System (DOORS).

Integrated Energy Policy Report

The CEC adopts an Integrated Energy Policy Report (IEPR) every two years, which provides a cohesive approach to identifying and solving the State's pressing energy needs and issues. The report contains an integrated assessment of major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources and ensure a reliable, secure, and diverse energy supply, among other objectives. An update is published every other year and was most recently provided in February 2023 to address 2022 trends. Some of the key recommendations or actions from this update, as related to renewable energy resources, include the following:

- Examine how to balance the roles of distributed energy resources and grid assets in making the energy transition away from fossil fuels.
- Examine the role of interconnection and how utility process reform can increase the pace of distributed energy resources deployment.
- Initiate efforts to analyze opportunities for additional reliability investments and develop a Clean Energy Reliability Investment Plan.
- Enact the Strategic Electricity Reliability Reserve to make additional generation and load reduction available during extreme events.

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local energy-related policies, plans, or programs for informational purposes. Although LS Power is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The Conservation Element of the City of Fremont General Plan provides a framework to help guide decision making in regard to the conservation, management, and utilization of resources. This includes goals and policies related to Energy Conservation and Renewable Energy such as the following (City of Fremont, 2011):

- Goal 7-9** **Energy Conservation.** Highly efficient building and site design standards that provide cost-effective methods to conserve energy, reduce the City's carbon footprint, and promote the use of renewable energy sources.
- Policy 7-9.2** **Energy Efficiency in Building/Site Design.** Encourage/require maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all development and redevelopment projects.
- Policy 7-9.3** **Renewable Energy Sources.** Encourage renewable energy sources for new and existing buildings and infrastructure.

City of Fremont Fossil Fuel Divestment Resolution

In October 2018, the Fremont City Council adopted a Fossil Fuel Divestment Resolution to divest fully from the fossil fuel sector, commit to a fast and just transition to 100 percent renewable energy by 2050 at the latest, and to continue adopting regulations that support the transition to clean energy while discouraging installations of new fossil fuel infrastructure.

City of Milpitas General Plan

The City of Milpitas General Plan contains goals and polies to help guide decision making and a sense of direction for action. This includes goals and policies related to Conservation and Sustainability such as the following (City of Milpitas, 2021):

- Goal CON-1** Ensure a sustainable future for the City of Milpitas by promoting a carbon free energy future that increases renewable resources, conservation, and efficiency throughout the City.
- Policy CON 1-1** Ensure that new development is consistent with the energy objectives and targets identified by the City's Climate Action Plan (CAP).
- Policy CON 1-2** Ensure all development projects comply with the mandatory energy efficiency requirements of the California Green Building Standards Code (CALGreen).
- Policy CON 1-4** Require large-scale industrial and manufacturing energy users to implement an energy conservation plan as part of the project review and approval process.
- Policy CON 1-5** Consider lifecycle costs when identifying opportunities for the replacement and retrofit of energy efficient technologies when upgrading or maintaining City facilities.
- Policy CON 1-6** Reduce the City's energy demand by pursuing the use of alternative energy and fuel-efficient City vehicles and equipment, and strive for a zero-emission City vehicle fleet to the extent feasible and practical.
- Policy CON 1-7** Support the production of alternative and renewable energy fueling stations in Milpitas.

- Policy CON 1-9** Encourage site planning and building techniques that promote energy conservation. Where feasible, encourage projects to take advantage of shade, prevailing winds, landscaping, sunscreens, building orientations, and material choices that reduce energy use.
- Policy CON 1-10** Encourage distributed energy resources including solar, fuel cells etc. to provide environmental benefits, as well as energy security, and the support of the grid during peak energy use periods.
- Policy CON 1-11** Consider incentive programs such as reduced fees, and permit expedition for projects that exceed mandatory energy requirements, incorporate alternative energy technologies, or support the City's energy objectives.
- Policy CON 1-12** Promote incentives from local, state, and federal agencies for improving energy efficiency and expanding renewable energy installations.
- Policy CON 1-13** Support projects and programs such as appliance upgrades and the use of electric appliances, and energy storage options that reduce the use of and reliance on natural gas.
- Goal UCS-6** Ensure adequate, reliable electric and natural gas service is available to all users.
- Policy UCS 6-1** Work cooperatively with utility providers to ensure the provision of adequate electric power and natural gas services and facilities to serve the needs of existing and future residents and businesses.
- Policy UCS 6-2** Coordinate with service providers in the siting and design of power facilities to minimize environmental, aesthetic, and safety impacts.
- Policy UCS 6-3** Require that all new power and gas lines and transformers are installed underground where feasible and promote the undergrounding of existing overhead facilities.

City of San José General Plan

The City of San José General Plan provides Measurable Environmental Sustainability (MS) goals for the City through 2040, establishing measurable standards for the achievement of sustainable development practices. The following MS goals, policies, and action items are provided for informational purposes of sharing the City of San José's energy conservation and renewable energy goals (City of San José, 2024).

- Goal MS-2** **Energy Conservation and Renewable Energy Use.** Maximize the use of green building practices in new and existing development to maximum efficiency and conservation and to maximize the use of renewable energy sources.
- Action MS-2.8** Develop policies which promote energy reduction for energy-intensive industries. For facilities such as data centers, which have high energy

demand and indirect greenhouse gas emissions, require evaluation of operational energy efficiency and inclusion of operational design measures as part of development review consistent with benchmarks such as those in EPA's EnergyStar Program for new data centers. Also require consideration of distributed power production for these facilities to reduce energy losses from electricity transmission over long distances and energy production methods such as waste-heat reclamation or the purchase of renewable energy to reduce greenhouse gas emissions.

- Goal MS-15** **Renewable Energy.** Receive 100% of electrical power from clean renewable sources (e.g., solar, wind, hydrogen) by 2022; and to the greatest degree feasible, increase generation of clean, renewable energy within the City to meet its own energy consumption needs.
- Policy MS-15.4** Promote local innovation, research, development, and deployment of renewable energy and energy efficiency technologies.
- Policy MS-15.5** Showcase and apply innovative technologies within San José, including developments that achieve maximum energy efficiency or net zero energy, and renewable energy systems that generate energy equal to or greater than that consumed on site.
- Goal MS-16** **Energy Security.** Provide access to clean, renewable, and reliable energy for all San José residents and businesses.
- Policy MS-16.1** Promote availability of a variety of tools and services for implementing energy conservation and renewable energy generation, including financing districts, energy auditing, and energy efficiency retrofit services to all residents and business owners.
- Policy MS-16.2** Promote neighborhood-based distributed clean/renewable energy generation to improve local energy security and to reduce the amount of energy wasted in transmitting electricity over long distances.
- Policy MS-16.3** Consider benefits and risks of alternative energy sources and evaluate the City's position on alternative energy sources.
- Action MS-16.6** Create partnerships and governance structures that improve the overall efficiency and reliability of energy production and supply.

City of Santa Clara General Plan

The following goals and policies included in the City of Santa Clara General Plan aim to reduce GHG emissions and provide energy, fuel, and monetary savings while improving quality of life for the Santa Clara community (City of Santa Clara, 2010).

- Goal 5.10.3-G1** Energy supply and distribution maximizes the use of renewable resources.

- Goal 5.10.3-G2** Implementation of energy conservation measures to reduce consumption.
- Goal 5.10.3-G3** Adequate energy service to residents, businesses, and municipal operations.
- Policy 5.10.3-P1** Promote the use of renewable energy resources, conservation, and recycling programs.
- Policy 5.10.3-P2** Transition away from using coal as an energy source to renewable resources by replacing coal in Silicon Valley Power's portfolio, exploring City owned property for renewable energy projects, developing solar projects, and incentivizing solar projects for residents and businesses, consistent with the CAP.
- Policy 5.10.3-P3** Maximize the efficient use of energy throughout the community by achieving adopted electricity efficiency targets and promoting natural gas efficiency, consistent with the CAP.
- Policy 5.10.3-P4** Encourage new development to incorporate sustainable building design, site planning, and construction, including encouraging solar opportunities.
- Policy 5.10.3-P5** Reduce energy consumption through sustainable construction practices, materials, and recycling.
- Policy 5.10.3-P6** Promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.
- Policy 5.10.3-P8** Provide incentives for Leadership in Energy and Environmental Design (LEED) certified, or equivalent development.
- Policy 5.10.3-P9** Incorporate criteria for sustainable building and solar access into the City's ordinances and regulations.
- Policy 5.10.3-P10** Maintain the City's level of service for high quality utilities and telecommunications infrastructure.
- Policy 5.10.3-P11** Continue innovative energy programs to develop cost effective alternative power sources and encourage conservation.
- Policy 5.10.3-P12** Work with Silicon Valley Power to implement adequate energy distribution facilities to meet the demand generated by new development.
- Policy 5.10.3-P14** Work with Pacific Gas and Electric to ensure an adequate supply of natural gas to meet the demand generated by new development.

- Policy 5.10.3-P15** Explore opportunities for alternative energy “fueling stations” and promote participation in shuttle services that use new technology vehicles to reduce greenhouse gas emissions.

5.6.3 IMPACT QUESTIONS

5.6.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to energy come from the California Environmental Quality Act (CEQA), Appendix G, Environmental Checklist. According to the CEQA Checklist, a project may cause a potentially significant impact if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.6.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), the following additional CEQA Impact Question is required for energy. Would the project:

- Add capacity for the purpose of serving a non-renewable energy resource?

5.6.4 IMPACT ANALYSIS

5.6.4.1 Energy Impact Analysis

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

Less-Than-Significant Impact. Construction activity associated with the Proposed Project would require the consumption of fossil fuel resources, such as diesel fuel and gasoline, to power the construction equipment, construction vehicles, and work crew vehicles. Proposed Project construction activities are not anticipated to involve the consumption of natural gas. Additionally, construction may utilize electrical energy directly from the existing system to power construction trailers, lighting, and other equipment.

The short-term use of fuels by equipment and motor vehicle trips during construction would be necessary to install and remove the facilities, respectively. Using estimated GHG emissions (refer to **Section 5.8, Greenhouse Gas Emissions** and **Appendix 5.3-A, Air Quality and GHG Modeling Files**), the volume of diesel and gasoline fuels utilized during construction were calculated. These calculations are shown in **Appendix 5.6-A, Fuels Use Calculations**. Construction of the Proposed Project is estimated to consume a total of approximately 26,266 gallons of gasoline and 662,440 gallons of diesel fuel. To put these estimates in context, estimated gasoline sales in 2022 totaled 375 million gallons for the Cities of Fremont, Milpitas, San José, and Santa Clara combined (CEC, 2023). The Proposed Project's use of diesel and gasoline fuels would be de minimis compared to

the volumes consumed within the Cities of Fremont, Milpitas, San José, and Santa Clara each year. In addition, CARB regulations require that all off-road equipment produced needs to meet the basic requirements for Tier 4 compliance, which indicates diesel engines that meet the most stringent EPA standards for fuel efficiency and emission control (refer to **Sections 5.3, Air Quality, and 5.8**) (CARB, 2023). Off-road equipment fleets are managed by CARB and are typically based on total horsepower owned. Owners are limited to what types of equipment they must maintain as their fleet and can include equipment from rental companies. For this reason, it is assumed that the Proposed Project equipment would conservatively be made up of at least 75 percent Tier 4 equipment during the construction years of 2026 through 2028. This would be achievable because most equipment operators already maintain fleets consisting of mostly Tier 4 equipment. **Applicant Proposed Measure (APM) AQ-1, Construction Fleet Minimum Requirements and Tracking** has been incorporated into the Proposed Project to ensure that the assumed construction fleet specifications are tracked and to achieve reduced consumption of diesel fuel.

Construction activities may also utilize existing energy directly from PG&E and SVP distribution systems. A temporary distribution line (i.e., 12 kV) may be established to provide power to the staging areas and both proposed HVDC terminal sites during construction. The use of temporary generators for construction would be a contingency if distribution power is not available in a timely manner prior to construction commencing. Temporary mobile generators would be required during construction of the proposed underground transmission lines. The same distribution systems would also serve to provide electrical energy to the proposed Albrae and Baylands terminal facilities during O&M. Any temporary power provided by PG&E would be representative of PG&E's current energy supply portfolio. Based on the requirements of SB 100 (State of California, 2018), utility providers are required to have 60 percent of their energy portfolio supplied by renewable energy sources by the year 2030. As of 2021, PG&E had achieved an approximately 54 percent renewable portfolio (CPUC, 2022). Given this, PG&E's renewable portfolio for 2028 (the Proposed Project in-service year) is estimated to be approximately 58 percent. The ratio of renewable energy would be expected to increase each year until reaching 60 percent by 2030 as required by California's RPS. Similarly, any temporary power provided by SVP would be representative of their current energy supply portfolio. As of 2020, renewable and/or GHG-free energy made up 100 percent of power used by SVP residential customers, 42 percent for SVP non-residential, and 100 percent for Santa Clara Green Power. SVP is in various stages of clean energy procurement for the future, negotiating contracts for over 700 MW of energy, totaling over 2,200,000 megawatt hours (MWh) annually. These resources are anticipated to be constructed and brought online by 2028.

Once construction is complete, the Proposed Project would be remotely controlled and would require little use of energy, as discussed further in **Section 3.8, Operation and Maintenance**. Maintenance and normal operations, including inspections of the Proposed Project components, would require use of fossil fuels (e.g., diesel, gasoline) for motor vehicle trips and occasional use of construction equipment. Use of these fuels would be necessary for normal O&M activities, including periodic inspections, equipment testing, and repairs. One new full-time technician would be retained by LS Power to support the Proposed Project and other California projects operated by LS Power. No other induced or direct population growth would occur as result of the Proposed Project. Maintenance would be incorporated within existing maintenance programs. Using the GHG emissions estimates (refer to **Section 5.8** and **Appendix 5.3-A**), O&M of the Proposed Project is anticipated to utilize approximately 1,106 gallons of gasoline per year (refer to **Appendix 5.6-A**). As with construction fuel usage, the Proposed Project's O&M usage would be minimal compared with the total volume consumed in the City of San José alone on a yearly basis (as well as when compared to the four cities together).

Operation of Proposed Project equipment at the proposed HVDC terminal sites, such as lighting and heating, ventilation, and air conditioning (HVAC), would also consume energy. While the Proposed Project's ancillary equipment is not yet specified, the Proposed Project would utilize energy efficient systems when practicable to reduce energy consumption such as LED lighting, motion sensor lighting, and energy efficient HVAC systems in compliance with all applicable regulations. It is assumed that the total demand on-site would be approximately 200 kilowatts (kW) continuous for each of the proposed HVDC terminal sites. This would equate to roughly 1,752,000 kilowatt hours (kWH) per year. Since the Proposed Project would use only electrical energy, the energy usage is assumed to be representative of PG&E's and SVP's current energy supply portfolios.

The Proposed Project would allow for more efficient transmission and use of energy already being generated within the PG&E and SVP systems. By upgrading the existing system to be more reliable, the Proposed Project would improve the efficiency of the system's ability to transfer and deliver electricity to California's end users and result in a net benefit in relation to the efficient use of energy within the vicinity of the Proposed Project. The Proposed Project has been designed to comply with all applicable federal, state, and local energy use conservation requirements and would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during Proposed Project construction or operation. Therefore, impacts would be less than significant under this criterion.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV direct current (DC) transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). Similar to the Proposed Project, the Newark substation modifications would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during Proposed Project construction and maintenance. PG&E would implement PG&E **Best Management Practice (BMP) AQ-4 Tier 4 Construction Equipment** which requires 75 percent of construction equipment to use engines compliant with EPA Tier 4 non-road engine standards, which would increase fuel efficiency and reduce consumption of diesel fuels during construction. Furthermore, the Newark substation modifications would facilitate implementation of the proposed HVDC system, which would increase the use of renewable resources. Impacts would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation facility. Similar to the Proposed Project, the NRS substation modifications would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during Proposed Project construction and maintenance. Construction of the NRS substation modifications would be consistent with CARB regulations, which require 75 percent of construction equipment to use engines compliant with EPA Tier 4 non-road engine standards, which would increase fuel

efficiency and reduce consumption of diesel fuels during construction. SVP would also implement Proposed Project **APM AQ-1** to ensure that the assumed construction fleet specifications are tracked and to achieve reduced consumption of diesel fuel. Furthermore, the NRS substation modifications would facilitate implementation of the proposed HVDC system, which would increase the use of renewable resources. Impacts would be less than significant.

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

No Impact. The state and local plans that are evaluated with respect to the Proposed Project include, but are not limited to, the State RPS program, City of San José General Plan's MS goals, City of Fremont General Plan, City of Milpitas General Plan, and City of Santa Clara General Plan, which are described in **Section 5.6.2, Regulatory Setting**. During construction of the Proposed Project, there would be a temporary increase in demand for electricity resources and fuel resources for vehicles and construction equipment; however, this temporary increase would be minor. Operation of the Proposed Project would also require minor amounts of electricity and fuel resources, as described above and in **Section 3.0**.

All electricity retail sellers had an interim target between compliance periods to serve at least 27 percent of their load with RPS-eligible resources by December 31, 2017. In general, retail sellers either met or exceeded the interim 27 percent target and are on track to achieve their compliance requirements. California's three large IOUs collectively served 36 percent of their 2017 retail electricity sales with renewable power. The Small and Multi-Jurisdictional Utilities (SMJUs) and ESPs served roughly 27 percent of retail sales with renewables, and CCAs collectively served 50 percent of retail sales with renewable power. All retail sellers utilize a mix of RPS resources, such as wind, solar photovoltaic (PV), solar thermal, hydroelectricity, geothermal, and bioenergy to meet their renewable procurement targets (CPUC, 2021).

The Proposed Project would support the City of San José General Plan's MS goals to conserve energy, utilize renewable energy, and provide access to efficient and reliable energy for all City residents. The Proposed Project would also be consistent with the goals and policies related to energy resources of the General Plans of the Cities of Fremont, Milpitas, and Santa Clara, as the Proposed Project would allow for more efficient transmission and use of energy already being generated within the PG&E and SVP systems, including increasing renewable sources. By upgrading the existing system to be more reliable, the Proposed Project would improve the efficiency of the system's ability to transfer and deliver electricity to California's end users and result in a net benefit in relation to the efficient use of energy within the vicinity of the Proposed Project.

The Proposed Project would, therefore, improve California's ability to supply renewable energy to end-use customers and to achieve Statewide renewable energy goals, specifically increased production of renewable energy within the greater PG&E and SVP service territories. Additionally, the Proposed Project would not prevent renewable energy sources from being used as a source of electricity in the future. As discussed in **Section 3.2, Existing and Proposed System**, the Proposed Project would increase the efficiency of the existing transmission network and would not introduce new energy demands or increase capacity. The Proposed Project would provide benefits in reducing local capacity requirements, which would reduce reliance on local gas-fired generation.

Therefore, the Proposed Project would comply with the State RPS program and would not interfere with any of the Cities of Fremont, Milpitas, San José, and Santa Clara's local plans for renewable energy or energy efficiency. As such, there would be no impacts under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Similar to the Proposed Project, the Newark substation modifications would comply with the State RPS program and would not interfere with any of the City of Fremont's plans for renewable energy or energy efficiency. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Similar to the Proposed Project, the NRS substation modifications would comply with the State RPS program and would not interfere with any of the City of Santa Clara's plans for renewable energy or energy efficiency. No impacts would occur under this criterion as a result of the NRS substation modifications.

Would the project add capacity for the purpose of serving a non-renewable energy source?

No Impact. The Proposed Project would be consistent with the guidelines of the State RPS program to reach RPS targets for renewable resources. The Proposed Project would be implemented to meet existing and future system reliability and voltage support demands; as such, it would not increase the demand for electricity. While the Proposed Project would increase the capacity of the existing transmission system, such an increase would serve existing sources, which include renewable and non-renewable sources. Therefore, the Proposed Project would not add capacity that would result in an increase in energy from non-renewable sources, such as coal and natural gas.

The Proposed Project, including the direct and indirect use of energy during construction and operation, would create upgraded facilities that would improve California's ability to supply renewable energy to end-use customers and to achieve Statewide renewable energy goals. Specifically, increased production of renewable energy within the greater PG&E and SVP service territories and the ability to deliver this energy directly to the load area around the existing PG&E Newark and SVP NRS substations would stabilize the transmission system. Therefore, there would be no impacts under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Similar to the Proposed Project, the Newark substation modifications would be consistent with the State RPS program, would not increase energy demand, and would not add capacity for the purpose of serving a non-renewable energy source. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Similar to the Proposed Project, the NRS substation modifications would be consistent with the State RPS program, would not increase energy demand, and would not add capacity for the purpose of serving a non-renewable energy source. No impacts would occur under this criterion as a result of the NRS substation modifications.

5.6.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for energy.

5.6.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures for energy would be implemented for the Proposed Project.

5.6.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E BMPs for energy have been included for PG&E's scope of work. PG&E would implement **BMP AQ-4** as discussed in **Section 5.1, Air Quality**.

5.6.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs for energy would be implemented for SVP's scope of work. SVP would implement Proposed Project **APM AQ-1**, as discussed in **Section 5.1**.

5.7 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

Would the project:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
a.	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.			X	
	ii) Strong seismic ground shaking?			X	
	iii) Seismic-related ground failure, including liquefaction?			X	
	iv) Landslides?			X	
b.	Result in substantial soil erosion or the loss of topsoil?			X	
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
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?				X
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

This section describes the geology, soils, and paleontological resources within the vicinity of the Proposed Project as well as potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.7.1 ENVIRONMENTAL SETTING

5.7.1.1 Regional and Local Geologic Setting

The Proposed Project runs through the Cities of Fremont, Milpitas, San José, and Santa Clara. The Proposed Project site is located in the Coast Range Geomorphic Province, which spans approximately 400 miles along the California coast from the northern California border to the County of Santa Barbara, and approximately 50 to 75 miles from the Pacific Ocean inland (to the east). The ranges and valleys trend northwest, almost parallel to the San Andreas Fault. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary rock layers. The northern and southern ranges are separated by a depression containing the San Francisco Bay (California Department of Conservation [DOC], 2002). The Proposed Project is located in the southern range, on the southeast border of the San Francisco Bay, between the Diablo Range and the Santa Cruz Mountains and within the Santa Clara Valley. The Diablo Range consists of several parallel ridges, with slopes varying between 20 to 60 percent. The highest point of the Diablo Range is Copernicus Peak, with an elevation of 4,372 feet located outside of the City of San José's Sphere of Influence. The Santa Cruz Mountains consist of complex ridges with rugged slopes. The mountain crests reach elevations of 2,000 to 3,400 feet, with the highest point being Loma Prieta Peak at 3,806 feet (City of San José, 2024).

Santa Clara Valley was created by the sudden growth of the Santa Cruz Mountains and the Diablo Range during the later Cenozoic era. This was a period of intense mountain building in California when the folding and thrusting of the earth's crust, combined with active volcanism, gave shape to the present state of California. Hence, Santa Clara Valley is a structural valley, created by mountain building, as opposed to an erosional valley, or one which has undergone the wearing away of the earth's surface by natural agents (National Park Service, 2018). The Santa Clara Valley is relatively flat and consists of alluvial fans that extend from the surrounding hills down to a central drainage axis (Guadalupe River and Coyote Creek) and to San Francisco Bay, which is fringed and underlain by the estuarine San Francisco Bay mud. The Santa Clara Valley varies in elevation from sea level at the southerly end of San Francisco Bay (northern part of the valley) up to 400 feet above mean sea level (amsl) at the southern end of the valley. The average grade on the valley floor ranges from nearly flat to two percent (City of San José, 2024).

Marine and non-marine (continental) sedimentary rocks underlie the entirety of the region around the Proposed Project area. These strata range in age from Pleistocene (2.6 million years ago [mya] to 11,000 years ago) to Holocene (11,000 years ago to today) (California DOC, 2015a). The elevation within the Proposed Project area ranges from approximately zero feet amsl to approximately 40 feet amsl. The proposed transmission line alignments are predominately characterized by relatively flat paved roadways.

5.7.1.2 Seismic Hazards

The San Francisco Bay Area is one of the most seismically active areas in the United States (County of Santa Clara, 1994). The sections below discuss the potential seismic hazards that are located within 10 miles of the Proposed Project area.

Active Faults

Significant earthquakes occurring in the San Francisco Bay Area are generally associated with crustal movement along well-defined, active fault zones of the San Andreas Fault system, which

spans the Coast Ranges from the Pacific Ocean to the San Joaquin Valley (City of San José, 2024). The San Andreas Fault generated the great San Francisco earthquake of 1906 and the Loma Prieta earthquake of 1989 and passes through the Santa Cruz Mountains southwest of the City of San José. Two other major active faults near the City of San José are the Hayward Fault Zone, located to the north, and the Calaveras Fault, located in the hills to the east. These two faults merge in a series of splays and step-overs in the hills between Mission Peak and Mount Hamilton. There are also several smaller potentially active faults in the area.

United States Geological Survey (USGS) quaternary fault maps (USGS, 2023a) and California Geological Survey (CGS) fault activity maps (California DOC, 2015b) were reviewed to determine the active faults within 10 miles of the Proposed Project area. **Figure 5.7-1, Fault Map** illustrates the location of these faults and fault zones, which are also described further below. The USGS quaternary fault maps' terminology refers to both "faults" and "fault zones" to describe these regions, depending on the size and character of rock fractures. A "fault" is a fracture between two blocks of rock that is generally mapped on the USGS quaternary fault maps as a single line, while a "fault zone" describes multiple fractures between blocks of rock that result in a seismic area with a common cause (USGS, 2024a, 2024b). For example, the Hayward Fault Zone is a series of rock fractures that is mapped as multiple fault lines across one region that encompasses several individual named faults. USGS faults and fault zones are also distinct from Alquist-Priolo Fault Hazard Zones, which describe regulatory zones surrounding the surface traces of active faults in California where local agencies regulate development projects (California DOC, 2024). The terminology for faults and fault zones described in this section and reflected in **Figure 5.7-1** and **Table 5.7-1, Faults within 10 Miles of the Proposed Project**, below, is consistent with the USGS quaternary fault maps (USGS, 2023a).

The Proposed Project is not located within an area mapped as an Alquist-Priolo Fault Hazard Zone; the nearest mapped zone is approximately 1.2 miles east of the Proposed Project. There are 15 faults or fault zones located within a 10-mile radius of the Proposed Project area, including the Silver Creek Fault Zone that crosses the Proposed Project alignment in two places. These are described below in **Table 5.7-1**.

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Table 5.7-1: Faults within 10 Miles of the Proposed Project

Fault Name	Age	Sense of Slip	Status	Approx. Distance from Proposed Project
Arroyo Aguague Fault	Undifferentiated Quaternary ⁴	Reverse	Non-Active	3.3 miles east
Berrocal Fault Zone	Undifferentiated Quaternary	Reverse	Non-Active	8.4 miles southwest
Calaveras Fault Zone	Historic ¹ , Latest Quaternary ² , or Late Quaternary ³	Right lateral	Active	6.0 miles east
Cascade Fault	Undifferentiated Quaternary	Reverse	Non-Active	6.2 miles southwest
Chabot Fault	Undifferentiated Quaternary	N/A	Non-Active	5.0 miles north
Coyote Creek Fault Zone	Undifferentiated Quaternary	N/A	Non-Active	9.2 miles south
Hanover Fault	Undifferentiated Quaternary	Unspecified	Non-Active	8.6 miles west
Hayward Fault Zone	Historic, Latest Quaternary, or Undifferentiated Quaternary	Right lateral	Active	1.2 miles east
Mission Fault	Undifferentiated Quaternary	Reverse	Non-Active	3.3 miles northeast
Monte Vista-Shannon Fault Zone	Latest Quaternary, Late Quaternary, or Undifferentiated Quaternary	Reverse	Active	8.1 miles southwest
Pulgas Fault	Undifferentiated Quaternary	Unspecified	Non-Active	8.7 miles west
San Jose Fault	Undifferentiated Quaternary	Unspecified	Non-Active	3.0 miles southwest
Silver Creek Fault Zone	Undifferentiated Quaternary	Right lateral	Non-Active	Intersects Proposed Project
Stanford Fault	Undifferentiated Quaternary	Unspecified	Non-Active	4.8 miles southwest
Verona Fault	Latest Quaternary, or Late Quaternary	Reverse, Right lateral	Non-Active	9.9 miles northeast

Source: USGS, 2023a; California DOC, 2023

N/A = not available

Notes:

¹ Historic age faults are less than 150 years old

² Latest Quaternary age faults are less than 15,000 years old

³ Late Quaternary age faults are less than 750,000 years old

⁴ Undifferentiated Quaternary age faults are less than 1.6 million years old

Faults are commonly considered to be active if they have moved one or more times in the last 10,000 years (USGS, 2024b). Therefore, Historic or Latest Quaternary age faults can be considered active for the purposes of this evaluation. Since the Arroyo Aguague Fault, Berrocal Fault Zone, Cascade Fault, Chabot Fault, Coyote Creek Fault Zone, Hanover Fault, Mission Fault, Pulgas Fault, San Jose Fault, Silver Creek Fault Zone, Stanford Fault, and Verona Fault are

Undifferentiated Quaternary age faults, they are not considered to be active. In addition, the Berrocal Fault Zone (Bryant, W.A., 2000a) and Silver Creek Fault Zone (California Division of Mines and Geology, 1981) were evaluated, and no evidence of rupture within the last 11,000 years was observed. Therefore, the non-active faults along with the Berrocal Fault Zone are not discussed further. While the Silver Creek Fault Zone is of Undifferentiated Quaternary age and, therefore, not considered an active fault, the proposed Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line crosses this fault zone in two places. Therefore, the Silver Creek Fault Zone is described further below, along with all active faults within 10 miles of the Proposed Project area.

Calaveras Fault Zone

The Calaveras Fault Zone is associated with the larger San Andreas Fault system and is a well-defined, recently active strike-slip fault that exhibits clear evidence of major, right-lateral slip during Holocene time (California Division of Mines and Geology, 1981). This fault zone generally trends along the eastern side of the East Bay Hills, bounds the western side of San Ramon Valley, extends into the western Diablo Range, bounds the eastern side of Santa Clara Valley, extends into Hollister Valley, and eventually joins the San Andreas Fault Zone along the eastern part of the Gabilan Range (Bryant and Cluett, 1999). This fault zone is divided into three segments, and the Proposed Project area is primarily located within the central segment, with the closest mapped portion of the fault approximately 6.0 miles from the Proposed Project area.

Historically, the southern half of the central segment of the Calaveras Fault Zone has been the most seismically active segment of the fault (Bryant and Cluett, 1999). It produced the magnitude-5.4 Alum Rock earthquake in 2007, the magnitude-6.2 Morgan Hill earthquake in 1984, and a magnitude-6.2 earthquake in 1911. The magnitude-5.9 Coyote Lake earthquake in 1979 ruptured slightly to the south of these other earthquakes. The most recent earthquake associated with this fault zone appears to be a magnitude-5.1 earthquake and aftershocks that occurred on October 25, 2022. Because its rate of creep nearly matches the total fault slip rate, it is widely believed that this segment of the fault zone is not capable of an earthquake having a magnitude much larger than the 1984 Morgan Hill earthquake.

Hayward Fault Zone

The Hayward Fault Zone is a major active fault zone in the San Francisco Bay Area and, like most of the fault zones in the Bay Area, consists of a right-lateral strike slip fault (USGS, 2020). A component of the San Andreas Fault system, the Hayward Fault Zone extends about 74 miles through the East Bay, from its junction with the Calaveras Fault southeast of the City of San José to where it eventually connects with the Rodgers Creek Fault Zone beneath San Pablo Bay. The closest mapped portion of the Hayward Fault Zone is approximately 1.2 miles from the Proposed Project area, with additional portions extending to 10 miles and beyond.

The Hayward Fault Zone not only produces earthquakes but also creeps aseismically, which means it slips slowly and continuously and causes displacement at the ground surface (USGS, 2020). The last large earthquake on the Hayward Fault Zone occurred over 150 years ago on October 21, 1868. The Hayward Fault Zone has a 33 percent probability of producing a magnitude-6.7 or greater earthquake by the year 2043.

Monte Vista-Shannon Fault Zone

The Monte Vista-Shannon Fault Zone is a Late Quaternary active and possibly Holocene active, reverse to reverse-dextral oblique slip fault that forms a part of the Southwestern Santa Clara Valley thrust belt, which is located generally along the foothills of the northeastern Santa Cruz Mountains (Bryant, W.A., 2000b). Geology of the fault zone indicates possible displacement, and significant portions of the fault zone are concealed by Holocene alluvium. Evidence implies a recurrence of earthquakes approximately every 400 years. The Monte Vista-Shannon Fault Zone has the potential of producing a magnitude-6.5 or greater earthquake (USGS, 2008). The closest mapped portion of the Monte-Vista Shannon Fault Zone is approximately 8.1 miles southwest of the Proposed Project area.

Silver Creek Fault Zone

The northwest-trending Silver Creek Fault Zone consists of a 25-mile-long strike-slip fault in the eastern Santa Clara Valley that has exhibited different behaviors within a changing San Andreas Fault Zone system over the past 10 to 15 million years. Few instrumentally recorded earthquakes are located near the fault zone. The fault zone might have been responsible for two poorly located moderate earthquakes that occurred in the area in 1903. In the absence of convincing evidence to the contrary, and as a conservative estimate, it is presumed that the Silver Creek Fault Zone has continued its strike-slip movement through the Holocene, but at a very slow rate. Such a slow rate would, at most, yield very infrequent damaging earthquakes. If the 1903 earthquakes did, in fact, occur on the Silver Creek Fault Zone, they would have greatly reduced the short-term future potential for large earthquakes on the fault (USGS, 2010). The Silver Creek Fault Zone intersects the Proposed Project area in two places—at the proposed Albrae to Baylands 320 kV DC underground transmission line alignment on Cushing Parkway and at the proposed Albrae to Baylands 320 kV DC overhead transmission line alignment directly east of Los Esteros Road.

Landslides

Given that the Proposed Project site is located on the Santa Clara Valley floor away from any slopes, no previous landslides in the immediate area have occurred. Areas prone to landslides can be found in the foothill and mountain areas located to the east and west of the Proposed Project area, where steep slopes are present in the Santa Cruz Mountains and Diablo Range, or where inadequate ground cover accelerates erosion. There is no risk of large landslides where the Proposed Project is located, due to its relatively flat topography (zero to two percent slope) and distance from hills, mountains, or slopes. The Proposed Project site is not located within a landslide hazard area, as indicated by the California DOC Geological Interactive Data inventory (California DOC, 2023).

Liquefaction

Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similar to a fluid when subjected to high-intensity ground shaking. An increase in pore water pressure occurs as the soil attempts to compact in response to the shaking, resulting in less grain-to-grain soil contact and, therefore, loss of strength. Liquefaction occurs when three general conditions exist: shallow groundwater (40 feet below ground surface [bgs] or less); low density, fine-grained sandy soils; and high-intensity ground motion. Effects of liquefaction on level ground can include sand boils, settlement, and bearing capacity failures below structural foundations. CGS has designated certain areas within California as potential liquefaction hazard

zones. These are areas that are considered at risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table. As shown in **Figure 5.7-2, Liquefaction Map**, the Proposed Project area is located within a liquefaction hazard zone (California DOC, 2023).

Lateral spread is a type of liquefaction-induced ground failure that occurs on gentle slopes or near free-faces, such as river channels. Lateral spread occurs when surface material extends or spreads on gentle slopes and is often associated with earthquake-induced ground shaking. Horizontal displacement due to lateral spreading can be damaging to foundations, bridges, roadways, pipelines, and other underground utilities. When coherent soil material, typically either bedrock or soil, sits on top of materials that liquefy, the upper units may undergo fracturing and extension and then subside, disintegrate, or liquefy and flow (USGS, 2024c). Lateral spreading in fine-grained materials on shallow slopes usually starts suddenly in a small area and spreads rapidly. Areas in the liquefaction zone, as shown in **Figure 5.7-2**, are potentially susceptible to lateral spreading where they are located on gentle slopes or adjacent to river channels.

5.7.1.3 Geologic Units

Geologic units that occur within one mile of the Proposed Project area are shown in **Figure 5.7-3, Geological Units Map**. As shown in **Table 5.7-2, Geological Units within One Mile of the Proposed Project**, there are two classifications of rock type found within one mile of the Proposed Project area. The geological unit that underlays the entire Proposed Project area is Pleistocene-Holocene marine and non-marine (continental) sedimentary rock.

Table 5.7-2: Geological Units within One Mile of the Proposed Project

Unit Classification	General Lithology	Description	Era
Q	Marine and non-marine (continental) sedimentary rocks	Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine but includes marine deposits near the coast.	Pleistocene-Holocene
Qoa	Marine and non-marine (continental) sedimentary rocks	Older alluvium, lake, playa, and terrace deposits.	Pleistocene

Source: California DOC, 2015b.

5.7.1.4 Soils

A review was conducted of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA, 2023a). As depicted in **Figure 5.7-4, Soil Types** and listed in **Table 5.7-3, Soil Types within the Proposed Project Area**, the Proposed Project area is underlain by numerous soil types.

Table 5.7-3: Soil Types within the Proposed Project Area

Soil Type	K Factor*
Clear Lake clay, 0 to 2 percent slopes, drained	0.17
Omni silty clay loam, strongly saline	0.24
Pescadero clay, drained	0.32
Marvin silt loam, saline-alkali	0.49
Botella loam, 0 to 2 percent slopes	0.24
Reyes clay, 0 to 2 percent slopes	0.2
Campbell silt loam, 0 to 2 percent slopes, protected	0.37
Elder fine sandy loam, 0 to 2 percent slopes, protected	0.2
Embarcadero silty clay loam, 0 to 2 percent slopes, drained	0.24
Clear Lake silty clay, 0 to 2 percent slopes, drained	0.28
Urban land, 0 to 2 percent slopes, basins	N/A
Novato clay, 0 to 1 percent slopes, tidally flooded	0.17
Urbanland-Clear Lake complex, 0 to 2 percent slopes	N/A
Urbanland-Campbell complex, 0 to 2 percent slopes, protected	N/A
Willows clay, drained	0.24
Xerorthents, trash substratum, 0 to 2 percent slopes	N/A
Danville silty clay loam, 2 to 9 percent slopes	0.24
Source: USDA, 2023a, 2023b.	
*The NRCS typically rates each soil type according to its whole soil water erosion potential. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion by water.	

Soil Hazards

Lateral spreading and liquefaction are discussed in **Section 5.7.1.2, Seismic Hazards**. Other potential hazards from unstable soils are discussed below.

Subsidence

The primary causes of most subsidence are human activities, including groundwater or petroleum withdrawal from large alluvial basins with thick accumulations of unconsolidated sediments and drainage of organic soils. Regional lowering of land elevation has occurred gradually over time. The Santa Clara Valley region has experienced subsidence due to the withdrawal of groundwater for agricultural, domestic, and industrial uses at a higher rate than natural and artificial replenishment (USGS, 2023b). Soil types that are common in the Santa Clara Valley region where subsidence has occurred include clay soils and silt, such as Urbanland-Campbell complex, zero to two percent slopes. The Santa Clara Valley Water District (SCVWD or "Valley Water") began managing groundwater and subsidence conditions, including ongoing groundwater recharge since the 1970s, which has halted further subsidence in the area (SCVWD, 2023). Geotechnical studies to be completed for the Proposed Project would evaluate Proposed Project facility locations for conditions susceptible to subsidence.

Soil Collapse

Soil collapse occurs when added moisture causes bonds between soil particles to weaken, which allows the soil structure to collapse and the ground surface to subside. Collapsible soils are generally low-density, fine-grained combinations of clay and sand left by mudflows that have dried, resulting in the formation of small air pockets in the subsurface. The addition of moisture reduces the strength of the soil, resulting in collapse or subsidence. Some of the area surrounding the Proposed Project contains weak soils subject to collapse, such as Campbell silt loam and Danville silty clay loam; however, as shown in **Table 5.7-3**, the majority of soils within the Proposed Project area are not highly susceptible to erosion and collapse. Geotechnical studies to be completed for the Proposed Project would evaluate proposed facility locations for conditions susceptible to soil collapse.

Expansive Soils

Expansive soils are clayey soils that have a high plasticity index. Typical shallow reinforced concrete spread-footing foundations, such as those for buildings and other foundations covering a considerable area of ground, can be affected by expansive soils if such soils are present close to the ground surface. The Proposed Project area contains expansive soils, and much of the soil can be considered moderately to highly expansive (USDA, 2023b). Geotechnical studies to be completed for the Proposed Project would evaluate the proposed facility locations for conditions susceptible to expansive soils. Expansive soils in the Proposed Project area include Campbell silt loam, Danville silty clay loam, and Clear Lake clay.

Soil Erosion

Natural forces, both chemical and physical, are continually at work breaking down soils. Erosion poses two hazards: it removes soils, thereby undermining roads and buildings and producing unstable slopes, and it deposits eroded soil into reservoirs, lakes, drainage structures, and on roads as mudslides. The NRCS typically rates each soil type according to its whole soil water erosion potential (Kw). The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. As shown in **Table 5.7-3** above, soils in the Proposed Project area have a K factor ranging from 0.17 to 0.49; however, the majority of the Proposed Project is located within an area with a K factor less than 0.37. This indicates a low-to-moderate whole soil erosion potential. Geotechnical studies to be completed for the Proposed Project would evaluate the conditions susceptible to erosion.

5.7.1.5 Paleontological Report

In January 2024, the Department of PaleoServices of the San Diego Natural History Museum (SDNHM) prepared the Paleontological Resources Technical Report (**Appendix 5.7-A, Paleontological Resources Technical Report**) (PaleoServices, 2024). The report summarizes the results of the paleontological records search of the paleontological collections at SDNHM and University of California Museum of Paleontology (UCMP) and a review of relevant paleontological and geologic literature. These tasks were undertaken to determine whether any documented fossil collection localities are located within the Proposed Project area. The report assigns a paleontological resource sensitivity rating to the geologic units underlying the Proposed Project site. The rating is based on the published geologic mapping, the results of the paleontological

records searches, literature review, and assessment of potential Proposed Project-related impacts to paleontological resources.

The Proposed Project site is located in the central portion of the Coast Ranges Geomorphic Province of California. The Coast Ranges are characterized by generally continuous linear series of northwest-trending mountain ranges and intervening valleys that dominate the coastal region of California from the Klamath Mountains near the Oregon border in the north to the Topatopa Mountains in the County of Ventura to the south. The Coast Ranges are characterized by complex geologic structural features that, today, are largely dominated by the San Andreas Fault Zone and related northwest trending faults and folds. The Proposed Project site lies within the Santa Clara Valley, a depositional basin receiving sediment derived primarily from erosion of the Santa Cruz Mountains to the west and south, with minor amounts of sediment derived from the Diablo Range to the northeast. To the northwest, this depositional basin opens into the south end of San Francisco Bay. Based on published literature, the Holocene-age alluvial and fluvial deposits at the surface in this region transition at relatively shallow depths into older Pleistocene-age alluvial deposits (**Appendix 5.7-A**).

The Society of Vertebrate Paleontology has developed standard procedures for assessment and mitigation of impacts to paleontological resources that are commonly used in California Environmental Quality Act (CEQA) practices (Society of Vertebrate Paleontology, 2010). The Society of Vertebrate Paleontology guidelines evaluate paleontological potential (or paleontological sensitivity) of individual geologic units based on the existence of known fossil localities within a given geologic unit and/or the potential for future fossil discoveries, given the age and depositional environment. These guidelines include four classes of paleontological potential: High Potential, Undetermined Potential, Low Potential, or No Potential. Pleistocene-age alluvial deposits are assigned a high paleontological potential, Holocene-age alluvial and fluvial deposits are assigned a low paleontological potential, and artificial fill is assigned no paleontological potential. Geologic units are assigned an undetermined potential if there is little information available concerning their paleontological content, geologic age, and depositional environment. Taking a conservative approach, geologic units with an undetermined potential are also considered to be potentially fossil-bearing until proven otherwise.

The results of the paleontological records searches and literature review indicate that fossils have not been documented from deposits of artificial fill or Holocene alluvial and fluvial deposits within a 500-foot buffer of the Proposed Project site. There is one documented fossil collection locality within one mile of the Proposed Project site approximately 0.7 mile south of proposed overhead structure DC-7 along Coyote Creek; however, the age of this occurrence is described as "Recent or Pleistocene" and is, therefore, only tentatively included in the Paleontological Resources Technical Report. The Proposed Project alignment is underlain at the surface by artificial fill deposits with no paleontological potential and an assortment of Holocene-age alluvial, fluvial, and estuarine deposits, which are assigned a low paleontological potential. Pleistocene-alluvial deposits with high paleontological potential were not mapped at the surface of the Proposed Project alignment but are known to underlie Holocene-age alluvial and fluvial deposits at relatively shallow depths around seven feet bgs. **Figure 5.7-5, Paleontological Resource Potential Map** depicts the areas of No, Low, and High paleontological potential within the Proposed Project area. As shown on **Figure 5.7-5**, there are areas of high paleontological potential within a one-mile buffer of the Proposed Project, but these areas are located outside the Proposed Project limits of construction.

5.7.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.7.2.1 Geology, Soils, and Paleontological Resources Regulatory Setting

Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (PL) 95–124 (NEHRP, 2021). At the time of its creation, Congress' stated purpose for NEHRP was "to reduce the risks of life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program." In establishing NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs.

Since NEHRP's creation, it has become the Federal government's coordinated long-term Nationwide program to reduce risks to life and property in the United States that result from earthquakes. Goals of the program include developing effective practices and policies for earthquake loss reduction and accelerating their implementation; improving techniques for reducing earthquake vulnerabilities of facilities and systems; improving earthquake hazards identification and risk assessment methods, and their use; and improving the understanding of earthquakes and their effects. NEHRP is a collaborative effort among the Federal Emergency Management Agency (FEMA), the National Institute of Standards and Technology (NIST), the National Science Foundation (NSF), and the USGS.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program addresses water pollution by regulating point sources that discharge pollutants to "waters of the United States." Created in 1972 by the Clean Water Act (CWA), the NPDES permit program is authorized to state governments by the United States Environmental Protection Agency (EPA) to perform many permitting, administrative, and enforcement aspects of the program. 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, EPA authorizes the NPDES permit program to state, Tribal, and territorial governments, enabling them to perform many of the permitting, administrative, and enforcement aspects of the NPDES program. In states authorized to implement CWA programs, EPA retains oversight responsibilities. Authorization for states, Tribes, and territories is through a process that is defined by CWA Section 402 (b) and 40 Code of Federal Regulations (CFR) Part 123.

Under these federal regulations, an operator must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of one acre or more. California State Water Resources Control Board's (SWRCB) Statewide stormwater general permit for construction activity (Order WQ 2022-0057-DWQ) requires the implementation of Best Management Practices (BMPs) to reduce sedimentation into surface waters and to control

erosion. One element of compliance with the NPDES permit is preparation of a Stormwater Pollution Prevention Plan (SWPPP), which includes implementation of BMPs to address control of water pollution, including sediment, in runoff during construction. (See **Section 5.10, Hydrology and Water Quality** for more information about the NPDES permit program and SWPPPs.)

State

Alquist-Priolo Earthquake Fault Zoning Act

California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972 (Public Resource Code [PRC] Sections 2621 et seq.), which requires the establishment of "Earthquake Fault Zones" (EFZ) (formerly known as "Special Studies Zones") along known active faults in California. Under the Alquist-Priolo Earthquake Fault Zoning Act, construction along or across faults is strictly regulated if they are "sufficiently active" and "well defined." A fault is considered sufficiently active if one or more of its segments shows evidence of displacement during Holocene time (defined for purposes of the Act as referring to approximately the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment. The Act also provides criteria for designating known fault rupture zones, which are used in planning and engineering design of facilities such as the Proposed Project.

Seismic Hazards Mapping Act

Like the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690-2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to the Alquist-Priolo Earthquake Fault Zoning Act in that the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards; and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within Seismic Hazard Zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out, and measures to reduce potential damage have been incorporated into the development plans.

California Building Standards Code

The California Building Standards Commission provides a minimum standard for building design with the California Building Code (CBC), which is based on the International Code Council but has been modified for California conditions. Chapter 23 of the CBC contains specific requirements for seismic safety. Chapter 29 of the CBC regulates excavation, foundations, and retaining walls. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapter 70 of the CBC regulates grading activities, including drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching, as specified in the California Occupational Health and Safety Administration Regulations (California Code of Regulations [CCR] Title 8) and in Section A33 of the CBC.

California Public Resource Code Section 5097.5

The California PRC states that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

California Public Utilities Commission General Order 95

The California Public Utility Commission (CPUC) originally adopted General Order (GO) 95 in 1941. GO 95 provides standards for the design, construction, and maintenance of overhead transmission and distribution lines. Standards include, but are not limited to, rules addressing general arrangement and use of lines, grounding, clearances between electrified portions of lines and the ground or other physical structures, pole loading structures, and vegetation management. The intent of these rules is to provide for adequate service and secure safety to persons engaged in the construction, maintenance, operation, or use of overhead lines and to the public in general. The rules are not intended to provide complete construction specifications, but to provide requirements determined to be most important from the standpoint of safety and service.

California Public Utilities Commission General Order 128

GO 128 governs construction and operation of underground transmission lines associated with public utilities in the State of California. The stated purpose of GO 128 is to formulate uniform requirements for underground transmission lines to ensure adequate service and safety for all those involved in the construction and operation of underground transmission, as well as to the public in general. GO 128 was adopted in 1967 and has been amended multiple times.

Local

The California Public Utility Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local geology, soils, and paleontological resources-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following policies are relevant to geology, soils, and paleontology (City of Fremont, 2011):

- Policy 7-6.1 Awareness of Soil Conditions.** Ensure development projects take soil conditions into account.
- Policy 7-6.2 Minimize Soil Erosion.** Eliminate soil erosion from development to the maximum extent possible.
- Policy 10-1.1 Location of Buildings and Structures.** Regulate new development and redevelopment in a manner that avoids geologic hazards to life and property.
- Policy 10-1.2 Mitigation of Hazards.** Require proposed development in areas of potential land instability to evaluate and sufficiently mitigate such hazards through site planning, appropriate construction techniques, building design, and engineering.
- Policy 10-1.3 Limits on Grading.** Prohibit excessive and unnecessary grading activity, especially in areas of potential landslide risk as identified on State and local geologic hazard area maps or as identified during site reconnaissance.
- Policy 10-2.1 Location of Buildings and Structures.** Regulate new development and redevelopment in a manner to minimize potential damage and hazards related to expected seismic activity.
- Policy 10-2.2 Building Setbacks from Fault.** Prohibit construction of structures for human occupancy (as defined by the State) including attached garages within 50 feet of an identified main fault trace, unless a setback less than 50 feet is approved through site specific geologic studies and associated peer review.
- Policy 10-2.3 Soil Engineering Standards.** Maintain and continually update construction and soil engineering standards that minimize seismic hazards to structures and building occupants.

City of Milpitas General Plan

The following policies are relevant to geology, soils, and paleontology (City of Milpitas, 2021):

- Policy SA 1-1** Require development to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and unstable soil conditions.
- Policy SA 1-2** Ensure that all new development and construction is in conformance with all applicable building standards related to geologic and seismic safety.
- Policy SA 1-5** Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation.

- Policy SA 1-6** All structures and building foundations requiring a building permit located within areas containing expansive soils, or other soils conditions which, if not corrected, would lead to structural defects, or unsafe conditions, shall be reviewed by a qualified engineer, who shall recommend corrective actions as appropriate to remedy on-site soil conditions.
- Action CON-4b** If construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts or unique paleontological resources, all work within 100 feet of the discovery shall cease, the Planning Department shall be notified, the resources shall be examined by a qualified archaeologist, paleontologist, or historian for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Planning Department.

City of San José General Plan

The following policies are relevant to geology, soils, and paleontology (City of San José, 2024):

- Policy ER-10.1** For proposed development sites that have been identified as archaeologically or paleontologically sensitive, require investigation during the planning process in order to determine whether potentially significant archeological or paleontological information may be affected by the project and then require, if needed, that appropriate mitigation measures be incorporated into the project design.
- Policy ER-10.3** Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.
- Policy EC-4.2** Approve development in areas subject to soils and geologic hazards, including unengineered fill and weak soils and landslide-prone areas, only when the severity of hazards have been evaluated and if shown to be required, appropriate mitigation measures are provided. New development proposed within areas of geologic hazards shall not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties. The City of San José Geologist will review and approve geotechnical and geological investigation reports for projects within these areas as part of the project approval process.
- Policy EC-4.3** Locate new public improvements and utilities outside of areas with identified soils and/or geologic hazards (e.g., deep seated landslides in the Special Geologic Hazard Study Area and former landfills) to avoid extraordinary maintenance and operating expenses. Where the location of public improvements and utilities in such areas cannot be avoided, effective mitigation measures will be implemented.

City of Santa Clara General Plan

The following policies are relevant to geology, soils, and paleontology (City of Santa Clara, 2010):

- 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.
- 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.
- 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.

5.7.3 IMPACT QUESTIONS**5.7.3.1 CEQA Impact Questions**

The significance criteria for assessing the impacts to geology, soils, and paleontological resources come from the CEQA, Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- 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; or
- Strong seismic ground shaking; or
- Seismic-related ground failure, including liquefaction; or
- Landslides; or
- Result in substantial soil erosion or the loss of topsoil; or
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; or
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; or
- 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; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

5.7.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments*, there are no additional CEQA Impact Questions required for geology, soils, and paleontological resources.

5.7.4 IMPACT ANALYSIS

5.7.4.1 Geology, Soils, and Paleontological Resources Impact Analysis

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

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?

Less-Than-Significant Impact. A project could directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault if the project includes activities that could induce seismicity (Wilson et al., 2017). Induced seismicity refers to seismic events (usually earthquakes) caused partially or completely by human (anthropogenic) activities. These activities can include impounding surface water reservoirs, erecting tall buildings, tunnel excavation, hydraulic fracturing (fracking), and removing mass from the surface by quarrying, as well as the subsurface extraction of resources, including groundwater, coal, hydrocarbons, and geothermal fluids. A project could also indirectly cause potential substantial adverse effects if a known earthquake fault ruptures during construction or operational activities and results in loss, injury, or death to the workers.

As detailed in **Section 5.7.1, Environmental Setting**, the Proposed Project area is not located within a mapped Alquist-Priolo Earthquake Fault Zone. There are three active or potentially active faults within 10 miles of the Proposed Project area: Calaveras Fault Zone, Hayward Fault Zone, and Monte Vista-Shannon Fault Zone. In addition, one inactive fault zone, Silver Creek Fault Zone, intersects the proposed Albrae to Baylands 320 kV DC transmission line alignment.

As described in **Section 3.0, Proposed Project Description**, installation of the proposed underground transmission lines would be primarily conducted by open-cut trenching techniques, which include cutting the pavement with a wet saw or asphalt zipper and excavating with a backhoe or excavator. All underground transmission lines included within the Proposed Project would be designed and constructed in compliance with GO 128, which governs construction of underground transmission lines. Installation of the proposed overhead transmission lines would include the installation of transmission support structures predominately consisting of self-supported tubular steel monopoles with a horizontal conductor configuration and two overhead optical ground wires. All overhead transmission lines included within the Proposed Project would be designed and constructed in compliance with GO 95, which governs construction of overhead transmission lines.

Geotechnical studies would provide geotechnical engineering recommendations for consideration in the final design relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions and would evaluate any substantive risks identified from trenching through the inactive Silver Creek Fault Zone (**Applicant Proposed Measure [APM] GEO-1, Geotechnical Studies and Geologic Hazard Reduction Measures**). Construction activities at the proposed high-voltage direct current (HVDC) terminal sites would involve typical excavation and structure installation activities. Therefore, these activities are unlikely to induce seismicity.

Construction of the Proposed Project would introduce construction workers to the area who would not otherwise be present. However, because of the short construction period and the low likelihood of an earthquake fault rupture occurring during that time, the potential for construction personnel to experience loss, injury, or death is considered low. In addition, if a seismic event were to occur during O&M, the risk of loss, injury, or death is considered low because the design and construction of the Proposed Project would adhere to all appropriate and applicable codes and seismic standards in order to withstand the maximum predicted ground motion, and the final design would consider any substantive risks identified by the geotechnical studies (**APM GEO-1**). Therefore, construction and O&M of the Proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. The impacts would be less than significant under this criterion.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Pacific Gas and Electric (PG&E) would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of the Newark substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited duration. Geotechnical studies would be prepared for the PG&E Newark substation. The geotechnical studies would evaluate soil conditions and provide geotechnical engineering recommendations relative to subsurface soil and rock conditions, groundwater conditions, lateral earth pressures, and seismic classifications of the

substation modification area. The Newark substation modifications would adhere to all appropriate and applicable codes and seismic standards in order to withstand the maximum predicted ground motion, and the final design would consider any substantive risks identified by the geotechnical studies. The modifications to the existing Newark substation facility would not impact known faults. Impacts would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Silicon Valley Power (SVP) would be required to perform modifications to their existing Northern Receiving Station (NRS) substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. Construction of these NRS substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited duration. Geotechnical studies would be prepared for the SVP NRS substation modifications. The geotechnical studies would evaluate soil conditions and provide geotechnical engineering recommendations relative to subsurface soil and rock conditions, groundwater conditions, lateral earth pressures, and seismic classifications of the substation modification area. The NRS substation modifications would adhere to all appropriate and applicable codes and seismic standards in order to withstand the maximum predicted ground motion, and the final design would consider any substantive risks identified by the geotechnical studies. The modifications to the existing NRS substation facility would not impact known faults. Impacts would be less than significant.

Strong seismic ground shaking?

Less-Than-Significant Impact. Faults in surrounding areas could result in ground shaking within the Proposed Project area. However, as discussed in the response above, due to the short construction period, the low likelihood of an earthquake fault rupture occurring during that time, and the fact that the proposed HVDC terminal sites would be remotely operated, impacts to human life would be very unlikely, unless workers were present for maintenance during seismic activity. All underground transmission lines included within the Proposed Project would be designed and constructed in compliance with GO 128, which governs construction of underground transmission lines. The Proposed Project facilities, including the Albrae to Baylands 320 kV DC transmission line, Newark to Albrae 230 kV transmission line, Baylands to NRS 230 kV transmission line, and HVDC terminal facilities, would be engineered to withstand predicted ground shaking and would consider the relevant seismic requirements included in the geotechnical studies (**APM GEO-1**). The geotechnical studies would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. This would help ensure that the final design would account for any substantive risks related to strong seismic shaking. Therefore, the impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of the Newark substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited duration. Construction of the Newark substation modifications would adhere to all appropriate and applicable codes and seismic standards in order to withstand the maximum predicted seismic ground shaking, and the final design would consider any

substantive risks identified by the geotechnical studies. The modifications to the existing Newark substation would, therefore, not cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic shaking. Impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction of the SVP facility modifications would adhere to all appropriate and applicable codes and seismic standards in order to withstand the maximum predicted seismic ground shaking, and the final design would consider any substantive risks identified by the geotechnical studies. The modifications to the existing NRS substation would, therefore, not cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic shaking. Impacts would be less than significant.

Seismic-related ground failure, including liquefaction?

Less-Than-Significant Impact. The Proposed Project area sits within a large liquefaction zone. However, the Proposed Project does not involve the withdrawal of fluid from geologic materials. All underground transmission lines included within the Proposed Project would be designed and constructed in compliance with GO 128, which governs construction of underground transmission lines. Furthermore, the Proposed Project facilities would be engineered to consider the relevant building code standards, as well as with consideration of the results presented in the geotechnical studies (**APM GEO-1**). The geotechnical studies would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. This would help ensure that the final design would account for any substantive risks related to liquefaction. Therefore, the impacts would be less than significant under this criterion.

PG&E Substation Modifications

PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The modifications to the existing Newark substation would not cause potential substantial adverse effects, including the risk of loss, injury, or death involving ground failure, including liquefaction, as they would be constructed in accordance with applicable codes and building standards, and the design would consider recommendations from the geotechnical studies. Impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The modifications to the existing NRS substation would not cause potential substantial adverse effects, including the risk of loss, injury, or death involving ground failure, including liquefaction, as they would be constructed in accordance with applicable codes and building standards, and the design would consider recommendations from the geotechnical studies. Impacts would be less than significant.

Landslides?

Less-Than-Significant Impact. The Proposed Project area consists of gently sloping (zero to two percent) topography along the Santa Clara Valley floor, and the site is not located directly

near any hills, mountains, or slopes. No landslides are anticipated to occur in the Proposed Project area. In addition, construction activities would be conducted in accordance with all appropriate and applicable codes, as well as with consideration of the results presented in the geotechnical studies (**APM GEO-1**). The geotechnical studies would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. Consideration of the geotechnical study recommendations into the final Proposed Project design would ensure that slope stability factors are not altered in a way that would increase the area's susceptibility to landslides. This would help ensure that final design would consider any substantive risks. Therefore, less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The proposed modifications to the existing Newark substation would not cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, as they would be constructed in accordance with applicable codes and building standards, and the design would consider recommendations from the geotechnical studies. In addition, the Newark substation and modification areas are generally flat, with no sloped areas that could be susceptible to landslides. Impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The modifications to the existing NRS substation would not cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, as they would be constructed in accordance with applicable codes and building standards, and the design would consider recommendations from the geotechnical studies. In addition, the NRS substation is generally flat, with no sloped areas that could be susceptible to landslides. Impacts would be less than significant.

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

Less-Than-Significant Impact. Soils within the Proposed Project area have a low to moderate erosion potential. The Proposed Project would result in more than one acre of soil disturbance. As a result, the Proposed Project would be required to prepare and implement a SWPPP in accordance with the State's General Permit for Stormwater Discharges Associated with Construction Activities (Construction General Permit [CGP] 2009-009-DWQ, as amended). The SWPPP would include measures to limit erosion and off-site transport of pollutants from construction activities. The plan would designate BMPs that would be followed during construction to help stabilize disturbed areas and reduce erosion, sedimentation, and pollutant transport. All underground transmission lines included within the Proposed Project would be designed and constructed in compliance with GO 128, which governs construction of underground transmission lines. Geotechnical studies would be conducted (**APM GEO-1**) and would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. While soil erosion or loss of topsoil could result from excavation or grading activities during construction of the Proposed Project, the implementation of the SWPPP and **APM GEO-1** would ensure that soil erosion and loss of topsoil would remain less than significant. Therefore, less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The proposed modifications to the existing Newark substation would not result in substantial soil erosion or the loss of topsoil, as the existing substation is located on a previously disturbed and developed site. Construction of the Newark substation modifications would be consistent with the Proposed Project SWPPP (or a separate SWPPP) and would implement PG&E **BMP HAZ-10, Stormwater BMP Installation**, including measures to limit erosion and off-site transport of pollutants. Impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The modifications to the existing NRS substation would not result in substantial soil erosion or the loss of topsoil, as the existing substation is located on a previously disturbed, and developed site. Construction of the NRS substation modifications would be consistent with the Proposed Project SWPPP (or a separate SWPPP), including measures to limit erosion and off-site transport of pollutants. Impacts would be less than significant.

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

Less-Than-Significant Impact. The potential for landslides and liquefaction-related impacts is analyzed above.

Subsidence

While the Proposed Project is located in an area of mapped subsidence, subsidence has been stabilized through ongoing groundwater recharge by the SCVWD and has been stable since the 1970s (SCVWD, 2023). The Proposed Project may involve dewatering if groundwater is encountered. All underground transmission lines included within the Proposed Project would be designed and constructed in compliance with GO 128, which governs construction of underground transmission lines. Construction activities would be conducted in accordance with all appropriate and applicable codes, including CBC and GO 128, as well as with consideration of the results presented in the geotechnical studies (**APM GEO-1**). The geotechnical studies would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. This would help ensure that the final design of the Proposed Project would consider any substantive risks related to subsidence.

Lateral Spreading

Lateral spreading is a type of liquefaction-induced ground failure that occurs on gentle slopes or near free-faces, such as river channels. Resulting horizontal displacements can reach up to several meters and can be considerably damaging to foundations, bridges, roadways, and pipelines. The potential for lateral spreading at the Proposed Project site is low due to the absence of topographic features susceptible to lateral spreading. Construction activities would be conducted in accordance with all appropriate and applicable codes, including CBC and GO 128, as well as with consideration of the results presented in the geotechnical studies (**APM GEO-1**).

The geotechnical studies would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. This would help ensure that the final design of the Proposed Project would consider any substantive risks related to lateral spreading.

Soil Collapse

Construction activities would be conducted in accordance with all appropriate and applicable codes including CBC and GO 128, as well as with consideration of the results presented in the geotechnical studies (**APM GEO-1**). The geotechnical studies would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. This would help ensure that the final design of the Proposed Project would consider any substantive risks related to soil collapse.

Therefore, the Proposed Project would not cause a geologic unit to become unstable, resulting in on-site or off-site landslide, lateral spreading, liquefaction, subsidence, or collapse. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Geotechnical studies would be conducted for the proposed substation modifications and would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. The final design for the Newark substation modifications would consider the recommendations of the geotechnical studies, which would mitigate applicable geologic hazards associated with soil collapse, lateral spreading, and subsidence. Impacts would be less than significant under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction of the Newark substation modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited duration. Geotechnical studies would be conducted for the proposed substation modifications and would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. The final design for the NRS substation modifications would consider the recommendations of the geotechnical studies, which would mitigate applicable geologic hazards associated with soil collapse, lateral spreading, and subsidence. Impacts would be less than significant under this criterion.

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

Less-Than-Significant Impact. As discussed in **Section 5.7.1.4, Soils**, expansive soils are located within the Proposed Project area. Proposed Project design and construction activities would be conducted in accordance with consideration of the results presented in the geotechnical studies (**APM GEO-1**). The geotechnical studies would provide geotechnical engineering recommendations relative to the local soil and rock conditions, groundwater conditions, and local seismic conditions. This would help ensure that the final design would consider any substantive

risks related to expansive soils. Further, all underground transmission lines included within the Proposed Project would be designed and constructed in compliance with GO 128, which governs construction of underground transmission lines. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property), which is located within areas containing expansive soils. Geotechnical studies would be conducted and would provide geotechnical engineering recommendations relative to the local soil conditions. The final design for the Newark substation modifications would consider the recommendations of the geotechnical studies, which would address applicable geologic hazards associated with expansive soils. Impacts would be less than significant under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, which is located within areas mapped as containing expansive soils. However, the NRS substation modifications would occur within the existing foundation of the NRS substation. Geotechnical studies would be conducted and would provide geotechnical engineering recommendations relative to the local soil conditions. The final design for the SVP substation modifications would consider the recommendations of the geotechnical studies, which would address applicable geologic hazards associated with expansive soils. Therefore, no impacts would occur under this criterion.

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 does not include the use of septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property) and would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation and would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur under this criterion.

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

Less-Than-Significant Impact. Excavations within artificial fill have no paleontological potential and would not impact paleontological resources. The Holocene-age sedimentary deposits present at the surface of the Proposed Project area are assigned a low paleontological potential and likely transition to Pleistocene-age alluvial deposits as shallow as seven feet bgs, which have a high paleontological potential. Although there are geologic units with high paleontological potential mapped within one mile of the Proposed Project, the Proposed Project limits of construction would be entirely within surface geologic units with no or low paleontological potential (**Figure 5.7-5**). Proposed Project components and construction methods, as currently proposed, would require varying degrees of ground disturbance, ranging from no or only superficial ground disturbance, to shallow excavation (less than seven feet bgs), to deeper excavation (seven to 50 feet bgs). Impacts to paleontological resources may occur during excavations that would disturb Pleistocene-aged alluvial deposits. Therefore, excavations extending less than seven feet deep in areas mapped as Holocene alluvial and fluvial deposits would be unlikely to impact paleontological resources, while excavations extending greater than seven feet bgs in these areas would have the potential to impact paleontological resources.

There is one documented fossil collection locality that lies within a one-mile radius of the Proposed Project; however, the fossil locality is 0.7 mile to the south of overhead structure DC-7 and would not be impacted by the Proposed Project limits of construction. Although impact avoidance through relocation of the Proposed Project would not be necessary, paleontological monitoring during construction is typically recommended to minimize any negative impacts to paleontological resources to less than significant levels. A Proposed Project-specific Paleontological Resources Mitigation and Monitoring Plan (PRMMP), as outlined in **APM PALEO-1, Paleontological Resources Mitigation Monitoring Plan** below, would be developed and implemented to reduce any potentially adverse impacts to paleontological resources through the recovery and conservation of any fossils that are unearthed during construction, consistent with California PRC Section 5097.5. **APM PALEO-2, Paleontological Resource Findings** would account for any inadvertent discoveries made when a paleontological monitor is not on-site. **APMs PALEO-1 and PALEO-2** would be implemented to ensure that impacts under this criterion remain at less-than-significant levels.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation is located within an area of low paleontological potential at less than seven feet bgs, and high paleontological potential greater than seven feet bgs. Excavation greater than seven feet would have the potential to impact paleontological resources. Although not anticipated, PG&E **BMP PALEO-1, Unanticipated Paleontological Discoveries** would account for any inadvertent discoveries made during excavation activities at the existing Newark substation. Less-than-significant impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The NRS substation is located in an area of low paleontological potential at less than seven feet bgs, and high paleontological potential greater than seven feet bgs. Excavation greater than seven feet

would have the potential to impact paleontological resources. However, the site is previously disturbed, graded, and consists of structures that have been previously constructed greater than seven feet bgs. Although unanticipated, SVP would reduce any potentially adverse impacts to paleontological resources through the recovery and conservation of any fossils that are unearthed during construction, consistent with California PRC Section 5097.5. Less-than-significant impacts would occur under this criterion.

5.7.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for geology, soils, and paleontological resources.

5.7.6 APPLICANT PROPOSED MEASURES

APM GEO-1: Geotechnical Studies and Geologic Hazard Reduction Measures

The following measures shall be implemented during construction to minimize impacts from geological hazards and disturbance to soils:

- Keep vehicle and construction equipment within the limits of the Proposed Project and in approved construction work areas to reduce disturbance to topsoil;
- Geotechnical studies will be completed to evaluate the risk of geologic hazards associated with the Proposed Project. The geotechnical studies shall provide geotechnical engineering recommendations relative to subsurface soil and rock conditions, groundwater conditions, lateral earth pressures, and seismic classifications of the Proposed Project area. Recommendations from the geotechnical studies shall be considered in the final design;
- Avoid construction in areas with saturated soils, whenever practical, to reduce impacts to soil structure and allow safe access. Similarly, avoid topsoil salvage in saturated soils to maintain soil structure;
- Keep topsoil material on-site in the immediate vicinity of the temporary disturbance or at a nearby approved work area to be used in restoration of temporary disturbed areas. Temporary disturbance areas shall be re-contoured following construction to match preconstruction grades. Areas shall be allowed to re-vegetate naturally or be reseeded with a native seed mix from a local source if necessary. On-site material storage shall be sited and managed in accordance with all required permits and approvals; and
- Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Removed vegetation shall be disposed of off-site to an appropriate licensed facility or can be chipped on-site to be used as mulch during restoration.

APM PALEO-1: Paleontological Resources Mitigation Monitoring Plan

Prior to the issuance of grading permits, a qualified paleontologist shall be retained to prepare and oversee the PRMMP for the Proposed Project. The PRMMP shall contain monitoring procedures, define areas and types of earthwork to be monitored, and provide methods for

determining the significance of fossil discoveries. The PRMMP shall direct that a qualified paleontological monitor (working under the supervision of the qualified paleontologist) shall monitor all excavations or grading at depths exceeding seven feet bgs where potentially fossil-bearing alluvial deposits of Pleistocene age may be present. The duration and timing of paleontological monitoring shall be determined by the qualified paleontologist based on the grading plans and construction schedule and may be modified based on the initial results of monitoring. The PRMMP shall state that any fossils that are collected shall be prepared to the point of curation, identified to the lowest reasonable taxonomic level, and curated into a recognized professional repository (e.g., SDNHM, UCMP), along with associated field notes, photographs, and compiled fossil locality data. The repository shall be contracted prior to the start of earthwork to curate and store any discovered and recovered fossils. Such an institution shall be a recognized paleontological specimen repository with a permanent curator, such as a museum or university. Donation of the fossils shall be accompanied by financial support for initial specimen curation and storage.

Following the completion of the above tasks, the qualified paleontologist shall prepare a final mitigation report that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. The report shall be submitted to appropriate agencies, as well as to the designated repository.

APM PALEO-2: Paleontological Resource Findings

If paleontological resources are encountered during ground disturbing activities when the qualified paleontologist or paleontological monitor is not on-site (an inadvertent discovery), earthwork within the vicinity of the discovery shall immediately halt, and the qualified paleontologist shall evaluate the significance of the fossil discovery. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthened fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered and the qualified paleontologist deems the discovery site has been mitigated to the extent necessary.

5.7.7 PG&E BEST MANAGEMENT PRACTICES

The following geology, soils, and paleontological resources-specific BMP would be implemented by PG&E for the activities to be completed by PG&E and/or their contractors. In addition, PG&E would implement **BMP HAZ-10**, as discussed in **Section 5.9, Hazards, Hazardous Materials, and Public Safety**.

BMP PALEO-1: Unanticipated Paleontological Discoveries

If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E cultural resource specialist (CRS) will be contacted immediately. The CRS will work with the qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted in consultation with the landowner, PG&E, and CPUC. The paleontologist will be responsible for developing the

recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.

5.7.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for geology, soils, and paleontological resources would be implemented for SVP's scope of work.

5.8 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?			X	
b.	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

This section describes the greenhouse gas (GHG) emissions within the vicinity of the Proposed Project as well as potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.8.1 ENVIRONMENTAL SETTING

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, California, and the Proposed Project encompasses four GHG zonal areas to include two new high-voltage direct current (HVDC) terminals (the proposed Albrae and Baylands terminals) and associated transmission lines between the existing Pacific Gas and Electric Company (PG&E) Newark substation and the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation, which would encompass work along an approximately 12-mile alignment between the existing Newark and NRS substations. Modifications to PG&E's Newark and SVP's NRS substations would occur to accommodate integration of the new Albrae to Baylands 320 kV direct current (DC) transmission line and HVDC terminals. The existing NRS substation modifications would be similar to the existing Newark substation. However, since the NRS substation is approximately 1.77 miles from the proposed Baylands terminal, the NRS substation is modeled separately.

5.8.1.1 GHG Setting

GHGs, such as water vapor and carbon dioxide, are abundant in the earth's atmosphere. These gases are called "Greenhouse Gases" because they absorb and emit thermal infrared radiation, which acts like an insulator to the planet. Without these gases, the earth's ambient temperature would either be extremely hot during the day or blistering cold at night. However, because these gases can both absorb and emit heat, the earth's temperature does not sway too far in either direction.

Over the years, scientists have measured a rise in carbon dioxide, and the general consensus is that human activities contribute to the heating of the planet. Other GHGs, such as methane and nitrous oxide, also contribute to global warming.

GHGs of concern are Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), and Sulfur Hexafluoride (SF₆). To simplify GHG calculations, CH₄, N₂O, and SF₆ are converted to equivalent amounts of CO₂ and are identified as carbon dioxide equivalent of metric tons (MT) of CO₂e. CO₂e

is calculated by multiplying the calculated levels of CH₄, N₂O, and SF₆ by a Global Warming Potential (GWP). The latest California Emissions Estimator Model (CalEEMod 2022.1) developed by South Coast Air Quality Management District uses the Intergovernmental Panel on Climate Change (IPCC) 2007 report as source data for GWP factors for both CH₄ and N₂O (California Air Pollution Control Officers Association [CAPCOA], 2016), using the 100-year periods of 25, 298, and 22,800, respectively (IPCC, 2007).

The proposed HVDC terminals (the Albrae and Baylands terminals) would convert alternating current (AC) to DC or the reverse. To facilitate this conversion, each new HVDC terminal would include Voltage Source Converter HVDC equipment, an AC switchyard using gas-insulated switchgear (GIS) in a breaker-and-a-half (BAAH) configuration, and converter transformers (with space for an on-site spare).

The GIS equipment located at both the proposed Albrae and Baylands terminals would require a combined total of approximately 6,000 pounds of SF₆, which is a GHG as described above. Primary sources of GHG emissions resulting from the Proposed Project are anticipated from SF₆ leakage, energy consumption, and, to a much lesser extent, vehicular trips from O&M activities. Also, as part of the Proposed Project, PG&E would perform modifications to their existing Newark substation. In doing so, PG&E would install clean air GIS breakers. Clean air GIS does not contain a GHG for insulation but instead utilizes clean air as the insulation medium. Similarly, SVP would modify their existing NRS substation to accommodate the interconnection of the Proposed Project.

5.8.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.8.2.1 GHG Regulatory Setting

Federal

Clean Air Act

On April 2, 2007, in *Massachusetts v. Environmental Protection Agency (EPA)*, the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the Federal Clean Air Act. On December 7, 2009, the EPA Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and SF₆—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the “endangerment finding.”
- The Administrator further found the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

State

Executive Order (EO) S-3-05

EO S-3-05 (June 2005) established the following Statewide goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050.

Assembly Bill (AB) 32 and California's Air Resources Board Climate Change Scoping Plan

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and regulations necessary to achieve the GHG emissions reduction mandate of AB 32. Therefore, in furtherance of AB 32, CARB adopted regulations requiring the reporting and verification of GHG emissions from specified sources, such as industrial facilities, fuel suppliers, and electricity importers (see Health & Safety Code Section 35830; Cal. Code Regs., tit. 17, §§95100 et seq.). CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, at the State level, CARB will continue monitoring compliance and enforcing rules, regulation, emission limitations, emission reduction measures, or market-based compliance mechanisms adopted.

In 2007, CARB approved a limit on the Statewide GHG emissions level for the year 2020 consistent with the determined 1990 baseline (427 million metric tons [MMT] CO₂e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* ("Scoping Plan") in accordance with Health and Safety Code Section 38561. The *Scoping Plan* established an overall framework for the measures that will be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The 2008 *Scoping Plan* evaluated opportunities for sector-specific reductions, integrated all CARB and Climate Action Team¹ early actions and additional GHG reduction features by both entities, identified additional measures to be pursued as regulations, and outlined the role of a Cap-and-Trade program. The key elements of the 2008 *Scoping Plan* include the following:

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
2. Achieving a Statewide renewable energy mix of 33 percent.

¹ The Climate Action Team is comprised of state agency secretaries and heads of state agencies, boards, and departments; these members work to coordinate Statewide efforts to implement GHG emissions reduction programs and adaptation programs.

3. Developing a California Cap-and-Trade Program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In the 2008 *Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual" [BAU]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the *Scoping Plan's* Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009 to 2016) and the Renewables Portfolio Standard (12 percent to 20 percent), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* ("First Update"). The stated purpose of the *First Update* was to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050." The *First Update* found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and it also noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the *First Update*, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050." Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6)

natural and working lands. The *First Update* identified key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

Based on CARB's research efforts presented in the *First Update*, the update has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the *First Update*, CARB recalculated the State's 1990 emissions level using more recent global warming potentials identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO₂e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions.

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan* ("*Second Update*") for public review and comment (CARB, 2017a). This update proposes CARB's strategy for achieving the State's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030², inclusive policies and broad support for clean technologies, enhanced industrial efficiency and competitiveness, prioritization of transportation sustainability, continued leadership on clean energy, putting waste resources to beneficial use, supporting resilient agricultural and rural economics and natural and working lands, securing California's water supplies, and cleaning the air and public health.

When discussing project-level GHG emissions reduction actions and thresholds, the *Second Update* states "[a]chieving no additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *Second Update* also recognizes that such an achievement "may not be feasible or appropriate for every project ... and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under [the California Environmental Quality Act] CEQA." CARB's Governing Board adopted the *Second Update* in December 2017.

CARB's Climate Change Scoping Plan Update 2022

In 2022 California released the latest scoping plan update which lays out the sector-by-sector roadmap for California to achieve carbon neutrality by 2045. This plan, addressing recent legislation and direction from Governor Newsom, extends and expands upon these earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045 (CARB, 2022a). The plan suggests that bold steps are required by the State and calls for the need of vast research and development with respect to methods of capturing CO₂. The plan calls for a need to take an unprecedented transformation and aggressively seek reductions to reduce the need of fossil fuels by moving to zero emission transportation, electrifying the cars, buses, trucks, and trains. The plan relies on external controls and requires partnership and collaboration with the Federal government, other U.S. states, and other jurisdictions around the world for California to succeed in achieving its climate targets.

² In July 2017, AB 398 was enacted into law, thereby extending the legislatively authorized lifetime of the Cap-and-Trade Program to December 31, 2030.

The 2022 Scoping Plan includes key actions to support success in the necessary transition away from fossil combustion. Among the actions listed is decarbonizing the electricity sector, which depends on both using energy more efficiently and replacing fossil-fueled generation with renewable and zero carbon resources, including solar, wind, energy storage, geothermal, biomass, and hydroelectric power. Another action includes expanding incentive programs to support the holistic retrofit of existing buildings. Buildings have cross-sector interactions that influence public health and well-being and affect energy use. There are about 14 million existing homes and over 7.5 billion square feet of existing commercial buildings in California. Fossil gas supplies about half of the energy consumed by end users in these buildings. In achieving carbon neutrality, transitioning away from fossil gas in existing residential and commercial buildings is an important action item.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set a new Statewide GHG reduction target—made changes to CARB's membership and increased legislative oversight of CARB's climate change-based activities; and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that Statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the State of California's climate policies.

AB 197 also added two members of the Legislature to CARB as nonvoting members. The legislation further requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and Toxic Air Contaminants (TACs) from reporting facilities; and identify specific information for GHG emissions reduction measures when updating the scoping plan, including information regarding the range of projected GHG emissions and air pollution reductions that result from each measure and the cost-effectiveness (including avoided social costs) of each measure (see Health & Safety Code Section 38562.7).

EO B-55-18

In 2018, the Governor expanded upon EO S-3-05 by issuing EO B-55-18 and creating a Statewide goal of carbon neutrality by 2045. EO B-55-18 identifies CARB as the lead agency to develop a framework for implementation and progress tracking toward this goal. It should be noted that consistency with a Statewide carbon neutrality target by 2045 represents the Governor's policy goal but is not required to make a significance determination. The State of California has already determined that 80 percent below 1990 levels by 2050 is a long-term target that represents California's share of emissions reductions to stabilize and limit global warming and "avoid dangerous climate change". EO B-30-15 sets forth the 2050 target endorsed by the IPCC's findings and notes that the State's 2050 target would "attain a level of emissions necessary to avoid dangerous climate change" because it may limit global warming to two degrees Celsius by 2050.

AB 1279

In 2022, the Governor approved AB 1279 (State of California, 2022) which requires the state board to prepare and approve a scoping plan for achieving the maximum technologically feasible

and cost-effective reductions in GHG emissions and to update the scoping plan at least once every five years. This bill, the California Climate Crisis Act, would declare the policy of the State both to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, Statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels.

AB 1493

In response to the transportation sector accounting for more than half of California's CO₂ emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the State. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004 (CARB, 2017b).

SB 375

SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations (MPOs) are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan. The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, would achieve, if feasible and if implemented, the GHG reduction targets. If a SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To reduce GHG emissions, CARB, in conjunction with the EPA and the National Highway Traffic Safety Administration (NHTSA), also has adopted new GHG standards for model years 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 compared to 2017 (CARB, 2012).

The Zero Emission Vehicle (ZEV) program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (PHEVs) in the 2018 to 2025 model years (CARB, 2017c).

This program was recently updated and is known as the Advanced Clean Cars II Program ("ACC II"). The ACC II regulations will rapidly scale down emissions of light-duty passenger cars, pickup trucks, and SUVs starting with the 2026 model year through 2035. The regulations are two-pronged. First, it amends the ZEV regulation to require an increasing number of ZEVs, and relies on currently available advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric, and PHEVs, to meet air quality and climate change emissions standards. Second, the

Low-Emission Vehicle Regulations were amended to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions (CARB, 2023a).

EO B-16-12

EO B-16-12 (March 2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a Statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on Zero-Emission Vehicles that has published multiple reports regarding the progress made on the penetration of ZEVs in the Statewide vehicle fleet. As of January 2018, the Governor has called for as many as 1.5 million ZEVs by 2025 and up to five million ZEVs by 2030.

EO N-79-20

EO N-79-20 (September 2020) was signed by Governor Gavin Newsom in 2020, and it requires that 100 percent of new car sales in California be ZEVs by 2035. The plan targets 35 percent ZEV sales by 2026, 68 percent by 2030, and 100 percent by 2035 (CARB, 2023b).

AB 1236

AB 1236 (2015), as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for electric vehicle charging stations, as specified.

SF₆ Leakage Requirements

In 2010, the CARB published final regulations for SF₆ and outlined requirements for equipment operational from 2011 to beyond 2020. The purpose of this regulation is to achieve GHG emission reductions by reducing SF₆ emissions from GIS. Based on the requirements, the allowable leakage rate in 2011 was 10 percent. The allowable leakage rate in 2020 and each calendar year thereafter is one percent or a 90 percent reduction (CARB, 2010) from the 2011 allowable rate. Per CARB's latest rules, SF₆ gas-insulated electronics (GIE) are to be phased out over time. CARB has developed Phase-Out Dates for GIE and shall not be purchased after these dates without exemptions further spelled out by CARB. The phase-out dates are identified in **Table 5.8-1, Phase-Out Dates for SF₆ GIE** (CARB, 2022b).

Table 5.8-1: Phase-Out Dates for SF₆ GIE

Phase-Out Dates for SF₆ GIE with Voltage Capacity ≤ 38 kilovolt (kV)			
Configuration	Voltage Capacity (kV)	Short-Circuit Current Rating (kV)	Phase-Out Date
Aboveground	< 38	All	January 1, 2025
	38	All	January 1, 2028
Belowground	< 38	< 25	January 1, 2025
	< 38	> 25	January 1, 2028
Phase-Out Dates for SF₆ GIE with Voltage Capacity > 38 kV			
Configuration	Voltage Capacity (kV)	Short-Circuit Current Rating (kV)	Phase-Out Date
Any	38 < kV ≤ 145	< 63	January 1, 2025
		≥ 63	January 1, 2028
Any	145 < kV ≤ 245	< 63	January 1, 2027
		≥ 63	January 1, 2031
Any	> 245	All	January 1, 2033
Source: CARB, 2022b.			

SB 1078

SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least one percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010.

SB X1 2

SB X1 2 (2011) expanded the RPS by establishing that 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350

SB 350 (2015) further expanded the RPS by establishing that 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency.

SB 100

SB 100 (2018) has further accelerated and expanded the RPS, requiring achievement of a 50 percent RPS by December 31, 2026, and a 60 percent RPS by December 31, 2030. SB 100 also established a new Statewide policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City and County regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section identifies local GHG plans and regulations for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

The Proposed Project areas are located in the Cities of Fremont, Milpitas, San José, and Santa Clara, which are all located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD recommends local jurisdictions develop Greenhouse Gas Reduction Strategies (GHGRS) which can be used for GHG emission reduction planning. The Cities of Fremont, Milpitas, San José, and Santa Clara adopted a GHGRS. Per the plans and draft concepts for each jurisdiction however, reliance on BAAQMDs guidance as it relates to CEQA.

BAAQMD Project – Level Climate Impacts – 2022 CEQA Guidelines

The BAAQMD recommends that lead agencies use a "fair share" approach for determining whether an individual project's GHG emissions would be cumulatively considerable. If the project is doing its "fair share" to implement California's plans to address the cumulative problem, its contribution can be treated as less than cumulatively considerable.

The BAAQMD has thresholds for both a land use project and stationary source type projects. When a project has GHG emissions associated with natural gas appliances or vehicle miles traveled (VMT), the land use thresholds would apply. However, if the project has GHG emissions from sources permitted by the Air District, such as generators, boilers, or other relevant equipment, the GHG emissions from permitted sources would not be subject to the land use threshold of significance but instead would be subject to the stationary source thresholds. Many projects will require the use of both land use and stationary source thresholds (BAAQMD, 2022).

Land Use Projects

For a land use project to have a less-than-significant impact related to operational GHG emissions, it must include, at a minimum, the following project design elements:

1) Buildings

- a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- b. The project will not result in any wasteful, inefficient, or unnecessary energy use as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines

2) Transportation

- a. The project will achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target that reflects the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - i. Residential projects: 15 percent below the existing VMT per capita
 - ii. Office projects: 15 percent below the existing VMT per employee
 - iii. Retail projects: no net increase in existing VMT
- b. The project will achieve compliance with off-street electric vehicle requirements in the most recently adopted version of California Green Building Standards Code ("CALGreen") Tier 2.

If the project includes, at a minimum, these design elements, there would be a less-than-significant climate impact related to GHG emissions, and the project would not be likely to conflict with applicable initiatives to reduce GHG emissions.

Because construction emissions are temporary and variable, the Air District has not developed a quantitative threshold of significance for construction-related GHG emissions. However, the Lead Agency should quantify and disclose GHG emissions that would occur during construction. The BAAQMD does suggest that projects should implement Best Management Practices (BMPs) to reduce GHG emissions, if necessary, which are presented in **Table 5.8-2, Best Management Practices for Construction-Related GHG Emissions**.

Table 5.8-2: Best Management Practices for Construction-Related GHG Emissions	
	Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or located within a BAAQMD-designated Community Air Risk Evaluation (CARE) area or AB 617 community.
	Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliant engines or better as a condition of contract.
	Require that all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year (MY) 2024 to 2026, as a condition of contract.
	Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than two minutes (A five-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.
	Prohibit off-road diesel-powered equipment from being in the “on” position for more than 10 hours per day.
	Use CARB–approved renewable diesel fuel in off-road construction equipment and on-road trucks.
	Use U.S. EPA SmartWay certified trucks for deliveries and equipment transport.
	Require all that construction equipment is maintained and properly tuned in accordance with manufacturer’s specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
	Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills, and compressors, and use electric tools whenever feasible.
	Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.
	Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options on-site or shuttles to nearby meal destinations for construction employees.
	Reduce electricity use in the construction office by using light emitting diode (LED) bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
	Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.
	Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15 percent more by weight than the diversion requirement in Title 24.
	Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials and based on volume for roadway, parking lot, sidewalk, and curb materials). Wood products used should be certified through a sustainable forestry program.
	Use low-carbon concrete, minimize the amount of concrete used, and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.
	Develop a plan to efficiently use water for adequate dust control since substantial amounts of energy can be consumed during the pumping of water.
	Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities.
	Source: BAAQMD, 2022.

Stationary Sources of GHG Emissions

The BAAQMD is responsible for issuing permits for the construction and operation of stationary sources to reduce air pollution and to attain and maintain the national and California ambient air

quality standards in the Greater Bay Area. A stationary source consists of an emission source with an identified emission point, such as a stack at a facility. It should include mobile sources that are associated with the stationary source, such as trucks, ships, and rail. Facilities can have multiple emission point sources located on-site. Major stationary sources typically associated with industrial processes, such as refineries and power plants (BAAQMD, 2022) would fit this category.

If GHG emissions for a stationary source are greater than 10,000 MTCO₂e per year, the project would have significant impact related to GHG emissions. If emissions are less than 10,000 MTCO₂e per year, the impact would be less than significant (BAAQMD, 2022).

City of Fremont General Plan

Chapter 7 of the City of Fremont's General Plan (City of Fremont, 2011) outlines general GHG goals and policies geared towards reducing GHG impacts within the City. This document includes several related policies with implementation measures (IMP) that pertain to this Proposed Project located within the City of Fremont.

Goal 7-8 Greenhouse Gas Emissions. GHG reduced by 25 percent from 2005 levels by 2020. This goal is aspirational and not meant to supersede AB 32 targets as a standard for project review.

Policy 7-8.1 Climate Action Plan. Maintain a Climate Action Plan (CAP) that outlines the specific strategies the City will implement to achieve its 2020 reduction goals.

Implementation 7-8.1.A CAP Implementation. Implement strategies in the CAP to achieve the City's GHG reduction target.

Implementation 7-8.1.B CAP Updates. Update the CAP every five years to reflect updated GHG emissions data; review the appropriateness and adequacy of the City's GHG reduction target and determine whether revisions to the goals and strategies in the CAP are necessary.

Implementation 7-8.1.C Consistency with CAP. Review and adjust City policies and programs to be consistent with the CAP.

Implementation 7-8.1.D Take Leadership Role on Climate Action. Take a leadership role in working with other local agencies including Fremont Unified School District, Alameda County Water District, Union Sanitary District, and Washington Hospital to maximize GHG emission reductions.

Policy 7-8.2 Development Trends. Review development trends for consistency with targets of AB 32: Global Warming Solutions Act of 2006.

Implementation 7-8.2.A Report to City Council. Provide a development trend report to the City Council in 2015 to determine consistency with greenhouse gas reduction strategy analysis of the Draft

Environmental Impact Report (EIR) and target reductions of AB 32.

Implementation 7-8.2.B Monitoring. Monitor actions of the State Scoping Plan and Regional Climate Change planning activities, including SB 375, related to reduction targets for the year 2035 and 2050.

City of Fremont Climate Action Plan

Consistent with Policy 7-8.1 of the City of Fremont's General Plan, the City adopted their first CAP in 2012 as a means to assist the City in reducing GHG emissions by 25 percent from a 2005 baseline level by the year 2020 (City of Fremont, 2011). In 2019, the City adopted a Carbon Neutrality Resolution for the City of Fremont to achieve a 55 percent GHG emission reduction from a 2005 baseline level by the year 2030 and to become a carbon neutral city no later than 2045. The latest CAP was adopted in October 2023 (City of Fremont, 2023). The General Plan has developed a framework of key strategies to serve as a foundation for the CAP and is aligned with the State's GHG emission targets.

The City's community GHG reduction targets for *Climate Ready Fremont* are as follows:

- 2030 target: 55 percent below 2005 levels (approximately 30 percent below 2018 levels); and
- 2045 target: carbon neutrality.

To achieve these goals, the City of Fremont outlined 31 strategies that will both mitigate GHG emissions and enhance the City's ability to adapt to the impacts of climate change. The strategies are organized under the following eight focus areas.

- 1) Buildings and Energy
- 2) Infrastructure and Equipment
- 3) Land Use and Mobility
- 4) Materials and Waste
- 5) Natural and Urban Landscapes
- 6) Adaptation and Resiliency
- 7) Green and Circular Economy
- 8) Public Participation and Engagement

Based upon review of the strategies, the industrial project to enhance and stabilize the electrical grid would support the City's efforts in electrification and decarbonization of energy usage.

City of Milpitas General Plan

The Conservation and Sustainability chapter of the City of Milpitas General Plan (City of Milpitas, 2021) outlines general climate action goals, policies, and actions geared towards reducing GHG impacts within the City.

- Goal CON-1** Ensure a sustainable future for the City of Milpitas by promoting a carbon free energy future that increases renewable resources, conservation, and efficiency throughout the City.
- Policy CON 1-1** Ensure that new development is consistent with the energy objectives and targets identified by the City's CAP.
- Policy CON 1-2** Ensure all development projects comply with the mandatory energy efficiency requirements of the CALGreen.
- Policy CON 1-3** Support innovative green building BMPs including, but not limited to, Leadership in Energy and Environmental Design (LEED) certification, and encourage project applicants to exceed the most current "green" development standards in the California Code of Regulations (CCR), Title 24, as feasible.
- Policy CON 1-4** Require large-scale industrial and manufacturing energy users to implement an energy conservation plan as part of the project review and approval process.
- Policy CON 1-5** Consider lifecycle costs when identifying opportunities for the replacement and retrofit of energy efficient technologies when upgrading or maintaining City facilities.
- Policy CON 1-6** Reduce the City's energy demand by pursuing the use of alternative energy and fuel-efficient City vehicles and equipment and strive for a zero-emission City vehicle fleet to the extent feasible and practical.
- Policy CON 1-7** Require large-scale industrial and manufacturing energy users to implement an energy conservation plan as part of the project review and approval process.
- Policy CON 1-8** Encourage energy efficiency and conservation through public awareness and educational opportunities.
- Policy CON 1-9** Encourage site planning and building techniques that promote energy conservation. Where feasible, encourage projects to take advantage of shade, prevailing winds, landscaping, sunscreens, building orientations, and material choices that reduce energy use.
- Policy CON 1-10** Encourage distributed energy resources including solar, fuel cells etc. to provide environmental benefits, as well as energy security, and the support of the grid during peak energy use periods.
- Policy CON 1-11** Consider incentive programs such as reduced fees, and permit expedition for projects that exceed mandatory energy requirements, incorporate alternative energy technologies, or support the City's energy objectives.

- Policy CON 1-12** Promote incentives from local, state, and federal agencies for improving energy efficiency and expanding renewable energy installations.
- Policy CON 1-13** Support projects and programs such as appliance upgrades and the use of electric appliances, and energy storage options that reduce the use of and reliance on natural gas.
- Action CON-1a** Update the City's CAP to achieve the GHG reduction targets for 2030, and 2050. Updates to the CAP should align the City's GHG reduction targets with the statewide GHG reduction targets of Assembly Bill 32, SB 375, and Executive Orders S-03-05 and B-30-15.
- Action CON-1b** Adopt a City Green-Fleet policy to guide the City in purchasing energy efficient and clean emissions vehicles.
- Action CON-1c** Display energy conservation and energy efficiency information including state and local programs, community choice aggregation opportunities, and rebate opportunities on the City's web page.
- Action CON-1d** Continue to participate in Silicon Valley Clean Energy (SVCE) whereby City-owned facilities, parks, and streetlights will run on renewable energy sources like wind and solar and educate and encourage Milpitas residents and businesses to participate in SVCE to reduce GHG emissions and support statewide alternative energy use.
- Action CON-1e** Continue to review all new public and private development projects to ensure compliance with the California CCR, Title 24 standards as well as the energy efficiency standards established by California CALGreen, the General Plan, and the Milpitas Municipal Code Chapter 20 Green Building Regulations.
- Action CON-1f** Continue to require all development project applications for new buildings to include a completed LEED or CALGreen Mandatory Measures Checklist.
- Action CON-1g** Annually audit and report on the progress toward achieving the Milpitas CAP goals of reducing community-wide emissions levels by 2030 and 2050. The audit should be publicly available on the City's website and shall also be presented to the Milpitas Planning Commission and City Council.
- Action CON-1h** Periodically review and report on the effectiveness of the measures outlined in the CAP and the strategies in this Element. Institutionalize sustainability by developing a methodology to ensure all environmental, social and lifecycle costs are considered in project, program, policy, and budget decisions.

City of San José General Plan

The City of San José General Plan addresses climate change directly (City of San José, 2024). The General Plan sets guiding policies for minimizing impacts on resources and ensuring that the City of San José is able to maintain the infrastructure and services necessary to sustain its economy and quality of life.

Policy MS-14.3 Consistent with the CPUC's California Long Term Energy Efficiency Strategic Plan, as revised, and when technological advances make it feasible, require all new residential and commercial construction to be designed for zero net energy use.

City of Santa Clara General Plan

Chapter 5 of the City of Santa Clara's General Plan (City of Santa Clara, 2010) outlines general goals and policies geared towards reducing GHG impacts within the City. This document includes several GHG-related goals and policies that pertain to this Proposed Project located within the City of Santa Clara.

Goal 5.10.2-G2 Reduced GHG emissions that meet the State and regional goals and requirements to combat climate change.

Policy 5.10.2-P2 Encourage development patterns that reduce vehicle miles traveled and air pollution.

Policy 5.10.2-P4 Encourage measures to reduce GHG emissions to reach 30 percent below 1990 levels by 2020.

City of Santa Clara Climate Action Plan

The City of Santa Clara adopted their first CAP in 2013 as a means to assist the City in reducing GHG emissions. The latest CAP was adopted in October 2023 (City of Santa Clara, 2022). The Plan has developed a framework of key strategies to serve as a foundation for the CAP and is aligned with the State's GHG emission targets and has outlined 65 strategies that will both mitigate GHG emissions and enhance the City's ability to adapt to the impacts of climate change. The strategies are organized under the following five focus areas.

- 1) Buildings and Energy
- 2) Transportation and Land Use
- 3) Materials and Consumption
- 4) Natural Systems and Water Resources
- 5) Community Resilience and Wellbeing

5.8.3 IMPACT QUESTIONS

5.8.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts of GHG emissions come from the CEQA, Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

5.8.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for GHG emissions.

5.8.4 IMPACT ANALYSIS

5.8.4.1 GHG Impact Analysis

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

Less-Than-Significant Impact. The Proposed Project seeks to construct two stationary electrical HVDC terminals, and the primary sources of GHG emissions would be attributed to operation of SF₆ insulated switchgear and, to a lesser extent, vehicle trips associated with maintaining the terminals. The Proposed Project's estimated GHG emissions are analyzed based on stationary source recommendations provided in the 2022 CEQA Guidelines established by the BAAQMD (BAAQMD, 2022). Based on this guidance, if GHG emissions are less than 10,000 MTCO₂e per year, impacts would be less than significant.

The Proposed Project would generate direct GHG emissions from the Proposed Project construction, SF₆ leakage from GIS, and vehicle emissions from maintenance activities which may be necessary on-site each year. In addition, the Proposed Project would generate indirect GHG emissions from electrical energy use on-site. The total demand at each proposed HVDC terminal location would be approximately 200 kilowatts (kW) continuous or 1,752,000 kilowatt hours (kWh) annually, and both proposed HVDC terminals combined would consume 3,504,000 kWh annually.

For construction emissions, O&M activities, and operations energy usage, CalEEMod (version 2022.1) was used to model emissions. A specific model was created for the proposed Albrae terminal and existing Newark substation, for the proposed Baylands terminal, for the existing NRS substation, and for the entire proposed transmission line alignments connecting the terminals and substations. GHG models for each of the areas are provided as Attachments 1A, 1B, 1C, and 1D of **Appendix 5.3-A, Air Quality and GHG Modeling Files**. The Proposed Project plans to start

construction in 2026, with work assumed to be scheduled to occur six days per week and be completed in 2028.

Construction emissions for all three areas were combined and were then amortized over 30 years based on the projected operational life of the Proposed Project.

Based on the preliminary Proposed Project design, the SF₆ volume on-site for the proposed HVDC terminal sites is expected to be approximately 6,000 pounds of SF₆. The Proposed Project would be required to comply with CARB regulations regarding SF₆ leakage rates, which are limited to one percent per year or roughly 60 pounds of SF₆ annually.

Construction Emissions Modeling and Results

The Proposed Project plans to start grading and construction in 2026 and be completed in 2028. Material hauling/truck details along with worker trips are provided in **Section 3.0, Proposed Project Description** (see **Table 3-8, Estimated Average Daily Construction Traffic**) and was manually updated within the CalEEMod software (refer to **Appendix 5.3-A**). **Appendix 5.3-A** includes detailed equipment and usage as provided by the Proposed Project engineer.

In addition, CARB regulations require that, starting in 2012, all off-road equipment produced needs to meet the basic requirements for Tier 4 compliance (CARB, 2023c). Off-road equipment fleets are managed by CARB and are typically based on total horsepower owned. Owners are limited to what types of equipment they must maintain as their fleet and can include equipment from rental companies. For this reason, it is assumed that the Proposed Project equipment would conservatively be made up of at least 75 percent Tier 4 during the construction years of 2026 through 2028 and would be achievable since most equipment operators already maintain fleets consisting of mostly Tier 4 equipment (refer to **Applicant Proposed Measure [APM] AQ-1, Construction Fleet Minimum Requirements and Tracking** in **Section 5.3, Air Quality**).

Table 5.8-3, Expected Annual Construction CO₂e Emissions summarizes the construction emissions in metric tons per year for the Proposed Project, which includes construction of the proposed HVDC terminals, new transmission lines, and existing substation modifications. Emissions are amortized over a 30-year lifecycle. Based on the modeling, the Proposed Project construction would generate 236.47 MTCO₂e per year from construction. Based on BAAQMD Guidelines, construction thresholds do not exist. However, to reduce construction GHG emissions, the Proposed Project may implement additional BMPs as identified in **Table 5.8-2, above**.

Table 5.8-3: Expected Annual Construction CO ₂ e Emissions	
Year	CO ₂ e (MT/Year)
Albrae Terminal and Newark Substation 2026	1,394.00
Albrae Terminal and Newark Substation 2027	374.00
Albrae Terminal and Newark Substation 2028	33.90
Baylands Terminal 2026	1,372.00
Baylands Terminal 2027	103.00
Baylands Terminal 2028	33.00
NRS Substation 2026	91.80
NRS Substation 2027	274.00

Table 5.8-3: Expected Annual Construction CO₂e Emissions

Year	CO ₂ e (MT/Year)
NRS Substation 2028	34.30
Transmission Lines 2026	2,121.00
Transmission Lines 2027	1,073.00
Transmission Lines 2028	190.00
Total	7,094.00
Yearly Average Construction Emissions (MT/year over 30 years)	236.47
<u>Notes:</u>	
Expected construction emissions are based upon CalEEMod modeling assumptions (refer to Appendix 5.3-A) through years 2026 to 2028.	

Operations Emissions and Modeling Results

Operations of the Proposed Project would begin in 2028 once construction is completed. Operational emissions sources would include the consumption of energy on-site from HVDC cooling equipment and auxiliary equipment, such as control room heating, ventilation, and air conditioning (HVAC) units, communications equipment, and lighting. The total energy consumption from the Proposed Project would be 3,504,000 kWh annually and was modeled using CalEEMod.

Additional emissions during the Proposed Project operations would occur from mobile vehicle visits to the Proposed Project site associated with periodic O&M activities. It is estimated that monthly O&M visits would not be greater than 10,000 vehicle miles per year per site or 20,000 miles annually. These parameters were utilized for the GHG emission modeling (refer to Attachments 1A, 1B, 1C, and 1D of **Appendix 5.3-A**).

Finally, the Proposed Project would maintain a combined total of approximately 6,000 pounds of SF₆ for GIS. Based on CARB's older regulations, the allowable SF₆ leak rate for circuit breakers is limited to one percent or 60 pounds per year. The revised plans removed the leakage rate limitations but is still a design strategy. The new regulations require that new GIS after specific dates will not be allowed and would not generate GHGs. Given this, the 60 pounds per year was used within this analysis. In addition, a GWP of 22,800 for SF₆ was also utilized.

Under this scenario, operational emissions would only be expected at the proposed Albrae and Baylands terminals since the transmission lines would not require significant maintenance activities and would not consume energy. The Proposed Project emissions would be expected to generate 1,190.98 MTCO₂e per year (see **Table 5.8-4, Operational Emissions Summary MT/Year**). The Proposed Project scenario analyzed herein includes both annualized construction and operational emissions combined to reflect the total annual GHG emission produced by the Proposed Project.

Based on BAAQMD guidance, since the Proposed Project would generate less than 10,000 MTCO₂e per year, the impact would be considered less than significant. BAAQMD does not have construction significance thresholds as it relates to GHG emissions, though such emissions were included in this analysis which represent the worst-case scenario. Impacts would be less than significant.

Table 5.8-4: Operational Emissions Summary MT/Year

Site Locations	CO ₂ e (MT/Year)
Albrae Terminal Operations	167.00
Baylands Terminal Operations	167.00
SF ₆ Emissions (Total allowed one percent or 60 pounds per year)	620.51
Amortized Construction Emissions (Table 5.8-3 above)	236.47
Total Construction and Operations (MT/Year)	1,190.98
Threshold	10,000
Exceeds Threshold?	NO
Data is in MT. Conversion rate is 1 pound = 0.000453592 MT. GWP SF ₆ = 22,800 Data is presented in decimal format and may have rounding errors. Source: Appendix 5.3-A	

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). By the nature of GHG emissions and impact analysis, all Proposed Project activities are modeled as one action. As shown above, impacts from all Proposed Project actions, including the Newark substation modifications, are less than significant. Therefore, impacts associated with construction and operation of the Newark substation modifications would be less than significant if considered individually.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. By the nature of GHG emissions and impact analysis, all Proposed Project activities are modeled as one action. As shown above, impacts from all Proposed Project actions, including the NRS substation modifications, are less than significant. Therefore, impacts associated with construction and operation of the NRS substation modifications would be less than significant if considered individually.

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

Less-Than-Significant Impact. BAAQMD published the 2022 CEQA Guidelines so that cities and counties within the BAAQMD jurisdictional boundaries could point to significance thresholds as the basis for developing applicable plans, policies, and regulations. Since the Proposed Project would not exceed BAAQMD screening thresholds, the Proposed Project would not conflict with the Cities of Fremont, Milpitas, San José, or Santa Clara's plans to reduce the emissions of GHGs. Since the Proposed Project is designed to stabilize the electric grid, the Proposed Project would

enhance the utility provider's ability to provide a resilient electrical infrastructure, which is a requirement for electrification and decarbonization and which is a key goal and strategy for these Cities to reduce GHGs. Given this, the Proposed Project would not conflict with any City's plans to reduce GHG emissions.

Based on findings shown in **Table 5.8-4**, the Proposed Project would generate 1,190.98 MTCO₂e per year, which includes provisions for construction and operation within the estimate. Therefore, a conservative analysis was used as the emissions include both construction and operation of the Proposed Project. The BAAQMD significance threshold is 10,000 MTCO₂e per year for projects of this type. As shown in **Table 5.8-4**, GHG impacts from the Proposed Project would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Similar to the remainder of the Proposed Project elements, the Newark substation modifications would not conflict with the City of Fremont's plans to reduce the emissions of GHGs. Therefore, impacts associated with construction and operation of the Newark substation modifications would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Similar to the remainder of the Proposed Project elements, the NRS substation modifications would not conflict with the City of Santa Clara's plans to reduce the emissions of GHGs. Therefore, impacts associated with construction and operation of the NRS substation modifications would be less than significant.

5.8.4.2 Natural Gas Storage Accident Conditions

The Proposed Project does not involve the storage or transmission of natural gas. Therefore, no impact would occur.

5.8.4.3 Monitoring and Contingency Plan

The Proposed Project does not involve the storage or transmission of natural gas. Therefore, no impact would occur.

5.8.5 CPUC DRAFT ENVIRONMENTAL MEASURES

The CPUC includes one Environmental Measure for GHG. The Proposed Project is not anticipated to result in potentially significant impacts relating to GHG. Therefore, the Draft Environmental Measure is not included as part of the Proposed Project.

5.8.6 APPLICANT PROPOSED MEASURES

No APMs for GHG emissions would be implemented for the Proposed Project.

5.8.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E BMPs for GHG emissions would be implemented for PG&E's scope of work.

5.8.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for GHG emissions would be implemented for SVP's scope of work.

5.9 HAZARDS, HAZARDOUS MATERIALS, AND PUBLIC SAFETY

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?			X	
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?			X	
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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?			X	
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?			X	
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X
h.	Create a significant hazard to air traffic from the installation of new power lines and structures?			X	
i.	Create a significant hazard to the public or environment through the transport of heavy materials using helicopters?			X	

Would the project:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
j.	Expose people to a significant risk of injury or death involving unexploded ordnance?				X
k.	Expose workers or the public to excessive shock hazards?			X	

This section describes the hazards, hazardous materials, and public safety within the vicinity of the Proposed Project as well as potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.9.1 ENVIRONMENTAL SETTING

The Proposed Project has a gradual slope to the northwest toward the proposed Albrae terminal, existing Newark substation, and the San Francisco Bay. Geologic and hydrologic conditions in the Proposed Project are described in **Section 5.7, *Geology, Soils, and Paleontological Resources*** and **Section 5.10, *Hydrology and Water Quality***, respectively. Proximity to schools is discussed in **Section 5.15, *Public Services***. As discussed therein, the closest school to the Proposed Project is Kathryn Hughes Elementary School, located approximately 600 feet northeast of the existing Northern Receiving Station (NRS) substation (see **Figure 5.15-1, *Public Service Facilities Map***). The closest schools to the proposed high-voltage direct current (HVDC) terminals are Millard Elementary School, located approximately 1.1 miles northeast of the proposed Albrae terminal, and Saba's Academy, a private school located approximately 0.5 mile southeast of the proposed Baylands terminal and approximately 0.2 mile southeast of the proposed underground Baylands to NRS 230 kilovolt (kV) transmission line. There are multiple other schools in proximity to the proposed transmission lines, including Curtner Elementary, located approximately 0.7 mile east of the proposed Albrae to Baylands 320 kV direct (DC) transmission line, and George Mayne Elementary School, located approximately 0.2 mile northwest of the proposed Baylands to NRS 230 kV transmission line alignment, as shown on **Figure 5.15-1**. In total, there are three schools within 0.25 mile of the Proposed Project HVDC terminals and transmission line alignments.

Based on a review of topographic maps, dating as early as 1953, the southern terminus of the Proposed Project (i.e., the existing NRS substation area) consisted of unimproved land and was adjacent to a potential orchard (United States Geological Survey [USGS], 1953a, 1961a). The Proposed Project's southern alignment appears to be adjacent to a Southern Pacific Railroad right-of-way (ROW) and an unidentified road ROW. The Proposed Project turns east along Los Esteros Road and crosses the Guadalupe River and then north along Coyote Creek, traveling through a potential riparian area or sewage disposal area. The Proposed Project continues north, crossing Coyote Creek in an area that is undeveloped. The 1973 topographic maps identified the Milpitas Sewage Disposal that the Proposed Project appears to cross, south of Coyote Creek. The existing Newark substation was identified as a substation in the 1953 topographic maps (USGS, 1953b, 1961b). The topographic maps are included in **Appendix 5.9-A, *Hazardous Material Database Search Report*** and described further below.

5.9.1.1 Hazardous Materials Report

LS Power Grid California, LLC ("LS Power") ordered a third-party environmental database report for the Proposed Project area that was prepared by Environmental Risk Information Services (ERIS) (**Appendix 5.9-A**). The database is in compliance with Standard Practice E 1527-21 of American Society for Testing and Materials International (ASTM) for Phase I Environmental Site Assessments (ESA). The ERIS database search included more than 70 federal, county, and state hazardous material data tracking sites that provide listings of sites with records of hazardous material handling or releases to the environment. The ERIS database report for the Proposed Project was reviewed to determine whether there are known sites with past or ongoing hazardous material releases that could affect or be affected by the implementation of the Proposed Project.

In addition to the database resources reviewed therein, other potential site hazards and hazardous materials in the vicinity of the Proposed Project were evaluated through review of the following available resources:

- State Water Resources Control Board (SWRCB) GeoTracker database
- Department of Toxic Substances Control (DTSC) EnviroStor database
- California Department of Conservation (DOC) Wellfinder

The ERIS report utilized search radii based on ASTM standards and ranged from within the Proposed Project area to one mile depending on the specific database, and a total of 1,151 facilities were identified. Of the 1,151 identified facilities, 300 facilities are within 0.25 mile of the Proposed Project area, and 295 facilities are within 200 feet. **Appendix 5.9-A** provides details on all 1,151 facilities. This analysis focuses on the 295 facilities within 200 feet of the Proposed Project area, which are listed in **Appendix 5.9-B**, *Hazardous Materials Sites Summary Table*.

In order to determine which of the 295 facilities would have the potential to affect or be affected by implementation of the Proposed Project, the nature of the hazardous materials release, effected media and chemicals of concern, case status, and proximity to the Proposed Project area were considered. Many of the databases searched included facilities where the nature of environmental concern was not related to hazardous material storage, treatment, or releases. These databases were eliminated from further investigation since they do not identify hazardous material-related facilities. In addition, sites that have been granted closure or no further action by an oversight agency are typically not considered hazardous such that the Proposed Project could exacerbate an existing hazardous condition. Other facilities identified within 200 feet that were eliminated from further evaluation involved incidents related to small amounts of oil or other chemicals that were released to the surface or storm drain and were addressed at that time, were located downgradient or cross gradient from the Proposed Project area or involved injured or deceased persons. Open (e.g., active and un-remediated) sites, particularly those with groundwater impacts and located upgradient or adjacent to the Proposed Project area, pose the greatest risk because they have the potential to impact the shallow Proposed Project area soils. Therefore, of the 295 facilities, two sites fall within these criteria and are described further below. **Figure 5.9-1**, *Contaminated Sites Map* identifies the locations of these sites.

Cisco Systems Site 6/Syntax Court Disposal Site

Proposed Staging Areas 10 and 11, as well as an underground portion of the Baylands to NRS 230 kV transmission line,¹ are located within the Cisco Systems Site 6 (EnviroStor Case Number 43010027)/Syntax Court Disposal Site (GeoTracker Case Number T10000007316), which is an approximately 19-acre site with soil contaminated with heavy metals, including lead and arsenic, as well as volatile organic compounds (VOCs) in soil vapor and shallow groundwater (Surrey Associates, 2023). The site appears to have been used for agricultural purposes (a farm), possibly as far back as the late 1800s and continuing until approximately 1960. The Santa Clara sewer pump station was constructed on the site in the early 1960s, and the rest of the property remained vacant. Between the 1950s and 1987, the site was raised with approximately five feet of fill material (unregulated solid waste disposal) containing construction and glass debris generated by grading and landfilling activities at the site.

In 1998, sampling in this area indicated heavy metals in soil, including lead and arsenic, at concentrations above typical background levels (Surrey Associates, 2023). Therefore, the property owner at the time (Cisco Systems, Inc.) entered into a Voluntary Cleanup Agreement (VCA) with DTSC in order to be able to redevelop the area. A Soil Management Plan (SMP) and Health and Safety Plan were prepared in 2001 to guide handling of potentially contaminated soil within the site, which was named Cisco Systems Site 6. Because the contaminated fill material was left in place, a "Covenant to Restrict Use of Property" was put in place on May 23, 2003, and includes the following restrictions and requirements for the site:

- No residence for use as human habitation;
- No hospital for humans;
- No schools for persons under 21 years of age or day care centers for children;
- DTSC access for inspection, monitoring or other activities necessary to protect public health and the environment;
- Written notice to DTSC at least 14 days prior to any activities that will disturb the soil at or below 1.5 feet below grade;
- Activities that disturb the soil at or below 1.5 feet below grade shall be conducted in accordance with procedures described in the SMP and Health and Safety Plan approved on April 27, 2001, by the DTSC;
- Contaminated soils brought to the surface will be managed in accordance with applicable provision of state and federal law;
- No notice is required for activities that disturb only the top 1.5 feet of soil below grade. However, upon conclusion of such activities, at least 1.5 feet of clean soil must be maintained above the contaminated fill layer; and
- No cultivation of food (cattle, food crops).

Subsequently, starting in 2014, subsurface investigations were conducted at the site that delineated the location of the fill material (shown on **Figure 5.9-1**) and indicated the presence of chlorinated VOCs in soil vapor and shallow groundwater. As a result, the SMP and Health and

¹ Approximately 206 feet of the proposed Baylands to NRS 230 kV (underground) transmission line cross the approximate location of the contaminated fill material.

Safety Plan were updated in 2015 to include additional guidelines related to the VOC contamination, which was given a different site name, the Syntax Court Disposal Site. As part of the development, approximately 60,000 cubic yards of fill was brought in to raise site elevation approximately one to five feet across the site. Additionally, multiple actions were taken to address the VOCs in soil vapor and groundwater, including groundwater remediation and soil vapor monitoring. On October 2, 2023, the San Francisco Bay Regional Water Quality Control Board (RWQCB) determined that the investigation and corrective actions taking place to address the VOCs are complete and that no further action is required (RWQCB, 2023). While some residual contamination exists, it is well defined, limited in extent, and expected to attenuate in a reasonable timeframe. However, residual contamination is located at approximately five to 10 feet below ground surface, and any work involving excavation or other ground disturbing activities that could lead to contact with the contaminated soil or groundwater must still comply with the updated SMP and Health and Safety Plan.

South Bay Asbestos Area

The South Bay Asbestos Area (also referred to as the South Bay Asbestos Superfund Site) is a 550-acre site on the National Priorities List (NPL; Site ID No. 0902250; CERCLIS: CAD980894885) that is divided into several areas with differing issues and requirements (U.S. Army Corps of Engineers [USACE], 2020). Three former landfills were located within this contaminated site boundary, with the Santos Landfill being the closest in proximity to the Proposed Project area (see **Figure 5.9-1**). A short portion of the proposed Baylands to NRS 230 kV transmission line and overhead structure AC-4 are located within the Santos Landfill portion of the South Bay Asbestos Area (see **Figure 5.9-1**). The Santos Landfill was thought to have received asbestos waste from an asbestos cement pipe manufacturing plant from 1953 through 1982. Several types of waste were produced at the plant and transported to the landfill, including broken asbestos/cement pipe, machine and processing waste, and asbestos fiber bags. There were reports of Alviso residents using the asbestos material from the landfill to fill their yards and asbestos cement pipe to drain excess water from their properties before installation of curbs and gutters. In addition, some areas within the overall South Bay Asbestos Area, such as truck yards, may have been filled with asbestos-containing soils in order to raise the elevation of their properties to improve flood protection.

Cleanup activities have been occurring at the South Bay Asbestos Area since approximately 1988 in order to control the release of asbestos (USACE, 2020). These include paving potentially contaminated areas (referred to as a “cap”) and wet sweeping on a monthly basis; removing obvious asbestos sources such as pipes; placing deed restrictions after verifying the adequacy of cover materials; establishing institutional controls to ensure maintenance of remediation measures; and conducting routine maintenance and monitoring. For the Santos Landfill area specifically, a “Covenant and Agreement for Environmental Restriction” was recorded on October 21, 2004, and includes the following restrictions and requirements for the site:

- **Prohibited Uses:** Future use of the site shall be restricted to industrial and/or commercial use only and shall not be used for the following purposes: residences, hospitals, schools, and daycare facilities.
- **Soil Management:** Any soils contaminated with asbestos or asbestos containing materials brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law, and will not be removed from the Property without following a Soil Management Plan approved by the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) Lead Agency.

- Non-Interference with Cap: Activities that may disturb the cap are only allowed with prior written approval by the CERCLA Lead Agency.

Also, in accordance with CERCLA, five-year reviews are conducted at the site to determine if the remedy remains protective of human health and the environment. The most recent review occurred in 2020, and no issues that affect protectiveness were identified (USACE, 2020).

5.9.1.2 Airport Land Use Plan

There are no airports within two miles of the Proposed Project. The closest public airport is San José Mineta International Airport, with the edge of the runway located approximately 2.3 miles southeast of the existing NRS substation. However, the existing NRS substation and approximately 1.2 miles of the proposed Baylands to NRS 230 kV transmission line alignment are located within the Airport Influence Area (AIA); therefore, further discussion is provided below.

The Public Utilities Code of the State of California, Sections 21670 et seq. authorizes each county, including the County of Santa Clara, to establish an Airport Land Use Commission (ALUC) and defines its range of responsibilities, duties, and powers (County of Santa Clara, 2016). Section 21675 requires the ALUC to formulate and maintain a Comprehensive Land Use Plan (CLUP) for the area surrounding each public-use airport within the County of Santa Clara. The CLUP for the San José Mineta International Airport was adopted on May 25, 2011, and amended on November 16, 2016. This CLUP seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace. The implementation of this CLUP is intended to prevent future incompatible development from encroaching on the airport and allow for its development in accordance with the current airport master plan.

The CLUP establishes an airport land use planning area, referred to as the AIA, which sets the boundaries for application of ALUC policy. The CLUP contains the relevant policies for land use compatibility and specific findings of compatibility or incompatibility of land uses within the AIA. All actions, regulations, and permits within the AIA must be evaluated by local agencies to determine how the CLUP policies may impact the proposed development. This evaluation is to determine that the development meets the conditions specified for height restrictions and noise and safety protection for the public. Because a portion of the Proposed Project is located within the San José Mineta International Airport AIA, a discussion of the height restrictions and safety protection is provided below. A discussion of the noise restrictions is provided in **Section 5.13, Noise**.

Airport vicinity height limitations are required to protect the public safety, health, and welfare by ensuring that aircraft can safely fly in the airspace around an airport. This protects both those in the aircraft and those on the ground who could be injured in the event of an accident. In addition, height limitations are required to protect the operational capability of airports, thus preserving an important part of national and state aviation transportation systems. Federal Aviation Regulations (FAR) Part 77, Objects Affecting Navigable Airspace, establishes standards for the elevations above which structures may constitute a safety hazard. If a safety problem is found to exist, the Federal Aviation Administration (FAA), may issue a determination of a hazard to air navigation. FAA does not have the authority to prevent the encroachment; however, California law can prevent the encroachment if the FAA has made a determination of a hazard to air navigation. The local jurisdiction can establish and enforce height restrictions. The existing NRS substation and

approximately 1.2 miles of the proposed Baylands to NRS 230 kV transmission line alignment are located within a height limitation zone. The only aboveground structures included as part of the Proposed Project within this area would be located at the NRS substation modification area (refer to **Figure 3-4, Project Route Map**). This area is located between the 262 and 312-foot maximum structure height contours (County of Santa Clara, 2016). The NRS substation modification area is located adjacent to similar and larger structures, including the existing NRS substation, two large above ground storage tanks, and Levi's Stadium.

Airport Safety Zones are established to minimize the number of people exposed to potential aircraft accidents in the vicinity of the airport by imposing density and use limitations within these zones. The Proposed Project area is not located within any Airport Safety Zones.

5.9.1.3 Fire Hazard

Fire hazards are discussed in **Section 5.20, Wildfire**.

5.9.1.4 Metallic Objects

LS Power has conducted a preliminary desktop review and initial field surveys of existing utilities along the Proposed Project alignments and terminal sites, including metallic pipelines and cables. Based on this preliminary review, LS Power has identified the following types of potential utilities within 25 feet of the Proposed Project:

- Electric distribution;
- Electric transmission;
- Gas;
- Water;
- Sanitary sewer;
- Stormwater; and
- Telecommunication.

Of these utility lines, the electric, gas, and water utilities are typically partially or wholly metallic, while the sanitary sewer, stormwater, and telecommunication utilities are typically composed of materials such as concrete, clay, polyvinyl chloride (PVC), or high-density polyethylene (HDPE). However, many of the records reviewed to date did not indicate the material composition of the utility line.

In addition to the existing underground utilities, other metallic objects within the vicinity of Proposed Project features include metallic fences and barriers, including chain-link and barb wire fences, overhead transmission and distribution lines, and metallic roadway guard rails.

5.9.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.9.2.1 Hazards, Hazardous Materials, and Public Safety Regulatory Setting

Federal

Resource Conservation and Recovery Act

Under the Resource Conservation and Recovery Act (RCRA) of 1976 (RCRA; 42 USC section 6901 et seq.), individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as the federal RCRA requirements (United States Environmental Protection Agency [USEPA], 2024a). RCRA (42 USC section 6901 et seq.) regulates hazardous waste from the time that waste is generated until its final disposal through management, storage, transport, and treatment. The Federal government approved California's RCRA program, called the Hazardous Waste Control Law (HWCL), in 1992. In California, the RCRA program is administered by the California Environmental Protection Agency (CalEPA) DTSC, per direction of the USEPA.

Comprehensive Environmental Response, Compensation, and Liability Act

The CERCLA (CERCLA; 42 USC Chapter 103) and associated Superfund Amendments provide the USEPA with the authority to identify hazardous sites, to require site remediation, and to recover the costs of site remediation from polluters (USEPA, 2024b). CERCLA also enabled the revision of the National Oil and Hazardous Substances Pollution Contingency Plan, also known as the National Contingency Plan (NCP). The NCP provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

U.S. Department of Transportation Hazardous Materials Regulations

The U.S. Department of Transportation (DOT) Hazardous Materials Regulations (Title 49 Code of Federal Regulations [CFR] Parts 100–172) cover all aspects of hazardous materials packaging, handling, and transportation (DOT, 2017).

State

Cortese List

California Government Code 65962.5 (commonly referred to as the Cortese List) includes hazardous waste facilities and sites listed by DTSC, Department of Health Services' lists of contaminated drinking water wells, sites listed by the SWRCB as having underground storage tank leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

Hazardous Waste Control Law

The HWCL (California Health and Safety Code [HSC], Chapter 6.5 section 25100 et seq.) authorizes CalEPA's DTSC to regulate the generation, transportation, treatment, storage, and

disposal of hazardous wastes (State of California, 2014). DTSC can also delegate enforcement responsibilities to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of HWCL.

Hazardous Substance Account Act

The Hazardous Substance Account Act (HSAA) (California HSC, Chapter 6.8 section 25300 et seq.) is California's equivalent to CERCLA (State of California, 2015). It addresses hazardous waste sites and apportions liability for them. The HSAA also provides that owners are responsible for the cleanup of such sites and the removal of toxic substances, where possible.

The two state agencies with primary responsibility for enforcing federal and state regulations related to hazardous material transport and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and California Department of Transportation ("Caltrans"), respectively.

Occupational Health and Safety

The California Division of Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the State (California Code of Regulations [CCR] Title 8) (United States Department of Labor [DOL], 2023). Cal/OSHA standards are more stringent than Federal Occupational Safety and Health Administration (OSHA) regulations and take precedence (California Department of Industrial Relations [DIR], 2024).

Hazardous Materials Management

The California Office of Emergency Services (OES) is the State office responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. CCR Title 26 is a compilation of the chapters or titles of the CCR that are applicable to hazardous materials management.

Porter-Cologne Water Quality Control Act

As discussed in more detail in **Section 5.10**, the Porter-Cologne Water Quality Control Act ("Porter-Cologne") (California Water Code, Division 7) is the provision of the California Water Code that regulates water quality in California and authorizes the SWRCB and nine RWQCBs to implement and enforce the regulations. The RWQCBs regulate discharges under Porter-Cologne primarily through the issuance of waste discharge requirements. Anyone discharging or proposing to discharge materials that could affect water quality must file a report of waste discharge. The SWRCB and the RWQCBs can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. Porter-Cologne provides several means of enforcement, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecution. The Proposed Project area is under the jurisdiction of the San Francisco Bay RWQCB—Oakland Office.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program ("Unified Program") (CCR Title 27) was mandated by the State of California in 1993. The Unified

Program was created to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for six hazardous materials programs. The program has six elements:

- Hazardous Waste Generators and Hazardous Waste On-site Treatment;
- Underground Storage Tanks;
- Aboveground Petroleum Storage Act;
- Hazardous Materials Release Response Plans and Inventories;
- California Accidental Release Prevention; and
- Uniform Fire Code Hazardous Materials Management Plans and Hazardous Materials.

Inventory Statements

At the local level, the provision of vital facility chemical and emergency response information to ensure emergency response preparedness is accomplished by identifying a Certified Unified Program Agency (CUPA) that coordinates all of these activities to streamline the process for local businesses.

Rules for Overhead Electric Line Construction

Under Section 35 of General Order (GO) 95, the California Public Utilities Commission (CPUC) regulates all aspects of design, construction, and O&M of electrical power lines and fire safety hazards for utilities subject to their jurisdiction.

Fire Prevention Standards for Electric Utilities

The Fire Prevention Standards for Electric Utilities (CCR Title 14, sections 1250-1258) provide definitions, maps, specifications, and clearance standards for projects under the jurisdiction of California Public Resources Code (PRC) sections 4292 and 4293 in State Responsibility Areas.

California Fire Code

The California Fire Code 2010 (CCR Title 24, Part 9) is based on the International Fire Code from the International Code Council and contains consensus standards related to establishing good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new or existing buildings, structures, and premises.

California Public Utilities Commission

The CPUC's Utilities Safety and Reliability Branch of the Consumer Protection and Safety Division was established, in part, to oversee the safety of privately owned electric, communications, natural gas, and propane gas systems. It enforces CPUC rules and regulations, investigates and recommends ways to reduce utility-related accidents, and advises the CPUC on related matters. The CPUC has created a list of safety-related GOs to govern the construction and operation of power and communication lines subject to its jurisdiction.

California Department of Toxic Substances Control

The California Hazardous Waste Control Act governs hazardous waste management and cleanup in the State (California HSC Chapter 6.5-6.98). The act mirrors RCRA and imposes a cradle-to-grave regulatory system for handling hazardous waste in a manner that protects human health and the environment. It requires all businesses to report the quantity and locations of hazardous materials on an annual basis if the business stores (1) more than 55 gallons of a liquid or 500 pounds of a solid hazardous material, (2) more than 200 cubic feet of a compressed gas, or (3) a radioactive material that is handled in quantities for which an emergency plan is required. Businesses falling within these limits must prepare a Hazardous Material Business Plan (HMBP), which includes spill prevention, containment, emergency response measures, and a contingency plan. Implementation of the Hazardous Waste Control Act is the responsibility of the DTSC.

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City and County regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara and the Counties of Alameda and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local hazards, hazardous materials, and public safety-related policies, plans, or programs for informational purposes. Although LS Power is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

Alameda County Department of Environmental Health, Hazardous Materials Division

The Alameda County Department of Environmental Health (ACDEH) is the CUPA that coordinates and enforces numerous local, state, and federal hazardous materials management and environmental protection programs in the County of Alameda. The ACDEH is responsible for implementation, enforcement, and administration of the County's Hazardous Materials Business Plan (HBMP) program for facilities located in the County of Alameda.

Fremont City Fire Prevention Bureau

The City of Fremont Fire Prevention Bureau (FPB) is the CUPA for the City of Fremont. The FPB, under the direction of the Fire Marshal, is comprised of Fire Prevention and Hazardous Materials Divisions. The mission of the FPB is to protect lives and property by reducing the factors that contribute to fires and environmental emergencies. The Hazardous Materials Division is responsible for inspecting City of Fremont facilities that use, store, and handle hazardous materials, conduct inspections related to storage and handling of hazardous materials, and monitor compliance related to federal, state, or local hazardous materials codes.

City of Fremont General Plan

The following policies within the City of Fremont General Plan relate to hazards, hazardous materials, and public safety (City of Fremont, 2011).

- Policy 10-6.1 Hazardous Material Regulation.** Maintain sufficient regulation of land use and construction to minimize potential health and safety risks associated with future, current, or past use of hazardous materials in Fremont.
- Policy 10-6.3 Remediation.** Encourage site investigation and cleanup on properties where contamination is likely.
- Policy 10-6.5 Hazardous Material Oversight.** Maintain sufficient oversight regarding the storage, transport, and handling of hazardous materials within the City.
- Policy 10-6.6 Hazardous Material Disclosure.** Proper disclosure and management by employers that use hazardous materials to disclose risks to employees and nearby residents.
- Policy 10-6.7 Emergency Action Plan.** Maintain City Emergency Action Plans and sufficient response capability to respond to a hazardous material emergency.
- Policy 10-7.2 Emergency Operations Plan Training.** Maintain a current Emergency Management Operations Plan and adequately train personnel to respond to any catastrophic emergency or disaster.

City of Fremont Emergency Operations Plan

The City of Fremont's Emergency Operations Plan (EOP) establishes a comprehensive framework to effectively prepare for, mitigate, respond to, and recover from major incidents, including natural disasters and other highly complex emergencies (City of Fremont, 2020). The Plan complies with the National Incident Management System (NIMS), California Standardized Emergency Management System (SEMS), and the Federal Emergency Management Agency's Comprehensive Planning Guide. SEMS is designed to ensure that response agencies in California have a single, integrated emergency management system. The authority for emergency management within the City of Fremont rests with the City Manager, who, in accordance with the Fremont Municipal Code, is assigned as the Director of Emergency Services. Each department with assigned functional responsibilities for the management and operation of the EOP has reviewed and provided input on this plan. Policies and protocols have been developed to support emergency functions and each department and functional area further develops policies and procedures to enhance their emergency management capabilities.

County of Santa Clara Multi-Jurisdictional Hazard Mitigation Plan

The County of Santa Clara and a partnership of local governments, including the Cities of Milpitas, San José, and Santa Clara within the County, have developed a Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) to reduce risks from natural disasters in the Santa Clara County Operational Area, defined as the unincorporated County and incorporated jurisdictions within the geographical boundaries of the County (County of Santa Clara Office of Emergency Services

[OES], 2017). The MJHMP describes how various agencies and organizations in the County would coordinate resources and activities with other federal, state, local, Tribal, community organizations, faith-based organizations, and private-sector partners. During disasters, these interagency communications would contain situation reports, damage assessments, declarations of emergency, mutual aid requests, and disaster cost reimbursement application procedures and coordination. There are a number of separately published annexes that support the MJHMP. These supporting annexes further describe the hazard-specific or functional response that detail considerations, actions, and responsibilities for identified County departments or other agencies.

County of Santa Clara Emergency Operations Plan

The County of Santa Clara OES coordinates the development and maintenance of the County of Santa Clara EOP. This plan serves as an all-hazard plan that describes how the County of Santa Clara would organize and respond to emergencies and disasters in the community. The purpose of this plan is to ensure that the County is prepared for a disaster through coordination of protection, prevention, mitigation, response, and recovery activities that increase the County's capabilities to minimize loss of life and reduce impacts (County of Santa Clara, 2023). The plan also describes how various agencies and organizations in the County would coordinate resources and activities with other federal, state, local, Tribal, community organizations, faith-based organizations, and private-sector partners (County of Santa Clara OES, 2017). During disasters, these interagency communications would contain situation reports, damage assessments, declarations of emergency, mutual aid requests, and disaster cost reimbursement application procedures and coordination. There are a number of separately published annexes that support the EOP. These supporting annexes further describe the hazard-specific or functional response that detail considerations, actions, and responsibilities for identified County departments or other County agencies.

County of Santa Clara Hazardous Materials Compliance Division

The County of Santa Clara Hazardous Materials Compliance Division (HMCD) is the CUPA for hazardous waste and hazardous management programs in the County of Santa Clara. The HMCD was established in 1983 with the adoption of the local Hazardous Materials Storage Ordinance (HMSO), which regulates the storage of hazardous materials both above- and belowground. This ordinance has several key provisions that provide protection of public health and the environment when implemented by businesses. In addition to the HMSO, HMCD enforces the County's Toxic Gas Ordinance and Non-Point Source ("Urban Runoff") Ordinance. Passage of Senate Bill 1082 in 1993 required consolidation of State-mandated hazardous waste and hazardous materials management programs within a single Unified Program, to be administered by CUPA. HMCD has been certified by the State to be the CUPA to administer these programs throughout Santa Clara County, except in the Cities of Santa Clara, Gilroy, and Sunnyvale, which are themselves CUPAs.

City of Milpitas General Plan

The following goals and policies within the City of Milpitas General Plan relate to hazards, hazardous materials, and public safety (City of Milpitas, 2021).

Goal SA-3 Enhance safety throughout the community by ensuring emergency preparedness.

- Policy SA 3-5** Continue to maintain the City's Emergency Operations Center and conduct regular staff training exercises to ensure that all City staff members, in addition to emergency responders, are adequately trained to fulfill their duties in the event of an emergency.
- Goal SA-5** Protect citizens from hazardous materials.
- Policy SA 5-1** Require hazardous waste generated within Milpitas to be disposed of in a safe manner, consistent with all applicable local, state, and federal laws.
- Policy SA 5-2** Hazardous materials shall be stored in a safe manner, consistent with all applicable local, state, and federal laws.
- Policy SA 5-3** Ensure that businesses in Milpitas that handle hazardous materials prepare and file a HMBP and Hazardous Materials Inventories. The HMBP and Inventory shall consist of general business information, basic information on the location, type, quantity, and health risks of hazardous materials, and emergency response and training plans.
- Policy CIR 1-13** Maintain up-to-date emergency preparedness and evacuation plans and procedures in coordination with appropriate state, regional, county, and local agencies and departments.

City of San José General Plan

The following policies within the City of San José General Plan relate to hazards, hazardous materials, and public safety (City of San José, 2024).

- Goal EC-6** **Hazardous Materials.** Protect the community from the risks inherent in the transport, distribution, use, storage, and disposal of hazardous materials.
- Policy EC-6.5** The City shall designate transportation routes to and from hazardous waste facilities as part of the permitting process in order to minimize adverse impacts on surrounding land uses and to minimize travel distances along residential and other non-industrial frontages.
- Policy EC-6.6** Address through environmental review for all proposals for new residential, park and recreation, school, day care, hospital, church, or other uses that would place a sensitive population in close proximity to sites on which hazardous materials are or are likely to be located, the likelihood of an accidental release, the risks posed to human health and for sensitive populations, and mitigation measures, if needed, to protect human health.
- Action EC-6.9** Adopt City guidelines for assessing possible land use compatibility and safety impacts associated with the location of sensitive uses near businesses or institutional facilities that use or store substantial quantities of hazardous materials by June 2011. The City will only approve new development with sensitive populations near sites containing hazardous

materials such as toxic gases when feasible mitigation is included in the projects.

City of San José Emergency Operations Plan

The City of San José EOP (2019a) provides an overview of the City's approach to emergency operations. It identifies emergency response policies, describes the response and recovery organization, assigns specific roles and responsibilities to City departments, agencies, and community partners, and describes logistical support and the integration of assistance. The EOP also describes the role of the City of San José's Emergency Operations Center (EOC) and the coordination that occurs between the EOC, Department Operations Centers, those conducting field-level activities, and external entities such as the Operational Area, community partners, and City residents and visitors. The EOP is a broad programmatic document applicable to all hazards or threats, and all the missions/functions the City may perform in response to or recovery from an incident.

To provide planning support to the EOP, the City has developed Support Annexes for each of the critical functions the City must manage, coordinate, and/or perform following an emergency. A Support Annex is a function- or incident-specific application of the guidance, policies, and concepts defined in the EOP. The Evacuation Support Annex describes the overall process of conducting mass evacuations and re-entry during an emergency or large-scale disaster in the City of San José (2019b). In the City of San José, evacuation is the responsibility of the San José Police Department, with significant support from many other departments. The Evacuation Support Annex identifies a number of considerations, including that the primary means of transportation during an evacuation will be privately owned and operated vehicles. Specific evacuation routes are not identified.

City of Santa Clara General Plan

The following policies within the City of Santa Clara General Plan relate to hazards, hazardous materials, and public safety (City of Santa Clara, 2010).

- Policy 5.3.5-P19** Restrict the use and storage of hazardous materials for industrial uses within 500 feet of existing residential uses.
- Policy 5.10.1-P10** Promote the reduction, recycling, and safe disposal of household hazardous wastes through public education and awareness and through an increase in hazardous waste collection events.
- 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-P25** Use Best Management Practices to control the transport of hazardous substances and to identify appropriate haul routes to minimize community exposure to potential hazards.
- Policy 5.10.5-P1** Use the City's Local Hazard Mitigation Plan as the guide for emergency preparedness in Santa Clara.

City of Santa Clara Fire Department Community Risk Reduction Division CUPA

The Santa Clara Fire Department enforces the 2013 California Fire Code with local amendments. As a CUPA, the Santa Clara Fire Department Community Risk Reduction Division also enforces portions of the California Health and Safety Code and the CCR that relate to hazardous waste, hazardous waste treatment at fixed facilities, underground storage tanks, petroleum stored in aboveground tanks, and the California Accidental Release Prevention Program.

5.9.2.2 Touch Thresholds

OSHA standards cover many electrical hazards. OSHA's general industry electrical safety standards are published in Title 29 CFR, Part 1910.302 through 1910.308 – Design Safety Standards for Electrical Systems, and 1910.331 through 1910.335 – Electrical Safety-Related Work Practices Standards. OSHA's electrical standards are based on the National Fire Protection Association (NFPA) codes and standards: NFPA 70 – National Electrical Code and NFPA 70E – Standard for Electrical Safety in the Workplace.

The Proposed Project would be designed to all applicable standards and regulations that would provide for adequate horizontal and vertical clearances from electrical and energized equipment. All authorized personnel working on-site, during either construction or O&M, would be trained according to OSHA, NFPA, and LS Power standards. To minimize potential exposure of the public to electric shock hazards, the active construction site and staging areas would be fully fenced, and, once operational, the two proposed HVDC terminal sites would also be fully fenced and secured based on North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) standards, thus fully restricting site access to only qualified personnel (refer to **Section 3.5.8.3, Security** for additional details pertaining to proposed terminal site security). Warning signs would be posted to alert persons of potential electrical hazards. All electric power lines would be designed in accordance with CPUC GO 95 Guidelines for clearances established to protect the public from electric shock. Additional details on the safety and security procedures for construction and operation are included in **Section 3.0, Proposed Project Description**.

5.9.3 IMPACT QUESTIONS

5.9.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to hazards, hazardous materials, and public safety come from the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or
- 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; or
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or

- 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; or
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

5.9.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC, 2019), the following additional CEQA Impact Questions are required for hazards, hazardous materials, and public safety. Would the project:

- Create a significant hazard to air traffic from the installation of new power lines and structures?
- Create a significant hazard to the public or environment through the transport of heavy materials using helicopters?
- Expose people to a significant risk of injury or death involving unexploded ordnance?
- Expose workers or the public to excessive shock hazards?

5.9.4 IMPACT ANALYSIS

5.9.4.1 Hazards, Hazardous Materials, and Public Safety Impact Analysis

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 Impact. Construction of the Proposed Project would require the routine use of construction equipment that would use or contain hazardous materials, including, but not limited to, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and cement slurry. Equipment containing or transporting these materials would regularly travel throughout the Proposed Project area and region during construction periods. Additionally, the Proposed Project would include transformers containing mineral oil, which is considered a hazardous material in the State of California. All major terminal equipment (e.g., Voltage Source Converter [VSC] HVDC equipment, gas-insulated switchgear [GIS], power transformers, cooling equipment, etc.) would be installed on concrete foundations. Each transformer would have an oil containment system consisting of an impervious, lined, open, or stone-filled sump area around the transformer. The maximum amount of oil required for the transformers would be approximately 25,000 gallons for each of the transformers. Transformer

oil containment basins are designed to contain the oil volume of the transformers plus a 25-year, 24-hour storm event.

The routine use of construction equipment that would use or contain hazardous materials, and the installation of equipment containing hazardous materials, could result in accidental releases that may affect the public or environment (e.g., contamination of soils, surface water and/or groundwater quality impairment, and floral/faunal toxicity effects). The Proposed Project site is located in a populated area where on-site spills or releases due to accident conditions or natural disasters have the potential for direct contact and impacts to the general public. In addition, off-site transport of released materials in contaminated soils, surface waters, and/or groundwater has the potential to result in impacts. On-site releases also have the potential to impact workers and the environment through direct contact. Additionally, the improper disposal of hazardous waste on- or off-site may impact the public, workers, and/or the environment. The potential for off-site material transport to impact surface and groundwater resources is discussed in **Section 5.10**. **Table 5.9-1, Summary of Hazardous Materials** provides the type and approximate quantity of potentially hazardous materials that would be transported, used, or disposed of during implementation of the Proposed Project.

Table 5.9-1: Summary of Hazardous Materials			
Utility	Hazardous Material	Proposed Project Use	Approximate Quantity
LS Power	Mineral oil	Insulating and cooling transformers	25,000 gallons for each transformer, 200,000 gallons total
LS Power	Mineral oil	Insulation for transition structures	300 gallons for each transition structure, 1,500 gallons total
LS Power, Pacific Gas and Electric (PG&E), Silicon Valley Power (SVP ¹)	Diesel	Engine fuel	662,440 gallons
LS Power, PG&E, SVP ¹	Gasoline	Engine fuel	26,266 gallons
LS Power	Lead-acid batteries	Backup power during power outages	TBD
LS Power	Hydraulic fluids and lubricants	Engine and equipment lubrication, powering hydraulic equipment	TBD
LS Power	Other construction fluids (solvents)	Cleaning, lubricating hardware, etc.	TBD
LS Power	Ethylene glycol	Converter cooling systems	5,000 gallons for each terminal ²
Notes:			
¹ Diesel and gasoline quantities represent the anticipated total use for the Proposed Project and the PG&E & SVP facility modifications. See Appendix 5.6-A, Fuels Use Calculations .			
² 5,000 gallons represents a mixture of ethylene glycol and water. Exact ration is pending additional system design.			

All hazardous materials would be stored, handled, and used in accordance with applicable regulations. Based on the anticipated volume of hazardous liquid materials, such as transformer oil, that would be stored at Proposed Project locations, a Spill Prevention, Control, and Countermeasure Plan (SPCCP) is included as **Applicant Proposed Measure (APM) HAZ-1, Site-Specific Spill Prevention, Control, and Countermeasure Plan** and would be prepared to comply with Title 40 CFR, Parts 112.1-112.7. This plan would ensure the proper storage of hazardous liquids and require that the Proposed Project area be equipped with secondary containment that meets SPCCP guidelines. In addition, a Hazardous Materials Management Plan (HMMP) would also be required as part of **APM HAZ-2, Hazardous Materials Management Plan** and would include the proper use of hazardous materials, transport, storage, management, and disposal protocols during construction. Sufficient planning and site preparation, proper use and disposal of hazardous materials, and documented measures to immediately address exposure of these materials would reduce the risk of hazards to the public and the environment during construction of the Proposed Project. For these reasons, any impacts resulting from the routine transport, use, or disposal of hazardous materials would be less than significant.

The Proposed Project would include design specifications (such as the transformer containment system, which is discussed in **Section 3.3.4.1, HVDC Terminal Facilities**) and O&M procedures designed to minimize the potential for the release or improper disposal of hazardous materials during Proposed Project operation. Each transformer would be designed to include secondary containment that would capture the accidental release of hazardous materials. Maintenance activities would occur regularly at the Proposed Project facilities. These activities may include use of new pollutant sources, including, but not limited to, oils, paints, and solvents used for routine maintenance. All materials used during O&M would be applied, stored, and disposed of consistent with manufacturer recommendations by licensed professionals and in accordance with applicable regulations. Operational impacts of the Proposed Project would be less than significant; implementation of standard operational Best Management Practices (BMPs) consistent with **APMs HAZ-1** and **HAZ-2** would further ensure impacts remain less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Proposed Project construction would require the limited use of hazardous materials, such as fuels, lubricants, cleaning solvents, and chemicals. Only small volumes of hazardous waste would be generated, generally from empty fuel, lubricant, and solvent containers. Additional potentially hazardous waste sources during construction would include incidental spill waste and concrete washout. There is a low potential to encounter contaminated soil or groundwater during excavation and other ground-disturbing activities. Should excavation of hazardous materials be necessary, disposal would be carried out in compliance with applicable regulations. Waste generated or encountered would be handled, contained, and disposed of according to local, state, and federal regulations.

The Proposed Project would include the removal of approximately four existing PG&E distribution wood poles, which may have been treated with chemicals (e.g., penta oil, creosote, chemonite, and/or chromated copper, depending on the year of installation), which for certain uses and

quantities can be considered regulated hazardous materials. Therefore, disposal of the wood poles would require specific testing and handling procedures prescribed by state and federal regulations. PG&E would dispose of utility generated waste, including treated-wood waste generated from removal of the PG&E distribution poles, under the Hazardous Waste Fee Health and Safety Code (California HSC Chapter 6.5, Section 25143 et seq.). Under this exemption, the wood waste would be disposed of in a composite-lined portion of a municipal solid waste landfill that meets requirements imposed by State policy adopted pursuant to Section 13140 of the Water Code and regulations adopted pursuant to Sections 13172 and 13173 of the Water Code. Further, the solid waste landfill used for disposal would be authorized to accept the wood waste under waste discharge requirements issued by the RWQCB pursuant to Division 7 (commencing with Section 13000) of the Water Code. As discussed in **Section 5.19, Utilities**, the Kirby Canyon Landfill, Newby Island Sanitary Landfill, Guadalupe Landfill, and Ox Mountain Landfill are all treated-wood waste disposal sites that could serve the Proposed Project.

Construction and operational activities supporting the Newark substation modifications would be subject to PG&E construction **BMPs HAZ-1** through **HAZ-11**, as well as applicable federal, state, and local regulations that direct proper transport, use, and disposal of hazardous materials. The PG&E hazardous materials BMPs are designed to address the specific hazardous materials, wastes, and conditions present at the existing PG&E Newark substation. These include oil-filled transformers (**BMP HAZ-1**), lead-acid batteries (**BMP HAZ-4**), lead paint (**BMP HAZ-5**), SF₆ (**BMP HAZ-6**), hazardous waste management (**BMPs HAZ-2** and **HAZ-3**), spill prevention, control, and countermeasures (**BMP HAZ-7**), underground cable handling (**BMP HAZ-8**), stormwater (**BMP HAZ-10**), and dewatering (**BMPs HAZ-9** and **HAZ-11**). As such, less-than-significant impacts would occur.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation facility. Proposed Project construction would require the limited use of hazardous materials, such as fuels, lubricants, cleaning solvents, and chemicals. Only small volumes of hazardous waste would be generated, generally from empty fuel, lubricant, and solvent containers. Additional potentially hazardous waste sources during construction would include incidental spill waste and concrete washout. A low potential exists for the encounter of contaminated soil or groundwater during excavation and other ground-disturbing activities. Should excavation of hazardous materials be necessary, disposal would be carried out in compliance with applicable regulations. Waste generated or encountered would be handled, contained, and disposed of according to local, state, and federal regulations.

Construction and operational activities supporting the Newark substation modifications would be subject to applicable federal, state, and local regulations that direct the proper transport, use, and disposal of hazardous materials including the preparation of a SPCCP, as needed. As such, less-than-significant impacts would occur.

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 Impact. The release of hazardous materials into the environment could occur if hazardous materials used during construction or O&M were spilled or otherwise released accidentally or if construction activities exposed existing contamination. Release of hazardous materials during construction and O&M are discussed in the response above; therefore, this analysis focuses on existing contamination and provides a discussion of reasonably foreseeable upset and accident response. Construction activities that have the potential to expose existing contamination include ground-disturbing activities, such as excavation for structure foundations or trenching for the proposed underground transmission lines. Exposure of existing contamination would create a hazard to the public and the environment by putting construction workers at risk and spreading the contamination to other locations.

As detailed in **Section 5.9.1.1, Hazardous Materials Report**, there are two documented contaminated sites within 200 feet of the Proposed Project where existing contamination of soil and groundwater is present and has the potential to be encountered during construction of the Proposed Project. Contaminated soil and groundwater associated with the South Bay Asbestos Area and the Cisco Systems Site 6/Syntax Court Disposal Site is potentially located along a portion of the proposed Baylands to NRS 230 kV transmission line, just north of State Route 237, and Staging Areas 10 and 11 (refer to **Figure 5.9-1**). Excavation for the overhead structures and underground line has the potential to expose this existing contamination, which would expose construction workers to hazardous materials. However, **APM HAZ-3, Compliance with the Covenant to Restrict Use of Property (Cisco Systems Site 6/Syntax Court Disposal Site)** would be implemented for the Cisco Systems Site 6/Syntax Court Disposal Site, and **APM HAZ-4, Compliance with the Covenant and Agreement for Environmental Restriction (South Bay Asbestos Area)** would be implemented for the South Bay Asbestos Area. **APM HAZ-3** requires compliance with the Covenant that was established in 2003 for the Cisco Systems Site 6/Syntax Court Disposal Site and includes coordination with DTSC and following the requirements provided in the SMP and Health and Safety Plan (2001 and the 2015 update). **APM HAZ-4** requires compliance with the Covenant that was established for the South Bay Asbestos Area in 2004 that includes preparation of a Proposed Project-specific SMP and written approval from the CERCLA Lead Agency for any disturbance to the existing pavement cap. Compliance with **APMs HAZ-3** and **HAZ-4** would reduce human health risk to acceptable levels; therefore, construction for this portion of the Proposed Project would not create a significant hazard to the public or the environment.

The proposed underground transmission line O&M inspections would be performed by qualified LS Power technicians through sensors and splice vault inspections. Therefore, the existing soil contamination would not be exposed.

Regarding reasonably foreseeable accident or upset conditions, construction of the Proposed Project would include mechanisms intended to protect the public from accidents or failure of Proposed Project components. Shoring would be installed at trenching and excavation sites, and the public would not be permitted near construction activities through the use of fencing barriers, signage, and/or traffic control. After construction of the Proposed Project is complete, LS Power would implement O&M procedures addressing the potential release of hazardous materials in upset or accident conditions. Crews would be informed of hazardous material handling practices and accidental release containment and cleanup procedures. These procedures would be

developed to protect the public, O&M personnel, and the environment from hazardous materials by equipping O&M personnel with knowledge and procedures to follow to prevent accidents and failures or minimize potential impacts of an accident or failure. As a result, impacts associated with creating 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 from operation of the Proposed Project would be less than significant.

Further, the Proposed Project would be designed and maintained to withstand degrees of failure within portions of the system. Crews would monitor and operate the system with controls in place to proactively identify potential issues and minimize the hazard exposure to the public from failure of Proposed Project components as the result of an accident. The proposed HVDC terminals would be remotely monitored by LS Power's control center during O&M, which is staffed 24 hours a day, seven days a week, and is capable of handling and processing millions of data points during operations. If equipment malfunctions, O&M personnel would be dispatched to the site to investigate the problem and take appropriate corrective action. Regular maintenance and inspection by LS Power crews would further reduce the likelihood and severity of failures. The risk of significant hazard to the public or the environment caused by a system accident or failure would be less than significant.

Any O&M work would also be conducted in accordance with National Electric Safety Code (NESC), National Electrical Code (NEC), OSHA, and other applicable regulations and standards. The new transmission lines would also follow all applicable CPUC GOs, particularly GO 128, which governs the construction and maintenance of underground electric lines. LS Power would also comply with California Independent System Operator (CAISO) standards for inspection, maintenance, repair, and replacement. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). Construction and operational activities supporting the modifications to the existing Newark substation would be subject to PG&E **BMPs HAZ-1** through **HAZ-11**, which include measures to handle existing contamination safely, including requiring soil sampling and removal, if necessary, in order to reduce the potential for accidental release of hazardous materials. The PG&E work would also be subject to applicable federal, state, and local regulations that direct proper transport, use, and disposal of hazardous materials. In addition, there are no known existing areas of soil or groundwater contamination within the Newark substation modification area. As such, less-than-significant impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction and operational activities would also be subject to applicable federal, state, and local regulations that direct proper transport, use, and disposal of hazardous materials. In addition, there are no known existing areas of soil or groundwater contamination within the NRS substation modification area. As such, less-than-significant impacts would occur.

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

Less-Than-Significant Impact. As detailed in **Section 5.15** and shown on **Figure 5.15-1**, there are three schools located within 0.25 mile of the Proposed Project area, including Kathryn Hughes Elementary School, located approximately 600 feet northeast of the existing NRS substation; Saba's Academy, located approximately 0.5 mile southeast of the proposed Baylands terminal and approximately 0.2 mile southeast of the proposed underground Baylands to NRS 230 kV transmission line; and George Mayne Elementary School, located approximately 0.2 mile northwest of the proposed Baylands to NRS 230 kV transmission line. There are no schools within 0.25 mile of the proposed Albrae or Baylands terminals. Potentially hazardous air emissions related to construction equipment are discussed in **Section 5.3, Air Quality**. As discussed in the response above and in **Section 3.0**, construction of the Proposed Project would include the handling of common hazardous materials, substances, or waste, such as fuels, oils, and lubricants. The Proposed Project would include the emission or handling of acutely hazardous materials. However, with the implementation of **APMs HAZ-1** through **HAZ-4**, as well as adherence with existing federal, state, and local regulations, these materials, substances, and waste would be transported, handled, and disposed of in a manner that minimizes the potential to impact workers or the public. Therefore, while the Proposed Project would handle hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school, these activities would not pose a risk to the children and staff at the three schools. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation is not located within 0.25 mile of a school. Construction and operational activities supporting the Newark substation modifications would be subject to PG&E **BMPs HAZ-1** through **HAZ-11**, which include measures to properly use, store, transport, and dispose of hazardous materials in order to reduce the potential for public exposure to hazardous materials. No impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. There is one school located within 0.25 mile of the existing NRS substation. However, construction and operational activities would adhere to existing federal, state, and local regulations, hazardous materials, substances, and waste would be transported, handled, and disposed of in a manner that minimizes the potential to impact workers, schools, or the public. Impacts would be less than significant.

Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less-Than-Significant Impact. As discussed in **Section 5.9.2, Regulatory Setting**, the lists compiled pursuant to Government Code Section 65962.5 (or the Cortese List) include a variety of hazardous waste facilities and contaminated sites. A significant hazard to the public or environment could occur if existing contamination at one of these sites was released or exposed. As discussed above, portions of the proposed underground Baylands to NRS 230 kV transmission

line, just north of State Route 237 would be located on two Cortese List sites (the Cisco Systems Site 6/Syntax Court Disposal Site and the South Bay Asbestos Area), and Staging Areas 10 and 11 would be located on one of the Cortese List sites (the Cisco Systems Site 6/Syntax Court Disposal Site). As discussed in the response above, while contaminated soils may be present within the Proposed Project area, implementation of **APMs HAZ-2, HAZ-3, and HAZ-4** would ensure that the soil is handled and disposed of properly. Therefore, construction of the Proposed Project would not result in the exposure or release of existing contamination. As such, while the Proposed Project area would be located on sites compiled pursuant to Government Code Section 65962.5, implementation of the Proposed Project would not create a significant hazard to the public or the environment. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation is not located on a site that is listed pursuant to Government Code Section 65962.5. Construction and operational activities supporting the Newark substation modifications would also be subject to PG&E **BMPs HAZ-1 through HAZ-11**, which include measures to properly use, store, transport, and dispose of hazardous materials in order to reduce the potential for public or environmental exposure to hazardous materials. No impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation is not located on a site that is listed pursuant to Government Code Section 65962.5. No impacts would occur.

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

Less-Than-Significant Impact. A portion of the Proposed Project (specifically, the existing NRS substation and approximately 1.2 miles of the proposed Baylands to NRS 230 kV transmission line) is located within the AIA of the San José Mineta International Airport. The portion of the proposed Baylands to NRS 230 kV transmission line located within the AIA would be underground. The only aboveground structures included as part of the Proposed Project within this area would be located at the NRS substation modification area (refer to **Figure 3-4**), as discussed below under *SVP Substation Modifications*. Noise-related impacts are discussed in **Section 5.13**. The Proposed Project would be constructed in an urban area that already has a high density of people, vehicles, and buildings which are currently subjected to the environment within two miles of an airport. In addition, LS Power would coordinate with the FAA as needed to ensure the cranes, helicopters, and other equipment used during construction and the height of permanent structures would not result in a safety hazard. Therefore, the Proposed Project would not result in a safety hazard or excessive noise for people residing or working in the Proposed Project area. Less-than-significant impacts under this criterion would occur.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The existing Newark

substation is not located within two miles of a public airport and is not within the AIA of the San José Mineta International Airport. No impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation is located within the AIA and FAA height restriction zone, between the 262- and 312-foot contours. The NRS substation modifications would not exceed these height levels. However, SVP would coordinate with the FAA as needed to ensure the cranes and other equipment used during construction and the height of new permanent structures would not result in a safety hazard as defined by FAR Part 77. Therefore, the Proposed Project would not result in a safety hazard or excessive noise for people residing or working in the Proposed Project area. Impacts under this criterion would be less than significant.

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

Less-Than-Significant Impact. The Proposed Project area is located within the ROW of several roads throughout the Cities of Fremont, Milpitas, San José, and Santa Clara. All of these agencies maintain EOPs or other emergency planning documentation, as described in **Section 5.9.2**.

Construction for the Proposed Project would predominately occur within road ROWs and would require temporary lane closures during underground transmission line installation activities. Traffic detours may be necessary as part of construction. **Section 5.17, Transportation** further discusses the potential impacts on emergency access as a result of construction and O&M. Because the Proposed Project's transmission line would be constructed in segments, only small segments of roads are anticipated to be impacted by potential lane closures at a given time. Additionally, implementation of **APM TRA-1, Traffic Control Plan**, construction and O&M activities associated with the Proposed Project would not result in inadequate emergency access and, therefore, would not physically interfere with the City EOPs. The Proposed Project would also not impair implementation of the EOPs because, in the event of an emergency, LS Power would follow the instructions of the local emergency response agencies. In addition, as described in **Section 5.15**, the Proposed Project would not affect service ratios, response times, or other objectives for public services in the area. Fire, emergency, and police services currently serve, and would continue to serve, the Proposed Project area. Therefore, implementation of **APM TRA-1** would reduce impacts to less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). No road closures would be needed to implement the Newark substation modifications. If required to comply with local or Caltrans regulations, a Traffic Control Plan (TCP) would be implemented at the existing Newark substation to ensure that access is not impeded during construction, including access to the PG&E facility and associated staging areas. Impacts to this criterion would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. No road closures would be needed to implement the NRS substation modifications. If required to comply with local or Caltrans regulations, a TCP would be implemented at the existing NRS substation to

ensure that access is not impeded during construction, including access to the PG&E facility and associated staging areas. Impacts under this criterion would be less than significant.

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. Refer to **Section 5.20** for an analysis of impacts associated with wildland fires, including at the PG&E and SVP substation modifications. No impacts would occur under this criterion.

Would the project create a significant hazard to air traffic from the installation of new power lines and structures?

Less-Than-Significant Impact. As discussed in an above response, a portion of the Proposed Project is located within the AIA of the San José Mineta International Airport and within the FAR Part 77 height restriction area. Specifically, a portion of the proposed Baylands to NRS 230 kV transmission line is located within these areas. This portion of the proposed transmission line would be located underground and would have no effect on air traffic. However, the Proposed Project would fully comply with applicable regulations, including the FAA and ALUC policy. Therefore, the Proposed Project would not create a significant hazard to air traffic, and impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation is not located within the AIA for the San José Mineta International Airport. Therefore, no impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility and would include construction of new termination riser structures as well as new substation equipment. New overhead transmission lines or poles would be constructed. The NRS substation modification area is located between the 262- and 312-foot height restriction contours and is surrounded by a number of existing tall structures, including Levi's Stadium. The new structures within the NRS substation modification area would be similar to existing substation structures, would not exceed the FAR height limits, and would not be as tall as other existing surrounding structures, such as Levi's Stadium and transmission poles. However, SVP would fully comply with applicable regulations, including FAR and ALUC policy. Therefore, the NRS substation modifications would not create a significant hazard to air traffic, and impacts would be less than significant under this criterion.

Would the project create a significant hazard to the public or environment through the transport of heavy materials using helicopters?

Less-Than-Significant Impact. Helicopters are anticipated to be used during construction of overhead transmission lines, specifically to string the proposed overhead Albrae to Baylands 320 kV DC transmission line supported by structures DC-1 through DC-11 and Baylands to NRS 230 kV AC transmission line support by Structures AC-3 and AC-4 (refer to **Figure 3-4**). The segment

of the Albrae to Baylands 320 kV DC transmission line is located within the San José-Santa Clara Regional Wastewater Facility (RWF), which is restricted from public access and includes only access roads and drying ponds. The segment of the Baylands to NRS 230 kV transmission line is located over the Guadalupe River surrounded by private property to the east and State-owned land with limited public access to the west. As part of construction activities, helicopters are anticipated to be used to support stringing activities, whereby the helicopter flies a sock line between transmission line poles prior to installation of the conductors. During conductor stringing operations, helicopter takeoff and landing areas may include nearby staging areas, such as Staging Areas 6, 7, or 8. Additionally, helicopters may temporarily land on existing or proposed access roads as needed. It is also anticipated that local airfields would be utilized for takeoff and landing, fueling, maintenance, and long-term helicopter parking. Helicopter fueling would occur at local airfields and would be in compliance with applicable rules and regulations. No helicopter fueling is anticipated to take place on Proposed Project ROWs or staging areas. The conductor stringing operations that would utilize the helicopter would be completed in no more than a week. The helicopters are not anticipated to transport heavy materials. Helicopters are not anticipated to be used for O&M of the Proposed Project. Therefore, impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Neither construction nor operation of the modified Newark substation would require the use of helicopters. No impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Neither construction nor operation of the modified NRS substation would require the use of helicopters. No impacts would occur.

Would the project expose people to a significant risk of injury or death involving unexploded ordnance?

No Impact. The environmental database (refer to **Appendix 5.9-A**) did not identify any historical land uses that would have led to an unexploded ordnance being on the Proposed Project area or in the vicinity, including the existing PG&E Newark substation and the SVP NRS substation. As such, the Proposed Project would not expose people to a significant risk of injury or death due to an unexploded ordnance. Therefore, no impacts would occur under this criterion.

Would the project expose workers or the public to excessive shock hazards?

Less-Than-Significant Impact. All authorized personnel working on-site, during either construction or O&M, would be trained according to OSHA safety standards, which are based on applicable federal, state, and local safety regulations. To minimize potential exposure of the public to electric shock hazards, a wall would extend around the perimeter of each proposed HVDC terminal site, thus restricting site access, as stated in **Section 3.0**. The entrances to the proposed HVDC terminal sites would be gated and monitored remotely, restricting access to only authorized personnel. Warning signs would be posted around the perimeter of the Proposed Project's wall and gate to alert persons of potential electrical hazards. In addition, the Proposed Project would

be designed in accordance with CPUC GO 95 Guidelines for safe clearances established to protect the public from electric shock.

During O&M facilities inspections, all fencing would be examined, and repairs would be made, as necessary. The Proposed Project would be remotely monitored by LS Power 24 hours a day, seven days a week. If equipment malfunctions, O&M personnel would be available to be dispatched to the site to investigate the problem and take appropriate corrective action. LS Power has qualified operations personnel who are trained to avoid and minimize arc flash situations and are provided the appropriate arc flash personal protective equipment (PPE) (e.g., fire resistant clothing, gloves, and insulated tools). Proper PPE would be required when anyone is in the facility. LS Power uses high-speed relay equipment that evaluates electrical fault locations and opens circuit breakers to de-energize the line in milliseconds.

The Proposed Project includes three major elements that could cause shock hazards to workers or the public: two new HVDC terminals, one new 320 kV DC transmission line, and two new 230 kV alternating current (AC) interconnection transmission lines. The new HVDC terminals contain numerous pieces of equipment and connections/wiring capable of creating shock hazards; however, these facilities would be completely secured from the public and restricted to only those workers who are properly trained and equipped with proper PPE. Potential impacts from these facilities would be less than significant.

The new DC and AC transmission lines would be installed both underground and overhead (refer to **Figure 3-4**). When underground, the proposed transmission lines would be removed from causing direct hazards to workers or the public. When in the overhead position, the proposed transmission lines would meet minimum aerial and ground clearances that would reduce potential direct hazards to a less-than-significant level. The line would be deenergized during maintenance and repairs as required to ensure worker and public safety. The shock hazards associated with the proposed Albrae to Baylands 320 kV DC transmission line are detailed in **Appendix 5.9-C, Power the South Bay Transmission Reliability Project - Electromagnetic Effects of AC and DC High Voltage Circuit on Nearby Utilities**. The Association for Materials Protection and Performance/National Association of Corrosion Engineers (AMPP/NACE) Standard SP0177-2014 – Mitigation of Alternating Current and Lightning Effects on Metallic Structures and Corrosion Control Systems, Section 5.2.1.1, states, "Safe limits must be determined by qualified personnel based on anticipated exposure conditions. For the purpose of this standard, a steady-state touch voltage of fifteen volts (V) or more with respect to local earth at above-grade or exposed sections and appurtenances is considered to constitute a shock hazard." Based on currently available information and previous studies conducted by Ark Engineering & Technical Services, Inc., shock hazards due to stray DC currents along the proposed Albrae to Baylands 320 kV DC transmission line are not expected. However, there may be potential DC interference effects created during a short circuit fault of the DC line on a natural gas pipeline that would cross and parallel the proposed Albrae to Baylands 320 kV DC circuit for approximately three miles along Fremont Boulevard. This area requires further site and circuit details to fully evaluate the extent of potential impacts and if mitigation would be necessary to eliminate potential shock hazards. The further evaluation would be completed through implementation of **APM HAZ-5, Final Induction Study and Utility Coordination**, which requires LS Power to coordinate the design and construction of the proposed Albrae to Baylands 320 kV DC transmission line and HVDC terminals to mitigate potential electromagnetic induction effects on existing metallic utilities. Therefore, potential impacts would be less than significant.

The proposed Newark to Albrae 230 kV transmission line would connect the proposed Albrae terminal to the existing Newark substation via a new approximately 0.4-mile underground and overhead transmission line that would be completely contained within private portions of Weber Road and PG&E property. The proposed Newark to Albrae 230 kV transmission line would be removed from potential access from members of the public or untrained workers. Implementation of **APM HAZ-5** requires LS Power to coordinate the design and construction of the proposed Newark to Albrae 230 kV transmission line to mitigate potential electromagnetic induction effects on existing metallic utilities. As energized facilities, both the proposed Albrae terminal and the existing Newark substation would be designed and operated to mitigate the potential for induced current effects. Impacts would be less than significant.

The proposed Baylands to NRS 230 kV transmission line would connect the proposed Baylands terminal to the existing NRS substation via a new approximately 3.5-mile overhead and underground transmission line. The overhead portion of the Baylands to NRS 230 kV transmission line would be a two structure approximately 0.2 mile span over the Guadalupe River where public access is restricted to the Guadalupe River Trail. AC distribution and transmission lines can cause induced voltages to metallic objects in close proximity, which can result in touch potential effects. Touch potential refers to the measurement of voltage that passes between any two points on a person's body when exposed to electric current, which can present a shock hazard to personnel. Voltages on metallic objects can be controlled by various methods, including gradient control wires (zinc ribbon or equivalent) or AC ground wells along the pipeline. Implementation of **APM HAZ-5** requires LS Power to coordinate the design and construction of the proposed Albrae to Baylands 320 kV DC, Newark to Albrae 230 kV DC, and Baylands to NRS 230 kV transmission lines to mitigate potential electromagnetic induction effects on existing metallic utilities. As such, the Proposed Project would not expose workers or the public to excessive shock hazards, and impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Similar to the proposed HVDC terminal facilities, the existing Newark substation is secured with fencing, walls, and security systems. Only trained and approved personnel are granted access to portions of the existing substation facilities that contain potentially hazardous shock conditions. All personnel are required to wear appropriate protective equipment and clothing. Less-than-significant impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Similar to the proposed HVDC terminal facilities, the existing NRS substation is secured with fencing, walls, and security systems. Only trained and approved personnel are granted access to portions of the existing NRS substation that contain potentially hazardous shock conditions. All personnel are required to wear appropriate protective equipment and clothing. Less-than-significant impacts would occur.

5.9.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for hazards, hazardous materials, and public safety.

5.9.6 APPLICANT PROPOSED MEASURES

The following hazards, hazardous materials, and public safety-specific APMs would be implemented for the Proposed Project.

APM HAZ-1: Site-Specific Spill Prevention, Control, and Countermeasure Plan

A site-specific SPCCP shall be prepared prior to the initiation of storage of hazardous liquids on the Proposed Project site in excess of the appropriate regulatory thresholds. In the event of an accidental spill, the Proposed Project shall be equipped with secondary containment that meets SPCCP guidelines. The secondary containment shall be sufficiently sized to accommodate accidental spills. The plan shall be provided to the CPUC prior to construction for recordkeeping.

APM HAZ-2: Hazardous Materials Management Plan

A HMMP shall be prepared and implemented for the Proposed Project. The plan shall be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The plan shall include the following information related to hazardous materials and waste, as applicable:

- A list of hazardous materials present on-site during construction and O&M to be updated as needed, along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements;
- A Hazardous Materials Communication (i.e., "HAZCOM") Plan;
- Assignments and responsibilities of Proposed Project health and safety roles;
- Standards for any secondary containment and countermeasures required for hazardous materials;
- Spill response procedures based on product and quantity. The procedures shall include materials to be used, location of such materials within the Proposed Project area, and disposal protocols; and
- Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA-trained individual and testing at a certified laboratory.

The Proposed Project would also have lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Secondary containment shall be constructed around and under the battery racks, and the HMMP shall address containment from a battery leak.

The plan shall be provided to the CPUC prior to construction for recordkeeping. Plan updates shall be made and submitted as needed if construction activities change such that the existing plan does not adequately address the Proposed Project.

APM HAZ-3: Compliance with the Covenant to Restrict Use of Property (Cisco Systems Site 6/Syntax Court Disposal Site)

Construction activities within the Cisco Systems Site 6/Syntax Court Disposal Site boundaries (as outlined in **Figure 5.9-1**) shall comply with the Covenant to Restrict Use of Property and Environmental Restriction, signed May 23, 2003. Specific activities could include:

- Providing written notice to the DTSC at least 14 days prior to ground disturbing construction activities with the location of excavation, proposed depth, and soil management procedures.
- Conducting construction activities in accordance with the SMP and the Health and Safety Plan (2001 and 2015 update).
- Handling excavated soils in accordance with all applicable local, state, and federal regulations.

APM HAZ-4: Compliance with the Covenant and Agreement for Environmental Restriction (South Bay Asbestos Area)

Construction activities within the South Bay Asbestos Area site boundaries shall comply with the Covenant and Agreement for Environmental Restriction, signed October 21 2004, by the property owner and the DTSC. Specific activities would include, but not necessarily be limited to, the following:

- Coordinating with the CERCLA Lead Agency and gaining written approval for ground disturbing activities that could affect the soil cap.
- Preparing a SMP for any soils contaminated with asbestos or asbestos containing materials brought to the surface by grading, excavation, trenching, or backfilling.

APM HAZ-5: Final Induction Study and Utility Coordination

Design and construction of the proposed transmission lines shall be coordinated with existing utility owners (as applicable) to ensure that operation of the new transmission lines shall not cause unsafe electromagnetic induction effects on any existing metallic utilities located in close proximity to the proposed transmission lines. LS Power shall conduct a detailed Final Induction Study for all existing metallic utilities in close proximity to proposed transmission line alignments. Where potential adverse effects are identified by the induction study, LS Power shall coordinate with the applicable utility owner to develop appropriate mitigation measures. Final designs and mitigation strategies, if required, shall be submitted to the CPUC prior to commencement of construction of the transmission lines.

5.9.7 PG&E BEST MANAGEMENT PRACTICES

The following hazards, hazardous materials, and public safety-specific BMPs would be implemented by PG&E for the activities to be completed by PG&E and/or their contractors.

BMP HAZ-1: Oil Filled Electrical Equipment (OFEE)

The following measures shall be followed:

- OFEE shall be managed in accordance with ENV-3000P-02-JA01 Job Aid: Handling In-Service Electrical Equipment from the Field.
- If during the removal/replacement of OFEE, visible evidence of an oil leak is identified (e.g., seeping, weeping, staining, sheen), contact your local Environmental Field Specialist (EFS) immediately to determine cleanup actions and regulatory reporting requirements.
- Work must cease on all leaking pre-July 1, 1979, equipment or equipment without a non-PCB blue sticker or other non-PCB indicator on its nameplate until you've made contact with your local EFS.
- All leaking equipment must be patched, pumped, or containerized in the field so that it shall not leak during transport; taken straight back to the Service Center (i.e., stops at staging areas are prohibited); and placed in the designated returned equipment area with a completed yellow condition tag.
- Other equipment and bushings that cannot be tested and will be assumed > 500 ppm PCB. Contact the EFS to coordinate generation of a purchase order and contract for disposal. This equipment shall be transported by a PG&E-approved hazardous waste contractor and taken to a disposal facility.
 - Note: Do NOT transport to a PG&E waste consolidation site.

BMP HAZ-2: Hazardous Materials Business Plan

The EFS shall be notified 30 days prior to a threshold exceeding hazardous material/waste being placed on-site. Threshold limits are: 200 cubic feet of compressed gases (1,000 cubic feet for simple asphyxiation or the release of pressure only; carbon dioxide), 500 pounds of solids, or 55 gallons of liquids for more than 30 non-consecutive days. If required, the local county or city shall be notified of any amount of hazardous material/waste:

- Counties: Nevada, San Bernardino (waste only), San Francisco, Santa Clara (call for city specific details), Santa Cruz, Yuba (waste only)
- Cities: Bakersfield (waste only), Berkeley, Healdsburg, Sebastopol, Petaluma, Santa Clara (call for city specific details)
- PG&E shall develop an HMBP as necessary.

BMP HAZ-3: Hazardous Waste Management

This Proposed Project may involve the storage of hazardous materials and they must be managed according to regulations and the following BMPs.

- All releases of hazardous materials must be immediately addressed. Maintain a spill kit onsite during the length of the Proposed Project. Contact the Proposed Project EFS for spills of hazardous materials/wastes to determine if agency notifications shall be required and/or if additional resources are needed.
- Hazardous materials, greater than 440 lbs and less than 1,001 lbs can be transported on PG&E vehicles if the proper materials of trade (MOT) shipping paper/Material Safety Data Sheet (MSDS) accompanies the load. Contact the Proposed Project EFS for additional guidance in these areas.
- All hazardous materials containers must be marked correctly.
- All hazardous materials signs must be displayed as required.

- Non-saturated oily rags (to be laundered) stored in non-combustible containers.
- Emergency equipment such as fire extinguisher, eye wash, MSDS, etc. must be available on-site.
- Hazardous material containers must be in good condition.
- All hazardous materials must be compatible with containers.
- Hazardous materials containers are kept closed.
- If there is an unauthorized release of hazardous material, contact your EFS immediately. For after-hours releases contact the Environmental Emergency Hotline at 1-800-874-4043.

Immediately contact the local PG&E EFS and stop work if any of the following conditions occur. After hours or if the local EFS is unavailable, please call the Environmental Hotline at 800-874-4043.

- Discharge or spill of hazardous substance.
- If an Environmental Regulator visits the site.
- Visually cloudy/muddy water is observed leaving the work area.
- An underground storage tank is discovered.
- A subsurface component related to site remediation activities (e.g., monitoring well, recovery well, injection well) is discovered. No subsurface components may be impacted.
- If during excavation unanticipated evidence of contamination is identified (e.g., staining, odors), work must cease and when safe to do so, cover the trench with steel plates. In order to minimize impacts to public safety and the environment, place contaminated soil on a polyethylene sheet (four milliliters) and cover or place the contaminated soil in lined covered containers. Then contact your local/support EFS to determine the next steps.
- If any subsurface components related to site remediation activities (e.g., monitoring well, recovery well, injection well) are discovered in the path of excavation, work must cease in that location and your EFS must be notified to determine the next steps. No subsurface components may be impacted.

BMP HAZ-4: Lead Acid Batteries

This Proposed Project shall be generating lead-acid battery universal waste. The construction contractor or PG&E technicians shall properly manage and dispose of universal waste and follow Lead Acid Battery Procedure ENV 4000P-05-JA05 and/or ENV 4000P-05-JA06. Contact the Proposed Project EFS for additional guidance in these areas.

Management of Undamaged (Intact) Batteries – Universal Waste:

- If batteries are undamaged (i.e., intact and not leaking), they can be managed as universal waste at the nearest PG&E waste consolidation site. Remote sites shall have batteries transported and disposed of from site if quantities warrant. A PG&E-approved hazardous waste contractor transports intact batteries from a waste consolidation site to an approved universal waste handler using a non-hazardous waste manifest.

- Note: It is recommended that large station backup batteries are better shipped directly from the substation to a disposal facility rather than taken to a PG&E waste consolidation site. Coordinate with the local EFS for disposal.
- Reference ENV 4000P-05-JA05 for general information, proper labeling, transportation, storage, and accumulation time limit.

Management of Damaged or Leaking Batteries – Hazardous Waste:

- Ship damaged or leaking batteries from a waste consolidation site to an approved treatment, storage, and disposal facility (TSDF) for disposal using a PG&E-approved hazardous waste contractor and a uniform hazardous waste manifest (see ENV-4000P-02-JA01 Uniform Hazardous Waste Manifest).
- Batteries must be placed in non-reactive, structurally sound, closed containers (such as plastic drum) that are adequate to prevent breakage or further damage and contain vermiculite, which can be attained at a PG&E waste consolidation site.
- Reference ENV 4000P-05-JA05 for general information, proper labeling, transportation, storage, and accumulation time limit. Transportation – Reference ENV 4000P-05-JA05
- Transporting > 10 lbs of non-spillable batteries per vehicle from a field location to a consolidation facility requires a shipping paper (see Utility Procedure: ENV-4000P-05, Hazardous Waste Shipping Paper). Contact EFS if there is a large quantity of batteries for waste to determine handling and whether to ship from site to recycler.
- Transporting ≤ 10 lbs of intact batteries per vehicle does not require a shipping paper. However, document the shipment in the log maintained in the consolidation site's waste storage area Disposal – Reference ENV 4000P-05-JA06.

BMP HAZ-5: Lead Paint Removal

For any physical removal, sanding, scraping, needle gunning, blasting, welding, contact the local Safety Specialist or Paintings and Coating Department. For PG&E Contractor lead paint removal, the Contractor shall adhere to the Contract for worker health and safety. If the Proposed Project team has safety concerns prior to or during the Proposed Project, immediately contact the Safety Program Consultant.

BMP HAZ-6: Sulfur Hexafluoride (SF₆) Gas Material/Waste Management

Advanced Specialty Gas (ASG) provides sole-source service in supplying, replacing, removal and recycling of SF₆ in all facilities. ASG provides 24-hour service in response to events involving SF₆ as well as delivery and removal of all SF₆ cylinders.

- Contact information: <https://www.advancedspecialtygases.com>.

Before accessing any equipment that may contain SF₆ gas byproduct waste, contact the local EFS at least two weeks in advance for assistance in arranging cleanup, transportation and disposal.

- The Planning Section Chief (PSC) shall retrieve, package, label, and transport SF₆ byproduct waste (i.e. fluorides of sulfur, metallic fluorides, etc.). All SF₆ byproduct waste that is removed must have proper shipping papers, which could include a remote waste shipping paper or a manifest (manifests require a permanent or temporary EPA identification number).

- SF6 cylinder tracking and facility inventory shall be managed in accordance with Utility Procedure TD-3350P-001.

BMP HAZ-7: Spill Prevention, Control, and Countermeasure (SPCC) Plan

The local/support EFS shall be notified 30 days prior to an SPCC-triggering event occurs. Events that trigger an SPCC include:

- New storage of oil at a facility causing the total oil storage to exceed 1,320 gallons.
- Modification to existing oil storage at a facility that contains >1,320 gallons of oil by addition or removal of oil containers >55 gallons.

If the oil volume is contained in anything greater than 55 gallons, the SPCC Plan must be certified by a licensed engineer. SPCC containment must be installed prior to moving on-site of oil quantities requiring containment. The Project Manager (PM) number must remain open until the local/support EFS notifies the team that the plan is certified by an engineer, and any necessary modifications are complete.

BMP HAZ-8: Underground Electric Cable

Underground electric cable might require special handling and disposal as the cable may potentially be wrapped in lead or asbestos containing material, contain asbestos insulation, and/or oil for insulation. Furthermore, insulating oil used in underground cable may contain PCBs. If evidence of these hazardous materials is identified during the cable replacement, such as weeping oil from the cut end of the cable, the local EFS shall be contacted immediately to arrange for sampling, and to determine transportation and disposal requirements. A PG&E authorized hazardous waste hauler may be required to transport the cable. Arc-proofing wrap that is both friable (brittle, crisp or fragile) and non-friable must be removed by a certified abatement vendor or trained PG&E personnel (PG&E Insulation & Coatings, PSC, Bohm, ACS).

BMP HAZ-9: Vault Dewatering

Vault dewatering may be required. All vault dewatering must take place in accordance with the Vault Dewatering form.

BMP HAZ-10: Stormwater BMP Installation

This Proposed Project shall require a Stormwater Pollution Prevention Plan (SWPPP). If the construction crew shall not be installing stormwater BMPs, it is the responsibility of the Proposed Project manager to contact the Stormwater Quality Subject Matter Expert (SME) and Environmental Lead prior to construction to request BMP support with as much lead time as possible. Thirty days is preferred. The regional Stormwater SME shall hire a contractor to install, maintain, and remove stormwater BMPs.

BMP HAZ-11: Construction Dewatering

If dewatering of trenches or excavations is required, the Environmental Lead/Proposed Project EFS shall be notified at least 30 days in advance to ensure the appropriate dewatering methods are used, proper notifications are made, and, if necessary, applicable authorizations/permits are obtained. All dewatering activities must be coordinated through the Environmental Lead/Proposed Project EFS throughout the duration of the Proposed Project.

5.9.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for hazards, hazardous materials, and public safety would be implemented for SVP's scope of work.

5.10 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 water discharge requirements or otherwise substantially degrade surface or groundwater quality?			X	
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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?			X	
	ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
	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?			X	
	iv) Impede or redirect flood flows?			X	
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

This section describes hydrology and water quality within the vicinity of the Proposed Project, as well as potential impacts resulting from construction and operation and maintenance (O&M) of the Proposed Project.

5.10.1 ENVIRONMENTAL SETTING

The Proposed Project area is located within the San Francisco Bay Hydrologic Region (“Region”), which covers 4,603 square miles of waterways, wetlands, bays, and estuaries (San Francisco Bay Regional Water Quality Control Board [RWQCB], 2023). The Region includes all of the County of San Francisco and all or major portions of the Counties of Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and Alameda. Surface water and groundwater quality within the Region are regulated by the San Francisco Bay RWQCB. Surface water flows in the Region are highly seasonal, with more than 90 percent of the annual runoff occurring during the winter rainy season between October and April. Many streams become dry during the middle or late summer. Groundwater is an important component of the hydrologic system in the Region, as it supplies high quality water for drinking, irrigation, and industrial processing and service. As an important source of freshwater replenishment, groundwater may also discharge to surface streams, wetlands, and the San Francisco Bay.

Watersheds are delineated by the United States Geological Survey (USGS) using a Nationwide system based on surface hydrologic features. The Proposed Project area is located within two hydrologic unit code (HUC) watersheds as delineated by USGS within the San Francisco Bay Hydrologic Unit: the San Francisco Bay Watershed (HUC 18050004) and the Coyote Watershed (HUC 18050003) (USGS, 2024a; 2024b). See **Figure 5.10-1, Surface Water** for a depiction of the hydrologic setting of the Proposed Project area.

The San Francisco Bay Watershed (HUC 18050004) encompasses the San Francisco Bay and covers an area of approximately 1,333 square miles (853,147 acres) across the Counties of San Francisco, San Mateo, Santa Clara, Contra Costa, and Alameda. The watershed is bordered to the west by the northern extent of the Santa Cruz Mountains and extends to the Coastal Range and Diablo Range Mountains to the east. Surface water tributaries in the San Francisco Bay Watershed primarily drain towards the San Francisco Bay, except for tributaries that drain to inland waterbodies such as the Upper San Leandro Reservoir. Major rivers and creeks within five miles of the Proposed Project area that drain to the San Francisco Bay in the watershed include Newark Slough, Plummer Creek, Mowry Slough, Mud Slough, and Coyote Creek (California Natural Resources Agency [CNRA], 2024).

The Coyote Watershed (HUC 18050003) covers an area of approximately 720 square miles (460,973 acres) across the Counties of San Mateo, Santa Clara, and Santa Cruz. The watershed encompasses the Santa Clara Valley and is bordered by the Santa Cruz Mountains to the west and southwest; San Francisco Bay, Bay Creek, and the County of Alameda to the north; and the Diablo Range Mountains to the east. Surface water tributaries in the Coyote Watershed primarily drain to the north and eventually to the San Francisco Bay. Major rivers and creeks within five miles of the Proposed Project area in the watershed include Coyote Creek, Penitencia Creek, Berryessa Creek, and the Guadalupe River (CNRA, 2024).

The Proposed Project is located with the Santa Clara Valley Groundwater Basin. The Santa Clara Valley Groundwater Basin is divided into four groundwater subbasins: San Mateo Plain, Santa Clara, Niles Cone, and East Bay Plain. The Proposed Project spans between two groundwater subbasins: Santa Clara and Niles Cone Subbasins (see **Figure 5.10-2, Groundwater Basins Map**).

The Niles Cone Subbasin is bounded on the east by the Diablo Range and on the west by the San Francisco Bay. Alameda Creek, the principal stream in the subbasin, flows near the eastern

and northern margins of the subbasin. Coyote Creek flows along the southern margin of the subbasin. Average precipitation within the subbasin is about 18 inches annually (California Department of Water Resources [DWR], 2015). The subbasin includes local runoff from the Alameda Creek watershed, which accounts for about 40 percent of the County of Alameda's total water supply and is used to recharge the aquifers of the Niles Cone Subbasin. This runoff, together with water released from the South Bay Aqueduct at a location east of the Town of Sunol, flows down Alameda Creek and into the Alameda Creek Flood Control Channel. Here, the water is captured behind three large, inflatable rubber dams. These dams divert water to the Quarry Lakes, where water percolates to recharge the underlying groundwater basin (Alameda County Water District [ACWD], 2023a).

The Santa Clara Subbasin extends from the northern border of the County of Santa Clara to the groundwater divide near the City of Morgan Hill. The Santa Clara Subbasin drains to the north by tributaries to San Francisco Bay, including Coyote Creek, the Guadalupe River, and Los Gatos Creek. The annual precipitation for the Santa Clara Subbasin ranges from less than 16 inches in the valley to more than 28 inches in the upland areas (California DWR, 2004).

The topography within the Proposed Project area is relatively flat, ranging from zero feet to approximately 40 feet above mean sea level (amsl). Topography at the proposed high-voltage direct current (HVDC) terminal sites ranges from 17 to 19 feet amsl at the Albrae terminal site and zero to 20 feet amsl at the Baylands terminal site. The proposed transmission line alignments are predominately characterized by relatively flat paved roadways. **Figures 5.10-1** and **5.10-2** illustrate the hydrologic setting of the area.

5.10.1.1 Waterbodies

Mapped Waterbodies

There are nine mapped streams and waterbodies that cross the path of the Proposed Project alignment (United States Fish and Wildlife Service [USFWS], 2024; **Figure 5.10-1**). See below for a summary of the nine mapped waterbody crossings (WC) and each water quality classification per the California State Water Resources Control Board (SWRCB) California Integrated Report, which includes the Clean Water Act (CWA) Section 303(d) list of impaired waters. The 2022 California Integrated Report is the most recently approved Statewide Section 303(d) list; however, the 2024 California Integrated Report has been submitted to the United States Environmental Protection Agency (EPA) and is pending approval. Therefore, water quality classifications from the approved 2022 California Integrated Report and pending 2024 California Integrated Report are provided below, where applicable. No mileposts are provided; therefore, a qualitative discussion of each WC is provided below.

- **WC-1:** The proposed Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line corridor would potentially overlap a floodplain area included in the Don Edwards San Francisco Bay National Wildlife Refuge (NWR) along Cushing Parkway. The floodplain is classified in the USFWS National Wetlands Inventory (NWI) as a freshwater emergent wetland that is nontidal and seasonally flooded. Construction for the proposed Albrae to Baylands 320 kV DC transmission line along Cushing Parkway would use bridge attachments or trenching within an existing utility easement adjacent to the Cushing Parkway bridge. This floodplain area is not listed as impaired under the CWA Section 303(d).

- **WC-2:** The proposed Albrae to Baylands 320 kV DC transmission line alignment in Cushing Parkway would perpendicularly cross Laguna Creek. Laguna Creek is a tributary to the Coyote Creek canal that drains towards the Coyote Creek Lagoon and eventually to the marine estuary of the south San Francisco Bay. The Laguna Creek crossing is classified in the USFWS NWI as an intermittent estuarine, intertidal streambed that is regularly flooded and fluctuates with tidal influences. Laguna Creek is not listed in the 2022 California Integrated Report Section 303(d) list of impaired waters; however, it is proposed for listing in the 2024 California Integrated Report due to elevated levels of ammonia (SWRCB, 2022; 2024). The portion of the proposed Albrae to Baylands 320 kV DC transmission line that would cross this mapped stream would utilize a specialized trenching technique. Specifically, horizontal directional drilling (HDD) construction techniques would be employed.
- **WC-3:** The proposed Albrae to Baylands 320 kV DC transmission line corridor located within Fremont Boulevard, immediately south of Staging Area 3, would perpendicularly cross a tributary of Agua Caliente Creek. This channel is classified in the NWI as an intermittent estuarine, intertidal streambed that is regularly flooded and fluctuates with tidal influences (created by human excavation). Agua Caliente Creek is not listed on the Section 303(d) list of impaired waters (SWRCB, 2022; 2024). The portion of the proposed Albrae to Baylands 320 kV DC transmission line that would cross this mapped stream would utilize HDD construction techniques.
- **WC-4:** The proposed Albrae to Baylands 320 kV DC transmission line corridor located within Fremont Boulevard, approximately 430 feet north of Warren Avenue, would perpendicularly cross an unnamed water feature. This unnamed water feature is classified in the NWI as an unnamed estuarine and marine channel that is regularly flooded and fluctuates with tidal influences (created by human excavation). This unnamed water feature is not listed on the Section 303(d) list of impaired waters (SWRCB, 2022; 2024). The portion of the proposed Albrae to Baylands 320 kV DC transmission line that would cross this mapped stream would utilize HDD construction techniques.
- **WC-5:** The proposed Albrae to Baylands 320 kV DC transmission line corridor located within Fremont Boulevard approximately 0.07 mile south of Lakeview Boulevard would perpendicularly cross Agua Fria Creek. Agua Fria Creek is classified in the NWI as a perennial riverine habitat that is permanently flooded and tidally influenced (created by human excavation). This portion of Agua Fria Creek is not listed on the Section 303(d) list of impaired waters in the 2022 or 2024 California Integrated Report (SWRCB, 2022, 2024). The portion of the proposed Albrae to Baylands 320 kV DC transmission line that would cross this mapped stream would utilize HDD construction techniques.
- **WC-6:** The proposed Albrae to Baylands 320 kV DC transmission line corridor located within Fremont Boulevard, approximately 0.23 mile south of Lakeview Boulevard would perpendicularly cross an unnamed water feature. This unnamed water feature is classified in the NWI as an intermittent riverine streambed that is seasonally flooded and completely dewatered at low tide. This unnamed water feature is not listed on the Section 303(d) list of impaired waters (SWRCB, 2022; 2024). The portion of the proposed Albrae to Baylands 320 kV DC transmission line that would cross this mapped stream would utilize HDD construction techniques.
- **WC-7:** The proposed Albrae to Baylands 320 kV DC transmission line alignment located immediately north of Staging Area 4 would perpendicularly cross a water feature that is part of Coyote Creek. This water feature is classified in the NWI as a perennial estuarine

and marine deep-water habitat that is continuously covered by tidal water and varies in salinity. Coyote Creek is listed on the Section 303(d) list of impaired waters for the pollutants diazinon, toxicity, and trash in the 2022 California Integrated Report (SWRCB, 2022) and is proposed to be listed for dissolved oxygen, pyrethroids, bifenthrin, cypermethrin, and mercury in the 2024 California Integrated Report (SWRCB, 2024). The portion of the proposed Albrae to Baylands 320 kV DC transmission line that would cross this mapped stream would utilize HDD construction techniques.

- **WC-8:** The proposed Baylands to Northern Receiving Station (NRS) 230 kV transmission line corridor, where it spans both sides of Los Esteros Road at its western terminus and meets Spreckles Avenue, would overlap with an estuarine wetland. This unnamed water feature is classified as a perennial deep-water intertidal wetland that is irregularly exposed during low tides and was modified by a man-made barrier or dam. This unnamed water feature is not listed on the Section 303(d) list of impaired waters (SWRCB, 2022; 2024). The portion of the proposed Baylands to NRS 230 kV transmission line that would cross this mapped stream would utilize HDD construction techniques.
- **WC-9:** The proposed Baylands to NRS 230 kV transmission line, approximately 500 feet west of Staging Area 11, would span over the Guadalupe River, a tributary to the San Francisco Bay. The Guadalupe River is classified as a perennial estuarine intertidal system that is regularly flooded with tidal influence. Guadalupe River is listed on the Section 303(d) list of impaired waters for the pollutants diazinon, mercury, and trash in the 2022 California Integrated Report (SWRCB, 2022) and is proposed to be listed for chlordane, toxicity, pyrethroids, and bifenthrin in the 2024 California Integrated Report (SWRCB, 2024). The portion of the proposed Baylands to NRS 230 kV transmission line that would cross the Guadalupe River would be constructed overhead.

Construction of the proposed Albrae to Baylands 320 kV DC transmission line along Cushing Parkway (**WC-1**) would either utilize bridge attachments or trenching within an existing utility easement adjacent to the east side of the Cushing Parkway bridge. There is also a drainage canal that borders the southwest edge of the proposed Albrae terminal site and parallels the west side of Weber Road and the proposed Newark to Albrae 230 kV transmission line corridor (see **Figure 5.10-1**). The drainage would not cross the Proposed Project site but is located within 100 feet of proposed construction activities. This unnamed drainage is classified as an intermittent riverine habitat that is seasonally and temporarily flooded and was created by human excavation (USFWS, 2024). In addition, there are two drainages that terminate south of Boyce Road that do not cross the Proposed Project area but are located in proximity to the proposed Albrae to Baylands 320 kV DC transmission line and Staging Area 2. The first is an unnamed drainage that runs along the east side of the existing Pacific Gas and Electric Company (PG&E) Newark substation and is mapped within 150 feet of Staging Area 2. This drainage is classified as an intermittent riverine streambed that is temporarily flooded for up to a few weeks out of the year. The second is an unnamed drainage that borders Staging Area 2 to the west and southwest and is classified as an intermittent riverine streambed that is temporarily flooded for up to a few weeks out of the year and was created by human excavation (USFWS, 2024). These unnamed drainages are not on the Section 303(d) list of impaired waters.

Jurisdictional Waters

Jurisdictional “waters of the United States,” including wetlands, are regulated by the United States Army Corps of Engineers (USACE) under Section 404 of the CWA and Sections 9 and 10 of the Rivers and Harbors Act. Jurisdictional waters include navigable waters, tributaries to navigable

waters, and adjacent wetlands that are shown to have an impact on downstream water quality. Each of the stream and drainage features described above would likely be considered “waters of the United States” that eventually drain into the San Francisco Bay Estuary or its tributaries.

In order to determine which waters are “waters of the United States,” jurisdictional delineations are performed on a property in order to inform the Proposed Project design. Federal wetlands, jurisdictional under Section 404 of the CWA, are determined using three factors: hydrology, soils, and vegetation. California Department of Fish and Wildlife (CDFW) jurisdictional limits are typically defined by the top extent of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider. Jurisdictional delineations have been, or would be, performed where the Proposed Project may result in impacts to jurisdictional waters. A portion of the Coyote Creek drainage adjacent to the proposed overhead Albrae to Baylands 320 kV DC transmission line (structures DC-1 and DC-2) and the proposed work areas along the Cushing Parkway bridge were investigated in December 2023 and March 2024, respectively, to determine jurisdictional boundaries for USACE and CDFW. Delineation of the ordinary high-water mark (OHWM) on the east and west banks of Coyote Creek determined the base CDFW, USACE, and RWQCB jurisdictional extents for this wetland feature. Beyond the ordinary high water mark, federal wetlands were determined by the presence of sufficiently saturated soils in combination with the presence of wetland soil types and wetland plant species. CDFW jurisdictional extent extends beyond the ordinary high-water mark, following the extent of riparian vegetation. The area below the CDFW line encompasses both aquatic resource types (emergent wetland and open-water channel) and would be jurisdictional waters pursuant to the sections 401 and 404 of the CWA as well as Section 1600 of the California Fish and Game Code. Similar jurisdictional delineations are pending for the overhead segment of the proposed Newark to Albrae 230 kV transmission line that would be constructed by LS Power and PG&E. Refer to **Section 5.4, Biological Resources** for additional information.

Proposed transmission line structures DC-1 and DC-2 both lie in upland areas, outside of CDFW and USACE jurisdiction (with DC-2 lying just outside of the wetland-upland jurisdictional boundary) (refer to **Figure 5.4-7, Biological Impact Area Map**). The temporary construction work areas for overhead structures DC-1 and DC-2 would overlap with the CDFW and USACE jurisdictional extent above the OHWM, but the permanent structures would be located outside of the combined jurisdictional boundary. If the structure itself or its associated construction footprint would permanently impact the wetland, a CWA authorization would be required. Nationwide Permit (NWP) 57 – Electric Utility Line and Telecommunications Activities allows for minor temporary and permanent impacts of this type and would be the likely CWA compliance vehicle if required. Sections 1600–1607 of the California Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that Proposed Project construction may substantially divert or obstruct the natural flow of or substantially affect the bed, channel, or bank of Coyote Creek, a Lake or Streambed Alteration Agreement would be required (see **Section 5.10.2, Regulatory Setting**). These jurisdictional waters are discussed further in **Section 5.4**.

USACE Levee Systems

Several waterbodies crossed by the Proposed Project are USACE levee systems mapped on the USACE National Levee Database (**Figure 5.10-3, USACE Levee Systems**) (USACE, 2024a). Through the Levee Safety Program, USACE partners with levee sponsors to manage levees that help reduce flood risk to people, businesses, critical infrastructure, and the environment. The

National Levee Database identifies nine levees crossed by the Proposed Project that are regulated by the USACE San Francisco District and its local government partners (see **Table 5.10-1, USACE Levee Systems**).

Table 5.10-1: USACE Levee Systems					
No.¹	Levee System Name	Location	Proposed Project Feature	Proposed Project Crossing Method	Responsible Organization
1	Alameda Z06, Line E – Laguna Creek (IGCR) – Right Bank (RB)	Laguna Creek (west bank), crosses under Cushing Parkway	Albrae to Baylands 320 kV DC transmission line (underground)	HDD	USACE – San Francisco District
2	Alameda Z06, Line E – Laguna Creek (IGCR) – Left Bank (LB)	Laguna Creek (east bank), crosses under Cushing Parkway	Albrae to Baylands 320 kV DC transmission line (underground)	HDD	USACE – San Francisco District
3	King & Lyons	Northeast side of Coyote Creek Lagoon, crosses Fremont Boulevard near Warren Avenue	Albrae to Baylands 320 kV DC transmission line (underground)	HDD	Alameda County Flood Control and Water Conservation District (FCWCD)
4	Santa Clara County Levee 1	Crosses Fremont Boulevard north of McCarthy Boulevard north of Staging Areas 4, 5	Albrae to Baylands 320 kV DC transmission line (underground)	HDD	State of California
5	Coyote Creek, Santa Clara – LB	Eastern boundary of San José-Santa Clara Regional Wastewater Facility (RWF), west bank of Coyote Creek	Albrae to Baylands 320 kV DC transmission line structures DC-3 to DC-4 (overhead)	Overhead	USACE – San Francisco District
6	Santa Clara County Levee 50	Within San José-Santa Clara RWF property	Albrae to Baylands 320 kV DC transmission line structures DC-8 to DC-9 (overhead)	Overhead	USACE – San Francisco District
7	Santa Clara County Levee 56	Within San José-Santa Clara RWF property	Albrae to Baylands 320 kV DC transmission line structures DC-9 to DC-10 (overhead)	Overhead	USACE – San Francisco District
8	Guadalupe River – RB	Guadalupe River (east bank)	Baylands to NRS 230 kV transmission line structures AC-3 to AC-4 (overhead)	Overhead	USACE – San Francisco District
9	Guadalupe River – LB	Guadalupe River (west bank)	Baylands to NRS 230 kV transmission line structures AC-3 to AC-4 (overhead)	Overhead	USACE – San Francisco District

¹ These numbers correspond to levees labeled on **Figure 5.10-3**.
Source: USACE, 2024a

There is also one levee system mapped on the National Levee Database along Agua Caliente Creek (Alameda County Levee 88; USACE, 2024a), which terminates southwest of Fremont Boulevard approximately 160 feet west of the proposed Albrae to Baylands 320 kV DC transmission line alignment. The Proposed Project area would not cross this levee; thus, USACE review for this levee is not expected to be required. USACE Section 408 policy, described further in **Section 5.10.2.1, Hydrology and Water Quality Regulatory Setting**, sets forth the process and criteria USACE uses to review requests to alter USACE civil works projects which include dams, hydropower, levee systems, and navigational channels.

5.10.1.2 Water Quality

Under the CWA Section 303(d), states are required to review, edit, and submit a list of water quality limited segments that are not meeting, or are not expected to meet, water quality standards, to the EPA. Every two years, the California SWRCB updates the California Integrated Report (SWRCB, 2024), which consists of the CWA Section 303(d) list of impaired surface waters and is prepared in collaboration with each RWQCB. Both the Guadalupe River and Coyote Creek are listed on the SWRCB Section 303(d) list of impaired water bodies in both the most recently approved 2022 California Integrated Report and the 2024 California Integrated Report, which is pending EPA approval. The Guadalupe River is located approximately 1.1 miles southwest of the proposed Baylands terminal and crosses underneath the overhead portion of the proposed Baylands to NRS 230 kV transmission line directly north of State Route 237. Coyote Creek is located approximately two miles south of the proposed Albrae terminal. Pollutants in the Guadalupe River include diazinon, trash, and mercury; and pollutants in Coyote Creek include diazinon, trash, and toxicity from urban runoff/storm sewers (SWRCB, 2022). In the pending 2024 California Integrated Report, Coyote Creek is proposed to be listed on the Section 303(d) list of impaired waters for dissolved oxygen, pyrethroids, bifenthrin, cypermethrin, and mercury; and the portion of Guadalupe River crossed by the Proposed Project is proposed to be listed for chlordane, toxicity, pyrethroids, and bifenthrin (SWRCB, 2024). Water quality in the Guadalupe River and Coyote Creek are monitored by the Santa Clara Valley Water District (SCVWD or "Valley Water"). Laguna Creek, which is crossed by the proposed Albrae to Baylands 320 kV DC transmission line, is also proposed to be listed on the 2024 Section 303(d) list of impaired waters for ammonia (SWRCB, 2024).

Downstream from the Proposed Project, the Coyote Creek and Guadalupe River watersheds drain into the South San Francisco Bay, which is classified as an impaired water body due to various pollutants including polychlorinated biphenyls (PCBs) and invasive species (SWRCB, 2022; 2024). Additional downstream water bodies are proposed to be listed in the pending 2024 California Integrated Report, including the Artesian Slough (north of Los Esteros Road) and Alviso Slough (downstream from the Guadalupe River). In the pending 2024 California Integrated Report, the listed pollutants are PCBs and mercury in the Artesian Slough, and PCBs in the Alviso Slough (SWRCB, 2024).

The San Francisco Bay RWQCB is responsible for developing Total Maximum Daily Loads (TMDLs) for water bodies that do not meet water quality standards within its jurisdiction and the pollutants that impair them (San Francisco Bay RWQCB, 2024). Current TMDLs within and downstream from the Proposed Project include the Guadalupe River Watershed Mercury TMDL, San Francisco Bay Mercury TMDL, and San Francisco Bay PCBs TMDL. The Guadalupe River Watershed Mercury TMDL was developed to address mercury contamination originating from the New Almaden Mining District, which is approximately 17.5 miles south of the nearest Proposed Project component. In addition to being the primary regulatory means of achieving water quality

goals in the watershed, the Guadalupe River Watershed Mercury TMDL aims to simultaneously reduce the amount of mercury in the San Francisco Bay in accordance with the San Francisco Bay Mercury TMDL's proposed requirements. The San Francisco Bay TMDLs are contained in the Water Quality Control Plan for the San Francisco Bay (San Francisco Bay Basin Plan), which is managed and enforced by the San Francisco Bay RWQCB (see **Section 5.10.2.1**).

5.10.1.3 Groundwater Basin

The Proposed Project area spans two subbasins within the Santa Clara Valley Groundwater Basin (Groundwater Basin Number 2-009): the Niles Cone Subbasin (Groundwater Basin 2-009.01) and the Santa Clara Subbasin (Groundwater Basin 2-009.02) (California DWR, 2018). The SCVWD has managed and monitored recharge to the Santa Clara Valley Groundwater Basin since 1929 to protect and augment groundwater supplies (SCVWD, 2023a). (See **Figure 5.10-2**.)

The Niles Cone Subbasin covers a surface area of 65,800 acres (103 square miles) and is bounded by the Diablo Range to the east and the San Francisco Bay to the west. Two values of groundwater storage capacity have been calculated for the Niles Cone Subbasin; the estimated storage to a base corresponding to mean sea level is 47,000 acre-feet (AF), and the estimated storage to 400 feet below mean sea level is 1,361,000 AF. The Niles Cone Subbasin consists of several regional aquifers of varying thickness and depth: the Newark and Centerville Aquifers extend beyond ACWD's boundaries to the San Francisco Peninsula to the west (California DWR, 2006), and the Deep Aquifers are hydraulically connected to the South East Bay Plain Basin to the north (ACWD, 2023a; 2023b). Alameda Creek, the principal stream in the subbasin, flows near the eastern and northern margins of the subbasin. Coyote Creek flows along the southern margin of the subbasin. Since 1914, ACWD has actively managed the Niles Cone Subbasin and conserved the water of the Alameda Creek Watershed (ACWD, 2023c).

The Santa Clara Subbasin covers a subsurface area of 153,600 acres and has a storage capacity of approximately 350,000 AF (California DWR, 2004). The subbasin boundary extends from the northern border of the County of Santa Clara to the groundwater divide near the Town of Morgan Hill and is bounded by the Diablo Range to the west and Santa Cruz Mountains to the east. The Santa Clara Subbasin consists of Quaternary alluvium deposits of unconsolidated gravel, sand, silt, and clay that eroded from adjacent mountain ranges by flowing water and were deposited into the valley. The alluvium comprises interfingering alluvial fans, stream deposits, and terrace deposits.

Since the early 1900s through the mid-1960s, water levels have declined from groundwater pumpage, which has induced subsidence in the Santa Clara Subbasin and caused degradation of the aquifer adjacent to the bay from saltwater intrusion. Prior to importation of surface water via the Hetch Hetchy Aqueduct and South Bay Aqueduct and the introduction of an artificial recharge program, water levels declined more than 200 feet. Since 1965, groundwater levels in Santa Clara Valley have generally increased as a result of increase in recharge and decreases in pumpage (California DWR, 2004).

Depth to groundwater is approximately five feet below ground surface (bgs) at the proposed Albrae terminal site and existing Newark substation site and five to 10 feet bgs at the proposed Baylands terminal site and existing Silicon Valley Power (SVP) NRS substation. Depth to groundwater along the proposed transmission line corridor ranges from zero to 10 feet bgs, depending on the time of year (California DWR, 2024; SCVWD, 2024a).

5.10.1.4 Groundwater Wells and Springs

A water well search was conducted via the Sustainable Groundwater Management Act (SGMA) Data Viewer well completion reports and the SCVWD website for the Proposed Project area (California DWR, 2024; SCVWD, 2024b). A summary of the active wells identified within 150 feet of the Proposed Project area is included in **Table 5.10-2, Water Wells in the Proposed Project Area**, below.

Table 5.10-2: Water Wells in the Proposed Project Area				
Proposed Project Component	Number of Active Wells Within or Adjacent to Proposed Project Component	Type of Well(s) and Well Depth	Number of Active Wells Within 150 Feet of Proposed Project Component	Type of Well(s) and Well Depth
Albrae Terminal	1	Monitoring Well; 130 feet	-	-
Baylands Terminal	1 ¹	Monitoring; 10 feet	-	-
Albrae to Baylands 320 kV DC Transmission Line	2	Monitoring Well; 51 feet	22	21 Monitoring Wells; 17-150 feet 1 Water Production Well; 0 feet
Baylands to NRS 230 kV Transmission Line	2	Remediation Well; 51 feet	14	Monitoring Wells; 15-75 feet
Newark to Albrae 230 kV Transmission Line	1 ²	Monitoring Well; 130 feet	-	-
Existing PG&E Newark Substation	-	-	-	-
Existing SVP NRS Substation	-	-	-	-
Total	4	-	36	-
¹ This well is also within 150 feet of the Albrae to Baylands 320 kV DC and Baylands to NRS 230 kV transmission lines and is only counted once in the total wells. ² This is the same well within the Albrae terminal site and is only included once in the total wells. Source: California DWR, 2024; SCVWD, 2024b				

There is one active well located in the southwest corner of the proposed Albrae terminal site, which is constructed to a depth of 130 feet bgs (California DWR, 2024). This well is also immediately adjacent to the underground portion of the proposed Newark to Albrae 230 kV

transmission line. The proposed Albrae terminal is sited on a property with industrial land use and zoning. The existing facilities at the proposed Albrae terminal site would be removed, and the existing well would be capped per regulations. There is one active well located near the proposed entrance to the Baylands terminal site, which is a monitoring well, constructed to a depth of 10 feet bgs (SCVWD, 2024a). This well is also located within 150 feet of the proposed Albrae to Baylands 320 kV DC and Baylands to NRS 230 kV transmission lines and may occur within the anticipated construction disturbance area. There are no active wells located within the proposed Baylands terminal site, the existing Newark substation, or the existing NRS substation (SCVWD, 2024b).

There are no active wells or springs directly within the anticipated disturbance area for the proposed transmission line corridor. However, there are three active monitoring wells within or immediately adjacent to Los Esteros Road, immediately north of the San José-Santa Clara RWF, and adjacent to the proposed Albrae to Baylands 320 kV DC transmission corridor. In addition, there is one remediation well located within Los Esteros Road approximately 0.2 mile east of its intersection with Spreckles Avenue, adjacent to the proposed Baylands to NRS 230 kV transmission line.

5.10.1.5 Groundwater Management

The Proposed Project is within the Santa Clara and Niles Cone Subbasins of the Santa Clara Valley Groundwater Basin. The Santa Clara Subbasin is exclusively managed by SCVWD, which is the Groundwater Sustainability Agency (GSA) for the Subbasin for the purposes of SGMA. SCVWD prepared the 2021 Groundwater Management Plan (GWMP) for the Santa Clara and Llagas Subbasins, which is the first required five-year update to the 2016 GWMP that was approved in 2019 by the California DWR. The GWMP identifies the strategies for replenishing groundwater with local and imported surface water; reducing demands on groundwater through treated surface water deliveries, water conservation, and water recycling; and monitoring groundwater and implementing programs to protect against contamination (SCVWD, 2021a).

Groundwater use in the Santa Clara Subbasin was 93,100 AF in 2021, an increase of 1,300 AF compared to 2020. This is greater than the five-year average of 82,000 AF due to continued higher demand by water retailers. Pumping locations and uses remained relatively stable, with nearly all (95 percent) groundwater used for municipal and industrial purposes. Due to below average precipitation in 2021, average groundwater levels were lower compared to 2020 but remained above the minimum thresholds established to protect against land subsidence and, thus, met the subsidence outcome measure in 2021. Estimated groundwater storage in the Santa Clara Subbasin at the end of 2021 was 291,300 AF, which was 23,900 AF lower than 2020 but above the 278,000 AF GWMP outcome measure. Santa Clara Subbasin groundwater continues to have very good quality overall. In 2021, 96 percent of water supply wells tested met primary health-based drinking water standards. Public water systems must comply with drinking water standards, which may require treatment or blending prior to delivery (SCVWD, 2021b; 2023b).

ACWD is the GSA for the Niles Cone Subbasin for the purposes of SGMA and prepares the Groundwater Monitoring Report for the Niles Cone Subbasin (ACWD, 2023a). In general, compared to levels observed during Fall 2021, groundwater levels observed during Fall 2022 are lower in the Subbasin's Newark Aquifer and the other Below Hayward Fault (BHF) aquifers. Water level at the primary BHF indicator well, 4S/1W-29A006, decreased by 0.81 feet from 7.73 to 6.92 feet. Water levels at the Above Hayward Fault (AHF) Aquifer were also lower during Fall 2022 compared with Fall 2021. Water level at the AHF primary indicator well, 4S/1W-27D008,

decreased by 0.21 feet, from 30.55 to 30.34 feet. The long-term critical minimum operating levels, as measured in ACWD's two primary indicator monitoring wells, are +15 feet for the AHF Subbasin and zero feet for the BHF Subbasin. A short-term level of -5 feet at the BHF primary indicator well is the current expected worst case for a multi-year critical drought (ACWD, 2023b). Although decreases in water levels were observed in the majority of wells and related aquifers, groundwater levels remain within ACWD's operational criteria and well above the SGMA minimum thresholds despite drought conditions.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff, and other factors not evident at the time borings are performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than anticipated. The possibility of groundwater level fluctuations has been considered when developing the design and construction plans for the Proposed Project. If groundwater is encountered, dewatering may be required. LS Power Grid California, LLC ("LS Power") would follow all applicable state and federal regulations. Dewatering procedures are further described in **Section 3.5.10.2, Dewatering**.

5.10.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.10.2.1 Hydrology and Water Quality Regulatory Setting

Federal

Clean Water Act

The CWA (33 United States Code [U.S.C.] Section 1251 et seq.) is the primary federal legislation that addresses water quality, pollution, and protection of the chemical, physical, and biological integrity of most waters in the United States. The CWA chiefly addresses the quality of surface waters, while groundwater contamination is addressed by other legislation, including the Resource Conservation and Recovery Act. Section 402 of the CWA established a permit system, the National Pollutant Discharge Elimination System (NPDES), to regulate point sources of discharge into navigable "waters of the United States." Under Section 404, the CWA regulates the placement of dredged or fill material into "waters of the United States," and, under Section 401, the CWA ensures that federally permitted activities comply with the Federal CWA and state water quality laws.

CWA Sections 303 and 304

Pursuant to Section 303 of the CWA, states are required to adopt water quality standards applicable to all "waters of the United States" (33 U.S.C. Section 1313). When adopting water quality standards, the states are required to consider the designated uses of the waters involved and the associated water quality criteria based upon those uses. Such standards are established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and their use and value for navigation. Standards are also required to protect the public health or welfare and enhance the quality of water. Preferably, adopted water quality standards consist of specific numerical criteria; however, non-numeric criteria (e.g., narrative criteria, species dependent criteria, ecological criteria) based on bioassessment or monitoring may be utilized where numeric criteria are not available.

Under Section 303(d), states, territories, and authorized Tribes are required to develop lists of “impaired waters,” identifying those waters where pollution controls are not sufficient to meet designated water quality standards resulting in the impairment of beneficial uses. In making designations, it is required that the jurisdiction establish a priority ranking system accounting for the severity of the pollution. This prioritization system is used in the development of TMDLs for these waters to address water quality issues and the restoration of beneficial uses. As noted in **Section 5.10.1.2, Water Quality**, the San Francisco Bay RWQCB has established a TMDL for the Guadalupe River to address concentrations of mercury and two TMDLs for the San Francisco Bay to address concentrations of mercury and PCBs (San Francisco Bay RWQCB, 2024). Within the Proposed Project vicinity, Coyote Creek and the Guadalupe River are listed in the 2022 Section 303(d) list of impaired waters. Coyote Creek, Guadalupe River, and Laguna Creek are proposed to be included in the 2024 Section 303(d) list of impaired waters, which is pending EPA review.

Section 304(a) requires that the EPA develop criteria for water quality that reflect the latest scientific knowledge based on data and scientific judgments on pollutant concentrations and environmental or human health effects. Criteria are grouped into six categories: aquatic life, biological, nutrients, human health, microbial (pathogen), and recreational.

Implementation of Section 303 of the CWA (i.e., adoption of water quality standards, identification of beneficial uses, and identification of impaired waters) in California is performed by the SWRCB and nine RWQCBs. The Proposed Project is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

CWA Section 401

Section 401 of the CWA provides states and authorized Tribes the opportunity to protect water quality by requiring that any applicant for a federal license or permit, conducting an activity that may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the state in which the discharge originates (33 U.S.C Section 1341). This authority ensures that federally permitted activities comply with the CWA and state water quality laws. Section 401 is implemented through a review process conducted by the RWQCB, or, in the case of multiple RWQCB jurisdictions having authority, by the California SWRCB. The Proposed Project is within the jurisdiction of the San Francisco Bay RWQCB and may result in potential impacts to CWA jurisdictional waters that would require a Section 401 Water Quality Certification.

CWA Section 402

The NPDES program, established in 1972 as part of the CWA, controls water pollution through regulation of point source pollutants discharging to “waters of the United States” (33 U.S.C. Section 1342). Under the NPDES program, all facilities discharging pollutants from any point source into “waters of the United States” are required to obtain a NPDES permit. Though broadly defined, pollutants typically include any type of industrial, municipal, and agricultural waste and, for regulatory purposes, have been grouped into three categories: conventional (Section 304(a)(4) of the CWA), toxic (Section 307(a)(1) of the CWA), and non-conventional (pollutants not otherwise defined including many nutrients or water quality parameters). The primary focus of the Federal NPDES permitting program has historically been municipal and non-municipal (industrial) discharges.

In 1987, with the issuance of the 1987 Water Quality Act, Section 402 of the CWA was amended, requiring regulation of additional stormwater dischargers (NPDES Stormwater Program). Phase I of the NPDES Stormwater Program addresses five categories of dischargers (Phase I Facilities) including certain industrial activities, Municipal Separate Storm Sewer Systems (“MS4s”), and facilities considered to be significant contributors of pollutants. The Phase I industrial stormwater program regulations include provisions requiring construction sites disturbing greater than five acres to obtain NPDES permits. Phase II regulations of the NPDES Stormwater Program, issued in 1999, address additional dischargers not covered by Phase I regulations. The Phase II regulations expand permitting requirements to small MS4s, construction sites of one to five acres, and certain previously exempt industrial facilities.

The EPA is the primary authority to implement NPDES, although the CWA allows the EPA to delegate NPDES authority to the states. The CWA is implemented on a state and local level in California primarily by the SWRCB and nine RWQCBs, collectively. Whereas the Federal NPDES program mostly deals with point source control, current focus and regulation is shifting to nonpoint source pollution control under the authority of the RWQCBs. The San Francisco Bay RWQCB is the permitting authority for projects in its jurisdiction under the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit.

CWA Section 404

Section 404 of the CWA prohibits the discharge of dredged or fill material into “waters of the United States” without a permit from the USACE under Sections 9 and 10 of the Rivers and Harbors Act. Under the Rivers and Harbors Act, Section 10 permits are required for work or structures in, over, or under navigable “waters of the United States.” In light of recent litigation, USACE and EPA are currently interpreting “waters of the United States” pursuant to the pre-2015 regulatory regime, as interpreted by the agencies’ *Rapanos* guidance. Specifically, the agencies are applying the following regulatory definition, which had been codified at 40 Code of Federal Regulations (CFR) 230.3(s):

The term “waters of the United States” means:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as “waters of the United States” under this definition;

5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not "waters of the United States."

The EPA also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions. The Proposed Project may impact CWA jurisdictional waters and may require a Section 404 Permit under the NWP 57 – Electric Utility Line and Telecommunications Activities.

Rivers and Harbors Act of 1899

Section 10 (33 U.S.C. 403)

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in or over any navigable "waters of the United States". Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable waters of the United States, and applies to all structures, including any permanent, or semi-permanent obstacle or obstruction.

Section 14 (33 U.S.C. 408) (Section 408 Program)

Section 408 allows another party, such as a local government, company, or individual, to alter a USACE Civil Works project, including dams, basins, levees, channels, navigational channels, and any other local flood protection works constructed by the USACE. Reasons for alterations could include improvements to the projects, relocation of part of the project, or installing utilities or other non-project features. Alterations refer to any action by any entity other than USACE that builds upon, alters, improves, moves, occupies, or otherwise affects the usefulness, or the structural or ecological integrity, of a USACE project. Alterations also include actions approved as "encroachments" pursuant to 33 CFR 208.10. The Section 408 program verifies that changes to authorized USACE Civil Works projects will not be injurious to the public interest and will not impair the usefulness of the project. This requirement was established in Section 14 of the Rivers and Harbors Act of 1899, which has since been amended several times, and is codified at 33 U.S.C. 408, which is the section of U.S. Code that gives the program its name.

Requesters of a Section 408 permit have the responsibility to acquire all other permissions or authorizations required by federal, state, and local laws or regulations, including any required permits from the USACE Regulatory Program under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Section 404 of the CWA (33 U.S.C. Section 1344), and/or Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413). In addition, an approval under Section 408 does not grant any property rights or exclusive privileges nor does it

authorize any injury to the property or rights of others. Review of requests for alteration are reviewed by a USACE technical review team considering the following factors:

1. Impair the Usefulness of the Project Determination. The review team will determine if the proposed alteration would limit the ability of the USACE project to function as authorized, or would compromise or change any authorized project conditions, purposes, or outputs.
2. Injurious to the Public Interest Determination. Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest.
3. Environmental Compliance. A decision on a Section 408 request is a federal action, and therefore subject to the National Environmental Policy Act (NEPA) and other environmental compliance requirements.

The USACE regulatory district with jurisdiction over the Proposed Project area is the USACE San Francisco District (USACE, 2024b). As described in **Section 5.10.1.1, Waterbodies**, the Proposed Project would cross nine USACE levee systems, including four levee crossings via HDD and five overhead crossings. Although no levee alteration is proposed, because the levees are under USACE jurisdiction, each Proposed Project action that may be considered encroachment or alteration of a levee would require USACE review to determine if a Section 408 permit is required. An additional three levees (numbers 5, 6, and 7 in **Table 5.10-1** and **Figure 5.10-3**) may also require Section 408 review because the Proposed Project would include installation of new overhead transmission structures (DC-4 and DC-9, respectively) as well as temporary work areas located near the levee (as mapped by the USACE data). During final engineering, LS Power would coordinate with the USACE San Francisco District to determine if additional approval under Section 408 would be required at these locations.

National Flood Insurance Program

The National Flood Insurance Act of 1968 establishes the National Flood Insurance Program (NFIP), which provides private company flood insurance by the federal government. The NFIP relies on the national mapping system known as the Flood Insurance Rate Map (FIRM), which denotes special hazard areas associated with 100- and 500-year flood events (Federal Emergency Management Agency [FEMA], 2024). Lower rates are provided through the program for communities that encourage mitigation of flood hazards.

FEMA has primary authority for preparation, response, and mitigation of natural hazards, including coastal and inland floods. FEMA provides financial and technical support to local agencies in the drafting and implementation of hazard mitigation plans. CFR Title 44, Part 60 provides criteria for communities participating in the NFIP to adopt flood plain management regulations consistent with federal criteria for lands within flood-prone, mudslide- (i.e., mudflow) prone, or flood-related erosion-prone areas.

State

Porter-Cologne Water Quality Control Act

The Proposed Project would not result in impacts to “waters of the State”, and, therefore, reference to the Porter-Cologne Water Quality Control Act (“Porter-Cologne Act”) is provided here for informational purposes only. The Porter-Cologne Act (California Water Code Section 13000 et seq.) provides guidance for the protection of water quality and beneficial uses of water

throughout the state and, along with the CWA, provides the overarching legislation governing the SWRCB and RWQCBs. "Waters of the State" are defined as any surface water or groundwater, including saline waters, which are within the boundaries of the State of California (California Codes: Public Resources Code [PRC] Section 71200). This differs from the CWA definition of "waters of the United States" by its inclusion of groundwater and waters outside the OHWM in its jurisdiction.

The Porter-Cologne Act requires that each regional board adopt a Water Quality Control Plan, known as a "Basin Plan" for their region. Pursuant to Porter-Cologne, these Basin Plans become part of the California Water Plan, when such plans have been reported to the legislature (Section 13141, California Water Code). The Proposed Project is located within the jurisdiction of the San Francisco Bay RWQCB (Region 2) and subject to the criteria within the Basin Plan for the Sacramento River and San Joaquin River (San Francisco Bay RWQCB, 2023).

In 1972, amendments to the Porter-Cologne Act gave California the authority and ability to operate the Federal NPDES permits program. Before a permit may be issued, Section 401 of the CWA requires that the local RWQCB or, in the case of multiple RWQCB jurisdictions having authority, the SWRCB certify that the discharge would comply with applicable water quality standards. In addition, under Porter-Cologne, the RWQCB or SWRCB may also issue waste discharge requirements that set conditions on the discharge of a waste. These requirements must be consistent with the Basin Plan for the body of water that receives the waste discharge, as well as protect the beneficial uses of those receiving waters. On August 19, 1999, the SWRCB reissued the General Construction Stormwater Permit (Water Quality Order 99-08-DWQ), later amending it to apply to sites as small as one acre. On September 2, 2009, the SWRCB adopted Order No. 2009-0009-DWQ, which reissued Water Quality Order 99-08- DWQ. Order No. 2009-0009-DWQ has subsequently been amended by Order No. 2010-0014- DWQ in 2010, Order No. 2012-0006-DWQ in 2012,, and most recently by Order No. 2022-0057-DWQ on September 8, 2022, which went into effect on September 1, 2023. New construction activities must file for coverage under the 2022 Construction Stormwater General Permit (CGP).

The CGP authorizes discharges of stormwater and regulates discharges of pollutants in stormwater associated with construction activities from construction sites that disturb one or more acres of land surface or are part of a common plan of development or sale that disturbs more than one acre of land surface where the rainfall erosivity waiver does not apply. The CGP requires proposed dischargers to file a public Notice of Intent (NOI), submit Permit Registration Documents to the SWRCB's Stormwater Multiple Application and Report Tracking System (SMARTS) website, and obtain a Waste Discharger Identification Number prior to beginning regulated activities. Applicability of the CGP is contingent on meeting all order conditions and requirements including the implementation of a Stormwater Pollution Prevention Plan (SWPPP). In accordance with Order No. 2022-0057-DWQ, the SWPPP must be prepared and certified by a qualified SWPPP developer and include information to conclude:

- All pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity, are controlled;
- Where not otherwise required to be under a RWQCB permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;

- Site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology (BAT)/Best Control Technology (BCT) standard;
- Calculations and design details as well as BMP controls for site run-on are complete and correct; and
- Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

Attachment J of the 2022 CGP provides dewatering requirements for activities subject to an NPDES permit. The 2022 CGP requires that groundwater discharge is absent of pollutants, that dewatering activities take place in an area without known contamination or hazardous materials, and that discharge is tested and reported for pH and turbidity to protect water quality. Attachment J also provides the dewatering discharge reporting and monitoring requirements, which requires potential groundwater dischargers to notify the appropriate RWQCB at least 24 hours prior to a dewatering discharge. The site-specific SWPPP should also provide procedures for groundwater discharge, including on-site BMPs and corrective actions if exceedances are identified for pH and turbidity.

The SWRCB and RWQCBs also implement Section 402 of the CWA, which allows the State of California to issue a single discharge permit for stormwater runoff for the purposes of both federal and state law, as well as Section 303(d) of the CWA pursuant to the authority of the Porter-Cologne Act.

The SWRCB's State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to "waters of the State" ("Procedures"), provides a Statewide definition of "wetlands," and sets forth Statewide permitting requirements for discharges of dredge or fill material to waters of the State, including wetlands that qualify as "waters of the State".

The Proposed Project lies within the jurisdiction of the San Francisco Bay RWQCB. The RWQCB is responsible for the protection of beneficial uses of water resources in the San Francisco Bay Area, which includes the Counties of Alameda, Contra Costa, San Francisco, Santa Clara (north of Morgan Hill), San Mateo, Marin, Sonoma, Napa, and Solano. The San Francisco Bay Basin Plan was last updated on March 7, 2023 (San Francisco Bay RWQCB, 2023).

California Fish and Game Code Section 1602 – Lake and Streambed Alteration Notification/Agreement

Section 1602 of the California Fish and Game Code requires that a Lake and Streambed Alteration Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and the applicant is the Lake and Streambed Alteration Agreement.

Sustainable Groundwater Management Act

SGMA provides a framework to help provide long-term protection of groundwater resources. SGMA requires local agencies to form groundwater sustainability agencies for high and medium priority basins and implement groundwater sustainability plans (GSPs) to manage groundwater for long-term sustainability. The California DWR provides regulatory oversight through the evaluation and assessments of GSPs, and ongoing support through the development of BMPs, planning assistance, technical assistance, and financial assistance. The Santa Clara and Niles Cone Subbasins are designated as high priority basins under DWR's Bulletin 118. The ACWD is the GSP for the Niles Cone Subbasin, and the SCVWD is the GSA for the Santa Clara Subbasin for SGMA purposes. Any groundwater supplies used during Proposed Project construction would be sourced from water suppliers that manage groundwater in accordance with their respective GSPs under SGMA.

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) is a California state commission dedicated to the protection, enhancement, and responsible use of the San Francisco Bay. Under the McAteer-Petris Act, BCDC has authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within its jurisdiction (BCDC, 2020). The San Francisco Bay Plan was originally completed and adopted by the BCDC in 1968 and was transmitted to the California legislature and the Governor in 1969. BCDC is responsible for implementing and updating the San Francisco Bay Plan, which provides policy guidance for development within its jurisdiction and delineates Priority Use Areas that should be reserved for certain land uses on the San Francisco Bay shoreline. Priority Use Areas include ports, water-related industry, water-oriented recreation, airports, and wildlife refuges. The San Francisco Bay Plan outlines major conclusions and policies, which focus on guiding shoreline development and protecting and enhancing ecosystems that provide aquatic habitat. Major plan proposals include maintaining wildlife refuges such as the Don Edwards San Francisco Bay NWR. The Proposed Project would potentially cross BCDC jurisdiction in seven places (refer to **Figure 5.11-3, BCDC Jurisdiction and Priority Use Areas**), and the proposed Albrae to Baylands 320 kV DC transmission line alignment on the Cushing Parkway bridge would be adjacent to the Don Edwards San Francisco Bay NWR Priority Use Area for wildlife. An administrative permit (minor permit) for construction within, over, or under BCDC jurisdiction is anticipated to be required for the Proposed Project.

Local

Because the California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project, the Proposed Project is not subject to local discretionary regulations. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but County and City regulations are not applicable as the Counties of Alameda and Santa Clara and the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. This section includes a summary of local hydrology and water quality-related policies, plans, or

programs for informational purposes. Although LS Power is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

Water Quality Control Plan for the San Francisco Bay Basin

The San Francisco Bay Basin Plan is the San Francisco Bay RWQCB master water quality control planning document for the San Francisco Bay Basin (San Francisco Bay RWQCB, 2023). The San Francisco Bay Basin Plan designates beneficial uses and water quality objectives for “waters of the State”, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The San Francisco Bay Basin Plan established water quality objectives for total dissolved solids, mineral constituents, and turbidity on a watershed-by-watershed basis within the region, while objectives for total and fecal coliform bacteria, nutrients (total nitrogen and total phosphorus), pH, dissolved oxygen, and un-ionized ammonia are set on a regionwide basis.

Inland surface waters support or could support most of the beneficial uses described above. The specific beneficial uses for inland streams include municipal and domestic supply (MUN), agricultural supply (AGR), commercial and sport fishing (COMM), freshwater replenishment (FRSH), industrial process supply (PROC), groundwater recharge (GWR), preservation of rare and endangered species (RARE), water contact recreation (REC1), noncontact water recreation (REC2), wildlife habitat (WILD), cold freshwater habitat (COLD), warm freshwater habitat (WARM), fish migration (MIGR), and fish spawning (SPWN). The San Francisco Bay Estuary supports estuarine habitat (EST), industrial service supply (IND), and navigation (NAV) in addition to COMM, RARE, REC1, REC2, WILD, MIGR, and SPWN. Coastal waters’ beneficial uses include marine habitat (MAR) and shellfish harvesting (SHELL) in addition to REC1, REC2, IND, NAV, COMM, WILD, MIGR, SPWN, and RARE.

In order to attain specified designated uses, the RWQCB is required to identify water quality objectives for all surface and ground waters in the region. These objectives must be consistent with federal and state anti-degradation polices (40 CFR section 131.12) and State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California. This policy is aimed at protecting relatively uncontaminated aquatic systems where they exist and preventing further degradation. The State of California’s Antidegradation Policy is consistent with the Federal Antidegradation Policy, as interpreted by the SWRCB in State Board Order No. 86-17.

Alameda County Water District

The ACWD operates as the water supply and flood management agency for the County of Alameda. Its stewardship also includes creek restoration, pollution prevention efforts, and groundwater recharge. ACWD requires permits for all well construction and abandonment/destruction work and most exploratory boring for groundwater exploration.

After experiencing large reductions in State Water Project reliability during the 1987-1992 drought, the District’s Board of Directors adopted a set of reliability policy objectives as part of its 1995 Integrated Resources Plan (IRP) to explicitly reduce reliance on imported supplies from the Delta, setting in motion 25 years of focused investment in local supply reliability measures. These measures included the conjunctive use groundwater storage expansion, brackish groundwater desalination, stormwater capture, and targeted water use efficiency programming.

The expected outcomes for the District's Delta reliance and regional self-reliance were developed using the approach and guidance described in Guidebook Appendix C of the ACWD Urban Water Management Plan (UWMP). The UWMP provides a summary of the near-term (2025) and long-term (2045) expected outcomes for the District's Delta reliance and regional self-reliance. The results show that ACWD is measurably reducing reliance on the Delta and improving regional self-reliance, both as an amount of water used and as a percentage of water used (ACWD, 2021).

Santa Clara Valley Water District

The SCVWD operates as the water supply and flood management agency for the County of Santa Clara. Its stewardship also includes creek restoration, pollution prevention efforts, and groundwater recharge. SCVWD requires permits for all well construction and abandonment/destruction work and most exploratory boring for groundwater exploration.

The County of Santa Clara faces periods of severe drought, and SCVWD recognizes that water conservation is critical to sustainability. The 2020 UWMP prepared by SCVWD (SCVWD, 2021c) projects water demand through 2045 for normal and dry years, describes the water supplies, and outlines a five-stage water shortage contingency plan to decrease water demand during periods of water shortage, including water conservation measures that may be enacted by SCVWD. The 2020 UWMP includes water supply estimates for future single dry years and multiple dry year periods on a Countywide basis.

SCVWD, along with 15 cities, the County of Santa Clara, and business, agriculture, and streamside property owners and other environmental interest groups, formed the Water Resources Protection Collaborative ("the Collaborative") in 2002 to clarify and streamline local permitting for streamside activities. In 2007, the Collaborative adopted a guidebook entitled Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resource in the County of Santa Clara and replaced its existing streamside protection ordinance (Ordinance 83-2) with the Water Resources Protection Ordinance. The guidebook provides a framework for evaluating permit applications and establishing permit conditions.

City of Fremont General Plan

The City of Fremont General Plan (City of Fremont, 2011) identifies the following goals and policies pertaining to water quality and hydrology:

Goal 7-3 **Water Quality.** High quality water protected from pollutants and managed to improve the quality of the San Francisco Bay and groundwater resource.

Policy 7-3.1 **Protect and Improve Water Quality.** Protect and improve water quality in all Fremont's creeks, streams, water courses, and water bodies.

Implementation 7-3.1.A Limit Projects that Decrease Water Quality. Review projects in watershed areas that would negatively impact water quality and require appropriate mitigation.

Policy 7-3.3 Enforce Water Quality Requirements. Enforce Federal, State, and locally issued mandates regarding water quality such as the NPDES permit requirements.

Implementation 7-3.3.B Stormwater Control in New Developments. Require development projects to incorporate appropriate stormwater treatment measures, site design techniques, and source controls to address stormwater runoff pollutant discharges and to prevent increases in runoff rates and durations in development projects consistent with NPDES.

Implementation 7-3.3.C Reduce Impervious Surface Areas. Minimize stormwater flow and volume impacts on local waterways by reducing impervious surface areas associated with new and redevelopment projects and encouraging the use of permeable surfaces.

Implementation 7-3.3.E Preserve Areas with Water Quality Benefits. Preserve and where possible create or restore areas that provide important water quality benefits and areas that may be adversely impacted by increased development, such as the Niles Cone Groundwater Basin, creeks, riparian corridors, wetlands, and buffer zones.

Implementation 7-3.3.F Protect Areas Susceptible to Erosion. Enforce development guidelines as needed to protect areas that are particularly susceptible to erosion or other factors that would pose significant impacts to local waterways.

Implementation 7-3.3.G Landscape Design. Encourage the use of pest-resistant and drought-tolerant landscape and design features, and the incorporation of stormwater detention and retention techniques in development projects.

City of Milpitas General Plan

The City of Milpitas General Plan (City of Milpitas, 2021) identifies the following actions and policies pertaining to water quality and hydrology:

Action LU-3e Work with regional agencies to ensure an adequate water supply that will allow progress toward Milpitas' long-range land use plans to implement the goals of the General Plan.

Action LU-3g Implement the policies and actions included in the Safety Element and identify and annually review areas that are subject to flooding identified by flood plain mapping prepared by the FEMA or the Department of Water Resources.

Goal CON-3 Protect and maintain waterways and other sensitive habitat for plant and animal species throughout Milpitas and to protect the health of the San Francisco Bay.

Policy CON 3-1	Preserve and enhance biological communities that contribute to Milpitas' and the region's biodiversity including, but not limited to, wetlands, riparian areas, and aquatic habitat.
Policy CON 3-2	Preserve and enhance the aesthetic and habitat value of riparian corridors including, but not limited to Coyote, Berryessa, and Penitencia Creeks.
Policy CON 3-3	Limit the disturbance of natural water bodies and drainage systems in Milpitas by conserving natural open space areas, protecting channels, and minimizing the impacts and pollutants from stormwater and urban runoff.
Policy CON 3-5	Work with the SCVWD to preserve wetlands, riparian corridors, and buffer zones in Milpitas by continuing to require that new development follow the "Guidelines and Standards for Land Use Near Streams" to protect streams and riparian habitats. Encourage the use of Green Stormwater Infrastructure such as water quality wetlands, bioretention swales, watershed-scale retrofits, and other low-impact development techniques, etc., consistent with the City's Green Stormwater Infrastructure Plan and where such measures are likely to be effective and technically and economically feasible.
Action CON-3e	Continue to implement a comprehensive municipal stormwater pollution-prevention program in compliance with requirements of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) and the Municipal Regional Stormwater Permit as issued by the San Francisco Bay Regional Water Quality Control Board.
Policy CON 3-8	Encourage private and public development that is consistent with the City's Green Stormwater Infrastructure Plan and incorporate natural processes for stormwater drainage, groundwater recharge, and flood management.
Goal UCS-4	Provide an adequate level of service in the City's drainage system to accommodate runoff from existing and projected development and to prevent property damage due to flooding.
Policy SA 2-2	Coordinate with regional and local agencies and private landowners to plan, finance, construct, and maintain local and regional stormwater management and conveyance facilities.
Policy SA 2-3	Require all development projects to demonstrate how stormwater runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design

capacity of the drainage facility or result in an increased potential for off-site flooding.

- Policy SA 2-4** Ensure that construction activities and new development will not result in the creation of adverse, flood-related impacts to existing properties and/or flood control and drainage structures.

City of San José General Plan

The City of San José General Plan (City of San José, 2024a) identifies the following policies pertaining to water quality and hydrology:

- Policy ER-9.4** Work with the SCVWD to preserve water quality by establishing an appropriate public access and recreational uses on land adjacent to rivers, creeks, wetlands, and other significant water courses.

- Policy IN-3.5** Require mitigation for development which will have the potential to reduce downstream level-of-service (LOS) to lower than “D”, or development which would be served by downstream lines already operating at a LOS lower than “D”. Mitigation measures to improve the LOS to “D” or better can be provided by either acting independently or jointly with other developments in the same area or in coordination with the City’s Sanitary Sewer Capital Improvement Program.

- Policy IN-3.8** In designing improvements to creeks and rivers, protect adjacent properties from flooding consistent with the best available information and standards from the FEMA and the California DWR. Incorporate restoration of natural habitat into improvements where feasible.

- Policy IN-3.9** Require developers to prepare drainage plans that define needed drainage improvements for proposed developments per City standards.

- Policy IN-3.10** Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City’s NPDES permit.

City of Santa Clara General Plan

The City of Santa Clara General Plan (City of Santa Clara, 2010) identifies the following policies pertaining to water quality and hydrology:

- Policy 5.4.6-P18** Require new development to comply with the local floodplain management ordinance to ensure the safety of residents.

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

Policy 5.10.1-P5	Encourage enhancement of land adjacent to creeks in order to foster the reinstatement of natural riparian corridors where possible.
Policy 5.10.3-P13	Work with the City of San Francisco to explore opportunities to share the Hetch-Hetchy right-of-way for electrical facilities.
Policy 5.10.4-P5	Prohibit new development that would reduce water quality below acceptable state and local standards.
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-P13	Require that development complies with the Flood Damage Protection Code.

5.10.3 IMPACT QUESTIONS

5.10.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to hydrology and water quality come from the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality; or
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin; or
- 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:
 - Result in substantial erosion or siltation on- or off-site; or
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or
 - 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
 - Impede or redirect flood flows; or
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or

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

5.10.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for hydrology and water quality.

5.10.4 IMPACT ANALYSIS

5.10.4.1 Hydrology and Water Quality Impact Analysis

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

Less-Than-Significant Impact. As described in **Section 5.10.1.1**, there is one intermittent drainage that is located directly south of the proposed Albrae terminal and adjacent to the proposed Newark to Albrae 230 kV transmission line. This unnamed drainage would be located within approximately 50 to 100 feet of the proposed construction activities but is outside of the Proposed Project's limits of construction and would not be crossed by Proposed Project activities. There are also two intermittent drainages within approximately 150 feet of the Proposed Project area that border the existing Newark substation and Staging Area 2 but terminate south/southwest of the proposed Newark to Albrae 230 kV transmission line corridor on Boyce Road. These three drainages are seasonal tributaries that are temporarily flooded for several weeks out of the year and eventually drain to the San Francisco Bay. Each of the drainages would be located outside of the Proposed Project limits of construction; however, sediment runoff and pollutants from construction activities have the potential to be transported downstream and could contribute to degradation of surface water quality. Implementation of the SWPPP would require erosion control and sediment control BMPs along Weber Road, Boyce Road, and in Staging Area 2 to prevent the potential stormwater pollution from erosion or sediment transport.

As discussed above in **Section 5.10.1.1**, there are nine mapped streams and waterbodies that the Proposed Project crosses. Waterbody crossing **WC-1** is a wetland area associated with the Don Edwards San Francisco Bay NWR that crosses under Cushing Parkway. Four of the stream locations (**WC-2** through **WC-5**) are mapped as intermittent canals and drainages that are tidally influenced and seasonally flooded, and four of the streams are mapped as perennial estuarine streams, intermittent riverine, or intermittent wetland that are continuously covered by tidal water and convey surface water to the San Francisco Bay Estuary (**WC-6** through **WC-9**). The northern seven locations (**WC-1** through **WC-7**) cross the proposed underground Albrae to Baylands 320 kV DC transmission line, and **WC-8** and **WC-9** locations cross both the underground and overhead portions of the proposed Baylands to NRS 230 kV transmission line. As discussed in **Section 5.10.1.2**, Coyote Creek is listed on the 2022 and 2024 Section 303(d) list of impaired surface waters. Downstream of the Proposed Project, the San Francisco Bay is subject to the San Francisco Bay Mercury TMDL and the San Francisco Bay PCBs TMDL. Construction activities in proximity to Coyote Creek would be conducted in accordance with a SWPPP, which would comply with the San Francisco Bay RWQCB Guidelines for water quality and provide applicable erosion and sediment control BMPs. Implementation of the SWPPP would help stabilize disturbed areas and minimize sediment runoff during construction to reduce potential

impacts to downstream surface water quality. With implementation of the SWPPP and erosion control BMPs, impacts to surface water quality in Coyote Creek and downstream to the San Francisco Bay would be minimized.

As described in **Section 3.5.6, Transmission Line Construction (Belowground)**, specialized underground conductor installation techniques would be used where surface or underground conditions preclude utilization of standard trenching techniques. Specifically, HDD construction techniques would be employed at seven of the watercourse crossings. Six of the HDD watercourse crossings (**WC-2** through **WC-7**) would occur along the proposed underground Albrae to Baylands 320 kV DC transmission line corridor, and one HDD watercourse crossing (**WC-8**) would occur along the proposed Baylands to NRS 230 kV transmission line corridor (refer to **Figure 5.10-1**). At **WC-1**—the waterbody crossing of the wetland area adjacent to the Cushing Parkway bridge—construction of the proposed Albrae to Baylands 320 kV DC alignment would be attached to Cushing Parkway bridge or trenched within an existing 10-foot utility easement adjacent to the eastern side of the Cushing Parkway bridge. The option to use bridge attachments would involve construction crews on the ground and equipment staging areas under and adjacent to the bridge within both the 10-foot utility easement and 30-foot O&M easement.

The option to trench adjacent to the bridge would involve open cut trenching and duct bank conduit installation employed by construction crews on the ground within the 30-foot O&M easement. Once the duct bank conduit is installed, the trench would be backfilled around the conduits with flowable thermal concrete to form the duct bank encasement and covered with compacted native soil. For either construction methodology (e.g., use of bridge attachments or open trenching), O&M activities conducted at this location would be contained within an existing 30-foot O&M easement, thereby limiting the areas impacted. The utility and O&M easements are considered to be previously disturbed and are not wetlands or jurisdictional waters (refer to **Section 5.4** and **Appendix 5.4-A**). However, the areas east of the 30-foot O&M easement and on the west (bay) side of the bridge do contain potential wetlands and potentially jurisdictional water features. The Proposed Project would avoid these areas, and impacts would be restricted to the bridge and eastern adjacent O&M easement. Therefore, direct impacts to identified and potential wetlands and jurisdictional waters would be avoided, and jurisdictional waters permit are not anticipated to be required for this area. LS Power would coordinate with USFWS and additional agencies, as needed, to obtain permits, if required, and fully comply with project-specific measures aimed at reducing potential impacts to jurisdictional water features. Temporarily disturbed areas would be recontoured consistent with existing conditions and would allow for continued utilization of the O&M easement.

Waterbody crossing location **WC-9** is a crossing of the Guadalupe River, which would be aerially crossed by the overhead portion of the proposed Baylands to NRS 230 kV transmission line. As discussed in **Section 5.10.1.2**, the Guadalupe River is listed on the 2022 and 2024 Section 303(d) list of impaired surface waters and is subject to the Guadalupe River Watershed Mercury TMDL. The Proposed Project is not anticipated to result in mercury contamination and would not exceed the Guadalupe River Watershed Mercury TMDL. Downstream of the Proposed Project, the San Francisco Bay is subject to the San Francisco Bay Mercury TMDL and the San Francisco Bay PCBs TMDL. The proposed overhead transmission structures would be located approximately 90 to 100 feet from the Guadalupe River, and construction activities would not occur within the waterway itself. Impacts to the river would not occur, and wetlands permits are not anticipated to be required at this waterbody crossing. Construction activities in proximity to the Guadalupe River would be conducted in accordance with the SWPPP, which would comply with the San Francisco Bay RWQCB Guidelines for water quality and provide applicable erosion and sediment control

BMPs. Implementation of the SWPPP would help stabilize disturbed areas and minimize sediment runoff during construction to reduce potential impacts to surface water quality. Proposed Project work areas would be revegetated following construction, as applicable, in accordance with the SWPPP. With implementation of the SWPPP and erosion control BMPs, impacts to surface water quality in the Guadalupe River would be minimized.

Each of the nine stream surface waterbodies that overlap with the Proposed Project alignment, the drainage adjacent to Weber Road, and the two drainages located within 150 feet of Staging Area 2, are considered to be “waters of the State” under California’s Porter-Cologne Water Quality Control Act, jurisdictional streambeds under Section 1600 of the California Fish and Game Code, and “waters of the United States” under Section 404 of the CWA. A portion of the Coyote Creek drainage, from the southern side of McCarthy Boulevard bridge to proposed overhead structure DC-2, was investigated for aquatic resources in December 2023 to determine jurisdictional boundaries of the USACE and CDFW. According to the survey, the proposed transmission line overhead structures DC-1, DC-2, and DC-3 would lie in upland areas, outside of CDFW and USACE jurisdiction. However, temporary construction work areas for structures DC-1 and DC-2 for the proposed overhead Albrae to Baylands 320 kV DC transmission line would temporarily overlap with mapped jurisdictional boundaries and cause temporary disturbance. In total, the stringing, pulling, and work areas for overhead structures DC-1 and DC-2 would temporarily disturb approximately 0.2 acre (9,051 square feet) of CDFW and USACE/RWQCB jurisdictional wetlands. Obtaining a verification of the delineation report and drawings with all applicable agencies would be required prior to any earth moving activities in areas of potential “waters of the United States” or “waters of the State.” Although the structures and their associated construction footprint are not anticipated to permanently impact jurisdictional waters, a CWA authorization(s) may be required. NWP 57 allows for minor temporary and permanent impacts of this type and would be the likely CWA Section 404 compliance vehicle.

Section 1602 of the California Fish and Game Code requires any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. Prior to construction, LS Power would consult with the applicable agencies and acquire any requisite permits under the CWA (Section 401/404) from the RWQCB and USACE and fully comply with all conditions of the permits, which would assure that potential impacts to surface water quality would be less than significant. However, because the project has no discharge to the “waters of the United States,” a water quality certification pursuant to CWA Section 401 and a CWA Section 404 permit for placement of fills may not be required. A discussion of impacts related to jurisdictional waters is provided in **Section 5.4**.

The overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would be situated within and across the San José-Santa Clara RWF drying ponds. While the drying ponds are a mapped water feature, they are not jurisdictional features under CWA Section 401 or 404, or Section 1602 of the CDFW code. The proposed overhead structures of the Albrae to Baylands 320 kV DC transmission line would be constructed adjacent and partially overlapping existing private access roads within the San José-Santa Clara RWF. The San José-Santa Clara RWF drying ponds are mapped as NWI wetlands that are classified as freshwater, nontidal wetlands that are artificially flooded by pumps or siphons; however, this water is treated to stringent water quality standards prior to discharge into the San Francisco Bay. The San José-Santa Clara RWF must meet the strict requirements of more than 30 federal, state, and regional regulations for

treated water discharge, use of recycled water, disposal of biosolids, air emissions, safety requirements, and land use controls. The NPDES, administered by the Federal EPA, regulates the San José-Santa Clara RWF's permit to treat and discharge wastewater into the San Francisco Bay (City of San José, 2024b). Construction activities would have the potential to disturb surface soils and increase the potential for temporary erosion or sediment transport. While construction of the overhead structures would have the potential to disturb surface soils and temporarily increase erosion, there would be no long-term impacts to San José-Santa Clara RWF water quality associated with the Proposed Project.

Additionally, dewatering may be required for construction of the proposed HVDC terminals, HDD and jack-and-bore construction methods, installation of the overhead transmission line structures, splice vaults, and other below-grade activities, which could potentially affect surface water quality. If required during the Proposed Project, dewatering would be conducted in accordance with the 2022 CGP dewatering requirements, the Proposed Project SWPPP, and **Applicant Proposed Measure (APM) WQ-1, Groundwater Dewatering and Discharge Measures**. Groundwater encountered during underground construction would be pumped into water trucks for haul off or directly into containment tanks that allow acceptable de-sedimentation prior to discharge and tested for turbidity, pH, and other required parameters. When tested groundwater meets water quality standards in accordance with applicable regulations and acquired permits, the water would be discharged into the existing storm sewer system. Storm sewer collection systems that would potentially serve the Proposed Project are discussed in **Section 5.19, Utilities and Service Systems**. If parameters are detected in concentrations that prohibit discharge, the water would be hauled off-site. Discharge may also be applied to flat, vegetated, upland areas; used for dust control; or used in other suitable construction operations if testing determines that the water is suitable for such use in accordance with applicable regulations and acquired permits. Therefore, potential dewatering and groundwater discharge would not substantially affect surface or groundwater quality.

Erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported downstream, which could contribute to degradation of water quality downstream of construction. Erosion control and sediment control BMPs would be required as part of the Proposed Project's SWPPP to prevent the potential stormwater pollution from erosion or sediment transport. LS Power would consult with and acquire the requisite permits under the CWA (Section 401/404) from applicable regulatory agencies and fully comply with all conditions of the permits. Additional discussion is provided in **Section 5.4**.

In addition to potential pollutant contributions from disturbed areas, the delivery, handling, and storage of construction materials and wastes, as well as the use of construction equipment, could introduce a risk for stormwater contamination that could affect water quality. Spills or leaks from heavy equipment and machinery could result in oil and grease contamination. Staging areas could also be the source of pollution because of the use of paints, solvents, cleaning agents, and metals during construction. Materials from soil excavation could contain hazardous materials that may be exposed to stormwater. As discussed in **Section 5.9, Hazards, Hazardous Materials, and Public Safety**, the Proposed Project would comply with the applicable regulations for the safe handling and transport of hazardous materials. In addition, the Proposed Project would implement **APMs HAZ-1, Site-Specific Spill Prevention, Control, and Countermeasures Plan** and **HAZ-2, Hazardous Materials Management Plan**, which would ensure proper handling, storage, and disposal of hazardous material and wastes during construction and operation of the Proposed

Project. Furthermore, concrete used for footings and foundations could be potential sources of water quality pollution if any of these materials were spilled or deposited on unprotected surfaces. Stormwater management and waste management construction BMPs would also be implemented to prevent pollutants from being discharged to waterways from stockpiles, material, equipment storage and use, trash, and other pollutant sources. No other water discharge is anticipated as a result of the Proposed Project. The Proposed Project would not violate any water quality standard or waste discharge requirement because LS Power would comply with the regulatory requirements for protection of water quality, including implementation of the SWPPP, stormwater BMPs, and **APM WQ-1**. **APM WQ-1** requires all groundwater encountered during construction to be handled and discharged in accordance with all state and federal regulations.

Runoff from the proposed Albrae and Baylands terminal facilities would be directed to the proposed on-site detention system. The earthen stormwater detention system would not be lined, allowing for infiltration and groundwater recharge. The stormwater detention system is designed to capture the runoff from the 100-year storm, 24-hour rainfall event and then release the captured water over 48 hours. Overflow from the detention system would be returned to sheet flow via a level spreader that would provide for sheet flow of the stormwater to the adjacent land surface during storms that exceed the system's design capacity. The level spreading approach would control erosion and prevent scouring at discharge locations.

LS Power would assess the risk to water quality, based on site-specific soil characteristics, slope, and the construction schedule and would develop a SWPPP that would ensure protection of water quality. The SWPPP would specify measures for each activity that has the potential to degrade surrounding water quality through erosion, sediment runoff, and the presence of other pollutants. These measures would be implemented and monitored throughout the Proposed Project by a Qualified SWPPP Practitioner (QSP). Implementation of **APM WQ-1** would further minimize the temporary and short-term construction-related impacts on water quality. Impacts would be less than significant.

O&M activities may include use of new pollutant sources, including, but not limited to, oils, paints, and solvents used for routine maintenance. All materials would be applied, stored, and disposed of in an appropriate containment in a manner consistent with manufacturer recommendations by licensed professionals, if necessary, and in accordance with applicable regulations. Therefore, impacts under this criterion would be less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at the existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited duration. The existing Newark substation site is located on developed, paved/disturbed land, with no aquatic resources. However, construction of the PG&E segment of the proposed Newark to Albrae 230 kV transmission line would be located in close proximity to potential vernal pools and other potentially jurisdictional wetlands. Jurisdictional delineation surveys would be conducted within proposed transmission line work areas. If jurisdictional water features cannot be avoided, PG&E would acquire required permit(s) from the appropriate agencies (e.g., CDFW, USACE, and RWQCB). PG&E would comply with all permit conditions, including those intended

to avoid, reduce, and mitigate impacts to jurisdictional waters and wetlands. Construction of the Newark substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by PG&E) and would implement PG&E **BMP HAZ-10, Stormwater BMP Installation**. If dewatering is required for the PG&E facility modifications, dewatering would be conducted in accordance with PG&E **BMPs HAZ-9, Vault Dewatering** and **HAZ-11, Construction Dewatering** and would comply with the associated dewatering plan.. As such, less-than-significant impacts would occur.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. Construction of the NRS substation modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. The existing NRS substation site is located on developed, paved/disturbed land, with no aquatic resources. Construction of the NRS substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by SVP). As such, impacts under this criterion would be less than significant.

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 Impact. The Proposed Project would truck in water needed for construction from local sources managed by SCVWD and ACWD. In addition to the potential use of potable water, recycled, reclaimed water, or groundwater would be used by the Proposed Project, as available, in accordance with applicable regulations and acquired permits to meet the Proposed Project's construction needs. The Proposed Project would not source groundwater directly, and any groundwater supplies used would be sourced from water suppliers that are subject to sustainable groundwater management plans under SGMA. The estimated total water needs of the Proposed Project are approximately 15,000,000 gallons of water to be used for dust control, compaction, and concrete work over a period of approximately 24 months, the majority of which would be used during the site development and below-grade construction phases.

The proposed Albrae terminal site currently consists of a highly disturbed, developed lot used as a storage area for industrial uses. As described above in **Section 5.10.1.4, Groundwater Wells and Springs**, there are no existing wells that provide water sources within the proposed Albrae terminal site. There is one active well within the proposed Albrae terminal site; however, it is a monitoring well. The proposed Baylands terminal site is sited on San José-Santa Clara RWF property that is currently owned by the San José-Santa Clara RWF and is vacant and undeveloped. There is one active monitoring well located adjacent to the proposed Baylands terminal entrance; however, the well is not used for groundwater supplies. There are no existing wells within the proposed Baylands terminal site; therefore, there would be no change in the demand for groundwater and surface water at the proposed HVDC terminal sites. No water use is expected at the proposed Albrae or Baylands terminal facilities during O&M activities, and there would be no permanent workforce on-site at either of the proposed HVDC terminal sites. Thus, overall, the Proposed Project would not be expected to result in a substantial increased use of groundwater and/or surface water.

The proposed overhead transmission structures for the Albrae to Baylands 320 kV DC transmission line would be constructed on existing unpaved and rockered private access roads within the San José-Santa Clara RWF and would consist of concrete drilled shaft and pier foundations to support tubular steel poles. The proposed overhead structures for the Baylands to NRS 230 kV transmission line would be located on previously disturbed areas on either side of the Guadalupe River. The overhead structure foundations for each proposed transmission line would have a maximum depth of approximately 60 feet. While the overhead structures would create new impervious surfaces, the surface area would be considered negligible regarding impacts to groundwater recharge, and water would be expected to immediately run off of transmission line structures and foundations resulting in negligible to no change in groundwater runoff.

The proposed Albrae terminal site is currently fully paved and impervious and does not contribute to groundwater recharge. Proposed construction at the Albrae terminal site would remove the existing paved areas and replace these areas with concrete foundations for the terminal equipment and compacted gravel surrounding the foundations. Construction of the proposed Albrae terminal would, therefore, result in a net gain of pervious area and would not interfere substantially with groundwater recharge compared to existing conditions.

The proposed Baylands terminal site is located within undeveloped, pervious land. The permanent built-up portions of the proposed Baylands terminal site would be converted from pervious surfaces to partially impervious surfaces. New impervious areas at the proposed Baylands terminal site would include aboveground facilities supported by a combination of deep, reinforced drilled shaft foundations and slab foundations with spread footings. These new impervious areas would not be considered significant, as the impervious area represents a small fraction of the overall Proposed Project footprint and runoff from impervious areas would be directed to on-site stormwater detention basins and reinfiltrated into the ground. The remaining majority of the proposed Baylands terminal facility would be compacted and covered with gravel, and, although still considered pervious as some water can be absorbed, it would not be expected to facilitate high groundwater recharge. A stormwater detention system would be constructed for each proposed HVDC terminal site that would capture runoff and allow the water to percolate into the ground. Therefore, groundwater recharge would not be adversely affected by the construction of impervious surfaces, and impacts would be less than significant under this criterion.

The Proposed Project would not require water sources for O&M activities as the proposed Albrae and Baylands terminal facilities would not require a permanent on-site workforce. Thus, overall, the Proposed Project would result in no change in the demand or use of groundwater and/or surface water at these sites. Furthermore, a detention system would be constructed on each proposed HVDC terminal site that would capture runoff from the Albrae and Baylands terminals and allow the water to percolate into the ground; thus, groundwater recharge would not be affected by the construction of impervious surfaces, such as the control enclosure and equipment foundations. Impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The construction of the overhead structure by PG&E within PG&E's property (structure AC-1) would not result in a substantial increase in impervious surfaces; the structure would result in approximately 0.001 acre or 50 square feet of new impervious surface. Furthermore, the existing Newark substation site is located

on developed, paved/disturbed land, with existing stormwater collection facilities. Construction of the Newark substation modifications and overhead structure AC-1 would be consistent with the Proposed Project SWPPP (or equivalent document prepared by PG&E) and would not result in decreased groundwater supplies or recharge rates. As such, impacts under this criterion would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. Construction of the NRS substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by SVP) and would not result in decreased groundwater supplies or recharge rates. As such, impacts under this criterion would be less than significant.

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:

Result in substantial erosion or siltation on- or off-site?

Less-Than-Significant Impact. The Proposed Project would be constructed on relatively flat land, primarily within existing roadways. The Proposed Project would require clearing of vegetation and grading for construction. Construction would involve activities that expose ground surfaces to erosion. While erosion is a natural and important process essential to maintaining the geomorphology of receiving waters, excess erosion and sedimentation can impair habitat functions and transport pollutants. All areas of exposed ground have the potential to result in increased erosion during rain events and the transport of soil particles and other materials into nearby receiving water. The proposed Albrae terminal is located within a flat, paved lot in an industrial area. However, additional fill would be required to create the proposed Albrae terminal. The proposed Baylands terminal site is located on uneven, undeveloped, vacant land on San José-Santa Clara RWF property currently owned by the City of San José. As such, development of the proposed Baylands terminal would require grading (cut and fill); however, it is not expected that it would contribute to sedimentation to any downstream receiving waters.

The Proposed Project would be required to implement a SWPPP and stormwater BMPs; therefore, it is not expected that grading or construction associated with the proposed HVDC terminal sites or transmission line alignments would contribute to sedimentation to any downstream receiving waters. Implementation of the SWPPP would include BMPs and rain event monitoring to ensure that sediment and other potential pollutants do not leave the Proposed Project construction sites. Construction of the proposed Albrae terminal site would result in conversion of impervious area to pervious area, as the site is currently fully paved, and the Proposed Project would remove the existing pavement in some areas and replace it with compacted gravel. Drainage patterns would not be substantially altered. The only portions of the Proposed Project that would be permanently converted from a pervious surface to an impervious surface are the built-up portions of the proposed Baylands terminal site, including structure foundations and enclosures. The proposed overhead structures for the Newark to Albrae 230 kV, Albrae to Baylands 320 kV DC, and Baylands to NRS 230 kV transmission lines would create negligible amounts of impervious surfaces, with each overhead structure resulting in approximately 0.001 acre or 50 square feet of impervious surface and would not substantially

alter drainage patterns. In addition, a stormwater detention system would be constructed for each HVDC terminal site that would capture runoff from the proposed terminals and allow the water to percolate into the ground. Runoff would be directed to the stormwater detention systems and would not be allowed to leave the site, eliminating the potential for erosion to occur off-site. For these reasons, the existing drainage pattern of the area would not be substantially altered by the addition of impervious surfaces.

Construction and O&M of the Proposed Project would not result in substantial erosion or sedimentation on- or off-site. Therefore, impacts under this criterion would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation site is located on developed, paved/disturbed land, with existing stormwater management facilities. There are no streams or other water features located within the limits of construction for the Newark substation modifications or the overhead structure proposed to be constructed by PG&E within PG&E's property. Construction of the Newark substation modifications and proposed overhead structure AC-1 would be consistent with the Proposed Project SWPPP (or equivalent document prepared by PG&E) and would not alter existing drainage patterns. As such, no impact would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. There are no streams or other water features located within the limits of construction for the NRS substation modifications. Construction of the NRS substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by SVP) and would not alter existing drainage patterns. As such, no impact would occur.

Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less-Than-Significant Impact. The Proposed Project would be constructed on relatively flat land, primarily within existing roadways that would require minimal grading. The proposed Albrae terminal site is presently fully developed and paved, and construction on-site would convert some paved areas to pervious compacted gravel. Therefore, construction of the proposed Albrae terminal would not increase the rate or amount of surface runoff on-site. The proposed Baylands terminal site is presently undeveloped and would require grading and fill to level the area during site preparation; however, changes in surface runoff would be addressed by the proposed on-site stormwater management system. The underground alignments of the proposed Newark to Albrae 230 kV, Albrae to Baylands 320 kV DC, and Baylands to NRS 230 kV transmission lines would be constructed within existing roadway corridors and would not change the existing rate or amount of surface runoff following construction. The overhead structures of each proposed transmission line would cover a small total impervious footprint (0.001 acre or 50 square feet at each structure), with negligible effects on surface runoff. The proposed overhead structures for the transmission lines would be constructed on existing unpaved, previously disturbed areas. While the overhead structures would create new impervious surfaces, the surface area would be considered negligible regarding impacts from increases in the amount or rate of surface runoff.

The drainage pattern of the Proposed Project area would not be substantially altered, and the net increase of impervious surfaces would be minimal compared to the overall Proposed Project footprint. Additionally, the Proposed Project would include stormwater management systems consisting of a stormwater drainage and conveyance system and a stormwater detention system at each proposed terminal location. The size of the detention system would vary for each proposed HVDC terminal site, depending on site-specific conditions, and may include a detention basin, underground detention vaults, or a combination thereof. The site drainage system and stormwater detention system would be designed to collect and allow infiltration of the runoff volume generated by impervious and pervious surfaces of the facility during a 100-year storm event. Thus, the Proposed Project would not result in flooding either on-site or off-site, and impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. Construction of the overhead transmission structure and substation modifications within PG&E property would not result in significant increases in impervious surfaces and, therefore, would not result in an amount or rate of surface runoff in a manner which would result in flooding. As such, any impact from the Newark substation modifications would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. Construction of the NRS substation modifications would not result in the addition of new impervious surfaces. As such, no impact would occur.

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?

Less-Than-Significant Impact. The Proposed Project area is served by public stormwater drainage systems managed by the Cities of Fremont, Milpitas, San José, and Santa Clara. The proposed Albrae terminal site is served by the City of Fremont storm drain system. The proposed Baylands terminal site is not directly served by any existing or planned public or private stormwater drainage systems; however, there are several storm inlets located adjacent to the proposed Baylands terminal site associated with the San José-Santa Clara RWF. The discharge of stormwater runoff from the MS4s of the Cities of Fremont, Milpitas, San José, and Santa Clara is permitted under the San Francisco Bay RWQCB Municipal Regional Stormwater NPDES Permit (MRP). The MRP requires over 70 municipalities in the Greater Bay Area to place conditions on development projects to incorporate site design measures, source controls, treatment measures, and on larger projects, flow duration controls. The Proposed Project's development and implementation of the SWPPP and stormwater BMPs would, therefore, be consistent with the RWQCB MRP requirements.

The overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would be situated within and across the San José-Santa Clara RWF drying ponds. The proposed overhead structures of the Albrae to Baylands 320 kV DC transmission line would be constructed on existing

private access roads within the San José-Santa Clara RWF. The San José-Santa Clara RWF is mapped as NWI wetlands that are classified as freshwater, nontidal wetlands that are artificially flooded by pumps or siphons; however, this water is treated to stringent water quality standards prior to discharge into the San Francisco Bay. Construction activities would have the potential to introduce surface water contaminants if not properly utilized.

The delivery, handling, and storage of construction materials and wastes, as well as the use of construction equipment, could introduce a potential for stormwater contamination that could affect water quality. Spills or leaks from heavy equipment and machinery could result in oil and grease contamination. Staging areas could also be the source of pollution because of the use of paints, solvents, cleaning agents, and metals during construction. Materials from soil excavation could contain hazardous materials that may be exposed to stormwater. As discussed in **Section 5.9**, the Proposed Project would comply with the applicable regulations for the safe handling and transport of hazardous materials. Furthermore, concrete used for footings could be potential sources of water quality pollution if any of these materials were spilled or deposited on unprotected surfaces. Stormwater management and waste management construction BMPs would be implemented to prevent pollutants from being discharged to waterways from stockpiles, material, equipment storage and use, trash, and other pollutant sources. The Proposed Project would not violate any water quality standard or waste discharge requirement because LS Power would comply with the regulatory requirements for protection of water quality, including implementation of the SWPPP, stormwater BMPs, and the implementation of **APM WQ-1**. As noted above, because the Proposed Project would not discharge to the "waters of the United States," water quality certification pursuant to CWA Section 401 and a CWA Section 404 permit for placement of fills may not be required. However, LS Power would acquire any requisite permits under the CWA (Section 401/404) from applicable regulatory agencies and fully comply with all conditions of the permits.

As discussed in the response above, the Proposed Project would not increase the rate or amount of runoff water, and runoff would be contained within the site drainage system and stormwater detention system. Therefore, the Proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or result in substantial additional sources of polluted runoff.

Construction and O&M would require the limited use of hazardous materials, such as fuels, lubricants, cleaning solvents, and chemicals. These materials would all be stored, handled, and used in accordance with applicable regulations, as discussed further in **Section 3.5.11.2, Hazardous Materials Management** and **Section 5.9**. In addition, oil containment basins are designed to contain the oil volume of the transformers plus a 25-year, 24-hour storm event. As such, construction and O&M of the Proposed Project would not provide substantial additional sources of polluted runoff. Implementation of the Proposed Project's SWPPP would further reduce impacts. Therefore, impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. Construction of the Newark substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by PG&E) and would not result in increased runoff which would exceed the capacity of existing or planned stormwater drainage systems or

provide substantial additional sources of polluted runoff. As such, less-than-significant impacts would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. Construction of the NRS substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by SVP) and would not result in increased runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As such, less-than-significant impacts would occur.

Impede or redirect flood flows?

Less-Than-Significant Impact. The majority of the Proposed Project would be constructed on relatively flat land and would require minimal grading and fill for site preparation and construction of the proposed Albrae and Baylands terminal sites. As described in **Section 3.5.4.6, Grading**, the proposed HVDC terminal locations were chosen with avoidance of major site grading in mind; therefore, substantial grading activities during construction are not anticipated. However, both proposed HVDC terminal sites would require grading to create flat terminal sites. Major sources of grading and excavation include installation of the proposed underground transmission lines and site preparation at the proposed HVDC terminals. The proposed Albrae terminal site is fully developed and paved to a flat grade, and development of the site would not alter the drainage pattern of the site nor redirect or impede existing flood flows. The proposed Albrae terminal site is served by the City of Fremont storm drain system. The proposed Baylands terminal site is not directly served by any existing or planned public or private stormwater drainage systems; however, there are several storm inlets located adjacent to the proposed Baylands site associated with the San José-Santa Clara RWF. Existing flood flows in the Proposed Project area are conveyed by public stormwater drainage systems managed by the Cities of Fremont, Milpitas, San José, and Santa Clara. As such, the drainage pattern of the Proposed Project area, including proposed HVDC terminal sites, proposed overhead structure locations, and underground transmission lines would not be substantially altered.

Portions of the Proposed Project are located within the 100-year floodplain, including the proposed Albrae and Baylands terminal sites and the Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, and Newark to Albrae 230 kV transmission lines. Both of the proposed Albrae and Baylands terminal sites are located within the 100-year floodplain with one percent annual chance of flood. The existing NRS substation is located within Zone X with reduced flood risk due to levee, and the existing Newark substation is partially located within the 100-year floodplain (FEMA, 2024). Both the proposed Albrae and Baylands terminal facilities would include a stormwater management system consisting of a stormwater drainage and conveyance system and a stormwater detention system. Each proposed HVDC terminal pad would be graded to drain towards the stormwater conveyance system to ultimately direct stormwater into the detention system and infiltrate water into the ground. The stormwater detention system is designed to capture runoff from a 100-year storm event. As noted above, the proposed terminal sites are surrounded by flat lands that have irrigation drains and road ditches which collect water and redirect flows that could reach the site. These flat lands are not expected to generate flood flows upstream of the site such that the Proposed Project would impede or redirect flood flows. Proposed Project grading would not significantly alter the drainage pattern in those project areas

within 100-year flood zones, nor would they redirect the course of a stream or river that would impede or redirect flood flows. Proposed Project fills associated with the terminal sites would not be sited in locations that would impede or redirect flood flows, and fills for the terminal sites would constitute a small percentage of the acreage of the floodplain such that Proposed Project effects on flood elevations would be negligible. Therefore, the impact to the hydrology and flow path of the floodplain would be less than significant.

The proposed Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, and Newark to Albrae 230 kV transmission lines all cross through 100-year flood zones with a one percent annual chance of flood (FEMA, 2024). However, the majority of the proposed transmission lines would be installed underground within existing roadways and would, therefore, not impede or redirect flood flows. The overhead portions of the transmission lines would be supported by overhead structures situated in concrete foundations, consisting of tubular steel monopoles with a footprint of 0.001 acre or 50 square feet. Construction and operation of the proposed overhead and underground transmission lines would, therefore, not impede or redirect flood flows.

The Proposed Project would cross nine USACE levee systems mapped on the USACE National Levee Database that have been constructed for local flood control purposes (see **Figure 5.10-3**) (USACE, 2024a). Four of the levees within the Proposed Project limits of construction would be crossed by the underground Albrae to Baylands 320 kV DC transmission line via HDD construction techniques, three of the levees would be crossed overhead by the Albrae to Baylands 320 kV DC transmission line, and two of the levees would be crossed by the overhead Baylands to NRS 230 kV transmission line (see **Table 5.10-1**).

The first four levees crossed by the Proposed Project via HDD could require a Section 408 permit issued by the USACE for alteration of a USACE Civil Works project. As part of the permitting process, the USACE would review the proposed alterations and grant the requested permission for Proposed Project alteration under Section 408 based on several factors, described above in **Section 5.10.2.1**. The Proposed Project HDD construction techniques would involve drilling conduit ducts under the levees using HDD sending and receiving pits on either side of the water body that are typically six feet by 20 feet, located outside of the flood control right-of-way (refer to **Figure 3-14, Typical HDD Diagram**). The HDD boreholes would be drilled under the waterways to a minimum depth of 10 feet bgs, and no construction would occur within waterways, including channelized flood control structures and natural drainages. An additional three levees (numbers 5, 6, and 7 in **Table 5.10-1** and **Figure 5.10-3**) may also require Section 408 review because the Proposed Project would include installation of new overhead transmission structures (DC-4 and DC-9, respectively) as well as temporary work areas located near the levee (as mapped by the USACE data). During final engineering, LS Power would coordinate with the USACE San Francisco District to determine if additional approval under Section 408 would be required at these locations.

The Proposed Project is not anticipated to impair the usefulness of the USACE levees for flood control purposes nor impair the ability of the levees to function as authorized because the Proposed Project would coordinate with the USACE, including procurement of approval under Section 408 if needed. The informational requirements under the Section 408 process require a detailed level of engineering design, as well as a detailed level of analysis related to effects on USACE's Civil Works projects and indirect hydraulic effects. Prior to construction, LS Power would consult with the USACE San Francisco District and, if required, submit a formal request for alteration under Section 408 and acquire all other permissions or authorizations required by federal, state, and local laws or regulations. Because the Proposed Project has no discharge to

the “waters of the United States” and no placement of fills, permits pursuant to CWA Sections 401 and 404 may not be required. The final Proposed Project engineering designs, upon review and approval by USACE, would ensure that the Proposed Project would not impede or redirect flood flows, including flood control channels and levees managed by USACE projects.

The Proposed Project would comply with required state and federal permits and avoid impacts that would impair the ability of flood control projects to function as authorized or impede or redirect flood flows. In addition, temporary work areas and access roads would be restored after completion of the Proposed Project, and drainage patterns would not be altered from pre-project conditions. Therefore, impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. The existing Newark substation site is not located within or near any mapped USACE Section 408 levee systems. The existing Newark substation site is partially located within a FEMA flood hazard Zone AO, which is identified as a river or stream flood hazard area, and areas with a one percent or greater chance of shallow flooding each year to an average depth of one to three feet (FEMA, 2024). Construction of the Newark substation modifications or proposed overhead structure AC-1 would not impede or redirect flood flows. Impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation site is located on developed, paved/disturbed land, with existing stormwater collection facilities. The existing NRS substation site is not located within or near any mapped USACE Section 408 levee systems. The existing NRS substation site is located within a FEMA flood hazard Zone X, which is identified as an area with reduced flood risk due to levee (FEMA, 2024). Construction of the NRS substation modifications would not impede or redirect flood flows. Impacts would be less than significant.

Would the project risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones?

Less-Than-Significant Impact. The Proposed Project is partially located within an identified tsunami inundation area that encompasses the San Francisco Bay but is not located within a seiche zone. The San Francisco Bay tsunami hazard area boundary is located approximately 0.4 mile east of the proposed Albrae terminal, approximately 0.3 mile east of the proposed Newark to Albrae 230 kV transmission line, and approximately 0.16 mile north of the proposed Baylands terminal (California Department of Conservation [DOC], 2024). Portions of the proposed Albrae to Baylands 320 kV DC transmission line are located within the tsunami hazard area, including underground portions along Cushing Parkway, Fremont Boulevard, McCarthy Boulevard, and overhead portions south of McCarthy Boulevard. The underground portion of the proposed Baylands to NRS 230 kV transmission line directly borders the tsunami hazard zone boundary along Los Esteros Road, and the overhead portion crosses over the tsunami hazard zone along the Guadalupe River.

As discussed above, portions of the Proposed Project, including the Albrae and Baylands terminal sites and the Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, and Newark to Albrae 230 kV transmission lines, are all located in FEMA flood zones (FEMA, 2024). The proposed Albrae terminal site is located in a FEMA flood Zone AO, which is a river or stream flood hazard area with a one percent or greater chance of shallow flooding each year to an average depth of one to three feet (100-year floodplain). The proposed Baylands terminal site is mapped as Zone AE, which includes base flood areas that present a one percent annual chance of flooding (100-year floodplain). The proposed Albrae to Baylands 320 kV DC transmission line crosses through FEMA flood zones AE, A, and X. Zone A also includes areas with a one percent annual chance of flooding (100-year floodplain). Zone X includes areas with reduced flood risk due to levee. The proposed Baylands to NRS 230 kV underground and overhead transmission lines are partially located within Zone AE, with a one percent annual chance of flooding.

In the event of an inundation of the proposed HVDC terminal sites due to flood, there is potential for pollutants to be released (see **Section 5.9**). During construction, the Proposed Project would use materials, such as oil, grease, hydraulic fluid, fuel, construction materials and products, waste materials, and loose soil, that could risk release during inundation from flood hazard in Proposed Project work areas. The Proposed Project SWPPP would consider the Proposed Project's potential flood hazard and address the risk release of pollutants from inundation to align with federal and state regulations that manage and control pollutants during construction and facility operations. In addition, the Proposed Project would implement **APMs HAZ-1** and **HAZ-2**, which would ensure proper handling, storage, and disposal of hazardous material and wastes during construction and operation of the Proposed Project. The potential for risk release of pollutants from inundation caused by flood hazard would be less than significant. The proposed HVDC terminal sites are within the 100-year floodplain and are not within high flood hazard areas where inundation would be anticipated, and the potential for risk release of pollutants from inundation caused by flood hazard is anticipated to be less than significant. In addition, each proposed HVDC terminal pad would be graded to drain towards the stormwater conveyance system to ultimately direct stormwater into the detention system. The stormwater detention system would be designed to capture runoff from a 100-year storm event. In addition, oil containment basins are designed to contain the oil volume of the transformers plus a 25-year, 24-hour storm event.

Further, although portions of the proposed underground Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, and Newark to Albrae 230 kV transmission lines would be located within mapped flood zones, the proposed transmission lines would be installed underground within existing roadways. Therefore, the underground transmission lines would not be at risk of exposing the public to pollutants during inundation. The transmission structures associated with the overhead portions of the transmission lines would not release pollutants if inundated. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation is partially located within a FEMA flood hazard Zone AO, which is identified as a river or stream flood hazard area and areas with a one percent or greater chance of shallow flooding each year (100-year floodplain) to an average depth of one to three feet (FEMA, 2024). The existing Newark substation is located on developed, paved/disturbed land, with existing stormwater collection facilities to convey flood flows. In the case of inundation due to flooding, the Proposed Project SWPPP (or equivalent document prepared by PG&E) would consider the Proposed Project's potential flood

hazard and address the risk of pollutants being released from inundation from flood flows to align with federal and state regulations that manage and control pollutants during construction and facility operations. As discussed in **Section 5.9**, construction and operational activities supporting the modifications to the existing Newark substation would be subject to PG&E **BMPs HAZ-7, Spill Prevention, Control, and Countermeasure (SPCC) Plan**, and **HAZ-2, Hazardous Materials Business Plan (HMBP)**, which include measures to handle existing contamination safely, including requiring soil sampling and removal, if necessary, in order to reduce the potential for accidental release of hazardous materials. Therefore, risk of pollutant release due to inundation of PG&E work areas would be minimized. Construction of the Newark substation modifications would not result in a new risk of pollutants due to flood conditions different from preconstruction conditions. Impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation site is located within a FEMA flood hazard Zone X, which is identified as an area with reduced flood risk due to levee (FEMA, 2024). The existing NRS substation is located on developed, paved/disturbed land, with existing stormwater collection facilities to convey flood flows. Construction of the proposed NRS substation modifications would use construction materials and products that could risk release of pollutants from inundation from flood waters; however, there is low flood risk at the existing NRS substation and inundation would not be anticipated to occur. The Proposed Project SWPPP (or equivalent document prepared by SVP) would consider the potential flood hazard and address the risk of pollutants being released from inundation to align with federal and state regulations that manage and control pollutants during construction and facility operations.. Therefore, construction of the NRS substation modifications would not result in a new risk of pollutants due to flood conditions different from preconstruction conditions. Impacts would be less than significant.

Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-Than-Significant Impact. The Proposed Project would also not conflict with or obstruct implementation of the San Francisco Bay Basin Plan nor any applicable TMDL for the Guadalupe River and San Francisco Bay. Water discharge and runoff during construction would be managed in accordance with the Proposed Project SWPPP, which would require that all pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity are controlled, and that site BMPs are effective to reduce or eliminate pollutants. The Proposed Project would therefore be consistent with the water quality objectives and measures in the San Francisco Bay Basin Plan and TMDLs for the Guadalupe River and San Francisco Bay. The Proposed Project would also not conflict with the sustainable groundwater management plans for the Santa Clara and Niles Cone Subbasins described in **Section 5.10.1.5, Groundwater Management**. During construction, the Proposed Project would source water from several potential water suppliers in the vicinity, including ACWD and SCVWD, if feasible. The Proposed Project would not source groundwater directly, and any groundwater supplies used would be sourced from water suppliers which are subject to sustainable groundwater management plans under SGMA.

As stated in **Section 3.5.10, Water Use and Dewatering**, excavation dewatering effluent may be produced. This effluent would be tested, filtered, and managed according to the dewatering plan developed as part of the SWPPP. Dewatering would be conducted using a pump or well points.

Groundwater encountered during underground construction would be pumped into water trucks for haul off or directly into containment tanks (e.g., Baker tanks) that allow acceptable de-sedimentation prior to discharge and testing for turbidity and pH, and other required parameters. When groundwater is encountered during construction, measures in **APM WQ-1** would be implemented to ensure avoidance or minimization of potential impacts. Stormwater runoff would be managed according to the SWPPP to comply with any general construction permits and approved by the local RWQCB. Adherence to the SWPPP and implementation of **APM WQ-1** would ensure that the Proposed Project would be consistent with the water quality objectives of the San Francisco Bay Basin Plan, Guadalupe River Watershed Mercury TMDL, San Francisco Bay Mercury TMDL, and San Francisco Bay PCBs TMDL. As such, impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of the Newark substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by PG&E) and associated dewatering plan. In addition, PG&E would implement **BMPs HAZ-9** through **HAZ-11**, which include measures addressing dewatering and stormwater management. Therefore, the Newark substation modifications would not conflict or obstruct implementation of the San Francisco Bay Basin Plan or any sustainable groundwater management plan. As such, impacts would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction of the NRS substation modifications would be consistent with the Proposed Project SWPPP (or equivalent document prepared by SVP) and associated dewatering plan. The NRS substation modifications would not conflict or obstruct implementation of the San Francisco Bay Basin Plan or any sustainable groundwater management plans. As such, impacts would be less than significant.

5.10.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for hydrology and water quality.

5.10.6 APPLICANT PROPOSED MEASURES

APM WQ-1: Groundwater Dewatering and Discharge Measures

Groundwater, if encountered during construction, shall be handled and discharged in accordance with all state and federal regulations including the following:

- Recovered groundwater shall be contained on-site and tested prior to discharge;
- When testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations;
- Land application shall be made in a manner that discharge does not result in substantial erosion;

- Water unsuitable for land application shall be disposed of at an appropriately permitted facility; and
- Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE, RWQCB, and/or CDFW, as applicable).

5.10.7 PG&E BEST MANAGEMENT PRACTICES

PG&E would implement **BMPs HAZ-2, HAZ-7, and HAZ-9** through **HAZ-11** as discussed in **Section 5.9**. No additional BMPs specific to hydrology and water quality have been included for PG&E's scope of work.

5.10.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for hydrology and water quality would be implemented for SVP's scope of work.

5.11 LAND USE AND 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?				X
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?			X	

This section describes land use and planning within the area of the Proposed Project, as well as the potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.11.1 ENVIRONMENTAL SETTING

5.11.1.1 Land Use

The Proposed Project would be located within the Cities of Fremont, Milpitas, San José, and Santa Clara, California. The Proposed Project includes the construction of two new high-voltage direct current (HVDC) terminal facilities (the proposed Albrae and Baylands terminals) and associated transmission lines between the existing Pacific Gas and Electric Company (PG&E) Newark substation and the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation.

The proposed Albrae terminal would be located on approximately 6.1 acres along Weber Road, west of Boyce Road and south of Stewart Avenue, approximately 0.8 mile west of Interstate (I)-880. The proposed site is approximately one mile east of the Don Edwards San Francisco Bay National Wildlife Refuge (NWR) and 0.2 mile northeast of the existing PG&E Newark substation. The proposed Albrae terminal site is located within the City of Fremont and zoned for General Industrial use. Surrounding land uses consist of industrial facilities, including glass and concrete fabrication to the north, an electric utilities distribution center to the east, and a car repair, storage, and auction lot to the south and west.

The southern terminal site is the proposed Baylands terminal, which is located on Los Esteros Road approximately 0.5 mile north of State Route (SR)-237, approximately 1.8 miles west of I-880, and approximately 1.8 miles northeast of the existing SVP NRS substation. The site is located on approximately 9.2 acres within the City of San José and zoned for Single-Family Residential use. Surrounding land uses consist of Los Esteros Road and a recycling trash center to the north, San José-Santa Clara Regional Wastewater Facility (RWF) to the east, and undeveloped land to the south and west.

Though the California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project and the Proposed Project is not subject to local land use and zoning regulations or other permits (see **Section 5.11.2, Regulatory**

Setting for more information), the Cities of Fremont, Milpitas, San José, and Santa Clara land use and zoning designations are discussed here for informational purposes.

The City of Fremont General Plan, City of Milpitas General Plan, City of San José General Plan, and City of Santa Clara General Plan were reviewed to identify the land use designations associated with the Proposed Project. **Figure 5.11-1, General Plan Land Use** illustrates the designated land uses for the Proposed Project and surrounding area. **Table 5.11-1, General Plan Land Use Designations Within the Proposed Project** lists the land use designations for the areas on which the terminal sites are proposed, as well as the land uses within or adjacent to the transmission line routes. As mentioned in **Section 3.3, Project Components**, the proposed transmission lines would include both underground and overhead segments and would be located primarily within existing road rights-of-way (ROWs). Portions of the proposed overhead Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line would pass through a City of Milpitas Open Space land use area and City of San José Public/Quasi-Public and Open Space, Parklands and Habitat land use areas. The proposed overhead Baylands to NRS 230 kV alternating current (AC) transmission line structures would be located in the City of San José Combined Industrial/Commercial land use area and would cross over the Guadalupe River channel, which is a designated Open Space, Parklands and Habitat land use area. See **Figure 5.11-1** for more detail.

Table 5.11-1: General Plan Land Use Designations Within the Proposed Project	
Land Use Designation	Permitted Uses
City of Fremont	
Industrial – General <i>(Albrae Terminal)</i>	This is a broad industrial designation accommodating such uses as heavy manufacturing, warehousing, recycling facilities, and corporation yards. These areas have been mapped to recognize the greater potential of these uses to generate off-site impacts, including noise, odors, vibration, and truck traffic.
Industrial – Tech	This applies to areas used for research and development, “clean and green” tech, and semi-conductor, computer hardware, software and related technological, administrative, sales, and engineering facilities. These areas play an essential role in the Silicon Valley economy for the City of Fremont.
Open Space – Resource Conservation/Public	This category includes open spaces that are located below the Toe of the Hill (TOH) and owned by public or quasi-public agencies other than the City of Fremont. This designation includes PG&E transmission line ROWs and Alameda County Flood Control and Water Conservation District easements and ROWs. Resource Conservation and Public Open Space lands will remain as permanent open space through the horizon year of the general plan (2035).
Public Facility	The Public Facility designation generally applies to non-open space parcels owned by public agencies or utilities. The designation includes City facilities, public schools, water and sanitary district facilities, transit agency facilities, utilities, and other federal, state, county, and local government facilities. Allowable development intensity on Public Facility properties is determined on a case-by-case basis and a 45-foot height limit generally applies.

Table 5.11-1: General Plan Land Use Designations Within the Proposed Project	
Land Use Designation	Permitted Uses
Commercial – Regional	This includes large-scale commercial uses serving a citywide or regional market, typically on large sites along freeways or major arterials. Uses such as furniture and electronic stores, auto dealerships, home improvement stores, department stores, and “big box” retailers are included.
Commercial – General	This applies to low-scale commercial, service, and office uses located along the City’s arterials and collector streets. Some of these areas were developed as auto-oriented “strip” shopping centers while others are freestanding offices, commercial uses, or clusters of businesses meeting the day-to-day needs of City of Fremont residents.
City of Milpitas	
Permanent Open Space	The Permanent Open Space designation identifies areas designated for parks, waterways, sensitive habitat, groundwater recharge areas, creek corridors, and trails. Development in these areas shall be limited to such buildings and structures that support these uses. Examples of acceptable buildings and structures may include park facilities, restrooms, trails, signage, and utilities infrastructure.
City of San José	
Open Space – Parklands and Habitat <i>(Baylands Terminal)</i>	These lands can be publicly or privately owned areas that are intended for low intensity uses. Lands in this designation are typically devoted to open space, parks, recreation areas, trails, habitat buffers, nature preserves, and other permanent open space areas. New development on lands within this designation should be limited and mindfully located to minimize potential environmental and visual impacts.
Public/Quasi-Public	This category is used to designate public land uses and joint development, including schools, corporation yards, libraries, water treatment facilities, convention centers, and auditoriums, etc. This category is also used to designate lands used by some private entities, including private schools, daycare centers, hospitals, public utilities, and the facilities of any organization involved in the provision of public services such as gas, water, electricity, and telecommunications facilities that are consistent in character with established public land uses.
Combined Industrial/Commercial	This category allows a significant amount of flexibility for the development of a varied mixture of compatible commercial and industrial uses, including hospitals and private community gathering facilities. Properties with this designation are intended for commercial, office, or industrial developments or a compatible mix of these uses.
Residential Neighborhood	This designation is applied broadly throughout the City to encompass most of the established, single-family residential neighborhoods, including both the suburban and traditional residential neighborhood areas which comprise the majority of its developed land. The average lot size, orientation, and form of new Structures for any new infill development must, therefore, generally match the typical lot size and building form of any adjacent development.

Table 5.11-1: General Plan Land Use Designations Within the Proposed Project	
Land Use Designation	Permitted Uses
City of Santa Clara	
Parks/Open Space	This classification is intended for park and open space facilities, managed natural resource areas, and outdoor recreation areas. It includes parks, public golf courses, recreational facilities, and nature preserves that provide active or visual open space and serve the outdoor recreational needs of the community.
Urban Center/Entertainment District	The Urban Center/Entertainment District land use designation was approved as an amendment to the Climate Action Plan element of the General Plan to accommodate high-intensity, urban-oriented development. This classification is intended for a mixture of uses, including commercial retail and services, urban residential, hotel, and employment generating uses.
Transit Neighborhood	This classification is intended for residential development along a transit corridor to encourage higher-density residential development in transit and mixed-use areas. The intent of this classification is to encourage transit ridership.
High Intensity Office/Research and Development	This classification is intended for high-rise or campus-like developments for corporate headquarters, research and development, and supporting uses, with landscaped areas for employee activities.
Low Density Residential	This classification is intended for residential densities of 8 to 19 units per gross acre. Building types may include detached or attached dwelling units. Low Density Residential development comes in the form of single-family dwelling units, townhomes, rowhouses, and combinations of these development types.
Very Low Density Residential	This classification is intended for residential densities of up to ten units per gross acre. Development is typically single-family in scale and character, with a prevailing building type of single-family detached dwelling units.
Regional Commercial	This classification is intended for retail and commercial uses that provide local and regional services. A broad range of retail uses is allowed, including regional shopping centers, medical facilities, home improvement/durable goods sales and services, new and used auto sales and services, and travel-related services, such as hotels, gas stations, restaurants, convention centers, amusement parks, and sports venues.
Sources: City of San José, 2023a, 2023b; City of Santa Clara, 2010, 2016; City of Milpitas, 2021; City of Fremont, 2011, 2019.	

Figure 5.11-2, Zoning Designation illustrates the zoning designations within the vicinity of the Proposed Project. **Table 5.11-2, Zoning Designations Within the Proposed Project** lists the zoning designations for the proposed terminal sites and land adjacent to the proposed transmission line routes. A majority of the proposed Albrae to Baylands 320 kV DC transmission and Baylands to NRS 230 kV transmission line are within the road ROW and may require Encroachment Permits and Traffic Control Plans, as applicable.

Table 5.11-2: Zoning Designations Within the Proposed Project	
Zoning Designation	Permitted Uses
City of Fremont	
Industrial (IN) <i>(Albrae Terminal)</i>	This zoning district provides areas for general industrial, manufacturing, wholesale, and other related commercial and service uses needed by the City and the region. Electrical utility generation facilities would typically require a Zoning Administrator Permit.
Commercial (C)	Permitted uses include general commercial uses. In addition to general merchandising and retail trade, this district also permits offices, educational and instructional services, health-related services, personal services, group assembly, and other uses which are not oriented toward retail trade and general merchandising.
Industrial – Tech (IT)	This zoning district provides areas devoted to research and development activities, such as product development, engineering, sales, and administration, as well as light manufacturing and wholesale uses.
Open Space (OS)	This category includes open spaces that are owned by public or quasi-public agencies other than the City of Fremont. This designation includes PG&E transmission line ROWs and Alameda County Flood Control and Water Conservation District easements and ROWs. Resource Conservation and Public Open Space lands will remain as permanent open space through the horizon year of the general plan (2035).
Public Facilities (PF)	Permitted uses within Public Facilities districts are publicly owned facilities, public parks and open space, public colleges, and public transit facilities.
City of Milpitas	
Open Space (OS)	Permitted uses within this zoning designation are public parks and recreational facilities, public trails, and public community gardens. Conditional uses include day care centers and public utility facilities.
City of San José	
Single-Family Residential (RS) <i>(Baylands Terminal)</i>	The purpose of the single-family residence district is to reserve land for the construction, use, and occupancy of single-family subdivisions. The allowable density range is one to eight dwelling units per acre. Electrical generation facilities, such as the proposed Baylands terminal, would typically require a Special Use Permit from the City of San José.
Multi-Family Residential (RM)	The purpose of the multiple residence district is to reserve land for the construction, use, and occupancy of higher density residential development and higher density residential-commercial mixed-use development. Utility facilities are a conditional or special use.
Agriculture (A)	These areas are zoned where agricultural uses are desirable. Electrical utilities are a special or conditional use.
Planned Development Agriculture Base District (A[PD])	These areas are zoned where agricultural uses are desirable. Electrical utilities are a special or conditional use.
Light Industrial (LI)	The light industrial zoning district is intended for a wide variety of industrial uses and excludes uses with unmitigated hazardous or nuisance effects. Electrical utilities are a conditional use.
Heavy Industrial (HI)	Intended for industrial uses with nuisance or hazardous characteristics which for reasons of health, safety, environmental effects, or general welfare are best segregated from other uses. Extractive and primary processing industries are typical of this district.

Table 5.11-2: Zoning Designations Within the Proposed Project	
Zoning Designation	Permitted Uses
City of Santa Clara	
Planned Development (PD)	This designation is intended to accommodate development that is compatible with the existing community. A wide array of uses is permitted, while large storage areas or heavy industrial uses are not permitted.
Transit Neighborhood (TN)	This zone is designed to implement the Transit Neighborhood General Plan designation, creating a high-density, transit-oriented residential district with supportive retail services, such as live entertainment, mixed-use structures, traditional and supportive housing, and multi-family dwellings.
Public, Quasi-Public, and Public Park or Recreation Zoning Districts (B)	This district is intended to provide for public, quasi-public, and public park facilities as specific land use developments. Permitted uses include public utilities and public parks or recreational facilities.
Sources: City of Fremont, 2017; City of San José, 2023c, 2023d; City of Milpitas, 2023; City of Santa Clara, 2023a.	

5.11.1.2 Special Land Uses

The Proposed Project is located within lands administered by a federal agency and a designated coastal zone management area, as discussed below.

Land administered by federal, state, or local agencies, or private conservation organizations

Portions of the Proposed Project would be adjacent to the Don Edwards San Francisco Bay NWR, which is managed by the United States Fish and Wildlife Service (USFWS) as part of the San Francisco Bay NWR Complex. The Don Edwards San Francisco Bay NWR is located generally to the west of the Proposed Project within the south San Francisco Bay. It also has several areas that extend into or adjacent to the Proposed Project, including along both sides of the proposed Albrae to Baylands 320 kV DC transmission line corridor within Cushing Parkway, to the north of Los Esteros Road, and west of the San José-Santa Clara RWF. The Proposed Project is also located within lands regulated by the San Francisco Bay Conservation and Development Commission (BCDC), a state agency, as described further below.

Designated coastal zone management areas

The Proposed Project does not fall within a designated California Coastal Commission (CCC) coastal zone management area (CCC, 2019).

The Proposed Project is located within the jurisdiction of the BCDC, which is a coastal zone management agency (**Figure 5.11-3, BCDC Jurisdiction and Priority Use Areas**). The BCDC has permitting authority for work in and along the shoreline of the San Francisco Bay and within the Suisun Marsh. The boundaries of the Don Edwards San Francisco Bay NWR in the south San Francisco Bay are designated by the BCDC as a Priority Use Area for Wildlife (BCDC, 2024a). The Wildlife Priority Use Areas include national wildlife refuges, state wildlife areas and ecological reserves, and other shoreline sites around the Bay whose primary purpose is the protection of threatened or endangered native plants, wildlife, and aquatic organism; the preservation and enhancement of unique habitat types or highly significant wildlife habitat; or the propagation and feeding of aquatic life and wildlife (BCDC, 2020).

Designated or proposed candidate National or State Wild and Scenic Rivers crossed by the project

The Proposed Project is not crossed by any designated or proposed Natural or State Wild and Scenic Rivers (National Park Service, 2021).

National landmarks

The Proposed Project does not have any national landmarks within the Proposed Project area. The closest national landmark as identified is the Our Lady of Guadalupe Mission Chapel in San José, approximately 15.5 miles southeast of the proposed Baylands terminal site (National Park Service, 2023).

5.11.1.3 Habitat Conservation Plan

The Proposed Project is partially located within the habitat study area of the Santa Clara Valley Habitat Conservation Plan (HCP) (Santa Clara Valley HCP, 2012). The Santa Clara Valley HCP was established by the County of Santa Clara, City of San José, City of Morgan Hill, City of Gilroy, Santa Clara Valley Water District, and Santa Clara Valley Transit Authority. The objective of the Santa Clara Valley HCP is to maintain a reserve system that focuses on preservation and enhancement actions that provide for the protection of species, natural communities, and ecosystems, while providing a means to standardize the mitigation and compensation requirements for species listed under the Federal Endangered Species Act (ESA) and California Endangered Species Act from implementation of the covered activities (urban development, instream capital projects, instream O&M, rural capital projects, rural O&M, rural development, and conservation strategy implementation). The Proposed Project is located partially within the permit area for the Santa Clara Valley HCP and within an expanded study area for burrowing owl conservation. The Santa Clara Valley HCP is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth on approximately 500,000 acres, or two-thirds of southern Santa Clara County. The Santa Clara Valley Habitat Agency implements the plan. The Santa Clara Valley HCP requires permits for project-specific impacts on Santa Clara Valley HCP-listed species and removes the need to obtain approvals from the wildlife agencies and reduces the number and scope of required biological studies.

Section 10 of the Federal ESA allows for the creation of HCPs to protect listed and candidate species in connection with the issuance of an incidental take permit for federally listed species. PG&E's San Francisco Bay Area O&M HCP ("Bay Area O&M HCP") covers O&M activities for PG&E's electric and gas transmission and distribution systems within 34 counties in California. In 2017, PG&E began implementation of the Bay Area O&M HCP, which covers the nine counties that surround San Francisco Bay (PG&E, 2023). Although construction of the Proposed Project is not a "covered activity" under the plan, the Proposed Project area is located within the geographical boundaries of this HCP. The potential applicability of the HCP to the Proposed Project is further discussed in **Section 5.4, Biological Resources**.

The Proposed Project is also located within the plan area for the Don Edwards San Francisco Bay NWR Comprehensive Conservation Plan (CCP). The CCP was developed by the USFWS to guide refuge management and address legal mandates, policies, goals, and National Environmental Policy Act (NEPA) compliance. Goals, objectives, and strategies outlined in the

Don Edwards San Francisco Bay NWR CCP aim to protect and restore the refuge's tidal marsh, mudflat, open bay, vernal pool, grassland, and upland habitats and provide habitat for protected and sensitive species. The potential applicability of the CCP to the Proposed Project is further discussed in **Section 5.4**.

The County of Alameda is covered by the Alameda County Resource Conservation District (ACRCD) Voluntary Local Program (VLP), which was developed in collaboration with the California Department of Fish and Wildlife (CDFW) and the Natural Resources Conservation Service to encourage farmers and ranchers to voluntarily enhance, restore, and maintain habitat for sensitive, candidate, threatened, and endangered species that benefit from habitat maintenance and agricultural activities. The VLP primarily serves residents conducting routine and on-going agricultural activities in the eastern, rural portion of the County of Alameda and excludes projects in salt marsh and estuary habitats in the County's bayfront area, including land and waterways under BCDC jurisdiction. As mapped by the VLP Land Use figure, the Proposed Project would be located within Urban and Buildup Land and Other (rural development, mined land, etc.) in the County of Alameda and would not be eligible for participation in the VLP. However, this program is provided for informational purposes and the applicability of the VLP to the Proposed Project is further discussed in **Section 5.4**.

5.11.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.11.2.1 Land Use and Planning Regulatory Setting

Federal

Habitat Conservation Plans

As discussed above, the Proposed Project is located within the boundaries of the Santa Clara Valley HCP, PG&E Bay Area O&M HCP, Don Edwards San Francisco Bay NWR CCP, and the ACRCD VLP. The applicability of these plans is further discussed in **Section 5.4**.

State

San Francisco Bay Conservation and Development Commission

The BCDC is a California state commission dedicated to the protection, enhancement, and responsible use of the San Francisco Bay. BCDC has authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within its jurisdiction (BCDC, 2020). BCDC's authority derives from two statutes: the McAteer-Petris Act and the Suisun Marsh Preservation Act. As defined in the McAteer-Petris Act, BCDC's jurisdiction includes San Francisco Bay, including all sloughs, marshlands, tidelands, and submerged lands (below mean tide), a shoreline band consisting of all territory located within 100 feet of the shoreline, salt ponds and managed wetlands consisting of all areas that have been diked off from the Bay, and certain waterways, including Coyote Creek in the Counties of Alameda and Santa Clara up to the easternmost point of Newby Island. BCDC is responsible for implementing and updating the San Francisco Bay Plan, which provides policy guidance for development within its jurisdiction and delineates Priority Use Areas that should be reserved for certain land uses on the San Francisco Bay shoreline. Priority Use Areas include ports, water-

related industry, water-oriented recreation, airports, and wildlife refuges. Within Priority Use Areas, BCDC has set and described the specific boundaries of the 100-foot shoreline band in which it is authorized to grant or deny permits for shoreline development. BCDC also has enforcement authority to ensure that anyone who is required to obtain a permit pursuant to the McAteer-Petris Act or Suisun Marsh Preservation Act does so and that anyone who has obtained a BCDC permit complies with all of its terms and conditions (BCDC, 2024b).

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, terminals, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local land use and planning-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The purpose of the Land Use Element of the City of Fremont General Plan is to provide goals, policies, actions, and standards to guide future land use decisions in Fremont. It establishes the basic pattern of development in the City, including land uses and densities, and presents the policies and actions to ensure that future development will enhance the quality of life for all City of Fremont residents such as those described below (City of Fremont, 2011).

Policy 2-4.3

Corridors. Recognize the importance of Fremont's corridors in shaping the image and identity of the city. Encourage their development as "complete streets" that accommodate multiple modes of transportation while supporting a variety of land uses and utility infrastructure, including activities without an active street presence and uses which cannot be easily accommodated in centers. This policy is particularly applicable to Fremont Boulevard, but it applies to other thoroughfares as well. In general, corridors should be recognized as having distinct segments, punctuated by activity nodes around key intersections. Streetscape improvements, design guidelines, public art, land use and zoning standards, signage, undergrounding utilities, and road design changes can be used to create a stronger sense of identity.

Policy 2-6.7

Environmentally Sensitive Use of Open Space. Regulate recreational and public facility development on lands designated as open space to conserve the overall character of such sites and

minimize impacts on recreational activities, mature landscaping, and environmentally sensitive areas.

Implementation 2-6.7.A Infrastructure in Open Space. Establish zoning standards which recognize the presence of infrastructure facilities such as radio and television towers within designated open space areas. Periodically update zoning standards for these areas in response to changing infrastructure needs, changes in energy and communication, and emerging technologies. There are some public facilities and utilities that cannot feasibly be located in urbanized areas, but that serve an essential public need. There are also infrastructure facilities where City regulations may be preempted by state and federal law. This implementation measure does not apply to wastewater treatment facilities, landfills, and commercial power plants, which are prohibited uses in open space areas.

Policy 2-6.9 Environmentally Sensitive Use of Open Space. Strongly discourage the encroachment of development onto common open space areas within planned developments or other residential projects. Where feasible, shared open space areas in residential subdivisions shall be permanently restricted to open space uses through deed restrictions or other appropriate means.

City of Fremont Municipal Code

Pursuant to Fremont Municipal Code § 18.50 Zoning Regulations, Industrial Zoning Districts, electric power transmission, control and distribution facilities can be permitted within Industrial districts through a Zoning Administrator Permit issued by the Zoning Administrator. Pursuant to Fremont Municipal Code § 18.190.500, the erection, construction, alteration, or maintenance of electrical service facilities by an operator shall be allowed within Commercial and Open Space Districts without a Conditional Use Permit (CUP) or Zoning Administrator Permit, as long as the facilities are located within public streets or road ROW. Those facilities still may be subject to design review permit approval or performance standards as specified by the Fremont Municipal Code. Districts zoned for public facilities allow publicly owned facilities and utilities, as well as electrical utilities, as a conditional use upon approval of a CUP (City of Fremont, 2023).

However, the CPUC has preemptive power under the California Constitution (Article XII, Section 8) over local jurisdictions with respect to regulation of investor-owned public utilities and electric utility siting. The CPUC, therefore, has ultimate decision-making authority over the land use decisions for the Proposed Project.

City of Milpitas General Plan

The following goal and policies from the Milpitas General Plan are relevant to land use and the Proposed Project (City of Milpitas, 2021).

Goal LU-1 Accommodate a well-balanced mix of land uses that meets the diverse needs of Milpitas residents, businesses, and visitors with places to live, work, shop, be entertained and culturally enriched.

- Policy LU 1-5** Prohibit the conversion of designated Permanent Open Space lands to urban uses. This does not apply to the development or expansion of parks uses and amenities, which are considered open space uses.
- Policy LU 1-7** Recognize that the Land Use Map may be amended in accordance with State law in order to ensure that there is an adequate supply of commercial, business park, industrial, public facility, parks, residential, and other desired land uses to serve the City's needs.

City of Milpitas Municipal Code

Pursuant to Milpitas Municipal Code § 10.39 Zoning Regulations, Open Space, public utilities can be permitted within Open Space districts through a CUP (City of Milpitas, 2023). However, the CPUC has preemptive power under the California Constitution (Article XII, Section 8) over local jurisdictions with respect to regulation of investor-owned public utilities and electric utility siting. The CPUC, therefore, has ultimate decision-making authority over the land use decisions for the Proposed Project.

City of San José General Plan

The City of San José General Plan provides Measurable Environmental Sustainability (MS) goals for the City of San José through 2040, establishing measurable standards for the achievement of sustainable development practices. The following MS goals and action items are provided for informational purposes of sharing the City of San José's energy conservation and renewable energy goals (City of San José, 2024).

- Goal MS-2** **Energy Conservation and Renewable Energy Use.** Maximize the use of green building practices in new and existing development to maximum efficiency and conservation and to maximize the use of renewable energy sources.
- Action MS-2.8** Develop policies which promote energy reduction for energy-intensive industries. For facilities such as data centers, which have high energy demand and indirect greenhouse gas emissions, require evaluation of operational energy efficiency and inclusion of operational design measures as part of development review consistent with benchmarks such as those in the U.S. Environmental Protection Agency's EnergyStar Program for new data centers. Also require consideration of distributed power production for these facilities to reduce energy losses from electricity transmission over long distances and energy production methods such as waste-heat reclamation or the purchase of renewable energy to reduce greenhouse gas emissions.
- Goal MS-15** **Renewable Energy.** Receive 100 percent of electrical power from clean renewable sources (e.g., solar, wind, hydrogen) by 2022 and to the greatest degree feasible increase generation of clean, renewable energy within the City to meet its own energy consumption needs.
- Policy MS-15.4** Promote local innovation, research, development, and deployment of renewable energy and energy efficiency technologies.

- Policy MS-15.5** Showcase and apply innovative technologies within San José, including developments that achieve maximum energy efficiency or net zero energy, and renewable energy systems that generate energy equal to or greater than that consumed on site.
- Goal MS-16** **Energy Security.** Provide access to clean, renewable, and reliable energy for all San José residents and businesses.
- Policy MS-16.1** Promote availability of a variety of tools and services for implementing energy conservation and renewable energy generation, including financing districts, energy auditing, and energy efficiency retrofit services to all residents and business owners.
- Action MS-16.6** Create partnerships and governance structures that improve the overall efficiency and reliability of energy production and supply.

The General Plan acknowledges construction and maintenance of infrastructure is necessary to support existing and planned land uses and to achieve Environmental Leadership, Innovative Economy, Healthful Neighborhoods, and other City goals. The following Infrastructure (IN) goals and policies regarding are provided for informational purposes.

- Goal IN-1** **General Provision of Infrastructure.** Provide and maintain adequate water, wastewater, stormwater, water treatment, solid waste and recycling, and recycled water infrastructure to support the needs of the City's residents and businesses.
- Policy IN-1.6** Ensure that public facilities and infrastructure are designed and constructed to meet ultimate capacity needs to avoid the need for future upsizing. For facilities subject to incremental upsizing, initial design shall include adequate land area and any other elements not easily expanded in the future. Infrastructure and facility planning should discourage oversizing of infrastructure which could contribute to growth beyond what was anticipated in the Envision General Plan.
- Policy IN-1.9** Design new public and private utility facilities to be safe, aesthetically pleasing, compatible with adjacent uses, and consistent with the Envision General Plan goals and policies for fiscal sustainability, environmental leadership, an innovative economy, and quality neighborhoods.
- Policy IN-1.10** Require undergrounding of all new publicly owned utility lines. Encourage undergrounding of all privately owned utility lines in new developments. Work with electricity and telecommunications providers to underground existing overhead lines.
- Policy IN-1.11** Locate and design utilities to avoid or minimize impacts to environmentally sensitive areas and habitats.
- Goal IN-2** **Infrastructure Management.** Manage City resources efficiently in order to maintain existing infrastructure and facilities and avoid unnecessary replacement costs.

- Policy IN-2.1** Utilize the City's Infrastructure Management System Program to identify the most efficient use of available resources to maintain its infrastructure and minimize the need to replace it.
- Policy IN-2.2** Explore new methods to supplement the City's existing resources devoted to the operation and maintenance of its infrastructure and facilities.

City of San José Specific Plan for the Alviso Community

The Proposed Project is partially within the Specific Plan area for the Alviso Community (City of San José, 1998). This Specific Plan aims to preserve the existing Alviso village area and supports significant employment growth as an extension of the City's key North San José employment district. Within the Specific Plan area, the San José-Santa Clara RWF lands have been identified as a significant opportunity for new employment land areas, and in particular to provide an opportunity for new light industry or manufacturing activity jobs. According to occupancy data cited in the Specific Plan, there is a significant need for additional industrial land of this type. Because other Specific Plan areas within the City of San José are generally built-out and/or located in areas with a lesser degree of transit access, employment growth in those areas is more focused on commercial or industrial uses that support local residences and businesses.

The Specific Plan provides certain objectives and policies for new development within the Alviso Community, establishing measurable standards for the achievement of the goals of the Specific Plan. The following objectives and policies are provided for informational purposes.

River Orientation Objective	Encourage appropriate land uses and development adjacent to the Guadalupe River.
River Orientation Policy 1	Commercial land uses adjacent to the Guadalupe River should provide access to the waterway.
River Orientation Policy 2	Development along the Guadalupe River should be designed to reflect and acknowledge the river environment by orienting seating areas, windows, decks, balconies, and open spaces to the river while orienting utility, parking, storage, and trash areas away from it.
Industrial/Non-Industrial Relationships Objective	Setbacks and buffers should be established to protect environmental resources (e.g., Coyote Creek) and "sensitive uses" (e.g., residential, day care, and school uses) from potential negative impacts of industrial use.
Industrial/Non-Industrial Relationships Policy 1	Industrial uses are not allowed to store, handle, dispose, and/or use acutely hazardous materials within one-quarter mile of residential uses, George Mayne School, New Chicago Marsh (i.e., National Wildlife Refuge), and other sensitive uses and habitats.

Industrial/Non-Industrial Relationships Policy 2

The Light Industrial areas located north of State Street and adjacent to Coyote Creek should mitigate potential negative environmental impacts to nearby natural resources.

Industrial/Non-Industrial Relationships Policy 3

Industrial uses located adjacent to or across the street from residential, school, or other sensitive uses should:

- Be sited and designed to avoid creating nuisances and/or hazards for nearby sensitive uses;
- Have trash and storage areas, loading areas, and access and circulation driveways located at the sides, rear and/or far side of industrial buildings as far away as possible from residential, park, or school uses;
- Use attractive walls and landscaping to screen parking, loading, storage, and other outdoor activity areas;
- Locate buildings on the site to minimize views into nearby residential buildings and yards;
- Locate any activity that potentially generates noise, dust, traffic, the use of hazardous materials, or has other nuisance or safety effects as far from sensitive uses as possible;
- Provide sufficient on-site parking to avoid street parking of vehicles; and
- Limit hours of operation for any activities that may be considered a nuisance.

Environmental Protection Objective

New development should contribute to the protection and preservation of Alviso's natural amenities.

Environmental Protection Policy 1

All new parking, circulation, loading, outdoor storage, utility, and other similar activity areas must be located on paved surfaces with proper drainage to avoid potential pollutants from entering the groundwater, Guadalupe River, Coyote Creek, or San Francisco Bay.

Environmental Protection Policy 2

Waterways or marshlands should never be used for storage, trash, or other environmentally adverse uses.

Environmental Protection Policy 3

The riparian corridors adjacent to Coyote Creek and Guadalupe River should be preserved intact. Any development adjacent to the waterways should follow the City's Riparian Corridor policies.

- Environmental Protection Policy 4** To mitigate the loss of specific wildlife habitat due to development, certain lands should be set aside to provide needed habitat including;
- Portions of the City-owned lands associated with the Water Pollution Control Plant (the edge along Los Esteros Road).
 - Portions of the currently vacant property extending from Grand Boulevard to Route 237 (area along the PG&E easement adjacent to Grand Boulevard and the easterly edge adjacent to the Water Pollution Control Plant Lands).
 - Portions of the lands located just northwest of Highway 237 and Coyote Creek (easterly portion nearest the creek).
- Environmental Protection Policy 5** To protect aquatic habitats that receive storm runoff, all new development must comply with adopted City Council policy entitled "Post-Construction Urban Runoff Management."
- Gateway Entrances Objective** Development located near Highway 237 along both sides of Gold Street, First Street, and Zanker Road should foster a "gateway" feel through building orientation, signs, trees, landscaping, and other features.
- Village Area Design Objective** New development in the Alviso village area should be functional, attractive, and sensitive to the community's unique bayside history, character, and hydrology.

City of San José Municipal Code

Pursuant to San José Municipal Code § 20.30 Zoning Regulations, Residential Zoning Districts, stand-by/back-up power generation facilities can be permitted through a Special Use Permit as long as they do not exceed applicable noise or air standards. Private electrical power generation facilities are a conditional use requiring planning commission approval. Conditional uses are allowed upon issuance of and in compliance with a CUP approved by the planning commission, or city council on appeal, as set forth in Chapter 20.100.

Pursuant to San José Municipal Code § 20.60 and 20.50 Planned Development Agriculture and Heavy Industrial Zoning Districts allow development of utility facilities as a conditional use upon approval of a CUP (City of San José, 2023b).

Pursuant to San José Municipal Code § 20.80.1810, the minimum development criteria for all utility structures include:

- Utility structures shall be located in a private, public utility, or public service easement.

- Sight lines shall remain unobstructed at intersections or driveways consistent with the California Department of Transportation (“Caltrans”) Traffic Safety Manual on file with the director of public works.
- Utility structures shall be enclosed or screened, to the extent possible, to match existing fencing, screening, or landscaping.
- Utility structures shall be constructed and treated with appropriate materials which discourage or repel graffiti.
- Utility structures shall be sited to avoid impacts on ordinance sized trees.
- No utility structure shall exceed one hundred ten cubic feet or a maximum height of five and one-half feet above grade, exclusive of meter panels or pedestals.

However, the CPUC has preemptive power under the California Constitution (Article XII, Section 8) over local jurisdictions with respect to regulation of investor-owned public utilities and electric utility siting. The CPUC, therefore, has ultimate decision-making authority over the land use decisions for the Proposed Project.

City of Santa Clara General Plan

Policies in the City of Santa Clara General Plan provide direction to move the City's vision into action in keeping with the framework identified in the General Plan major strategies. Goals are presented to ensure the General Plan major strategies are fully realized, such as those described below (City of Santa Clara, 2010).

- | | |
|-----------------------|--|
| Goal 5.3.1-G2 | Consistency between new development, the General Plan, Zoning Ordinance, Capital Improvements Program, and other implementing regulations. |
| Goal 5.3.1-G4 | Opportunities for public participation in the review process for new development and other related planning efforts. |
| Goal 5.3.1-P1 | Preserve the unique character and identity of neighborhoods through community-initiated neighborhood planning and design elements incorporated in new development. |
| Goal 5.3.1-P2 | Encourage advance notification and neighborhood meetings to provide an opportunity for early community review of new development proposals. |
| Goal 5.3.1-P7 | Work with State and regional agencies to ensure that their plans and projects are consistent with the City's General Plan. |
| Goal 5.3.1-P9 | Require that new development provide adequate public services and facilities, infrastructure, and amenities to serve the new employment or residential growth. |
| Goal 5.3.1-P27 | Encourage screening of above-ground utility equipment to minimize visual impacts. |

Goal 5.3.1-P28 Encourage undergrounding of new utility lines and utility equipment throughout the City.

Goal 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.

City of Santa Clara Municipal Code

Pursuant to Santa Clara Municipal Code Zoning Regulations § 18.54, Planned Development and Combined Zoning Districts and § 18.25, Transit Neighborhood Zoning Districts, public utility development is permitted within Planned Development districts and Transit Neighborhood districts when a CUP or zoning change is approved by the City of Santa Clara Planning Commission. Development of electrical public utilities facilities is a permitted use within Quasi-Public and Public Park or Recreation Zoning Districts, per Santa Clara Municipal Code § 18.52 Zoning Regulations (City of Santa Clara, 2023b).

However, the CPUC has preemptive power under the California Constitution (Article XII, Section 8) over local jurisdictions with respect to regulation of investor-owned public utilities and electric utility siting. The CPUC, therefore, has ultimate decision-making authority over the land use decisions for the Proposed Project.

5.11.3 IMPACT QUESTIONS

5.11.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to land use and planning come from the CEQA, Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Physically divide an established community; or
- 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.

5.11.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for land use and planning.

5.11.4 IMPACT ANALYSIS

5.11.4.1 Land Use and Planning Impact Analysis

Would the project physically divide an established community?

No Impact. The Proposed Project includes the development of two new HVDC terminal sites and associated transmission lines. The proposed Albrae terminal would be located within urban, built-up land within an industrial area of the City of Fremont. The proposed Baylands terminal would

be located on undeveloped land within northern San José surrounded by a recycling center to the north, San José-Santa Clara RWF to the east, and undeveloped land to the south and west. There is currently no public access (e.g., vehicular or pedestrian) located within either of the proposed terminal site areas. The proposed Baylands to NRS 230 kV transmission line and Albrae to Baylands 320 kV DC transmission line would be located primarily within existing road ROWs in the Cities of Fremont, Milpitas, San José, and Santa Clara. The proposed Newark to Albrae 230 kV transmission line would interconnect the proposed Albrae terminal with the existing PG&E Newark substation. Neither proposed terminal site is located within a residential area, and the transmission lines are located primarily within areas with industrial, open space, or commercial land uses. The majority of the proposed Newark to Albrae 230 kV, Albrae to Baylands 320 kV DC, and Baylands to NRS 230 kV transmission lines would be constructed underground and would not physically divide an established community. The portions of transmission lines within the Cities of San José and Santa Clara where the proposed transmission lines would be built in the vicinity of residential homes would be installed underground within existing road ROWs.

As mentioned in **Section 3.5.8.2, Traffic Control**, construction of the proposed transmission lines would include trenching (for underground portions), temporary laydown, and wire pulling activities, which would result in lane closures, causing potential traffic detours. However, these restrictions would be temporary and, once installed, would operate with minimal traffic disruption after initial construction activities. Therefore, the proposed transmission lines would not physically divide an established community. As discussed in **Section 5.17, Transportation**, a Traffic Control Plan would be prepared to guide traffic, manage detours, and provide safe passage around work areas during construction activities. The proposed Albrae and Baylands terminals would be consistent with the existing character of the sites and would not remove existing access from an established community. As such, the development of the new Proposed Project facilities would not physically divide an established community or otherwise impede pedestrian or vehicular access to community features or services. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and the new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property) and would include the construction of the overhead portion of the proposed Newark to Albrae 230 kV transmission line, including one new pole (AC-1). The Newark substation modifications and the new transmission line are located within an industrial area with no residential facilities nearby. The modifications to the existing Newark substation and new transmission line would be consistent with the existing character of the area and would not divide an established community. There would be no impacts under this criterion.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and the new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. Therefore, the NRS modifications would be consistent with the existing character of the area and would not divide an established community. No impacts would occur under this criterion.

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?

Less-Than-Significant Impact. The Proposed Project would include construction of the new Albrae terminal, located in the City of Fremont, and the new Baylands terminal, located in the City of San José. The proposed associated transmission lines would be located within the Cities of Fremont, Milpitas, San José, and Santa Clara. Because the CPUC has regulatory authority over the Proposed Project, the Proposed Project is not under the discretionary jurisdiction of these Cities and, therefore, is not subject to local agency discretionary regulations. Nonetheless, the Proposed Project would not conflict with the plans, policies, or regulations of these Cities as summarized below.

Pursuant to the City of Fremont Municipal Code, electrical utility generation facilities are permitted within Industrial General zoning districts with the issuance of a Zoning Administrator Permit from the City Zoning Administrator. In addition, the erection, construction, alteration, or maintenance of electrical service facilities by an operator shall be allowed within Commercial and Open Space Districts without a CUP or Zoning Administrator Permit, as long as the facilities are located within public streets or road ROW. The service facilities still may be subject to design review permit approval or performance standards as specified by the Fremont Municipal Code Districts zoned for public facilities that allow publicly owned facilities and utilities, as well as electrical utilities as a conditional use upon approval of a CUP (City of Fremont, 2023). Development of the Proposed Project would not conflict with the goals and policies of the City of Fremont General Plan (City of Fremont, 2011).

Pursuant to City of Milpitas Municipal Code § 10.39 Zoning Regulations, Open Space, public utilities can be permitted within Open Space districts through a CUP (City of Milpitas, 2023). Therefore, development of the Proposed Project would not conflict with the City of Milpitas Municipal Code.

The City of San José Municipal Code § 20.60 and 20.50 allows utility facilities within Planned Development Agriculture and Heavy Industrial Zoning Districts, in which portions of the Proposed Project transmission lines are located, subject to approval of a CUP by the City Planning Commission, or City Council on appeal, as set forth in § 20.100. The proposed Baylands terminal site is zoned as a Single-Family Residential zoning district, which allows for utilities and power generation-related uses with the issuance of a Special Use Permit from the City Planning Commission (City of San José, 2023b).

The proposed Baylands terminal site is partially within the Specific Plan area for the Alviso Community (City of San José, 1998). Within the Specific Plan area, the San José-Santa Clara RWF lands have been identified as an opportunity to provide new light industry or manufacturing activity jobs. Although the new Baylands terminal (located on land owned by the San José-Santa Clara RWF) would be operated remotely once operational with no permanent operational workforce on-site, construction workers would be hired locally whenever possible. In addition, the construction of the proposed Baylands terminal would not prevent the development of the significant amount of undeveloped land surrounding the San José-Santa Clara RWF in a manner that would provide new light industry or manufacturing jobs. Development of the Proposed Project would not conflict with the goals and policies of the City of San José General Plan or any Specific Plan (City of San José, 2024).

The City of Santa Clara Municipal Code § 18.54 and § 18.25 allows public utility development within Planned Development districts and Transit Neighborhood districts when a CUP or zoning change is approved by the City Planning Commission. Development of electrical public utilities facilities is a permitted use within Quasi-Public and Public Park or Recreation Zoning Districts per Santa Clara Municipal Code § 18.52 Zoning Regulations (City of Santa Clara, 2023b). Development of the Proposed Project would not conflict with the goals and policies of the City of Santa Clara General Plan (City of Santa Clara, 2010).

The proposed transmission lines would be located within existing ROWs in the Cities of Fremont, Milpitas, San José, and Santa Clara. As discussed in **Section 3.5.8.2**, construction of the Proposed Project may result in temporary lane closures and potential traffic detours, the locations of which would be identified in the Traffic Control Plan that LS Power would develop in consultation with the applicable agencies. All road surfaces would be restored to the original condition in compliance with local requirements.

As such, the Proposed Project is compatible with the municipal codes for the Cities of Fremont, Milpitas, San José, and Santa Clara. The discretionary actions from these local agencies is replaced by the CPUC's Certificate of Public Convenience and Necessity (CPCN) process, wherein the CPUC will consider local land use regulations as part of its overall decision on the Proposed Project. The Proposed Project would not contribute to operational traffic to local roadways because construction of the proposed transmission lines would be temporary in nature, and the roadways would be returned to original conditions upon completion of the Proposed Project.

As described above in **Section 5.11.2.1, Land Use and Planning Regulatory Setting**, the BCDC has authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within its jurisdiction, including areas within 100 feet of the San Francisco Bay shoreline. To be approved, a project must meet the standards of state law, be consistent with any applicable court decisions, and conform with the BCDC's plans and policies. A portion of the proposed Albrae to Baylands 320 kV DC transmission line along Cushing Parkway and McCarthy Boulevard that borders the Don Edwards San Francisco Bay NWR would be constructed adjacent to the BCDC Priority Use Area for Wildlife. However, the Proposed Project would be constructed within the existing road ROWs or utility easement outside of BCDC's jurisdictional area. The Proposed Project would not be anticipated to result in permanent impacts to wildlife refuge areas, impact public access to these areas, or otherwise preclude the areas from being converted to the priority use.

The proposed Albrae to Baylands 320 kV DC transmission line would enter potential BCDC jurisdictional areas at the seven water crossing locations described in **Table 5.11-3, BCDC Jurisdiction Crossings** (see **Figure 5.11-3**). LS Power is currently coordinating with BCDC to make a final determination of jurisdiction at these seven locations.

No. ¹	Crossing number	Location
1	BCDC-1	Cushing Parkway west of Fremont Boulevard where it crosses Laguna Creek
2	BCDC-2	Fremont Boulevard south of Staging Area 3 where it crosses Agua Caliente Creek
3	BCDC-3	Fremont Boulevard north of Landing Road where it crosses a tributary to Coyote Creek

Table 5.11-3: BCDC Jurisdiction Crossings		
No.¹	Crossing number	Location
4	BCDC-4	Fremont Boulevard where it crosses a tributary to Coyote Creek approximately 0.06 mile southeast of Lakeview Boulevard
5	BCDC-5	Fremont Boulevard where it crosses a tributary to Coyote Creek approximately 0.23 mile southeast of Lakeview Boulevard
6	BCDC-6	Fremont Boulevard northwest of Staging Area 4 where it crosses Coyote Creek
7	BCDC-7	Los Esteros Road and Grand Boulevard near its intersection with Spreckles Avenue, northwest of the proposed Baylands terminal

¹ These numbers correspond to BCDC jurisdiction crossings labeled on **Figure 5.11-3**.

At each of these seven locations, construction of the proposed Albrae to Baylands 320 kV DC transmission line would include horizontal directional drilling (HDD) under the water feature (see **Figure 5.11-3**). In addition, the portion of the proposed Baylands to NRS 230 kV transmission that is proposed to be constructed underground within Los Esteros Road would also be located within a potential BCDC jurisdictional area. Construction and operation of the Proposed Project within these areas would not alter, restrict, or hinder the protection, enhancement, or responsible use of any of the San Francisco Bay, sloughs, marshlands, tidelands, submerged lands (below mean tide), or the designated shoreline band. LS Power has initiated coordination with BCDC, and it was confirmed that, at a minimum, an administrative permit would be required for these proposed transmission line crossings. LS Power would continue to coordinate with BCDC for their continued review of the Proposed Project, to confirm and obtain the necessary permits prior to construction, and to ensure compliance with the policies of both the McAteer-Petris Act and the San Francisco Bay Plan.

For the reasons mentioned above, the Proposed Project is consistent with the applicable land use plans, policies, and regulations and would not adversely affect public health, safety, or general welfare. Therefore, impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Therefore, the Newark substation modifications would be consistent with the existing character of the area and would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, located within a Public/Quasi-Public zoning district. Therefore, the SVP modifications would be consistent with the existing character of the area and would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impacts would occur under this criterion.

5.11.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for land use and planning.

5.11.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures (APMs) for land use and planning would be implemented for the Proposed Project.

5.11.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for land use would be implemented for PG&E's scope of work.

5.11.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for land use would be implemented for SVP's scope of work.

5.12 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?				X
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?				X

This section describes the mineral resources in the area of the Proposed Project, as well as the potential impacts resulting from construction and operation and maintenance (O&M) of the Proposed Project.

5.12.1 ENVIRONMENTAL SETTING

5.12.1.1 Mineral Resources

This section describes the extent of mineral resources in the vicinity of the Proposed Project. Mineral resources have long been a part of the City of Fremont’s land resources. The City of Fremont has former quarries of construction aggregate (sand, gravel, crushed rock) which are no longer operational, as well as salt ponds which remain operational, and limestone deposits which have not been previously mined (City of Fremont, 2011). The City of Milpitas contains four areas identified by the state geologist as containing Regionally Significant Construction Aggregate Resources. These areas are located in the foothills outside City limits and contain sandstone deposits (City of Milpitas, 2021). Minerals known to exist in the City of San José include construction aggregate, such as deposits of sand, gravel, crushed rock, clay, and limestone (City of San José, 2024). All of these have provided building materials to the construction industry. Mineral resources located within the City of Santa Clara include aggregate rock, granite, and braunite (Minerals of California, 2023). The Proposed Project is not located within 0.5 mile of any active mines or active mining claims (United States Geological Survey [USGS], 2023). Furthermore, there are no active oil wells or gravel mines within the Proposed Project area.

As shown in **Figure 5.12-1, Mineral Resources Map**, Mineral Resource Zones (MRZ) 1, 2, 3, and 4 are all mapped within 0.5 mile of the Proposed Project area (refer to **Table 5.12-1, Mineral Resource Zone Definitions**, for a description of each resource zone). Pursuant to the California Surface Mining and Reclamation Act of 1975 (SMARA), certain mineral resources within geographical areas are considered to have regional significance and are designated as “Sectors”. The proposed Albrae terminal and Newark to Albrae 230 kilovolt (kV) transmission line are located on land mapped as MRZ-3, or areas containing mineral deposits for which the significance cannot be determined from available data. The proposed Albrae terminal is located within 0.5 mile of, but does not currently overlap, an area designated as Sector J. Sector J is an Alluvial deposit near Mowry Landing in the City of Newark, which is no longer considered to be underlain by aggregate resources (California Department of Conservation [DOC], 2022). The northern portion of the

proposed Albrae to Baylands 320 kV direct current (DC) transmission line is located in an area mapped as MRZ-3 (approximately 0.9 mile) and following an area designated by the California Geological Survey (CGS) as within Sector K (approximately 0.7 mile) (CGS, 1983). Sector K represents an Alluvial deposit located west of Interstate 880 on the southern edge of the City of Fremont. However, in the figure titled, "Mineral Resources and Sites Subject to SMARA" in the City of Fremont General Plan, Conservation Element, Sector K is smaller and does not overlap with the Proposed Project (City of Fremont, 2011). This is likely because the northern portion of the area shown as Sector K within the CGS mapping is now highly developed and is unlikely to be utilized for future mineral extraction. The remaining approximately seven miles of the proposed Albrae to Baylands 320 kV DC transmission line runs through an area mapped as MRZ-1 or MRZ-4.¹ The proposed Baylands terminal and Baylands to Northern Receiving Station (NRS) 230 kV transmission line are located in areas mapped as MRZ-1 or MRZ-4. The Proposed Project is not located on any active mining sites or sites with active mining claims (USGS, 2023).

5.12.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.12.2.1 Mineral Resources Regulatory Setting

Federal

The Surface Mining Control and Reclamation Act (SMCRA) (30 U.S.C. §§ 1201-1328) establishes a program for regulating surface coal mining and reclamation activities. It establishes mandatory uniform standards for these activities on state and federal lands. This includes a requirement that minimizes adverse impacts on fish, wildlife, and related environmental values. The act creates an Abandoned Mine Reclamation Fund for use in reclaiming and restoring land and water resources adversely affected by mining practices (SMCRA, 1977).

State

The protection of regionally significant mineral resource deposits is one of the main emphases of the SMARA. The law specifically mandates a two-phased process, commonly referred to as classification and designation for mineral resources. The CGS is responsible under SMARA for carrying out the classification phase of the process (California DOC, 2015). The California State Mining and Geology Board (SMGB) is responsible for the second phase, which allows SMGB to identify areas within a production-consumption region that contain significant deposits of certain mineral resources that may be needed to meet the region's future demand (California SMGB, 2000). SMARA requires the state geologist to classify lands into MRZs based on the known or inferred mineral resource potential of that land. The classification process is based solely on geology, without regard to land use or ownership. MRZ definitions are provided below in **Table 5.12-1**.

¹ MRZ-1-delineated areas indicate that through adequate known geologic information, no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. MRZ-4-delineated areas indicate that the information available is inadequate for assignment of any other MRZ category. These areas are mapped as one combined layer by the California SMGB as shown on **Figure 5.12-1**.

Table 5.12-1: Mineral Resource Zone Definitions

Mineral Resource Zone	Definition
MRZ-1 ¹	Areas where adequate geologic 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 for which the significance cannot be determined from available data.
MRZ-4 ¹	Areas where available information is inadequate for assignment of any other MRZ category.
Sector J	Alluvial deposit near Mowry Landing in the City of Newark, which is no longer considered to be underlain by aggregate resources.
Sector K ¹	Alluvial deposit on the southern edge of the City of Fremont.
Source: California SMGB, 2000	
¹ MRZ-1 and MRZ-4 are mapped as one combined layer by the California SMGB as shown on Figure 5.12-1 .	
² Note that the Sector K zone in the Proposed Project vicinity is mapped in slightly different but overlapping areas by the CGS and City of Fremont General Plan.	

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local mineral resources-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following goal and policies from the City of Fremont General Plan are relevant to mineral resources and are provided for informational purposes (City of Fremont, 2011).

- Goal 7-5** **Mineral Resources.** State-designated and regionally significant mineral resources identified and protected where feasible.
- Policy 7-5.1** **Protect Mineral Resources.** Protect identified state designated mineral resources from incompatible development whenever feasible consistent with the City's long range development plans.

Implementation 7-5.1.B Evaluate Impact of Development Near Mineral Resources. Evaluate impacts of any development project proposed within approximately 100 feet of an identified mineral resource during the development and environmental review process.

Implementation 7-5.1.C Open Space Land Use Designations. Retain existing and designate new open space land use designations when appropriate on land containing identified significant mineral resources.

Implementation 7-5.1.D Evaluate Proposed Land use Changes. Evaluate and consider the impacts of any proposed change in land use designation for a parcel of land containing regionally significant mineral resources.

City of Fremont Municipal Code

Pursuant to Fremont Municipal Code § 18.220, Zoning Regulations, Surface Mining and Reclamation, mineral resource areas that have been classified by the DOC's Division of Mines and Geology or designated by the SMGB, as well as existing surface mining operations that remain in compliance with the provisions of this chapter, shall be protected from intrusion by incompatible land uses that may impede or preclude mineral extraction or processing, to the extent possible for consistency with the City's General Plan. The City's General Plan and resource maps will be prepared to reflect mineral information. Land use decisions within the City of Fremont will be guided by information provided on the location of identified mineral resources of regional significance.

Pursuant to City of Fremont Municipal Code § 18.145, Mineral Resources Overlay District, certain districts may be overlain with a Mineral Resources (M-R) designation. Any proposed use within a M-R district requiring discretionary approval by the City Council, Planning Commission, or Zoning Administrator shall first be required to submit an application for a public hearing before the planning commission to determine the compatibility of the proposed use with future extraction of a mineral resource (City of Fremont, 2023). The Proposed Project is not within an area overlain with a M-R designation (City of Fremont, 2017).

City of Milpitas General Plan

The following goal and policies from the City of Milpitas General Plan are relevant to mineral resources and are provided for informational purposes (City of Milpitas, 2021).

Goal CON-6 Provide for extraction of minerals to help meet future regional needs in an environmentally sensitive manner.

Policy CON 6-1 Manage aggregate resources to ensure that extraction results in the fewest environmental impacts.

Policy CON 6-2 Require preparation and assured implementation of adequate reclamation of mined lands as a condition of approval for mining.

Policy CON 6-3 Permit new quarries only if they are:

- Compatible with surrounding land uses;

- Not environmentally disruptive; and
- Not visible from the Valley Floor.

City of San José General Plan

The City of San José General Plan refers to mineral resources as “extractive resources” (City of San José, 2024). The following goals and policies related to extractive resources were reviewed, and summaries of applicable goals and policies are provided for informational purposes.

Goal ER-11 **Extractive Resources.** Conserve and make prudent use of commercially usable extractive resources.

Policy ER-11.1 When urban development is proposed on lands which have been identified as containing commercially usable extractive resources, consider the value of those resources.

Policy ER-11.2 Encourage the conservation and development of SMARA-designated mineral deposits wherever economically feasible.

City of Santa Clara General Plan

The City of Santa Clara General Plan does not contain policies that are relevant to mineral resources (City of Santa Clara, 2010).

5.12.3 IMPACT QUESTIONS

5.12.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to mineral resources come from the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- 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; or
- 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.

5.12.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for mineral resources.

5.12.4 IMPACT ANALYSIS

5.12.4.1 Mineral Resources Impact Analysis

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 is located within areas identified as MRZ-1 (no mineral deposits), MRZ-4 (inadequate information), and MRZ-3 (areas with mineral deposits with unknown significance). In addition, there are no active mining claims or active mining operations within 0.5 mile of the Proposed Project area. Although a portion of the proposed Albrae to Baylands 320 kV DC transmission line passes through Sector K—an area identified to have regional significance for its Alluvial deposits—the transmission line would be constructed underground within an existing roadway. Trenching for the installation of the underground conduit would be relatively shallow, at a depth of approximately five feet. The existing area identified as Sector K is primarily a developed area, and since the Proposed Project would not install any permanent components outside of the roadway within Sector K, this would not preclude any future mining operations or deplete the value of any existing resources within Sector K. Furthermore, the figure titled, “Mineral Resources and Sites Subject to SMARA” in the City of Fremont General Plan represents Sector K as a smaller area south of Cushing Parkway where the Proposed Project would not overlap (see **Figure 5.12-1**). The Proposed Project does not overlap any other known or inferred mineral resources that are of value to the region and the residents of the State and does not overlap with any areas currently used for mineral extraction. **Table 5.12-2, Mineral Resources within the Proposed Project Area** identifies the mineral resources for each Proposed Project component.

Proposed Project Feature	Mineral Resource Designation
Albrae terminal	MRZ-3
Newark to Albrae 230 kV transmission line	MRZ-3
Newark substation	MRZ-3
Albrae to Baylands 320 kV DC transmission line	MRZ-3, Sector K, and MRZ-1 or MRZ-4
Baylands terminal	MRZ-1 or MRZ-4
Baylands to NRS 230 kV transmission line	MRZ-1 or MRZ-4
NRS substation	MRZ-1 or MRZ-4
Staging Area 1	MRZ-3
Staging Area 2	MRZ-3
Staging Area 3	MRZ-1 or MRZ-4
Staging Area 4	MRZ-1 or MRZ-4
Staging Area 5	MRZ-1 or MRZ-4
Staging Area 6	MRZ-1 or MRZ-4

Table 5.12-2: Mineral Resources within the Proposed Project Area

Proposed Project Feature	Mineral Resource Designation
Staging Area 7	MRZ-1 or MRZ-4
Staging Area 8	MRZ-1 or MRZ-4
Staging Area 9	MRZ-1 or MRZ-4
Staging Area 10	MRZ-1 or MRZ-4
Staging Area 11	MRZ-1 or MRZ-4
Source: California SMGB, 2000	

The proposed Albrae terminal site, Newark to Albrae 230 kV transmission line, a portion of the Albrae to Baylands 320 kV DC transmission line (approximately 0.9 mile), and Staging Areas 1 and 2 are located in areas designated as MRZ-3. However, the proposed Albrae terminal site and a majority of the proposed transmission lines would be located within paved areas and/or along existing roads; therefore, these areas mapped as MRZ-3 would not be used for mineral extraction in the foreseeable future due to current developed conditions. There is one portion of the proposed Albrae to Baylands 320 kV DC transmission line where trenching and conduit installation may occur adjacent to the Cushing Parkway bridge, which is partially located within an area designated as MRZ-3. However, proposed transmission line construction outside of the roadway would be limited to an existing utility easement area that is not currently or planned to be used for mineral extraction. Staging Area 1 has been previously disturbed and would be used to temporarily store equipment, parking, and refueling of vehicles; therefore, it would not restrict any potential future use of the site for mineral resource extraction. Staging Area 2 would be located on a site that is partially developed as a substation and is unlikely to be used for mineral extraction due to the size and surrounding land use. Furthermore, use of Staging Area 2 would be temporary and would not restrict any potential future use of the site for mineral resource extraction.

A portion of the proposed Albrae to Baylands 320 kV DC transmission line (approximately 7.6 miles), Baylands to NRS 230 kV transmission line, Baylands terminal site, and Staging Areas 3 through 11 would be located within areas designated as MRZ-1 or MRZ-4. The proposed Baylands terminal site is the only portion of the Proposed Project area that is primarily undeveloped; however, the site does not consist of known mineral resources and is designated for development by the City of San José General Plan. There are no known mineral resources in areas designated as MRZ-1 or MRZ-4 that would be of value to the region and residents of the State. As noted above, none of the Proposed Project areas would be used for resource extraction due to existing development, with the exception of the proposed Baylands terminal site which is designated for development. Therefore, construction and operation of the Proposed Project would not result in the loss of any known mineral resources, and there would be no impacts under this criterion.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Pacific Gas and Electric Company (PG&E) would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property).

Although the existing Newark substation is located within an area designated as MRZ-3, there are no known mineral resources under the existing Newark substation site, and the site is already developed and is unlikely to be used for future mineral extraction. No impacts would occur under this criterion.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Silicon Valley Power (SVP) would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing developed substation. The substation is located within an area designated as MRZ-1 or MRZ-4; thus, there are no known mineral resources under the existing NRS substation site, and the site is already developed and is unlikely to be used for future mineral extraction. No impacts would occur under this criterion.

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 discussed in the previous section, a portion of the proposed Albrae to Baylands 320 kV DC transmission line passes through Sector K (as shown in CGS mapping) and would be constructed underground within an existing roadway (Cushing Parkway) and adjacent to the Cushing Parkway bridge within an existing utility easement. The existing area identified by CGS as Sector K is primarily a developed area, and the Proposed Project limits of construction within Sector K are not presently used for mineral resource extraction. Within the designated Sector K area, construction of the proposed Albrae to Baylands 320 kV DC transmission line would involve trenching to a relatively shallow depth of approximately five feet below ground surface (bgs), and splice vaults, installed along the underground transmission line corridor approximately every 1,500 to 3,000 feet, would be excavated to a depth of approximately 10 feet bgs. Since the Proposed Project would not install any permanent components outside of the roadway within Sector K, the Proposed Project would not restrict any potential future use that would result in a loss of availability of a mineral resource recovery site. Furthermore, the figure titled, "Mineral Resources and Sites Subject to SMARA" in the City of Fremont General Plan represents Sector K as a smaller area south of Cushing Parkway where the Proposed Project would not overlap (see **Figure 5.12-1**). The Proposed Project does not overlap any other known or inferred mineral resources that are locally important and does not overlap with any areas currently used for mineral extraction or resource recovery. As such, there would be no impacts under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing developed substation (located entirely within PG&E fee-owned property), which is not located on a known locally important mineral resource recovery site. No impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, which is not located on a known locally important mineral resource recovery site. No impacts would occur under this criterion.

5.12.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for mineral resources.

5.12.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures (APMs) for mineral resources would be implemented for the Proposed Project.

5.12.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for mineral resources would be implemented for PG&E's scope of work.

5.12.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for mineral resources would be implemented for SVP's scope of work.

5.13 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?			X	
b.	Generation of excessive ground-borne vibration or ground-borne noise levels?			X	
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 two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	

This section describes the noise environment within the vicinity of the Proposed Project as well as potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.13.1 ENVIRONMENTAL SETTING

5.13.1.1 Noise Sensitive Land Uses

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, California, and the Proposed Project encompasses four zonal areas to include two new high-voltage direct current (HVDC) terminals and associated transmission lines between the existing Pacific Gas and Electric Company (PG&E) Newark substation and the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation, which are separated by approximately seven miles.

HVDC Terminal Sensitive Land Uses

The Proposed Project seeks to construct two HVDC terminals—the Albrae terminal and Baylands terminal. The proposed Albrae terminal is located north of Weber Road and west of Boyce Road, approximately 0.8 mile west of Interstate (I)-880. The proposed Albrae terminal site consists of approximately 6.1 acres and is located adjacent to PG&E property, approximately 0.2 mile northeast of the existing Newark substation. Surrounding land uses consist of industrial uses to the north, a parking lot and industrial uses to the east, PG&E’s operations to the south, and a parking lot to the west. The nearest sensitive receptors are located approximately 2,500 feet to the northwest and 4,500 feet to the northeast.

The Proposed Project seeks to construct the Baylands terminal, which is located approximately 0.5 mile north of State Route (SR)-237, approximately 1.8 miles west of I-880, and approximately 1.8 miles northeast of the existing NRS substation. Specifically, the proposed Baylands terminal consists of approximately 9.2 acres and is located south of Los Esteros Road, west of the San José-Santa Clara Regional Wastewater Facility (RWF). Surrounding land uses consist of Los Esteros Road and a recycling trash center to the north, San José-Santa Clara RWF to the east, and undeveloped land to the south and west. The nearest sensitive receptors are the residences approximately 3,500 feet to the west-northwest starting at Speckles Avenue.

To provide a point of interconnection for the new Baylands to NRS 230 kilovolt (kV) transmission line, SVP needs to add electrical infrastructure to support the termination of the new transmission line within the existing NRS substation located 1.8 miles southwest of the proposed Baylands terminal. The existing NRS substation is surrounded by Levi's Stadium and a training facility to the north, the City of Santa Clara's water utilities to the west, and residential developments to the south and east.

Transmission Line Sensitive Land Uses

The proposed Albrae to Baylands 320 kV direct current (DC) transmission line is located within the Cities of Fremont, Milpitas, and San José and would connect the new Albrae terminal to the new Baylands terminal. The underground portion of this transmission line would be located within existing roadways, including Weber Road, Boyce Road, Cushing Parkway, Fremont Boulevard, McCarthy Boulevard, and Los Esteros Road. The overhead portion of this transmission line would begin south of McCarthy Boulevard (approximately 0.1 mile south from its intersection with Dixon Landing Road) spanning across the San José-Santa Clara RWF's existing wastewater drying ponds to Los Esteros Road where it transitions back underground until reaching the proposed Baylands terminal. Approximately 5.5 miles of this alignment are located in the City of Fremont, 0.2 mile is located in the City of Milpitas, and 2.9 miles are located in the City of San José. There are no sensitive receptors located in close proximity to the proposed Albrae to Baylands 320 kV DC transmission line.

The new Newark to Albrae 230 kV transmission line would be an approximately 0.4-mile overhead and underground alignment connecting the proposed Albrae terminal to the existing Newark substation. This proposed transmission line would be located within the City of Fremont. The nearest sensitive receptors are located approximately 2,500 feet to the northwest and 4,500 feet to the northeast.

The proposed Baylands to NRS 230 kV transmission line would leave the proposed Baylands terminal underground in Los Esteros Road, which it would follow into Grand Boulevard and Disk Drive before turning into Nortech Parkway. The line would follow Nortech Parkway into private land comprising of a parking lot and undeveloped land until it reaches the Guadalupe River. The line would transition aboveground at the Guadalupe River for one span before transitioning back underground within private property. The proposed Baylands to NRS 230 kV transmission line would continue underground through private property consisting of a parking lot and undeveloped land until it reaches Lafayette Street, where it would continue south until reaching SVP's existing NRS substation. Approximately 2.3 miles of this alignment are located in the City of San José, and approximately 1.2 miles are located in the City of Santa Clara. Sensitive receptors along the proposed Baylands to NRS 230 kV transmission line include a residential development off Grand Boulevard in the City of San José and residential developments along Lafayette Street, near the

existing NRS substation. Sensitive receptors along the existing NRS substation include residential land uses to the south and east of the substation.

5.13.1.2 Noise Setting

Noise Fundamentals

Noise is defined as unwanted or annoying sound which interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs, and when the noise occurs.

Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise, whereas the equivalent sound level depicted as L_{eq} represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval (California Department of Transportation ["Caltrans"], 2013).

The Community Noise Equivalent Level (CNEL) is the 24-hour A-weighted average for sound, with corrections for evening and nighttime hours. The corrections require an addition of five dB to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of ten dB to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sound appears louder.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of three A-weighted decibels (dBA) (Caltrans, 2013). Therefore, the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of three dBA. Mobile noise levels radiate in an almost oblique fashion from the source and drop off at a rate of three dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt, and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas, and vegetation. On the other hand, fixed/point sources radiate outward uniformly as they travel away from the source. Their sound levels attenuate or drop off at a rate of six dBA for each doubling of distance.

The most effective noise reduction methods consist of controlling the noise at the source, blocking the noise transmission with barriers, or relocating the receiver. Any or all of these methods could be required to reduce noise levels to an acceptable level.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration (Federal Transit Administration [FTA], 2018). There are several different methods that are used to quantify vibration. The peak particle velocity (PPV), in inches per second (in/sec), is defined as the maximum instantaneous peak of the vibration signal.

Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are, therefore, usually confined to short distances (i.e., 500 feet or less) from the source. Sensitive receivers for vibration include structures (especially older masonry structures), places occupied by people (especially residents, the elderly, and sick), and vibration sensitive equipment. Most residential buildings can be exposed to ground-borne vibration levels of 0.5 in/sec PPV without experiencing structural damage (Caltrans, 2020). The threshold of architectural damage for conventional sensitive structures is 0.2 in/sec PPV. Human response indicates 0.24 in/sec PPV is the annoyance perception level. Long-term or repeated (frequent/intermittent) sources are perceivable and may be annoying at levels as low as 0.08 in/sec PPV (Caltrans, 2020). Vibration from construction equipment and activities, such as excavation (i.e., continuous/frequent intermittent vibration), can be barely perceptible to human beings at 0.01 in/sec PPV (Caltrans, 2020).

Existing Ambient Noise Environment

The Proposed Project site and surrounding areas are dominated by traffic noise on Boyce Road, Automall Parkway, Grand Boulevard, Lafayette Street, SR-237, and other local roadways. Noise from aircraft and railroad operations also contribute to the existing noise environment. These noise sources can produce high levels of sound, and ambient noise levels within and around the Proposed Project site were found to be 51.8 to 77.0 dBA during the daytime. To assess existing noise levels, three long-term 24-hour measurements and three short-term measurements (15 minutes) were gathered on December 12 and December 13, 2023. Noise sources at the nearest sensitive receptors (residences located approximately 20 feet from Lafayette Street near the existing NRS substation) is Lafayette Street and Levi's Stadium. Ambient noise measurements at the nearest noise sensitive receptors (residences located approximately 20 feet from Lafayette Street near the existing NRS substation) were found to have a 66.9 to 77.0 dBA L_{eq} daytime and 55.2 to 71.0 dBA equivalent continuous sound level (L_{eq}) nighttime average. The average daily noise levels are 73.1 dBA day-night noise level (L_{dn}) at the nearest sensitive receptor. Additional information about ambient noise monitoring at the Proposed Project can be found in **Appendix 5.13-A, Ambient Noise Results Memorandum**. Conservatively, as further described in **Appendix 5.13-A**, the noise levels during the nighttime hours could be 10 dB lower than daytime noise levels.

5.13.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.13.2.1 Noise and Vibration Regulatory Setting

Federal

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA), Office of Noise Abatement and Control, was established to coordinate federal noise control activities. The Federal Noise Control Act of 1972 established programs and guidelines to identify and address the effects of noise on public health and welfare and the environment. Administrators of the EPA determined in 1981 that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982, responsibilities for regulating noise control policies were transferred to state and local

governments. However, noise control guidelines and regulations contained in the rulings by EPA in prior years remain upheld by designated federal agencies.

Federal Transit Administration

FTA published the Transit Noise and Vibration Impact Assessment Manual (FTA, 2018), which provides technical guidance for conducting noise and vibration analyses for federally funded transit projects and incorporating the results into FTA's National Environmental Policy Act (NEPA) environmental review documents. The manual describes noise and vibration concerns related to transit projects and potential effects on the surrounding community. The Proposed Project does not meet the criteria for a transit project defined by the FTA; however, the construction activities and equipment associated with the Proposed Project are similar to those addressed in the FTA manual, which establishes useful guidelines for assessing construction noise, particularly when local criteria are not well defined. The FTA manual establishes absolute noise levels (thresholds) and considers the duration of construction to determine noise impacts on adjacent land uses. For most projects, the highest levels of vibration occur during construction and assessment; therefore, the guidance focuses on evaluating the potential for damage to nearby buildings. The FTA manual establishes construction damage criteria in terms of PPV, which range from a threshold of 0.12 in/sec for "buildings extremely susceptible to vibration damage" to 0.5 inch per second for "reinforced concrete, steel, or timber (no plaster)" (FTA, 2018).

Federal Railroad Administration

In addition to the guidance developed by the FTA for conventional rail noise and vibration impact assessments, the Federal Railroad Administration (FRA) has developed complementary guidance for high-speed rail. FRA relies on FTA transit noise and vibration impact assessment procedures in evaluating improvements to conventional passenger rail lines and stationary rail facilities and for horn noise assessment and also developed the High-Speed Ground Transportation Noise and Vibration Impact Assessment Manual (FRA, 2012). The manual contains criteria and procedures for use in analyzing the potential noise and vibration impacts of various types of high-speed fixed guideway transportation systems and is intended for projects with train speeds of 90 to 250 miles per hour. FRA's Office of Safety is also responsible for enforcing the Railroad Noise Emissions Compliance Regulation (49 Code of Federal Regulations [CFR] 210) that sets maximum sound levels from railroad equipment and for regulating locomotive horns. The Proposed Project does not meet the criteria for a high-speed ground transportation project; however, the FRA manual provides useful information regarding noise and vibration data, noise source mitigation, and clarifications to policy-related topics such as guidance on determining the need for mitigation of moderate noise impacts.

Occupational Safety and Health Administration

Occupational Safety and Health Administration (OSHA) regulates on-site and occupational noise levels and sets legal limits on noise exposure in the workplace over an eight-hour workday. OSHA's permissible exposure limit (PEL) is 90 dBA for all workers for an eight-hour day (29 CFR 1910.95). OSHA requires employers to implement a hearing conservation program when noise exposure is at or above 85 dBA averaged over eight working hours, or an eight-hour time-weighted average (TWA). When information indicates that any employee's exposure may equal or exceed an eight-hour time-weighted average of 85 dBA, the employer is required to develop and implement a monitoring program and notify employees of potential noise exposure. OSHA regulations also provide preventative measures, such as requiring hearing protectors for all

employees and providing training to ensure that employees are aware of the effects of noise on hearing, the purpose of hearing protectors, the purpose of audiometric testing, and an explanation of audiometric testing procedures.

State

California Health and Safety Code

California Health and Safety Code Division 28, Section 4600, provides the California Noise Control Act. The California Noise Control Act states the following:

- a) Excessive noise is a serious hazard to the public health and welfare.
- b) Exposure to certain levels of noise can result in physiological, psychological, and economic damage.
- c) There is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas.
- d) Government has not taken the steps necessary to provide for the control, abatement, and prevention of unwanted and hazardous noise.
- e) The State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise.
- f) All Californians are entitled to a peaceful and quiet environment without the intrusion of noise which may be hazardous to their health or welfare.
- g) It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare. To that end it is the purpose of this division to establish a means for effective coordination of state activities in noise control and to take such action as will be necessary to achieve the purposes of this section.

California General Plan and Zoning Guidelines

California planning and zoning law set forth by the California Governor's Office of Planning and Research (OPR) requires that local governmental agencies adopt a Noise Element as part of all city and county general plans. The Noise Element of the general plan provides a basis for comprehensive local programs to control and abate environmental noise and to protect residents from excessive exposure. OPR requires that the Noise Element recognize the guidelines established by the California Noise Control Act and implement noise-compatible land use planning. Noise compatible uses are defined by zoning or other land use controls to maintain areas that are deemed acceptable in terms of noise exposure and limit uses to those which are noise compatible in areas with excessive noise exposure. Based upon the relative importance of noise sources in order of community impact and local attitudes towards these sources, cities and counties are also required to develop noise-mitigating implementation measures to address existing and foreseeable noise issues and address local concern.

California OSHA

California OSHA ("Cal/OSHA") regulations (CCR, Title 8, Section 5095-5100) require employers to provide employees with proper protection against the effects of noise exposure when sound levels exceed an eight-hour TWA of 90 dBA (Permissible Exposure Level). The protective measures may be provided either through engineering or administrative controls. If these control measures fail to reduce the noise within the acceptable limits, personal protective equipment shall be provided and used. Additionally, whenever employee noise exposures equal or exceed an

eight-hour (TWA) sound level of 85 dBA (action level), the employer shall develop and administer a Hearing Conservation Program.

Caltrans Vibration Guidance

The Caltrans Vibration Guidance Manual (Caltrans, 2020) provides practical guidance to engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. The manual provides procedures to develop screening tools for assessing the potential for adverse effects related to human perception and structural damage and is intended to be informative and educational to those individuals who must address vibration from construction equipment, explosives, and facility operations. The manual is not an official policy, standard, specification, or regulation but is provided here for informational purposes.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local noise-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

Chapter 10 of the City of Fremont General Plan (City of Fremont, 2011) includes a safety and noise element. The purpose of the noise element is to identify noise and vibration sources and impacts and provide policy guidance to minimize their effects. Table 10-1, *Noise Level Standards for New Industrial and Commercial Noise Sources* states the thresholds for residential properties at locations where a lowered noise level would be beneficial. The table identifies an hourly exterior noise level limit of 50 dBA L_{eq} and 70 dBA L_{max} during the daytime hours of 7 a.m. to 10 p.m. and an hourly exterior noise level limit of 45 dBA L_{eq} and 65 dBA L_{max} during the nighttime hours of 10 p.m. to 7 a.m.

City of Fremont Municipal Code

Section 9.25.020 of the City of Fremont Municipal Code (City of Fremont, 2023) states that it is unlawful for any person to willfully make or continue or cause to be made or continued any loud, unnecessary, or unusual noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. However, the municipal code defines the following acts declared as disturbing, excessive, and offensive noises in violation of Section 9.25.020: noises by animals; construction-

related noise near residential uses; conflicts with residential uses; loud music or other noise by people; and music, stereos, and electronics. Exemptions include emergency work; industrial districts I-S, I-T, and G-I zones; and public health, welfare, and safety activities.

Operating any devices that create vibration which is above the vibration perception threshold of an individual at or beyond the property of the source shall be prohibited. For the purposes of this analysis, vibration perception threshold means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or observation or moving objects.

Section 18.160.010 of the City of Fremont Municipal Code (City of Fremont, 2023) states that except as modified herein, construction activity for development projects in any zoning district on any property within 500 feet of one or more residences, lodging facilities, nursing homes, or inpatient hospitals shall be limited to the weekday hours of 7:00 a.m. to 7:00 p.m. and the Saturday or holiday hours of 9:00 a.m. to 6:00 p.m., while Sunday construction is not allowed. Construction activity for projects not located within 500 feet of residences, lodging facilities, nursing homes, or inpatient hospitals shall be limited to the weekday hours of 6:00 a.m. to 10:00 p.m. and the weekend or holiday hours of 8:00 a.m. to 8:00 p.m.

Section 18.50.040 of the City of Fremont Municipal Code includes noise levels for the I-G district, where the proposed Albrae terminal would be located. At all property lines, as measured consistent with subsection (c) of Section 18.50.040, the maximum noise level generated by any user shall not exceed an Ldn level of 70 dB(A) when adjacent users are industrial, commercial, business, professional or office.

City of Milpitas General Plan

The City of Milpitas General Plan (City of Milpitas, 2021), adopted on March 9, 2021, establishes goals, policies, and actions to guide future growth and development of the City. The General Plan is inclusive of seven elements. The Noise element was implemented to address major noise sources and to promote safe and comfortable noise levels throughout the City. **Table 5.13-1, City of Milpitas Land Use Compatibility Noise Exposure** below includes the acceptable and unacceptable exterior noise levels per land use category within the City. The City also establishes stationary noise source standards for sensitive receptors. However, the portion of the Proposed Project in the City of Milpitas is not near any residential sensitive receptors.

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Table 5.13-1: City of Milpitas Land Use Compatibility Noise Exposure						
Land Use Category	Exterior Noise Exposure (Ldn)					
	55	60	65	70	75	80
Single-Family Residential						
Multi-Family Residential, Hotels, and Motels						
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
Schools, Libraries, Museums, Hospitals, Personal Care, Public Assembly						
Office Buildings, Business Commercial, and Professional						
Industrial						
<p>Note: Residential components of Mixed-Use developments are subject to the Multi-Family Residential Noise Standards unless otherwise allowed in conjunction with Policy N 2-2.</p>						
	<p>NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements</p>					
	<p>CONDITIONALLY ACCEPTABLE Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design</p>					
	<p>UNACCEPTABLE New construction or development should generally not be undertaken because mitigation was found to be infeasible to comply with noise element policies</p>					
<p>Source: City of Milpitas, 2021</p>						

City of Milpitas Municipal Code

Chapter 213, Section V-213-3, Subsection 3.06 of the City of Milpitas Municipal Code (City of Milpitas, 2023) states that no person shall engage or permit others to engage in construction of any building or related road or walkway, pool, or landscape improvement or in the construction operations related thereto, including delivery of construction materials, supplies, or improvements on or to a construction site except within the hours of 7:00 a.m. to 7:00 p.m. on weekdays and weekends. No construction work shall be conducted or performed on the holidays indicated in Section V-213-2-2.05 of this Chapter.

Exempt from the Off-Site Construction Regulations of this article are as follows:

1. Emergency construction and repair that is necessary for protection of life and property,
2. Operation preempted from local regulation by state law, such as construction of public school buildings,
3. Furnishing utility-type service including construction and maintenance of utility facilities,
4. Any work on an existing single-family or duplex (two-family) dwelling undertaken by the property owner,
5. Operation to construct and maintain facilities within the public right-of-way as deemed necessary by the Public Works Director, and
6. Any other circumstances where the City Manager deems that an exemption would be appropriate.

City of San José General Plan

The City of San José General Plan (2024a) distinguishes between noise from transportation sources and noise from non-transportation (i.e., stationary) sources. The short-term exterior noise goal is 60 dBA day-night average sound level (DNL) for transportation sources. For stationary sources, the exterior noise goal is 55 dBA DNL at the property line between sensitive land uses (e.g., residences, schools, libraries, hospitals, etc.) and non-sensitive land uses (e.g., industrial, commercial, etc.).

In addition to the policies of the City of San José General Plan, developments may also be subject to the following:

- San José Municipal Code §20.100.450: Limits construction hours within 500 feet of residences to 7 a.m. to 7 p.m. weekdays, with no construction on weekends or holidays.
- City of San José’s Zoning Ordinance: The City’s Zoning Ordinance applies specific noise standards to Residential, Commercial, and Industrial Zoning Districts, which limits the sound pressure levels generated by any use or combination of uses shall not exceed the decibel level at any property line as shown in **Table 5.13-2, City of San José Zoning Code Noise Standards** below.

Table 5.13-2: City of San José Zoning Code Noise Standards	
Land Uses	Maximum Noise Level at Property Line*
Residential, open space, industrial, or commercial uses adjacent to a property used or zoned for residential purposes.	55 dBA
Open space, commercial, or industrial use adjacent to a property used or zoned for commercial purposes or other non-residential use.	60 dBA
Industrial use adjacent to a property used or zoned for industrial or use other than commercial or residential purposes.	70 dBA
*Values may be exceeded with a Conditional Use Permit (CUP). Source: City of San José, 2024b	

The Environmental Leadership Chapter in the City of San José General Plan sets forth policies to achieve the goal of minimizing construction impacts on people, residences, and business operations in the City of San José. The following policy is applicable to the Proposed Project:

- Policy EC-1.7** Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would: Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.

The City of San José General Plan sets forth policies to achieve the goal of minimizing construction impacts on people, residences, and business operations in the City of San José. The following policy is applicable to the Proposed Project:

- Policy EC-2.3** Require new development to minimize continuous vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, including ruins and ancient monuments or building that are documented to be structurally weakened, a continuous vibration limit of 0.08 in/sec PPV will be used to minimize the potential for cosmetic damage to a building. A continuous vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction. Equipment or activities typical of generating continuous vibration include but are not limited to: excavation equipment; static compaction equipment; vibratory pile drivers; pile-extraction equipment; and vibratory compaction equipment. Avoid use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings, or buildings in poor condition. On a project-specific basis, this distance of 300 feet may be reduced where warranted by a technical study by a qualified professional that verifies that there will be virtually no risk of cosmetic damage to sensitive buildings from the new development during demolition and construction. Transient vibration impacts may exceed a vibration limit of 0.08 in/sec PPV only when and where warranted by a technical study by a qualified professional that verifies that there will be virtually no risk of cosmetic damage to sensitive buildings from the new development during demolition and construction.

City of Santa Clara General Plan

The City of Santa Clara General Plan (City of Santa Clara, 2010) establishes goals and policies related to noise and vibration in Section 5.10. The following goals and policies are applicable to the Proposed Project.

- Goal 5.10.6-G1** Noise sources restricted to minimize impacts in the community.
- Goal 5.10.6-G2** Sensitive uses protected from noise intrusion.

- Goal 5.10.6-G3** Land use, development and design approvals that take noise levels into consideration.
- 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.

City of Santa Clara Municipal Code

Chapter 9.10 of the City of Santa Clara Municipal Code (City of Santa Clara, 2023) establishes noise, sound, and vibration evaluation criteria to ensure that the City is protected from unnecessary, excessive, and unreasonable noise or vibration from fixed sources in the community. **Table 5.13-3, Exterior Sound and Noise Limits** below outlines the exterior sound or noise limits allowed per receiving zone.

Table 5.13-3 Exterior Sound and Noise Limits		
Receiving Zone	Time Period	Noise Level (dBA)
Category 1 – Single-family and duplex residential (R1, R2)	Commencing at 7:00 a.m. and ending at 10:00 p.m. that evening.	55
	Commencing at 10:00 p.m. and 7:00 a.m. the following morning.	50
Category 2 – Multiple-family residential, public space (R3. B)	Commencing at 7:00 a.m. and ending at 10:00 p.m. that evening.	55
	Commencing at 10:00 p.m. and 7:00 a.m. the following morning.	50
Category 3 – Commercial Office (C, O)	Commencing at 7:00 a.m. and ending at 10:00 a.m. that evening.	65

Table 5.13-3 Exterior Sound and Noise Limits

Receiving Zone	Time Period	Noise Level (dBA)
	Commencing at 10:00 p.m. and 7:00 a.m. the following morning.	60
Category 4 – Light Industrial (ML, MP)	Anytime	70
Heavy Industrial (MH)	Anytime	75
Source: City of Santa Clara, 2023		

5.13.3 IMPACT QUESTIONS

5.13.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to noise come from the California Environmental Quality Act (CEQA), Appendix G, Environmental Checklist. According to the CEQA Checklist, a project may cause a potentially significant impact if it would 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; or
- Generation of excessive ground-borne vibration or ground-borne noise levels; or
- 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 two miles of a public airport, would the project expose people residing or working in the project area to excessive noise levels.

5.13.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for noise.

5.13.4 IMPACT ANALYSIS

5.13.4.1 Noise and Vibration Impact Analysis

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 Impact. Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders, excavators, pile drivers, helicopters, and scrapers, which can reach relatively high noise levels. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal working hours.

Construction Noise

Typical maximum noise levels for construction equipment at 50 feet from the source are shown in **Table 5.13-4, Typical Noise Levels Generated by Construction Equipment**. As shown in the table below, the maximum intermittent noise levels (L_{max}) are expected to range between 74 and 90 dBA at approximately 50 feet.

Equipment	Noise Level (dBA L_{max}) at 50 feet
Backhoe	80
Backhoe Ram	85-90
Concrete mixer	85
Pump truck	82
Crane, Mobile	83
Dozer	85
Excavator	85
Generator/Welder	81
Grader	85
Man lift/Aerial lift/Forklift	85
Loader	85
Paver	89
Roller	85
Scraper	89
Trencher	75
Drill rig	85
Trucks (all types)	74-88
Helicopter	75-85

Sources: Federal Highway Administration (FHWA), 2006; Ontario Ministry of Labour, Training, and Skills Development, 2016

Grading and excavation operations are typically the loudest construction activity due to the quantity of equipment involved. The primary grading operations for the Proposed Project would likely include equipment similar to a dozer, a grader, and a tractor/loader/backhoe within the staging areas and the proposed HVDC terminal sites.

The list of equipment in **Table 5.13-4** provides a conservative assessment from a noise perspective, as these represent some of the loudest pieces of equipment that would be used during construction. The majority of the grading activity is anticipated to be located at the proposed HVDC terminal sites and the point of interconnection for the new Baylands to NRS 230 kV transmission line at the existing NRS substation. The proposed Albrae and Baylands terminal sites are surrounded primarily by industrial uses.

Less intense construction activities are anticipated at staging areas. The closest sensitive receptors during construction are the residential uses. Specifically, along the proposed Baylands to NRS 230 kV transmission line, the nearest residence would be approximately 40 feet from construction along Grand Boulevard. Additionally, there are residences approximately 20 feet from Lafayette Street east of the proposed underground Baylands to NRS 230 kV transmission line (refer to **Figure 3-4, Project Route Map**). Transmission line construction equipment would generate similar noise levels as roadway improvements, and the amount of equipment utilized would be limited due to alignment and work area constraints. Based on a narrow construction area, the average hourly off-site construction noise levels would be approximately 74 dBA L_{eq} or lower at 40 feet from the edge of construction and approximately 64 dBA L_{eq} or lower at 130 feet. In some cases, transmission line equipment or construction of the alignment may occur at distances as close as 20 feet from some residential uses. The equipment would only be utilized for a few days in those locations but could result in noise levels of 80 dBA. During maximum effort with several pieces of equipment operating at the same time in close proximity, maximum noise levels of 76 to 85 dBA L_{max} may be experienced at local residences; however, these levels would only last for a short duration at any specific location. Duct bank installation for the proposed Baylands to NRS 230 kV transmission line is anticipated to progress linearly along the proposed alignment, with crews working in multiple locations along the proposed alignment. Similarly, splice vault installation and cable installation activities would progress linearly, with multiple crews along the proposed alignment and efforts concentrated near the splice vaults. Therefore, the most intensive construction activities associated with the proposed underground transmission lines would typically only occur in close proximity to specific residences for a matter of days at a time. Due to the limited equipment and duration, noise generated during the proposed transmission line construction activities would be less than the more intensive construction activities that would occur at the proposed HVDC terminals. Construction at the proposed Albrae and Baylands terminal sites, including activities such as grading, would include more and larger equipment than the proposed transmission line construction. Construction noise generated by the Proposed Project at locations of intensive construction are conservatively estimated to be to 85 dBA from the center of construction activity. These would include access road construction, on-site terminal construction, and grading.

As seen below in **Table 5.13-5, Construction Noise Levels**, construction noise during the proposed transmission line construction phase has the highest impact potential due to the narrow construction area. Similarly, splice vault installation and cable installation activities would progress linearly with multiple crews along the proposed alignment, with efforts concentrated near the splice vaults. Therefore, the most intensive construction activities associated with the proposed transmission lines would typically only occur in close proximity to specific residences for a matter of days at a time.

Table 5.13-5: Construction Noise Levels					
Equipment Required	Equipment Noise Levels (Leq; 50 feet)	Phase Noise Level (Leq; 50 feet)	Phase Duration at Each Location	Receptor Nearest to Construction Phase	Noise Level at Nearest Receptor (Leq)
Site Development (Preparation and Grading)					
Dozer	74	81.3	120 Workdays	200	69.3
Scraper	75				
Excavator	79				
Below-grade Construction					
Dump Truck	75	81.2	150 Workdays	200	69.1

Table 5.13-5: Construction Noise Levels					
Equipment Required	Equipment Noise Levels (Leq; 50 feet)	Phase Noise Level (Leq; 50 feet)	Phase Duration at Each Location	Receptor Nearest to Construction Phase	Noise Level at Nearest Receptor (Leq)
Excavator	79				
Loader/Tractor	73				
Above-grade Construction					
Grader	73	77.5	450 Workdays	200	65.4
Loader	73				
Tractor	72				
Transmission Line Construction					
Hydraulic Crane	78	82.1	480 Workdays	50	82.1
Loader	73				
Excavator	79				
*Source: Noise Measurements taken at several construction projects throughout California by Ldn.					

None of the Cities of Fremont, Milpitas, San José, and Santa Clara specify quantitative thresholds for the impact of temporary increases in noise due to construction. However, the City of San José has adopted Policy EC-1.7 (City of San José, 2024a), which includes general parameters for what may constitute a temporary construction noise impact. LS Power reviewed previous reports from the general Proposed Project area to see how this policy was being implemented by the City in terms of CEQA impacts. Specifically, this Proponent's Environmental Assessment (PEA) has utilized the construction noise significance criteria from the San José Envision 2040 General Plan Environmental Impact Report (City of San José, 2011), as follows:

“For temporary construction-related noise to be considered significant, construction noise levels would have to exceed ambient noise levels by five (5) dBA L_{eq} or more and exceed the normally acceptable levels of 60 dBA L_{eq} at the nearest noise-sensitive land uses or 70 dBA L_{eq} at office or commercial land uses for a period of more than 12 months.”

Therefore, for the purposes of this PEA analysis, a potentially significant temporary construction noise impact would be identified if construction-related noise would increase ambient noise levels such that hourly average noise levels exceed 60 dBA L_{eq} at residential land uses and ambient noise levels were also increased by at least five dBA L_{eq} for a period of more than one year (12 months). This threshold was applied to the entire Proposed Project, even though most of the Proposed Project features are not within the City of San José.

Construction of the proposed Baylands to NRS 230 kV transmission line would occur in closer proximity to sensitive residential receptors and other land uses (refer to **Figure 3-4**). As such, construction noise would be anticipated to exceed 60 dBA at sensitive receptor locations. Given the length of the proposed Baylands to NRS 230 kV transmission line route, existing ambient noise levels are anticipated to vary greatly, depending upon site-specific conditions such as proximity to roads and aircraft. Specifically, ambient noise levels along the proposed Baylands to NRS 230 kV transmission line are anticipated to range between 52 dBA and 77 dBA. Therefore, at some locations along the proposed transmission line, construction noise could result in an increase to ambient noise greater than five dBA. However, while overall transmission line construction is anticipated to continue for more than one year, actual construction activities typically would not remain in a single location for more than one month and typically less than one week. Therefore, noise impacts to any given sensitive receptor along the proposed Baylands to

NRS 230 kV transmission line alignment would not exceed one year. Impacts from construction of the proposed Baylands to NRS 230 kV transmission line would be less than significant.

Shoring Noise

During transmission line construction, the Proposed Project would require the use of a jack-and-bore machine to complete certain trenchless crossings (refer to **Figure 3-4, Project Route Map**). This process would require bore pits that are shored with sheet piles that are sometimes vibrated into place with a vibratory pile driver. If required, the equipment associated with the shoring of these pits would potentially include a vibratory drill, pickup truck, and water truck within the excavation site. Additionally, the shoring phase may require a crane to hoist the equipment from the excavation site. All equipment would not operate continuously over a given period; rather the equipment would be utilized on an as-needed basis depending on the shoring activities required.

As described previously, construction along the proposed Baylands to NRS 230 kV transmission line would have the nearest proximity to sensitive receptors, mainly in the form of residential areas. Specifically, the nearest residence would be approximately 40 feet from construction along Grand Boulevard. Additionally, there are residences approximately 20 feet from Lafayette Street east of the proposed Baylands to NRS 230 kV transmission line. Noise at these locations would be moving linearly and would not include jack-and-bore operations or related shoring. The closest proposed jack-and-bore, which would be located adjacent to the existing NRS substation, would be located approximately 100 feet from the nearest sensitive receptor.

The noise levels utilized in this analysis for the shoring activities are shown in Table 5.13-6, *Shoring Operations Noise Levels in Decibels (dBA)* for the nearest noise sensitive uses along the proposed Baylands to NRS 230 kV transmission line alignment. As shown in Table 5.13-6, the cumulative noise levels would be 75.3 dBA from the site excavation and shoring activities over an eight-hour period with the equipment working closely together at the nearest location. However, in actuality, the equipment location and use would be spread out over the site at larger distances, wouldn't be used continually over the 8 hour period, and the noise levels would often be lower.

Table 5.13-6: Shoring Operations Noise Levels in Decibels (dBA)				
Construction Equipment	Quantity	Source Level at 50-Feet (dBA)¹	Duty Cycle (Hours/Day)	Cumulative Noise Level at Nearest NSLU² (dBA)
Vibratory Drill	1	80	8	80
25-Ton Crane	1	74	8	74
Water Truck	1	70	8	70
Pickup Truck	1	59	8	59
Cumulative Levels @ 50 Feet (dBA)				81.3
Distance to Sensitive Uses				100
Noise Reduction Due to Distance				-6.0
NEAREST NSLU NOISE LEVEL				75.3
¹ Source: Empirical Data				
² Noise Sensitive Land Use				

The Cities of Fremont, Milpitas, San José, and Santa Clara do not specify quantitative thresholds for temporary impacts resulting from increases in noise due to construction. However, in the City of San José, to be considered a significant impact, noise levels must exceed 60 dBA as well as exceed ambient noise levels by more than 5 dBA, for a period of more than 12 months. Since

transmission line construction activities typically would not remain in a single location for more than one month (at boring and splice vault locations) and typically less than one week (for standard trenching and transmission line construction), temporary construction noise levels would not increase ambient noise levels for a period of more than 12 months, and impacts would be less than significant.

Helicopter Noise

It is expected that several conductors and shield wires may require a helicopter for stringing the pilot lines. These operations would occur for a limited duration of approximately one week, for approximately eight hours per day. This would occur along the overhead segment of the proposed Albrae to Baylands 320 kV DC transmission line, between structures DC-1 and DC-11. Helicopters could also be used during stringing operations on the Baylands to NRS 230 kV transmission line, between structures AC-3 and AC-4. Helicopter noise levels vary based on the model, engine, and height of the helicopter; however, typical helicopter noise levels can reach 75 to 85 dBA. The overhead segment of the proposed Albrae to Baylands 320 kV DC transmission line is surrounded by open space, industrial uses (RWF facility), and commercial and warehouse developments. The overhead segment of the proposed Baylands to NRS 230 kV transmission line is surrounded by open space, SR-237, and commercial development. The nearest noise sensitive land use (residential developments) are located approximately 500 feet away, across SR-287. Given the temporary nature of helicopter use and the distance to nearby sensitive receptors, impacts would be less than significant.

Construction Traffic Noise

Construction of the Proposed Project would temporarily increase traffic noise off-site from commuting construction workers and from haul trucks bringing materials to and from the Proposed Project site. All Proposed Project components would be constructed over an approximately two-year period. All construction traffic would access the proposed HVDC terminals from Weber Road via Boyce Road and I-880 or Los Esteros Road. While annual average daily traffic (AADT) is not available for Weber Road (industrial area), the AADT along I-880 and Lafayette Street is in the tens of thousands. The AADT for Los Esteros Road is approximately 2,100 (City of San Jose, 2021). Therefore, the 500 maximum trips per day required during construction would have a minimal effect on daily traffic volumes along the roadways, and the short-term increase in traffic noise from Proposed Project construction would not cause a substantial increase over existing conditions. Impacts would be less than significant.

Operations Noise

To evaluate noise impacts due to operations of the Proposed Project, the PEA defines a significant noise impact associated with Proposed Project operations as a noise impact that would exceed local noise ordinance threshold values and would cause a noticeable increase in noise levels versus existing ambient conditions. Proposed Project operations noise levels that do not exceed this significant impact threshold are not considered significant and do not warrant abatement.

As part of operations, the Proposed Project would include eight heating, ventilation, and air conditioning (HVAC) units; four transformers, only three of which would be energized simultaneously; and six reactors at each proposed HVDC terminal site.

The proposed transformers would have an unshielded noise rating of 87 dBA at one meter (approximately three feet). The proposed reactors have an unshielded noise rating of 79 dBA at one meter. The proposed outdoor cooling has an unshielded noise rating of 82 dBA at one meter. The HVAC units have an unshielded noise rating of 73 dBA at one meter.

The operations source noise levels are presented in **Table 5.13-7, Proposed Project Operations Source Noise Level in Decibels (dBA)**. All sound power reference levels were taken from preliminary manufacturer specification sheets for the Proposed Project.

Name	Sound Power Level (dBA)	Sound Pressure Level at one meter (dBA)
Converter Transformers	98	87
Reactors	90	79
Outdoor Cooling	93	82
HVAC	84	73

All equipment was modeled as active at 100 percent power for a full hour during all hours. This is considered a reasonably conservative assumption, as it would be unlikely that the transformers or reactors would be at full power for a full hour at the same time. To be conservative, noise receptors were placed at all parcel boundaries in line with surrounding residences.

The nearest residential uses to the proposed Albrae terminal are located to the northwest over 2,500 feet from the terminal site and to the east over 4,500 feet from the proposed terminal. Both residential areas are separated from the proposed Albrae terminal site by industrial uses, roads, freeways, and other noise generating uses. The nearest residential uses to the proposed Baylands terminal are located to the west-northwest over 3,500 feet from the proposed terminal. The anticipated noise levels at the property line for the residences could be as high as 28 dBA L_{eq} unshielded and would comply with the City of Fremont's and San José's noise thresholds. Based on these inputs and the site layouts shown in **Figures 3-7a, Albrae Terminal General Arrangement** and **3-7b, Baylands Terminal General Arrangement**, the Proposed Project would not exceed the noise level limits at any property boundary. Thus, Proposed Project operations would not require noise abatement in order to comply with local standards. Impacts in relation to this threshold would be less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and the new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property) and would include the construction of an approximately 0.2-mile overhead segment of the proposed Newark to Albrae 230 kV transmission line. While construction of these modifications would result in noise emissions similar to those discussed above, the existing Newark substation and new transmission line are both located on PG&E property, within an industrial area with no sensitive receptors in the immediate vicinity. In addition, the modifications to the existing Newark substation would be consistent with the existing industrial character of the area. Therefore, impacts from construction would be less than significant.

Operations noise from the existing Newark substation would result in less-than-significant impacts. The Newark substation is an existing facility, located entirely on PG&E property, and operational substation noise is already integrated into the existing ambient noise levels. In addition, the existing Newark substation is not located near any sensitive receptors. Thus, operations noise impacts would be less than significant for the Newark substation modifications.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and the new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The existing NRS substation is surrounded by Levi's Stadium and a training facility to the north, the City of Santa Clara water facility to the west, and residential developments to the south and east. The NRS substation modifications would occur within the existing substation. Preliminarily, the required NRS substation modifications include construction of new line positions, transformer positions, installation of four new transformers, and removal of two existing transformers. LS Power's scope of work for the new Baylands to NRS 230 kV connection to the existing NRS substation is proposed to cease at a new SVP dead-end structure within the existing NRS substation property line. As discussed above, the existing ambient noise levels at the residences near the existing NRS substation along Lafayette Street are estimated to be 67 to 77 dBA during daytime hours (when the majority of construction activities would occur).

The nearest residential uses to the existing NRS substation are located to the east (across Lafayette Street) and to the south, adjacent to the substation site. As described above and shown above in **Table 5.13-5**, construction noise from the NRS substation modifications could result in ambient noise levels above 60 dBA at the nearby residential receptors. However, the existing ambient noise levels at this location are 73 dBA (near the existing NRS substation). These noise levels are due to the proximity of the area to Lafayette Street as well as other urban noise sources, such as local traffic, Levi's Stadium, and aircraft noise from the San José Mineta International Airport. Therefore, construction noise impacts associated with the NRS substation modifications would be less than significant because construction noise would not be anticipated to increase ambient noise by more than five dBA.

Based on the proposed site layout, the NRS substation modification equipment would be primarily centrally located on the existing substation site and would provide additional separation from the residences. The existing NRS substation site has a solid wall around the perimeter of the site (approximately 10 feet tall) that would break the line of sight to the equipment and reduce the noise levels by at least five to eight dBA. The anticipated noise levels at the property line for the residence located to the south could be as high as 29 to 33 dBA L_{eq} with the shielding from the perimeter barrier and would comply with City of Santa Clara thresholds. The anticipated noise levels at the property line for the residence located to the east, across Lafayette Street, could be as high as 40 to 43 dBA L_{eq} with the shielding from the perimeter barrier and would also comply with City of Santa Clara thresholds. Based on these inputs, the Proposed Project would not exceed the noise level limits at any property boundary, which are depicted as Receivers 1 and 2 in **Table 5.13-8, NRS Substation Operational Noise Levels in Decibels**. Thus, the Proposed Project operations would not require noise abatement in order to comply with local standards. Impacts in relation to this threshold would be less than significant.

Table 5.13-8: NRS Substation Operational Noise Levels in Decibels

Receiver	Description	Nearest Proposed Project Feature	Noise Level (dBA L _{eq})		Does the noise level exceed standard?
			At Property Line	City Standard (nighttime)	
1	Single Family south of NRS substation on Gianera Street	NRS substation	33	50	No
2	Single Family east of NRS substation on Lafayette Street	NRS substation	43	50	No

In addition to facility operational noise, periodic site maintenance of the facility would also be required. On-site activities are not anticipated to result in consistent noise levels in excess of existing landscape maintenance, agricultural operations, rail line operations, or highway use on the existing and surrounding properties. Thus, on-site maintenance is not anticipated to result in a substantial increase in noise levels.

Because operational noise levels would remain below the normally acceptable noise level standard, it must also be determined if the Proposed Project would cause an increase in ambient noise levels greater than five dBA L_{dn}. As described above, the operational noise levels at the nearest receptor would be below the existing ambient noise levels. Therefore, operation of the Proposed Project would not result in a substantial increase in ambient noise levels, and no impacts would occur as a result of operation noise at the nearest sensitive receptor.

Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Less-Than-Significant Impact. The Proposed Project is anticipated to result in less-than-significant impacts associated with ground-borne vibration, as outlined below for construction and operations.

Construction Vibration

Construction activities, such as tamping ground surfaces, excavation, grading, drilling, and passing heavy trucks on uneven surfaces, may produce minor ground-borne vibration in the immediate vicinity of the construction activity. Impacts from construction-related ground-borne vibration, should they occur, would be intermittent and confined to the immediate area surrounding the activity. Installation of underground (below-grade) facilities would be anticipated to generate the highest vibration levels. Below-grade activities would require the use of an excavator/backhoe to dig and backfill trenches for installing the ground grid, cables, foundations, footings, and duct banks. Other activities such as facility construction would also generate vibrations; however, these vibration levels would be less intense and would occur for a shorter duration. As shown in **Table 5.13-9, Typical Construction Equipment Vibration Levels**, large bulldozers and backhoes can create vibration levels of 0.089 in/sec PPV at 25 feet, and vibratory rollers can create vibration levels of 0.210 in/sec PPV at 25 feet.

Equipment	PPV at 25 feet (in/sec)
Roller	0.210
Backhoe Ram	0.089
Large Bulldozer	0.089
Haul Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Worst-Case Proposed Project at 50 feet	0.074
Source: Caltrans, 2020	

The nearest sensitive receptors to construction activities at the Proposed Project sites would be the residences located along the proposed Baylands to NRS 230 kV transmission line alignment, near Grand Boulevard and Spreckles Avenue, which could be as close as approximately 20 to 40 feet depending on the final alignment of the transmission line (refer to **Figure 3-4**). Using the reference levels in **Table 5.13-8**, predicted worst-case vibration levels of approximately 0.074 in/sec PPV at 50 feet could occur from excavation and related below-grade activities. However, at 25 feet, individual construction equipment could create vibration levels as high as 0.089 in/sec PPV for excavation and below-ground construction. Therefore, the City of San José's threshold of 0.08 in/sec PPV for historic buildings could be exceeded depending upon the final Baylands to NRS 230 kV transmission line alignment. However, the closest residences to the proposed Baylands to NRS 230 kV transmission line are not designated as historic buildings pursuant to the City of San José's Historic Resource Inventory database (City of San José, 2017). The closest historical residence is located at 1391 Michigan Avenue, which is approximately 0.2 mile west of the proposed Baylands to NRS 230 kV transmission line. Thus, the vibration impacts would not exceed the 0.08 in/sec PPV for historical buildings, and impacts related to construction vibration would be less than significant.

Operations Vibration

Operation of the Proposed Project would not be anticipated to generate substantial ground-borne vibration or ground-borne noise levels. Operation of the Proposed Project would consist of routine maintenance activities and emergency repairs. These activities would be unlikely to produce ground-borne vibration. Operation of transformers at the Proposed Project HVDC terminals could produce ground-borne vibration; however, ground-borne vibrations would be perceptible only in the immediate vicinity (i.e., less than 25 feet) of the transformer pad, if at all. No sensitive receptors are within 25 feet of the transformer pads or even the proposed HVDC terminal sites themselves. Additionally, no other component of the Proposed Project would generate vibrations during operation. Thus, impacts resulting from the generation of ground-borne vibration during operation of the Proposed Project would be less than significant.

Therefore, construction and O&M of the Proposed Project would result in a less-than-significant impact related to the generation of ground-borne vibration and ground-borne noise levels.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property) and would include the construction of the 0.2-mile overhead segment of the proposed Newark to Albrae 230 kV transmission line

which would connect the proposed Albrae terminal to the existing Newark substation. The existing Newark substation and PG&E's portion of the transmission line are both located within an industrial area with no residential or other noise or vibration sensitive facilities nearby. Impacts from construction would be less than significant under this criterion.

Operations vibration from the modified Newark substation would result in less-than-significant impacts. As described above, vibration from operating substation equipment (e.g., transformers) on concrete foundations would only be perceptible in the immediate vicinity of the equipment. There are no structures or facilities within the immediate surroundings of the existing Newark substation other than open space and existing PG&E equipment and transmission lines. Therefore, operational vibration impacts would be less than significant for the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. As discussed previously, there are residences to the south of the existing NRS substation and east of Lafayette Street. Based on the proposed site layout, the equipment would be primarily centrally located and would provide separation from the residences. The nearest residences are approximately 85 feet from the southern boundary of the existing NRS substation. Therefore, vibration levels at the nearby receptors would be below the threshold, and impacts would be less than significant.

Operations vibration from the modified NRS substation would result in less-than-significant impacts. As described above, vibration from operating substation equipment (e.g., transformers) on concrete foundations would only be perceptible in the immediate vicinity of the equipment. The nearest receptors are located approximately 85 feet from the existing substation fence. At this distance, vibration noise emitted from the new substation equipment would not be perceptible. Therefore, operational vibration impacts would be less than significant for the NRS substation modifications.

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 two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less-than-Significant Impact. San José Mineta International Airport is located approximately 3.6 miles south of the proposed Baylands terminal and approximately 9.2 miles south of the proposed Albrae terminal. The Draft San José International Airport 2024 Airport Land Use Compatibility Plan and Revised Airport Influence Area (Airport Land Use Commission [ALUC], 2024) extends to the NRS substation portion of the Proposed Project. The Proposed Project is not located within a safety zone per the ALUC Airport Influence Areas (ALUC, 2024). The closest private airstrip is the Reid-Hillview County Airport, which is approximately 12.4 miles southeast of the Proposed Project. Additionally, the proposed Baylands and Albrae terminals are located outside the current and future 60 dBA CNEL contours of the airport (San Jose Mineta International Airport, 2020). During construction at portions of the proposed Baylands to NRS 230 kV transmission line, crews and Proposed Project personnel would be exposed to elevated noise levels partially associated with the San José Mineta International Airport (refer to **Appendix 5.13-A**). However, construction activities would be temporary, and the expected noise levels (65 to 70 dBA) are not anticipated to significantly affect workers. Impacts during construction would be less than significant.

There are no proposed long-term sensitive uses as part of the Proposed Project. Therefore, operation of the Proposed Project would not expose people working or residing in the area to excessive construction or operation noise levels attributable to aircraft or airport operations, and no impact would occur. Overall, impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation is approximately nine miles northwest of the San José Mineta International Airport and is not within a safety zone per the ALUC Airport Influence Areas (ALUC, 2024). Additionally, the closest private airstrip is the Reid-Hillview County Airport approximately 29 miles to the south. Therefore, no impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The San José Mineta International Airport is located approximately 2.2 miles south of the existing NRS substation. The flight path from the San José Mineta International Airport travels almost directly over the existing NRS substation. The existing NRS substation is located between the current and future 60 to 65 dBA CNEL contours of the airport according to the San José Mineta International Airport Master Plan. However, construction activities would be temporary, and the expected noise levels (65 to 70 dBA) are not anticipated to significantly affect workers. Noise from the San José Mineta International Airport would not change in relation to existing NRS substation operations and maintenance staff. Additionally, the closest private airstrip is the Reid-Hillview County Airport that is approximately 12.5 miles southeast of the existing NRS substation. Thus, impacts would be less than significant.

5.13.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for noise.

5.13.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures (APMs) for noise would be implemented for the Proposed Project.

5.13.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for noise would be implemented for PG&E's scope of work.

5.13.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for noise would be implemented for SVP's scope of work.

5.14 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 (e.g., by proposing new homes or business) or indirectly (e.g., through extension of roads or other infrastructure)?				X
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

This section describes population and housing conditions within the area of the Proposed Project, as well as the potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.14.1 ENVIRONMENTAL SETTING

The proposed Albrae terminal site is located in the City of Fremont, within the County of Alameda, along Weber Road, west of Boyce Road and south of Stewart Avenue, approximately 0.8 mile west of Interstate (I)-880. The proposed site is approximately one mile east of the Don Edwards San Francisco Bay National Wildlife Refuge (NWR) and 0.2 mile northeast of the existing Pacific Gas and Electric Company (PG&E) Newark substation. Surrounding land uses consist of industrial facilities, including glass and concrete fabrication, to the north, an electric utilities distribution center to the east, and a car repair, storage, and auction lot to the south and west.

The proposed Baylands terminal is located in the City of San José, within in the County of Santa Clara, on Los Esteros Road, 0.5 mile north of State Route (SR)-237. The proposed site is approximately 1.8 miles west of I-880 and approximately 1.8 miles northeast of the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation. Surrounding land uses consist of Los Esteros Road and a recycling trash center to the north, the San José-Santa Clara Regional Wastewater Facility (RWF) to the east, and undeveloped land to the south and west.

The proposed Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line is located within the Cities of Fremont, Milpitas, and San José and would connect the proposed Albrae terminal to the proposed Baylands terminal. The proposed Newark to Albrae 230 kV transmission line is located entirely within the City of Fremont and would connect the proposed Albrae terminal to the existing Newark substation. The proposed Baylands to NRS 230 kV transmission line would be located within the Cities of San José and Santa Clara and would connect the proposed Baylands terminal to the existing NRS substation.

Historical population data presented below was obtained from the U.S. Census Bureau decennial census (U.S. Census Bureau, 2020a, 2020b). Population projections were obtained from the Association of Bay Area Governments (ABAG) (ABAG, 2018). Housing development data was obtained through the Cities of Fremont, Milpitas, San José, and Santa Clara in their respective

Housing Element portions of their General Plans and their renewed 2023-2031 Housing Elements. The population and growth data and the Proposed Project purpose and need were retrieved for use in evaluating whether the Proposed Project could indirectly induce growth. This section evaluates the Proposed Project's potential impacts from both construction and O&M.

5.14.1.1 Population Estimates

Population data from the 2020 decennial census are presented in **Table 5.14-1, Population and Housing Estimates**. Between 2010 and 2020, the Cities of Fremont, Milpitas, San José, and Santa Clara experienced population increases of 7.7 percent, 20.2 percent, 7.1 percent, and 9.6 percent, respectively (U.S. Census Bureau, 2020b). The ABAG represents the San Francisco Bay Area, its nine counties, 101 cities, and smaller geographic areas, including the Cities of Fremont, Milpitas, San José, and Santa Clara. In 2018, ABAG developed population and housing projections through 2040 using a suite of models, operated according to technical direction from an advisory committee, as well as direction from ABAG's policy making boards. By 2040, the Cities of Fremont, Milpitas, San José, and Santa Clara are estimated to have populations of 275,440, 103,970, 1,377,145, and 159,500, respectively. From 2020 to 2040, this represents an estimated 19 percent increase for the City of Fremont, 30 percent increase for the City of Milpitas, 36 percent increase for the City of San José, and 25 percent increase for the City of Santa Clara (ABAG, 2018).

5.14.1.2 Housing Estimates

During each Housing Element update, each jurisdiction must plan for its share of housing needs for the planning period as mandated by the State of California. Housing need is determined for households in four income categories: above moderate-, moderate-, low-, and very low-income. State law has established a process for assigning the responsibility for planning for housing production in California to individual cities and counties. This is known as the Regional Housing Needs Allocation (RHNA) process. The City of Fremont's RHNA for the 2023-2031 planning period is 12,897 units. Of the 12,897 units in Fremont's RHNA, 60 percent are designated for very low-, low-, and moderate-income affordability levels (City of Fremont, 2023a). The City of Milpitas's RHNA for the 2023-2031 planning period is 6,713 units, with 56 percent designated for extremely low/very low-, low-, and moderate-income affordability levels (City of Milpitas, 2023a). For the 2023-2031 planning period, the City of San José's RHNA is 62,200 units. Of those 62,200 new housing units, 55 percent are designated for very low-, low-, and moderate-income groups (City of San José, 2023a). The City of Santa Clara's RHNA for the 2023-2031 planning period is 11,632 units, with 56 percent designated for very low-, low-, and moderate-income groups (City of Santa Clara, 2023a).

Data on the numbers of occupied and vacant housing units and vacancy rates for the Cities of Fremont, Milpitas, San José, and Santa Clara as of 2020 are presented in **Table 5.14-1**.

	City of Fremont	City of Milpitas	City of San José	City of Santa Clara
Population, 2010	214,089	66,790	945,942	116,468
Population, 2020	230,504	80,273	1,013,240	127,647
Housing Units, Total, 2020	77,430	25,183	342,037	50,229
Housing Units, Occupied, 2020	74,450	24,480	328,622	47,004
Housing Units, Vacant, 2020	2,980	703	13,415	3,225

Table 5.14-1: Population and Housing Estimates

	City of Fremont	City of Milpitas	City of San José	City of Santa Clara
Vacancy Rate, 2020 (%)	3.8%	2.8%	3.9%	6.4%
Source: U.S. Census Bureau, 2020a, 2020b				

The Greater Bay Area is a densely populated area with a population larger than 38 states and an economy larger than 46 states (ABAG, 2018). With the increasing growth of the finance and technology industries within the region, population is anticipated to continue to increase along with housing needs, which is what the Cities of Fremont, Milpitas, San José, and Santa Clara aim to address in their respective 2023-2031 Housing Elements. The estimated population and housing projections for the Cities of Fremont, Milpitas, San José, and Santa Clara is provided below in **Table 5.14-2, Population and Housing Projections**.

Table 5.14-2: Population and Housing Projections

	Estimated Population (2030)	Estimated Households (2030)	Estimated Total Housing Units* (2030)
City of Fremont	239,610	79,215	90,327
City of Milpitas	95,605	28,835	31,896
City of San José	1,189,660	386,605	404,237
City of Santa Clara	142,425	52,110	61,861
*This total assumes the goal RHNA for each City is achieved by 2030. Source: ABAG, 2018; City of Santa Clara, 2023a; City of San José, 2023a; City of Fremont, 2023a; City of Milpitas, 2023a			

5.14.1.3 Approved Housing Developments

There are several housing developments within one mile of the Proposed Project in the City of Fremont (City of Fremont, 2023a). These new housing developments currently under construction or pending review will result in 2,677 new housing units once constructed and an estimated population increase of 7,995. All of these new developments are located more than 0.5 mile from the closest Proposed Project component—a portion of the Albrae to Baylands 320 kV DC underground transmission line—and more than two miles from the proposed Albrae terminal.

There are three planned housing developments within one mile of the Proposed Project in the City of Milpitas. These planned housing developments, currently pending review of planning or building permits, would result in 253 new housing units once constructed with an estimated population increase of 809 (City of Milpitas, 2023a). These new developments are located more than 0.3 mile from the closest Proposed Project component, a portion of the Albrae to Baylands 320 kV DC overhead transmission line.

According to data provided by the City of San José, there is one pending housing development within one mile of the Proposed Project—the Charities Housing/Vista Montana development (City of San José, 2023b). If approved, there will be an additional 509 housing units within the area and an estimated population increase of 1,542. The pending Charities Housing/Vista Montana development is located approximately 0.7 mile east of the proposed Baylands to NRS 230 kV transmission line alignment within Lafayette Street.

There are three pending housing developments within one mile of the Proposed Project in the City of Santa Clara, including Related Santa Clara, the Tasman East Specific Plan, and the Mission Point by Kylli Project. The Tasman East Specific Plan, adopted on November 13, 2018 by the Santa Clara City Council, proposes the development of a high-density mixed-use and transit-oriented neighborhood located northeast of the intersection of Tasman Drive and Lafayette Street. The Tasman East Specific Plan is sited adjacent to the proposed Baylands to NRS 230 kV underground transmission line and would support a population increase of 11,700. Within the Tasman East Specific Plan area, there are 11 individual projects, seven of which have been approved by the City and four of which are still pending approval (City of Santa Clara, 2023b). According to the data provided by the City of Santa Clara, the City's pending housing developments will add approximately 7,980 housing units, resulting in an estimated increase of 20,748 residents once complete.

Data on the estimated numbers of housing units and resulting population increase for the Cities of Fremont, Milpitas, San José, and Santa Clara are presented in **Table 5.14-3, Housing Developments Within One Mile of the Proposed Project**.

Table 5.14-3: Housing Developments Within One Mile of the Proposed Project				
Project Name or Developer	Number of Units	Estimated Population Increase*	Approval Date	Construction Status
City of Fremont				
Lennar Innovation Multi-Family Market Rate Rental (Lot 3)	328	948	October 31, 2016	Under Construction
Lennar Innovation Multi-Family Market Rate Rental (Lot 4 and 10)	728	2,184	October 31, 2016	Entitlement Approved
Lennar Master Plan – Innovation Phase 2	371	1,113	September 22, 2016	Under Construction
Lennar Master Plan – Innovation Phase 3	202	606	September 22, 2016	Building Permit Review
Lennar Master Plan – Innovation Phase 2 Podiums	146	438	September 22, 2016	Entitlement Approved
Mission Falls Village 4	66	198	TBD	Under Construction
Mission Falls Village 5	81	243	TBD	Under Construction
Mission Falls Village 6	70	210	TBD	Under Construction
Palma at Mission Falls	171	513	TBD	Entitlement Approved
Metro West Victoria Station Flats	77	231	September 22, 2016	Under Construction
Valley Oak Warm Springs Area 3 Mixed Use	184	552	September 22, 2016	Entitlement Approved
Warm Springs Lennar Innovation Phase 1	253	759	September 22, 2016	Under Construction
Subtotal:	2,677	7,995	-	-

Table 5.14-3: Housing Developments Within One Mile of the Proposed Project				
Project Name or Developer	Number of Units	Estimated Population Increase*	Approval Date	Construction Status
City of Milpitas				
1355 California Circle	206	659	TBD	Planning Permit Filed
1880 N Milpitas Blvd, Milpitas, CA 95035	3	10	TBD	Building Permit Filed
1724 Sunnyhills Ct, Milpitas, CA 95035, USA	44	140	November 2022	Planning Permit Approved
Subtotal:	253	809	-	-
City of San José				
Charities Housing/Vista Montana	509	1,542	TBD	Pending Approval
City of Santa Clara				
Related Santa Clara	1,680	4,368	June 28, 2016	Pending Architectural Review
Tasman East Specific Plan	4,500	11,700	November 13, 2018	TBD
Mission Point by Kylli Project	1,800	4,680	TBD	Pending Review
Subtotal:	7,980	20,748	-	-
Total (All Cities):	11,419	31,094	-	-
* Estimated population increase was calculated using the City's average household size. Source: City of San José, 2023b; City of Santa Clara, 2023b; City of Fremont, 2023b; City of Milpitas, 2023a; U.S. Census Bureau, 2022				

5.14.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.14.2.1 Population and Housing Regulatory Setting

Federal

There are no applicable federal regulations for population and housing that apply to the Proposed Project.

State

There are no applicable state regulations for population and housing that apply to the Proposed Project.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating

electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local population and housing-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following goal and policies from the City of Fremont General Plan are relevant to population and housing and are provided for informational purposes (City of Fremont, 2011).

- Goal 1** Preserve, Maintain, and Improve the Existing Housing Supply.
- Policy 1.01** Identify and Remedy Substandard Housing Conditions.
- Policy 1.02** Facilitate Improvement of Existing Housing Stock.
- Policy 1.03** Improve Infrastructure within Existing Residential Neighborhoods.

City of Fremont 2023-2031 Housing Element

The City of Fremont 2023-2031 Housing Element contains the same principal goals and policies as the Housing Element in the General Plan. The housing policies of the 2015-2023 Housing Element contained in the General Plan doubled affordable housing production during the previous planning period. The 2023-2031 Housing Element intends to build on that success while staying consistent with the General Plan (City of Fremont, 2023a).

City of Milpitas General Plan

The following goal and policies from the City of Milpitas General Plan are relevant to population and housing and are provided for informational purposes (City of Milpitas, 2023b).

- Goal LU-1** Accommodate a well-balanced mix of land uses that meets the diverse needs of Milpitas residents, businesses, and visitors with places to live, work, shop, be entertained and culturally enriched.
- Policy LU 1-3** Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, and economic needs over the planning period.
- Policy LU 1-4** Continue to provide for a variety of housing types and densities that meet the needs of individuals and families and offers residents of all income levels, age groups, and special needs sufficient housing opportunities and choices for locating in Milpitas.

City of Milpitas 2023-2031 Housing Element

The City of Milpitas 2023-2031 Housing Element was adopted on January 24, 2023. The Housing Element ensures that local jurisdictions appropriately plan and provide opportunities for the private market to address the housing needs of the City across diverse groups and income levels. The Housing Element provides a coordinated strategy for producing needed housing and meets a variety of state and local values that are consistent with the recently adopted General Plan 2040 (City of Milpitas, 2023b).

- Goal HE-1** Maintain adequate sites to accommodate the City's share of the regional housing need, including sites that are appropriate for the development of housing affordable to extremely low-, very low-, low-, moderate-, and above moderate-income households through appropriate land use and zoning.
- Policy HE 1.1** Monitor residential development projects to ensure there is an adequate level of remaining development capacity through the housing sites inventory.
- Policy HE 1.3** Require new residential development projects and mixed-use development projects with a residential component to meet or exceed minimum residential densities to ensure efficient use of remaining land available.
- Policy HE 1.4** Continue to facilitate housing production through implementation of specific plans and overlay zones, including the Milpitas Metro Specific Plan (Transit Area Specific Plan [TASP] Update) and Gateway-Main Street Specific Plan (Milpitas Midtown Update).
- Policy HE 1.5** Facilitate the development of housing through the adoption of new zoning districts consistent with the General Plan, zoning incentives or waivers, development process streamlining, and California Environmental Quality Act (CEQA) findings of consistency, especially affordable housing in high resource areas.

City of San José General Plan

The following policies from the City of San José General Plan are relevant to population and housing and are provided for informational purposes (City of San José, 2024).

- Policy H-1.9** Facilitate the development, preservation, and rehabilitation of housing to meet San José's fair share of the County's and region's housing needs.
- Policy H-3.3** Situation housing in an environment that promotes health, safety, and well-being of the occupants and is close to services and amenities.

City of San José 2023-2031 Housing Element

The City of San José 2023-2031 Housing Element was adopted by the City Council on June 20, 2023. This revised Housing Element includes an implementation workplan that links each action for the 2023-2031 planning period to a General Plan housing policy to ensure alignment and

internal consistency between the two documents. The five goals of the 2023-2031 Housing Element are included below for informational purposes (City of San José, 2023a).

- Goal 1** An abundant and affordable housing stock.
- Goal 2** Sufficient housing for people experiencing homelessness.
- Goal 3** Housing stability and opportunities to build wealth for all residents.
- Goal 4** Healthy, thriving neighborhoods with access to good jobs, schools, transportation, and other resources.
- Goal 5** Racially and socially inclusive neighborhoods that overcome past and present discrimination.

City of Santa Clara General Plan

The following goals and policies from the City of Santa Clara General Plan are relevant to population and housing and are provided for informational purposes (City of Santa Clara, 2010).

- Goal 5.3.2-G1** Equitable housing opportunities within the community for persons of all economic levels, regardless of religion, gender, sexual orientation, marital status, national origin, ancestry, familial status, race, color, age, source of income, or mental or physical disability.
- Goal 5.3.2-G2** A variety of housing types, sizes, location, and tenure in order to maintain social and economic diversity in the City.
- Goal 5.3.2-G3** Affordable housing units dispersed throughout the City to avoid a concentration in any one neighborhood.
- Policy 5.3.2-P1** Encourage the annual construction of the housing units necessary to meet the City's regional housing needs assessment by reducing constraints to housing finance and development.
- Policy 5.3.2-P2** Encourage higher-density residential development in transit and mixed-use areas and in other locations throughout the City where appropriate.
- Policy 5.3.2-P3** Encourage below-grade parking and parking structures for development in Medium Density and High-Density designations.
- Policy 5.3.2-P6** Provide adequate choices for housing tenure, type, and location, including higher density, and affordability for low- and moderate-income and special needs households.

City of Santa Clara 2023-2031 Housing Element

The City of Santa Clara 2023-2031 Housing Element was prepared to maintain consistency with the goals and policies of the City's General Plan as required by State law. The 2023-2031 Housing Element has an increased focus on Affirmatively Furthering Fair Housing (AFFH), which heavily

influenced the document. The following goals and policies from the Santa Clara 2023-2031 Housing Element are relevant to population and housing and are provided for informational purposes (City of Santa Clara, 2023a).

Goal A	Create and maintain high-quality, livable, and diverse housing stock within the City of Santa Clara.
Policy A-4	Seek collaborative efforts with regional entities and utility service providers to subsidize and incentivize residential energy and water conservation.
Policy A-6	Engage with developers regarding the benefits of hiring local labor, hiring from or contributing to apprenticeship programs, increasing resources for labor compliance, and providing living wages.

5.14.3 IMPACT QUESTIONS

5.14.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to population and housing come from the CEQA, Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Induce substantial unplanned population growth in the area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of roads or other infrastructure); or
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

5.14.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for population and housing.

5.14.4 IMPACT ANALYSIS

5.14.4.1 Population and Housing Impact Analysis

Would the project induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes or business) or indirectly (e.g., through extension of roads or other infrastructure)?

No Impact. Construction of the Proposed Project would not induce, either directly or indirectly, substantial population growth in the area. LS Power expects to utilize up to approximately 300 workers per day during peak construction, but, on average, the workforce on-site would be less. The labor demands of the Proposed Project would be met by existing LS Power employees, by hiring specialty construction and electrical contractors who already reside in the surrounding areas, or by hiring specialty construction and electrical contractors from outside the local area who may temporarily reside in the vicinity of the Proposed Project while completing their roles in the construction process. Given the relatively small number of positions required for construction

of the Proposed Project, no population growth would be induced by the construction of the Proposed Project.

The primary objective of the Proposed Project is to resolve several reliability concerns, including multiple near-term and long-term overloads identified in the San José area 115 kV transmission system. While the Proposed Project would improve the overall system capability to adequately serve the existing and forecasted load demand, it is not intended to increase power supplies related to potential growth for any planned housing development and would not extend power to undeveloped areas approved for growth by local agencies. The Cites of Fremont, Milpitas, San José, and Santa Clara planning documents already anticipate and permit a certain level of growth in the area based on regional population projections, and the Proposed Project would not directly affect anticipated growth. Improved system reliability would not generate new housing development, and the Proposed Project does not propose new housing, businesses, extension of roads, or other land use changes that would induce economic or population growth in the area. Further, although the Proposed Project would improve system reliability that would benefit both existing and planned growth in the Proposed Project area, it would be speculative to estimate the extent to which the Proposed Project could support new planned housing development in the Greater Bay Area.

O&M of the Proposed Project would not provide new jobs nor require development of new housing and, therefore, would not induce, either directly or indirectly, substantial population growth in the area. Although the Proposed Project would improve system reliability that would benefit both existing and planned growth in the Cites of Fremont, Milpitas, San José, and Santa Clara, the Proposed Project is not expected to directly or indirectly support new planned development in the Greater Bay Area or otherwise support any growth-related activities that could lead to a significant effect on the environment. Finally, while the Proposed Project would facilitate reliable operation of the transmission system in the electrical proximity of the existing PG&E Newark and the existing SVP NRS substations, it would not directly induce population growth or create new demand because the proposed high-voltage direct current (HVDC) terminals and transmission facilities would support the existing regional transmission system for existing customer demand and forecasted electrical load demand.

The Proposed Project would be operated remotely by LS Power's control center in Austin, Texas and LS Power's local maintenance/technical staff, utilizing existing internal LS Power staff and external resources for maintenance and emergency response. The Proposed Project would be incorporated into LS Power's existing programs with existing equipment, experienced staff, and trusted contractors to provide operational and cost efficiency with reduced risks. LS Power would hire one technician to be located in close proximity to the Proposed Project to perform routine inspections, monitoring, and repairs. LS Power would also have two other technicians located in California for LS Power's other projects who would assist in O&M of the Proposed Project facilities, if needed. Given the small number of personnel required for O&M, the Proposed Project would have no impact to the workforce residing in the area.

The Proposed Project would be remotely operated with no permanent workforce on-site and only require a small number of positions for O&M; therefore, no population growth would be directly induced by operation of the Proposed Project. Additionally, the Proposed Project would not include new infrastructure such as publicly accessible roads that could indirectly induce unplanned population growth. Proposed new access roads would provide ingress and egress to the proposed HVDC terminals and would not facilitate unplanned growth. As discussed further in **Section 3.2.3, System Reliability**, the Proposed Project is needed to meet the increased demand

for energy within the existing service area and would not serve any additional end users beyond those already being served by the existing system. O&M of the Proposed Project would not induce, either directly or indirectly, substantial population growth in the area. No impacts would occur under this criterion.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). No new homes, businesses, or transportation infrastructure would be constructed as a result of the Newark substation modifications that would induce unplanned population growth. The Newark substation modifications would not result in an increase in permanent workforce at the substation and, therefore, would not induce, either directly or indirectly, substantial population growth in the area. No impacts would occur under this criterion as a result of the PG&E substation modifications.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. No new homes, businesses, or transportation infrastructure would be constructed as a result of the NRS substation modifications that would induce unplanned population growth. The NRS substation modifications would not result in an increase in permanent workforce at the substation and, therefore, would not induce, either directly or indirectly, substantial population growth in the area. No impacts would occur under this criterion as a result of the NRS substation modifications.

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

No Impact. The Proposed Project would not displace any existing housing. The Proposed Project facilities and associated transmission lines would be located primarily within vacant land, commercial land, industrial land, and existing roadways absent of existing housing developments or residences. There are 19 planned housing developments within one mile of the Proposed Project (see **Table 5.14-3**); however, there are no new housing developments within one mile of either the proposed Albrae or Baylands terminals. None of these developments would be stopped or delayed due to the construction of the Proposed Project. No people or housing would be displaced by construction or operation of the Proposed Project; thus, it would not be necessary to construct replacement housing elsewhere. Therefore, there would be no impacts under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property) and would not displace any existing people or housing. No impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation and would not displace any existing people or housing. No impacts would occur under this criterion.

5.14.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for population and housing.

5.14.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures (APMs) for population and housing would be implemented for the Proposed Project.

5.14.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for population and housing would be implemented for PG&E's scope of work.

5.14.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for population and housing would be implemented for SVP's scope of work.

5.15 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities?			X	

This section describes the public services within the vicinity of the Proposed Project, as well as the potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.15.1 ENVIRONMENTAL SETTING

The Proposed Project spans approximately twelve miles from the City of Fremont south to the Cities of Milpitas, San José, and Santa Clara. Public services data, including fire and police protection and maintenance of public facilities such as schools and parks, was obtained using the City of Fremont General Plan (City of Fremont, 2011), City of Milpitas General Plan (City of Milpitas, 2015, 2021), City of San José General Plan (City of San José, 2024), City of Santa Clara General Plan (City of Santa Clara, 2010), Fremont Fire Department (FFD) (FFD, 2023), Milpitas Fire Department (MFD) (MFD, 2023), San José Fire Department (SJFD) (City of San José, 2023a SJFD, 2023a, 2023b), Santa Clara Fire Department (SCFD) (City of Santa Clara, 2010; SCFD, 2021, 2023), Fremont Police Department (FPD) (2023a, 2023b, 2023c), Milpitas Police Department (MPD) (2020), San José Police Department (SJPD) (2023a, 2023b, 2023c), Santa Clara Police Department (SCPD) (2019, 2022, 2023), Fremont Unified School District (FUSD) (2023), Milpitas Unified School District (MUSD) (2024, Santa Clara Unified School District (SCUSD) (City of Santa Clara, 2010; SCUSD, 2023), and other local service information resources. The locations of public service facilities near the Proposed Project area are shown on **Figure 5.15-1, Public Service Facilities Map, Figure 5.16-1, Recreational Resources Map,** and described below.

5.15.1.1 Service Providers

The following section discusses the public service providers that would serve the Proposed Project.

Police

The FPD provides law enforcement services throughout the City of Fremont. The FPD is divided into three geographic zones for servicing purposes. The Proposed Project spans across FPD's Zone 3, which covers most of south Fremont (FPD, 2023b). The FPD is comprised of three divisions with more than 30 specialized units and assignments. As of 2023, the FPD consists of over 300 staff, of which more than 200 are sworn personnel (FPD, 2023a). The FPD, located at 2000 Stevenson Boulevard, Fremont, is approximately 3.3 miles northeast of the proposed Albrae terminal. According to the FPD, the median response time in 2022 was five minutes and 56 seconds for Priority 1 Emergency calls. The FPD's Priority 1 response time goal is five minutes (FPD, 2023c).

The MPD provides law enforcement services throughout the City of Milpitas. The Chief of Police is responsible for administering and managing the whole department, which is comprised of two bureaus: Support Services Bureau and Police Operations Bureau (MPD, 2020). The MPD station is located at 1275 North Milpitas Boulevard, which is approximately 0.8 mile east of the proposed Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line (overhead) alignment. According to the City of Milpitas, the average response time in 2023 was two minutes and 50 seconds for Priority 1 Emergency calls. The MPD's Priority 1 response time goal is less than three minutes (City of Milpitas, 2024).

The SJPD provides law enforcement services throughout the City of San José. The SJPD is organized with four bureaus comprised of 11 divisions with more than 50 specialized units and assignments (SJPD, 2023a). The Proposed Project spans across the SJPD's Crime Prevention Central Division (Zone 3). The Central Division includes four patrol districts totaling approximately 39 square miles, serving a population of approximately 200,000 residents. The Central Division is roughly bordered by downtown San José to the south, the Alviso Marina to the north, U.S. Route 101 and Interstate 880 to the east, and the City of Santa Clara boundary to the west (SJPD, 2023b). The Central Division Command Staff and Supervision consists of four lieutenants and 18 sergeants. The SJPD, located at 201 West Mission Street, San José, is approximately six miles south of the proposed Baylands to Northern Receiving Station (NRS) 230 kV transmission line. According to the SJPD Police Response Time Dashboard, the average response time in the last 30 days is 8.79 minutes for Priority 1 calls and 28.4 minutes for Priority 2 calls (SJPD, 2023c). The SJPD has a goal response time of six minutes or less for 60 percent of all Priority 1 calls (City of San Jose, 2023b).

The SCPD serves the City of Santa Clara and is divided into four divisions: Field Operations, Investigations, Special Operations, and Administrative Services (SCPD, 2019). The SCPD serves a diverse community of approximately 129,488 residents over 19.3 square miles (SCPD, 2022). The SCPD has 153 sworn officers, or 1.13 per thousand by population (SCPD, 2023). The SCPD headquarters station is located at 601 El Camino Real, Santa Clara, approximately 5.2 miles from the Proposed Project. The SCPD has a police station located at 3992 Rivermark Parkway, Santa Clara, approximately one mile southeast of the existing NRS substation. As of February 2022, the average response time of the SCPD is 2.59 minutes (SCPD, 2023). The SCPD goal is to maintain

a Citywide average of a three-minute response time for 90 percent of emergency calls (City of Santa Clara, 2010).

Fire

The FFD is comprised of 13 in-service fire companies from 11 fire stations located throughout the City and is responsible for providing rapid delivery of fire, medical, rescue, and life safety emergency services within the City of Fremont. The FFD has 11 fire engines, two aerial ladder trucks, one specialized hazardous materials unit, one heavy duty rescue, and two battalion chiefs (FFD, 2023). The closest FFD station to the proposed Albrae terminal is Fire Station 7, located at 43600 South Grimmer Boulevard, approximately 1.3 miles northeast of the proposed Albrae to Baylands 320 kV DC transmission line, 1.4 miles east of the proposed Albrae terminal site, and it is approximately 1.3 miles northeast of the existing Newark substation. FFD Fire Station 11 is located approximately 0.5 mile east of the proposed Albrae to Baylands 320 kV DC (underground) transmission line, at 47200 Lakeview Boulevard. Per the City's General Plan, the Proposed Project is located below (outside) the Toe of the Hill line. The City of Fremont defines "toe of the hill" as a line along the base of the hills along which the grade becomes 20 percent or more (City of Fremont, 2011). The City of Fremont has a goal of a six minute and 40 second response to 90 percent of emergency service calls below (outside) the toe of the hill.

The MFD provides fire protection services for the 13.2 square-mile incorporated portion of the City Planning Area. The City staffs and operates four fire stations: Curtis Avenue, Yosemite Drive, Midwick Drive, and Barber Lane (MFD, 2023). While expansion of facilities and seismic upgrading at some stations is being planned, there are no plans to add new stations (City of Milpitas, 2015). The closest MFD station to the Proposed Project is Station 1 at 777 South Main Street, approximately two miles southeast of the proposed Albrae to Baylands 320 kV DC transmission line (overhead) alignment. The average response time to an emergency in the City was about 4.2 minutes during 2010/2011. The City's Insurance Services Office (ISO) rating is 3 on a scale of 1 to 10 (with 1 being the best) (City of Milpitas, 2015).

The SJFD is a full-service fire department providing fire protection, rescue, and emergency services to citizens within the City of San José. The SJFD serves the City of San José and some unincorporated areas of the County of Santa Clara, totaling approximately 200 square miles and 1.2 million residents. The SJFD is organized into seven bureaus that include approximately 650 sworn personnel (SJFD, 2023a). The City of San José has 34 fire stations, 33 Type 1 Fire Engines, nine aerial ladder trucks, one hazmat rig, one hazmat foam unit rig, and 29 other emergency response vehicles (SJFD, 2023b). The closest fire station to the proposed Baylands terminal is Fire Station 25, located at 5125 Wilson Way, Alviso, which is approximately 0.8 mile west of the proposed terminal location and approximately 0.2 mile west of the proposed Baylands to NRS 230 kV transmission line. In 2021-2022, the SJFD responded to 71 percent of Priority 1 incidents within its time standard of eight minutes, which is below the target of 80 percent, and responded to 92 percent of Priority 2 incidents within 13 minutes, which is within the target of 90 percent. The SJFD is adding two new fire stations (Fire Station 32 and 36) to improve response times (City of San José, 2022).

The SCFD serves the City of Santa Clara and is comprised of nine fire stations consisting of eight engines, two trucks, one rescue/light unit, one hazardous materials unit, and two command vehicles. The response area for the SCFD is approximately 19.3 square miles, serving approximately 127,647 residents (SCFD, 2023). The SCFD is divided into five divisions comprised

of 155 personnel (SCFD, 2021). Two SCFD fire stations are located within one mile of the Proposed Project; Fire Station 6 is located at 888 Agnew Road and Fire Station 8 is located at 2400 Agnew Road. The current SCFD response time standard for the first unit is to arrive in less than six minutes, 90 percent of the time. In 2022, the SCFD arrived in four minutes and 50 seconds or less, 90 percent of the time (SCFD, 2022). This is within the City's set standard. Neither current traffic flow nor building standards in the City have impeded the SCFD's service delivery (City of Santa Clara, 2010).

Table 5.15-1, Fire Stations Near the Proposed Project Area provides a list of the fire stations that are closest to the Proposed Project components.

Table 5.15-1: Fire Stations Near the Proposed Project Area		
Fire Station Name	Location	Distance from Proposed Project
Fire Station 7 (City of Fremont)	43600 South Grimmer Boulevard Fremont, CA	Approximately 1.3 miles northeast of the proposed Albrae to Baylands 320 kV DC transmission line (underground) alignment, and 1.4 miles east of the proposed Albrae terminal.
Fire Station 11 (City of Fremont)	47200 Lakeview Boulevard Fremont, CA	Approximately 0.5 mile east of the proposed Albrae to Baylands 320 kV DC transmission line (underground) alignment.
Fire Station 5 (City of Fremont)	55 Hackamore Lane Fremont, CA	Approximately 1.1 miles east of the proposed Albrae to Baylands 320 kV DC transmission line (underground) alignment.
Fire Station 1 (City of Milpitas)	777 South Main Street Milpitas, CA	Approximately two miles southeast of the proposed Albrae to Baylands 320 kV DC transmission line (overhead) alignment.
Fire Station 25 (City of San José)	5125 Wilson Way Alviso, CA	Approximately 0.2 mile west of the proposed Baylands to NRS 230 kV transmission line (underground) alignment, and 0.8 mile west of the proposed Baylands terminal.
Fire Station 29 (City of San José)	199 Innovation Drive San José, CA	Approximately 1.6 miles east of the proposed Baylands to NRS 230 kV transmission line (underground) alignment, and 1.68 miles east of the proposed modifications at the existing NRS substation.
Fire Station 8 (City of Santa Clara)	2400 Agnew Road Santa Clara, CA	Approximately 0.73 mile south of the proposed modifications at the existing NRS substation, and 0.9 mile south of the proposed Baylands to NRS 230 kV transmission line (underground) alignment.

Table 5.15-1: Fire Stations Near the Proposed Project Area

Fire Station Name	Location	Distance from Proposed Project
Fire Station 6 (City of Santa Clara)	888 Agnew Road Santa Clara, CA	Approximately 0.9 mile east of the proposed Baylands to NRS 230 kV transmission line (underground) alignment, and 0.86 mile south of the proposed modifications at the existing NRS substation.

Schools

The Proposed Project is located in the FUSD, MUSD, and SCUSD.

The FUSD serves over 32,000 students from transitional kindergarten to grade 12 and includes 29 elementary schools, five middle schools, five high schools, one continuation high school, and one alternative high school (FUSD, 2023). The closest school to the proposed Albrae terminal is Millard Elementary School, located approximately 1.1 miles northeast of the proposed terminal site. There are no schools within 0.25 mile of the Proposed Project within the FUSD, as shown on **Figure 5.15-1**.

The MUSD enrolls more than 10,170 students who live within the City of Milpitas. MUSD offers 18 different programs, with 10 elementary schools, two middle schools, two child development centers, one comprehensive high school, one continuation high school, one San José City College Extension Program, and one adult education school (MUSD, 2024). The closest MUSD school to the Proposed Project is Curtner Elementary, located approximately 0.7 mile east of the proposed Albrae to Baylands 320 kV DC transmission line (overhead) alignment. There are no MUSD schools within 0.25 mile of the Proposed Project, as shown on **Figure 5.15-1**.

The SCUSD serves over 20,000 students and consists of 16 elementary schools, three middle schools, two high schools, one kindergarten to grade eight school, and one adult education school (City of Santa Clara, 2010; SCUSD, 2023). The closest school to the Proposed Project is Kathryn Hughes Elementary School, located approximately 600 feet northeast of the existing NRS substation. There is one additional school, George Mayne Elementary School, located approximately 0.2 mile northwest of the proposed Baylands to NRS 230 kV transmission line (underground) alignment, as shown on **Figure 5.15-1**.

In addition, there is one private school located within 0.25 mile of the Proposed Project. Saba's Academy, an Islamic School serving students from kindergarten to high school, is located at 4415 Fortran Court, in the City of San José (Saba's Academy, 2023). Saba's Academy is located approximately 0.2 mile southeast of the proposed Baylands to NRS 230 kV transmission line (underground) alignment.

Parks

There are numerous parks surrounding the Proposed Project (discussed further in **Section 5.16, Recreation**). The Proposed Project would be served by the City of Fremont Parks and Recreation Department; the City of Milpitas Recreation and Community Services Department; the City of San José Department of Parks, Recreation, and Neighborhood Services; and the City of Santa Clara

Parks and Recreation Department. Recreational resources, including park facilities and recreational trails, are shown on **Figure 5.16-1**, included as part of **Section 5.16**.

The closest city park to the Proposed Project area is Fairway Glen Park. Fairway Glen Park is four acres and is located approximately 900 feet northeast of the proposed modification area of the existing NRS substation. This park is maintained and operated by the City of Santa Clara Parks and Recreation Department and includes a children's play area, open space, tennis courts, and picnic facilities (City of Santa Clara, 2023). The Proposed Project crosses over the Guadalupe River Trail, just north of State Route 237. The Guadalupe River Trail is managed by the City of San José's Department of Parks, Recreation, and Neighborhood Services and is nine miles long (City of San José, 2023b). The Don Edwards San Francisco Bay National Wildlife Refuge (NWR), part of the San Francisco Bay National Wildlife Refuge Complex, is located approximately 500 feet north of the Proposed Project. The Don Edwards NWR is managed by the U.S. Fish and Wildlife Service (USFWS) and was established to preserve and enhance wildlife protection (USFWS, 2023). Additional information about parks is provided in **Section 5.16**.

Other Public Facilities

Hospitals

There are four hospitals in the vicinity of the Proposed Project area (see **Figure 5.15-1**). The Washington Hospital Healthcare System is located approximately 3.5 miles northeast of the proposed Albrae terminal and would likely provide medical needs in the northern portion of the Proposed Project. Valley Health Center Sunnyvale is located approximately 3.9 miles southwest of the existing NRS substation. The Santa Clara Valley Medical Center and the Regional Medical Center are located approximately 6.2 miles and 6.8 miles southeast of the existing NRS substation, respectively. All three of these hospitals would likely service any emergencies that occur in the southern portion of the Proposed Project.

Libraries

Library services for the City of Fremont, where the proposed Albrae terminal would be located, are provided by the Alameda County Library System. The closest Alameda County library to the proposed Albrae terminal is the Irvington Library, located approximately 1.6 miles northeast of the proposed terminal site and approximately 1.5 miles northeast of the proposed Albrae to Baylands 320 kV DC transmission line (City of Fremont, 2011) (see **Figure 5.15-1**). The Milpitas Library is a member of the Santa Clara County Library District (SCCLD) and is the sole library in the City of Milpitas (SCCLD, 2023). The Milpitas Library is located approximately 1.3 miles southeast of the proposed Albrae to Baylands 320 kV DC transmission line (overhead) alignment. Library services in the City of San José are provided by the San José Public Library (SJPL) System. The closest library to the proposed Baylands terminal is located approximately 0.8 mile west of the terminal at the Alviso Library (SJPL, 2023). The Santa Clara City Library (SCCL) serves the City of Santa Clara, and the nearest library to the Proposed Project is the Northside Branch Library, which is located approximately one mile southeast of the proposed modifications at the existing NRS substation and the proposed Baylands to NRS 230 kV transmission line (underground) alignment (SCCL, 2023).

5.15.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.15.2.1 Public Services Regulatory Setting

Federal

National Fire Protection Association 1710

National Fire Protection Association (NFPA) 1710 is the standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments. NFPA developed NFPA 1710 as an industry standard for the deployment of fire suppression operations to ensure safe and effective fire service operations. The Standard stipulates that the arrival of the first fire engine for 90 percent of emergency calls should occur within a range of six minutes and 15 seconds and six minutes and 45 seconds. It is recognized that the NFPA 1710 Standard is the optimal national standard and is not regularly achieved in rural areas or areas otherwise far removed from firefighting service providers.

State

California Fire Code

The California Code of Regulations (CCR), Title 24, Part 9 is known as the California Fire Code. This code provides provisions for planning, precautions, and preparations for fire safety and fire protection during various activities. This includes, but is not limited to, construction, demolition, building requirements, and guidelines for working with flammable chemicals and materials (California Building Standards Commission, 2022). The Proposed Project is located within a Local Responsibility Area (LRA) and is not located within a State Responsibility Area (SRA), according to data from the California Department of Forestry and Fire Protection ("CAL FIRE") (CAL FIRE, 2023). However, the area to the east of the proposed Albrae and Baylands terminals is identified as being within a "High" Fire Hazard Severity Zone (City of San José, 2023a). As such, the California Fire Code was reviewed for informational purposes for the Proposed Project.

California Public Resources Code Sections 4292 and 4293

California Public Resources Code (PRC) Section 4292 states:

[A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line...shall, during such times and in such areas as are determined to be necessary by the director or the agency, has primary responsibility for fire protection of such areas, 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.

PRC Section 4293 states:

[A]ny person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such area, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:

- (a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet.
- (b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet.
- (c) For any line which is operating at 110,000 or more volts, 10 feet.

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard.

Red-Flag Fire Warning and Weather Watches

Like PRC Sections 4292 and 4293, red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues red-flag warnings and fire-weather watches, and CAL FIRE provides safety recommendations for preventing fires. These include clearing and removing vegetation and ensuring the proper use of equipment.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local public services-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following public service goals and policies from the City of Fremont General Plan (City of Fremont, 2011) are relevant to the Proposed Project and are provided for informational purposes.

- Goal 9-1** **Public Facilities and Services.** A range of public facilities and services to meet the needs of Fremont residents.
- Policy 9-1.2** **Public Safety Facilities.** Ensure public safety facilities are added or expanded as necessary to keep pace with population growth and meet operational needs. Take into account the availability of both capital and operating funds when determining the timing of new and expanded facilities.
- Policy 9-1.3** **Provide Library, Cultural, and Community Facilities.** Continue to provide library facilities and community centers, senior centers, and Family Resource Center to the community. Provide additional facilities and cultural facilities as funding allows.
- Goal 9-6** **Solid Waste Diversion.** Waste diversion maximized with the long-term objective of eliminating landfill waste.
- Policy 9-6.2** **Protect Public Health and Safety.** Implement waste diversion programs that protect public health and safety and the environment.
- Goal 9-9** **Educational Facilities.** Quality educational opportunities and facilities available to the community.
- Policy 9-9.1** **Inform FUSD of Development Plans.** Coordinate with FUSD so that the District Board and staff are aware of development plans.
- Goal 9-10** **School Site Traffic and Parking.** Safe school sites implemented through sound parking and transportation management plans.
- Policy 9-10.1** **Addressing Circulation, Traffic and Parking Issues at Schools.** Work with FUSD, Ohlone College, and other educational institutions to address circulation, traffic, and parking issues in the vicinity of school campuses, to encourage use of alternate modes of transportation, and to ensure the safety of students traveling to and from school.
- Goal 9-11** **City/School Collaboration.** Collaboration between City-sponsored programs and related programs of educational institutions.
- Policy 9-11.1** **Collaboration on Sustainability.** Collaborate with FUSD and other educational institutions on sustainability programs.
- Goal 9-12** **Programs Serving Fremont Youth.** Effective and accessible health and human service programs

- Policy 9-12.2 Direct Services.** Continue to offer direct services to seniors, youths, and families.

City of Milpitas General Plan

The following public service goals and policies from the City of Milpitas General Plan (City of Milpitas, 2021) are relevant to the Proposed Project and are provided for informational purposes.

- Goal UCS-8** Enhance the quality of life for all city residents through the provision of cultural and social resources including quality schools, libraries, medical, and other community services and facilities.
- Policy UCS 8-1** Continue to strongly support and encourage the maintenance of high quality public and private schools and diverse educational opportunities in Milpitas and work cooperatively with MUSD, Berryessa Union High School District, and East Side Union School District to explore all local and state funding sources to secure available funding for new school facilities.
- Policy UCS 8-2** Encourage the planned financing of new school facilities concurrent with new development.
- Policy UCS 8-3** Consider opportunities for joint-use of facilities with the local school districts. When feasible, a joint-use agreement will be pursued to maximize public use of facilities, minimize duplication of services provided, and facilitate shared financial and operational responsibilities.
- Policy UCS 8-7** Support the provision of high quality civic, library, medical, and other community facilities in order to meet the broad range of needs within Milpitas.
- Policy UCS 8-8** Support efforts by SCCLD to provide library services that meet the evolving educational and social needs of Milpitas residents.
- Policy UCS 8-11** Explore opportunities to expand library services and funding to areas within Milpitas.
- Policy UCS 8-15** Provide responsive and high-quality City government services to residents and businesses.
- Goal SA-4** Maintain a safe community by providing efficient and high-quality police, fire, and emergency services
- Policy SA 4-1** Provide adequate funding for police and fire facilities and personnel to accommodate existing and future citizens' needs to ensure a safe and secure environment for people and property throughout the city.

- Policy SA 4-9** Ensure that fire and emergency medical services meet existing and future demand by maintaining a response time of four minutes or less for all urban service areas.
- Policy SA 4-10** Ensure that adequate water supplies are available for fire suppression throughout the City. Require development to construct and fund all fire suppression infrastructure equipment needed to provide adequate fire protection services to new development.

City of San José General Plan

The following public service policies from the City of San José General Plan (City of San José, 2024) are relevant to the Proposed Project and are provided for informational purposes.

- Policy ES-1.14** Collaborate with school districts, the community, post-secondary institutions, businesses, and industry to ensure availability of necessary resources to meet student needs.
- Policy ES-3.10** Incorporate universal design measures in new construction and retrofit existing development to include design measures and equipment that support public safety for people with diverse abilities and needs. Work in partnership with appropriate agencies to incorporate technology in public and private development to increase public and personal safety.
- Policy ES-3.11** Ensure that adequate water supplies are available for fire-suppression throughout the City. Require development to construct and include all fire suppression infrastructure and equipment needed for their projects.
- Policy ES-3.14** Encourage property maintenance and pursue appropriate code enforcement to reduce blight, crime, fire hazards, or other unsafe conditions associated with under-maintained and under-utilized properties.
- Policy ES-3.15** Apply demand management principles to control hazards through enforcement of fire and life safety codes, ordinances, permits, and field inspections.
- Policy ES-3.19** Remove excessive/overgrown vegetation (e.g., trees, shrubs, weeds) and rubbish from City-owned property to prevent and minimize fire risks to surrounding properties.
- Policy ES-4.9** Permit development only in those areas where potential danger to the health, safety, and welfare of persons in that area can be mitigated to an acceptable level.

City of Santa Clara General Plan

The following public service policies from the City of Santa Clara General Plan (City of Santa Clara, 2010) are relevant to the Proposed Project and are provided for informational purposes.

- Policy 5.9.3-P2** Provide police and fire services that respond to community goals for a safe and secure environment for people and property.
- Policy 5.9.3-P3** Maintain a City-wide average three minute response time for 90 percent of police emergency service calls.
- Policy 5.9.3-P4** Maintain a City-wide average three minute response time for fire emergency service calls.
- Policy 5.9.3-P5** Maintain emergency traffic preemption controls for traffic signals.
- Policy 5.9.3-P6** Maintain the fire and hazardous materials mutual aid agreements with surrounding jurisdictions.
- Policy 5.10.5-P28** Continue to require all new development and subdivisions to meet or exceed the City's adopted Fire Code provisions.

5.15.3 IMPACT QUESTIONS

5.15.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to public services come from the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- 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:
 - Fire protection
 - Police protection
 - Schools
 - Parks
 - Other public facilities

5.15.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for public services.

5.15.4 IMPACT ANALYSIS

5.15.4.1 Public Services Impact Analysis

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?

Fire and Police Protection

Less-Than-Significant Impact. The Proposed Project would construct two new high-voltage direct current (HVDC) terminals and a new system tie between the existing Pacific Gas and Electric Company (PG&E) Newark and Silicon Valley Power (SVP) NRS substations, which would increase energy capacity and controllability in the Proposed Project area and Greater Bay Area. No expansion of existing or construction of new government facilities is proposed. Therefore, the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities.

Fire, emergency, and police services currently serve, and would continue to serve, the areas in which the existing Newark substation, the existing NRS substation, and the proposed high-voltage direct current (HVDC) terminals and transmission lines are located. The Proposed Project would not result in a need for new or additional public services because it would not directly induce population growth or result in the construction of residential or other land uses that would indirectly induce area population growth. It is not anticipated that the Proposed Project would adversely affect the use or operation of fire, police protection services, or emergency services. The Proposed Project would not adversely impact service ratios, response times, or other performance objectives of the fire and police protection in the area; thus, no new or physically altered governmental facilities or need for new or physically altered governmental facilities would result from the Proposed Project.

Proposed Project work areas would be cleared or trimmed of vegetation by LS Power before staging construction equipment, thus minimizing the probability of a fire during construction. Although the need for emergency services may arise during construction of the Proposed Project, such a need would not substantially affect the provision of existing emergency services or require the provision of service beyond existing capacities. Construction is not anticipated to permanently affect response times because construction lane or road closures would be temporary, occur in small segments, and would be coordinated with local jurisdictions and emergency service providers. Traffic control would also be implemented, as necessary, and is described in **Section 5.17, Transportation**.

The Proposed Project would employ up to approximately 300 construction workers at peak construction. Workers would likely commute from the greater Fremont, Milpitas, San José, and Santa Clara areas. The Proposed Project would not create permanent employment or displace people. There would be no relocation of people regarding governmental facilities or services. The Proposed Project would not result in a need for new or additional public services because it would not directly induce population growth or result in the construction of residential or other land uses that would indirectly induce area population growth (see **Section 5.14, Population and Housing**).

At the proposed Albrae and Baylands terminal construction sites and proposed staging areas, perimeter security fencing would be installed around the outer limits of the work area. Lighting would also be installed for security purposes during construction. Construction crews would lock and secure each worksite to prevent theft or vandalism associated with work equipment or supplies at the completion of each workday. Once built, the permanent perimeter physical security system would consist of an approximately eight-foot-tall security wall and security cameras placed throughout the site. Therefore, the Proposed Project is not anticipated to encourage criminal activities that would result in a need for increased police services.

As discussed in **Section 5.17**, traffic control measures associated with construction of the Proposed Project on major streets would be implemented pursuant to all applicable industry standards and applicable local jurisdictional agency review. For installation of proposed underground transmission lines, LS Power would coordinate with the appropriate emergency (fire and police) personnel prior to construction to ensure that construction activities and associated lane closures would not substantially affect emergency response vehicles. The Proposed Project is not anticipated to impede ingress and egress of emergency vehicles or impact emergency response times during construction and operation. Any lane or road closures associated with construction of the Proposed Project would be temporary, occur in short segments, and be coordinated with local jurisdictions and emergency service providers, and be subject to local agency approved traffic control plans.

Operation of the Proposed Project facilities would not impede emergency vehicle response times, as operation of the Proposed Project facilities would not require any lane or road closures and would require only minimal staffing that would not increase traffic levels near the Proposed Project. Lane closures would only be necessary for underground vault inspections that would occur periodically and during maintenance of the proposed underground transmission lines. Any lane or road closures associated with maintenance of the Proposed Project would be temporary and would be coordinated with local jurisdictions and emergency service providers. Therefore, impacts to emergency response times would be less than significant during construction and operation of the Proposed Project.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Although the need for emergency services may arise during construction of the substation modifications, such a need would not substantially affect the provision of existing emergency services or require the provision of service beyond existing capacities. Therefore, the Newark substation modifications would not result in a need for new or additional public services, nor would it significantly increase emergency response times. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform

modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. Although the need for emergency services may arise during construction of the Proposed Project, such a need would not substantially affect the provision of existing emergency services or require the provision of service beyond existing capacities. Therefore, the NRS substation modifications would not result in a need for new or additional public services, nor would it significantly increase emergency response times. No impacts would occur under this criterion as a result of the NRS substation modifications.

Schools, Parks, and Other Public Facilities

Less-Than-Significant Impact. It is not anticipated that the Proposed Project would adversely affect the use or operation of any schools, parks, or other public facilities, such as libraries or hospitals, in the vicinity of the Proposed Project. The Proposed Project would not generate the need for new or additional public services because it would not result in construction of residential or other land uses that would induce population growth in the area. As discussed in **Section 3.2.3, System Reliability**, the Proposed Project would not provide additional electrical service to any new users or areas; rather, existing users and areas presently served by the existing infrastructure would be supported by the Proposed Project infrastructure. The Proposed Project would not generate new residents for the area's schools or parks, and access to schools and parks would not be impacted. The Proposed Project would not adversely impact service ratios or performance objectives of schools, parks, and other public facilities in the area; thus, no new or physically altered governmental facilities or need for new or physically altered governmental facilities would result from the Proposed Project (refer to the analysis in **Sections 5.16** and **5.17** for a full discussion of potential impacts related to parks and public transportation, respectively).

There are four hospitals in the vicinity of the Proposed Project area, including the Washington Hospital Healthcare System, located approximately 3.5 miles northeast of the proposed Albrae terminal; Valley Health Center Sunnyvale, located approximately 3.9 miles southwest of the existing NRS substation; and the Santa Clara Valley Medical Center and the Regional Medical Center, located approximately 6.2 miles and 6.8 miles southeast of the existing NRS substation, respectively. All of these hospitals would likely service any emergencies that occur in the Proposed Project area during construction. However, the potential increase in demand during construction would be minimal and temporary, and would not exacerbate the need for, or deterioration of, the hospital facilities nor result in the need for new facilities. The peak construction employment is anticipated to be approximately 300 workers per day, but on average, the workforce on-site would be less. It is anticipated that a maximum of approximately 60 workers would be employed at a single construction site at one time. During O&M, the proposed HVDC terminal facilities would be remotely operated with no permanent workforce on-site and would not result in a need for new hospital facilities in order to maintain performance objectives. Therefore, no impacts to hospitals are anticipated.

Construction of the Proposed Project transmission lines may require temporary lane or road closures, which have the potential to temporarily delay travel time to these public facilities. However, coordination with local jurisdictions and emergency service providers and the traffic control plans (discussed in **Section 5.17**) would include measures to minimize delays and provide detours if necessary. Operation of the Proposed Project would not require any lane or road closures and would require only minimal staffing that would not increase traffic levels near the Proposed Project. Lane closures would only be necessary for underground vault inspections that would occur periodically and during maintenance of the proposed underground transmission lines.

Any lane or road closures associated with maintenance of the Proposed Project would be temporary and would be coordinated with local jurisdictions and emergency service providers.

Thus, the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities based on performance objectives that could cause significant environmental impacts. Less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation modifications would not generate new residents for the area's schools, parks, or other public facilities. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The NRS substation modifications would not generate new residents for the area's schools, parks, or other public facilities. No impacts would occur under this criterion as a result of the NRS substation modifications.

5.15.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for public services.

5.15.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures (APMs) for public services would be implemented for the Proposed Project.

5.15.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for public services would be implemented for PG&E's scope of work.

5.15.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for public services would be implemented for SVP's scope of work.

RECREATION

Would the project:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b.	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
c.	Reduce or prevent access to a designated recreation facility or area?			X	
d.	Substantially change the character of a recreational area by reducing the scenic, biological, cultural, geologic, or other important characteristics that contribute to the value of recreational facilities or areas?			X	
e.	Damage recreational trails or facilities?			X	

This section describes recreation resources and facilities within the area of the Proposed Project, as well as the potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project. A recreation area is defined herein as any site or facility that is used for recreational activities, including national, state, county, city, or private parks or trails; open space; cultural centers and museums; campgrounds; and private recreational sites, such as golf courses, amusement parks, and amphitheatres.

5.16.1 ENVIRONMENTAL SETTING

5.16.1.1 Recreational Setting

The Proposed Project alignment spans approximately 12 miles from the City of Fremont south to the Cities of Milpitas, San José, and Santa Clara. The recreational analysis within this section involved a review of various documents, interactive web maps, aerial imagery, general plans of the Cities of Fremont, Milpitas, San José, and Santa Clara, and the County of Santa Clara Trail Master Plan. There are numerous recreational areas within a 0.5-mile buffer of the Proposed Project boundary, as listed in **Table 5.16-1, Existing Recreational Uses** and illustrated in **Figure 5.16-1, Recreational Resources Map**.

Table 5.16-1: Existing Recreational Uses		
Name of Existing Recreational Resource	Recreational Amenities	Approximate Location to Closest Proposed Project Component
Don Edwards San Francisco Bay National Wildlife Refuge (NWR)	The refuge is managed by the United States Fish and Wildlife Service (USFWS), and it provides habitat for threatened and endangered species, as well as opportunities for people to enjoy the benefits of nature (USFWS, 2023). The refuge includes over 30 miles of trails for visitors to explore. ¹ The City of San José designates the refuge as a recreational resource within City boundaries.	At its closest, the City of San José-designated NWR recreational area is located approximately 0.17 mile west of the proposed Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line (underground) within the City of Fremont and approximately 500 feet north of the Baylands to Northern Receiving Station (NRS) 230 kV transmission line (underground) within the City of San José.
San Francisco Bay Trail (Bay Trail)	The Bay Trail provides space for recreation and active transportation to work, school, and other destinations in the community (Metropolitan Transportation Commission [MTC], 2023a).	The Bay Trail intersects with, is located adjacent to, and is within 0.5 mile of both the proposed underground and overhead Albrae to Baylands 320 kV DC transmission line and the proposed underground and overhead Baylands to NRS 230 kV transmission line in multiple locations along the proposed route over a distance of approximately 8.8 miles.
Pacific Commons Sports Park	This is a planned park and does not yet provide any recreational uses (City of Fremont, 2023).	Pacific Commons Sports Park is located approximately 700 feet southwest of the existing Newark substation and approximately 0.48 mile west of the proposed Albrae to Baylands 320 kV DC transmission line (underground).
Dixon Landing Park	The 11-acre community park has a cricket pitch, one large and two small baseball diamonds, three tennis courts, a basketball court, and playgrounds (City of Milpitas, 2011).	Dixon Landing Park is located approximately 0.42 mile east of the proposed Albrae to Baylands 320 kV DC transmission line (overhead).
City of San José Bay Trail	This is a planned trail and does not yet provide any recreational uses, except for an existing reach that is designated as part of the Highway 237 Bikeway (City of San José, 2024a).	The City of San José Bay Trail intersects with the proposed Albrae to Baylands 320 kV DC transmission line (overhead), south of Dixon Landing Road.
Highway 237 Bikeway	Existing and planned multi-use paved route in north City of San José, adjacent to State Route (SR)-237, and includes on-street portions. This bikeway network overlaps with the planned City of San José Bay Trail and partially	At its closest, the Highway 237 Bikeway is adjacent to the proposed underground Baylands to NRS 230 kV transmission line on Lafayette Street, where it crosses under SR-237. This

Table 5.16-1: Existing Recreational Uses		
Name of Existing Recreational Resource	Recreational Amenities	Approximate Location to Closest Proposed Project Component
	overlaps with the existing and planned San Francisco Bay Trail (City of San José, 2024b; 2024c).	resource also parallels the south side of SR-237.
Alviso Park and Alviso Park Expansion Area	The park consists of a swimming pool, barbecue amenities, and a playground (City of San José, 2023a).	Alviso Park is located approximately 0.2 mile north of, and the Alviso Park Expansion Areas are located adjacent to, the proposed underground portion of the Baylands to NRS 230 kV transmission line.
Topgolf	Entertainment venue with a high-tech golf driving range, lounge with drinks, and games (Topgolf, 2023).	Topgolf is located approximately 700 feet northwest of the proposed underground portion of the Baylands to NRS 230 kV transmission line and adjacent to Staging Areas 9 and 10.
Guadalupe River Trail	Nine miles of bicycle and pedestrian trails adjacent to the Guadalupe River (City of San José, 2023a).	The Guadalupe River Trail runs perpendicular to and crosses under the proposed Baylands to NRS 230 kV overhead and underground transmission line.
San Tomas Aquino Creek Trail	Multi-use paved route spanning approximately five miles through Santa Clara along its namesake waterway. In the north, the trail connects to the Highway 237 Bikeway at the edge of the small community of Alviso situated on the southern end of the San Francisco Bay (City of Santa Clara, 2023).	The San Tomas Aquino Creek Trail is approximately 800 feet to the west of the existing NRS substation and approximately 0.37 mile west of the proposed Baylands to NRS 230 kV transmission line (underground).
Santa Clara Police Activities League (SCPAL) Bicycle Moto-Cross (BMX) Track	BMX track (SCPAL, 2023).	The SCPAL BMX Track is located immediately east of the proposed Baylands to NRS 230 kV transmission line (underground).
Ulistac Natural Area	40 acres of open space that showcases seven distinctive natural habitats and has restored California native vegetation and preserved wildlife habitat. The trails have interpretive panels to provide additional information on the natural history of the area. This land was originally used as a seasonal encampment for the Ohlone Indians. There are no activity facilities, restrooms, or picnic facilities within the natural area (City of Santa Clara, 2023).	The Ulistac Natural Area is located approximately 0.3 mile east of the proposed Baylands to NRS 230 kV transmission line (underground) and approximately 0.48 mile east of the proposed modifications at the existing NRS substation.

Table 5.16-1: Existing Recreational Uses

Name of Existing Recreational Resource	Recreational Amenities	Approximate Location to Closest Proposed Project Component
Fairway Glen Park	Large children's play area, open space, tennis courts, and picnic facilities (City of Santa Clara, 2023).	Fairway Glen Park is located approximately 660 feet east of the proposed Baylands to NRS 230 kV transmission line (underground) and approximately 890 feet northeast of the proposed modifications at the existing NRS substation.
Santa Clara Youth Soccer Park	Soccer fields (City of Santa Clara, 2023).	Santa Clara Youth Soccer Park is located adjacent to the proposed Baylands to NRS 230 kV transmission line (underground) and approximately 600 feet north of the proposed modifications at the existing NRS substation.
Levi's Stadium	Open sports stadium that hosts major events (Levi's Stadium, 2023).	Levi's Stadium is located immediately north of the proposed modifications at the existing NRS substation and adjacent to the proposed Baylands to NRS 230 kV transmission line (underground).
Lick Mill Park	10.5-acre neighborhood park with a neighborhood recreation building, children's play area, open space, a basketball court, tennis courts, picnic and barbecue facilities, and restrooms (City of Santa Clara, 2023).	Lick Mill Park is located approximately 0.28 mile east of the proposed Baylands to NRS 230 kV transmission line (underground) and approximately 0.31 mile east of the proposed modifications at the existing NRS substation.
Fuller Street Park	2.5-acre park that includes children's play areas, picnic and barbecue facilities, open turf area, and pathways (City of Santa Clara, 2023).	Fuller Street Park is located approximately 0.2 mile south of the proposed modifications at the existing NRS substation and approximately 0.3 mile south of the proposed Baylands to NRS 230 kV transmission line (underground).
California's Great America Amusement Park	Amusement park with over 60 rides, live entertainment, and a waterpark (California's Great America, 2023).	California's Great America Amusement Park is located approximately 930 feet southwest of the existing NRS substation and approximately 0.4 mile west of the proposed Baylands to NRS 230 kV transmission line (underground).
Juan Bautista de Anza National Historic Trail	Juan Bautista de Anza National Historic Trail is a 1,200-mile trail that commemorates, protects, marks, and interprets the route traveled by Spanish	See the Bay Trail discussion above.

Table 5.16-1: Existing Recreational Uses		
Name of Existing Recreational Resource	Recreational Amenities	Approximate Location to Closest Proposed Project Component
	Lieutenant Colonel Juan Bautista de Anza and colonists in 1776 from New Spain to present-day California (National Park Service [NPS], 2023). This historic trail includes the approximate historic route, as well as recreational trails that are located near the historic route in areas that are accessible to visitors. These recreational trails are included within the Bay Trail network, which is mentioned above.	
<p>Source: USFWS, 2023; MTC, 2023a, 2023b; County of Santa Clara, 2023; City of Fremont, 2015; City of Santa Clara, 2023; City of San José, 2023a; City of Milpitas, 2011.</p> <p>Note:</p> <p>¹ Many trails within the Don Edwards San Francisco Bay NWR are included as segments of the Bay Trail. However, the refuge trail names are different from the Bay Trail segment names. Therefore, for consistency purposes, this text and Figure 5.16-1 illustrate and refer to the names used by the Bay Trail segment.</p>		

As noted in **Table 5.16-1**, there are 17 recreational resources¹ within 0.5 mile of the Proposed Project, including one planned park (Pacific Commons Sports Park) that does not yet provide recreational resources. Of these 17, there are seven existing recreational resources that are located adjacent to, or intersect with, the Proposed Project area. These are discussed further below.

The Bay Trail is a series of connected walking and cycling paths that ring the San Francisco and San Pablo bays. It currently includes more than 350 miles of trails, connecting communities, parks, open spaces, schools, and transit. It provides space for recreation and active transportation to work, school, and other destinations in the community. The goal of the Bay Trail is to build a shoreline path with a total of 500 miles running through all nine Bay Area counties; these proposed paths are identified as planned trails in **Figure 5.16-1** (MTC, 2023a). Some trail segments within the Bay Trail network are also identified as trails by other agencies, sometimes with different names. For example, the segment of the Bay Trail identified as the Fremont Boulevard Trail, which is adjacent to the proposed underground Albrae to Baylands 320 kV DC transmission line, is identified by USFWS as the Coyote Creek Lagoon Trail. The Coyote Creek Trail is also identified by the City of San José as being a segment of the Bay Trail and is included within the Juan Bautista de Anza National Historic Trail recreational trail system. At its closest point, the Coyote Creek Trail is within approximately 210 feet of the proposed overhead Albrae to Baylands 320 kV DC transmission line (MTC, 2023b). Other existing segments of the Bay Trail intersect with the proposed underground Albrae to Baylands 320 kV DC transmission line including: Boyce from Steveson to Auto Mall, Rerouted Cushing Boulevard, and Fremont Boulevard Trail.

¹ Some resources, such as the Bay Trail, include multiple trails. For the purposes of counting the number of recreational resources in this section, the Bay Trail network and the Don Edwards San Francisco Bay NWR trail network are counted together as one recreational resource. The only existing portion of the planned City of San José Bay Trail is designated as the Highway 237 Bikeway; therefore, these two trail networks are also counted together as one recreational resource.

Segments of the Bay Trail that intersect the proposed overhead segment of the Albrae to Baylands 320 kV DC transmission line include: Between Dixon Landing and Fremont Boulevard, and Coyote Creek Trail. In addition, segments of the Bay Trail along Los Esteros Road, including those associated with the Juan Bautista de Anza National Historic Trail, would intersect with both proposed transmission lines (underground).

Six other recreational resources are located adjacent to the proposed Baylands to NRS 230 kV transmission line: Alviso Park Expansion, Guadalupe River Trail, SCPAL BMX Track, Levi's Stadium, Santa Clara Youth Soccer Park, and Topgolf.

- The existing Alviso Park is 4.5 acres with a swimming pool, barbecue amenities, and a playground. With a planned expansion area for additional recreational facilities, the park will include approximately 23.5 acres (City of San José, 2018). The Alviso Park Expansion Area is adjacent to the proposed Baylands to NRS 230 kV transmission line for approximately 300 feet along Disk Drive. There are existing transmission towers that are located in the expansion area.
- The Guadalupe River Trail consists of two disconnected trail systems. The northern and central portions travel from the San Francisco Bay, through Silicon Valley, and into downtown San José. The Guadalupe River Trail is a core trail system within San José's trail network. Once fully developed, it will extend about 20 miles and link the San Francisco Bay to south San José (City of San José, 2023b). The Guadalupe River Trail crosses the Proposed Project at the proposed Baylands to NRS 230 kV transmission line where it transitions from underground to overhead to cross the Guadalupe River.
- The SCPAL BMX Track is a racecourse open to the public. SCPAL was founded by former Chief of Police Frank Sapena in 1970. The goal was to bring police, neighborhood volunteers, and kids together in a positive setting. SCPAL is a nonprofit organization dedicated to teaching youth the values and rewards that can be accomplished through athletics: self-determination, self-belief, goal-setting, teamwork, and respect for others (SCPAL, 2023). The proposed Baylands to NRS 230 kV transmission line runs adjacent to the SCPAL BMX Track's western border along Lafayette Street for approximately 0.2 mile.
- Levi's Stadium is an open sports stadium with a natural grass field. The stadium hosts major sports and entertainment events. It has a seating capacity of 68,500 and is expandable to approximately 75,000.
- Santa Clara Youth Soccer Park consists of 10.8 acres and is comprised of three lighted, regulation-size soccer fields. Two fields are natural grass, and one field is made of artificial sports turf. The artificial surface allows practice and game activity year-round in all types of weather. The facility's off-street parking lot can accommodate 100 cars. There is a 7,000-square-foot soccer building with concessions, restrooms, showers, lockers, and meeting rooms.
- Topgolf, which is located adjacent to Staging Areas 9 and 10, is an entertainment venue with a sports entertainment complex that features an inclusive, high-tech golf game, full bar, and restaurant (Topgolf, 2023).

5.16.2 REGULATORY SETTING

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

5.16.2.1 Recreation Regulatory Setting

Federal

The National Park System is the administrative agency over the Guadalupe River Trail and Coyote Creek Trail.

The National Trail System Act SEC. 9. [16USC1248] (a) The Secretary of the Interior or the Secretary of Agriculture as the case may be, may grant easements and rights-of-way upon, over, under, across, or along any component of the national trails system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, that any conditions contained in such easements and rights-of-way shall be related to the policy and purposes of this Act.

State

There are no applicable state regulations for recreation that apply to the Proposed Project.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local recreation-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The City of Fremont General Plan notes that sustainable communities include parks and open spaces where residents and visitors can enjoy recreation, connect with nature, learn about local history, or gather with neighbors. The strategies and policies outlined in the General Plan at the Citywide level acknowledge the importance of recreational resources to the City. Recreation goals, strategies, and policies from the City of Fremont General Plan were reviewed, and a summary is provided below for informational purposes (City of Fremont, 2015).

Policy 8-1.5 Acquire and develop linear trail parks that serve many functions, including recreational opportunities, alternative transportation routes, aesthetic

enhancements, and the re-use of abandoned or underutilized transportation, utility, or other corridors.

- Action 8-1.5.A** Pursue acquisition of abandoned or underutilized land corridors for development into linear parks, consistent with the Bicycle and Pedestrian Master Plans and with the goal of providing safe and convenient recreational opportunities and mobility alternatives to cyclists and pedestrians.

City of Fremont Municipal Code

The City of Fremont Municipal Code Chapter 12.20 Parks and Recreation Areas applies and is in full force and effect at all parks and recreation areas which now are or which may hereafter be under the jurisdiction and control of the City of Fremont, and shall include all grounds, roadways, avenues, parks, buildings, school facilities when they are in use as recreational facilities, and areas, under the control, management, or direction of the parks and recreation director of the City of Fremont.

City of Milpitas General Plan

The City of Milpitas is laying the framework to ensure that all Milpitas residents, employees, and visitors have safe, convenient, and equitable access to a diverse range of outdoor activities, naturalized open space areas, and recreational opportunities. Recreation goals, strategies, and policies from the City of Milpitas General Plan were reviewed, and a summary is provided below for informational purposes (City of Milpitas, 2021).

- Policy PROS 1-1** Provide a park and recreation system that is equitably distributed, safe, accessible, and designed to serve the needs of all residents of the community.
- Policy PROS 1-2** Develop and maintain a high-quality system of parks, trails, and recreation facilities to create diverse opportunities for passive and organized recreation.
- Policy PROS 1-5** Encourage the provision and dedication of parkland within future development projects, rather than the payment of in-lieu fees, in order to ensure that the City maintains an extensive network of neighborhood parks that serve all areas of the community.
- Policy PROS 1-9** Prioritize funding and City resources to improve the condition, maintenance, and upkeep of existing City parks and recreational facilities.
- Policy PROS 1-11** Pursue opportunities for cooperation and partnerships with other agencies to develop and enhance publicly-accessible trails and linear parks along local drainages, creeks, and utility corridors.
- Action PROS-1g** Pursue opportunities to cooperate with the Santa Clara Valley Water District and the San Francisco Public Utilities Commission to develop and enhance trails, linear parks, and related infrastructure along local

water drainages, creek, and utility corridors. "Related infrastructure" includes, but is not limited to, lighting, signage, benches, water fountains, and restrooms, where applicable.

City of Milpitas Municipal Code

The City of Milpitas defines a "park" as: any tract of ground, pond, or lake owned, operated, or maintained by the City of Milpitas, set aside and maintained for public use and recreation. The term shall include all buildings and structures and all recreational facilities thereon or in connection therewith. "Picnic Area" is defined as park area wherein picnic tables for eating and/or braziers for cooking are permanently installed.

The City of Milpitas prohibits the following in City parks: defacing park property, climbing trees or structures, picking or cutting flowers, removing dirt, throwing rocks, tampering with electrical devices, overturning trashcans, leaving waste, polluting water, possession or consumption of alcoholic beverages, and breaking glass.

City of San José General Plan

The City of San José encourages providing high quality recreation opportunities. The strategies and policies outlined in the General Plan at the Citywide level acknowledge the importance of recreational resources to the City. Recreation goals, strategies, and policies from the City of San José General Plan were reviewed, and a summary is provided below for informational purposes (City of San José, 2024d).

- Policy PR-7.2** Condition land development and/or purchase property along designated Trails and Pathways Corridors in order to provide sufficient trail right-of-way and to ensure that new development adjacent to the trail and pathways corridors does not compromise safe trail access nor detract from the scenic and aesthetic qualities of the corridor. Locate trail rights-of-way consistent with the provisions of the City's Riparian Corridor Policy Study and any adopted Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP).
- Policy PR-8.5** Encourage all developers to install and maintain trails when new development occurs adjacent to a designated trail location. Use the City's Parkland Dedication Ordinance and Park Impact Ordinance to have residential developers build trails when new residential development occurs adjacent to a designated trail location, consistent with other parkland priorities. Encourage developers or property owners to enter into formal agreements with the City to maintain trails adjacent to their properties.
- Policy PR-8.7** Actively collaborate with school districts, utilities, and other public agencies to provide for appropriate recreation uses of their respective properties and rights-of-way. Consideration should be given to cooperative efforts between these entities and the City to develop parks, pedestrian and bicycle trails, sports fields, and recreation facilities.

- Action TN-2.10** Work with the Santa Clara Valley Water District and the utilities, including Pacific Gas and Electric Company (PG&E), to explore opportunities to develop trails, joint-use facilities, and/or other recreational amenities along their right-of-way.

City of San José Municipal Code

The City of San José Municipal Code defines a “park” as: all outdoor areas managed by the department of parks, recreation, and neighborhood services which are identified as a city park by the City, made available for use by the public as a park for recreation or open space purposes, and over which the City has the right of use for such purposes.

However, the term "park" does not include areas within a city park that the City has designated for use as picnic areas, athletic fields, sports areas, trails and pathways, gardens, and bodies of water, the use of which is governed by the permit requirements set forth in Chapter 13.44. Pursuant to Section 13.44.220, Damaging park property – Prohibited acts designated states: No person shall pick, saw, chop, carve, cut, or damage any vegetation or tree or cut or remove sand, wood, turf, grass, gravel, stone, or timber in or from any park of the City, or make any excavation by any tool, equipment, blasting, or by any other means in any park of the City.

Section 13.44.060, Non-Public Areas – Posting Required – Entering or Damaging Property Prohibited states:

- A. By posting appropriate notices, the director of the department of recreation, parks, and community services may exclude the public from or limit use of any road, area, building, lands, trail, natural feature, water area, or facility in a city park which is used for access, storage, parking, shop, office, residence, or utility purposes, or other park or recreational use, or any combination thereof, whenever public access to the same will endanger the public health or safety, interfere with such use, or cause damage to such public property or natural resources. The director may also by appropriate means exclude the public from the place of any construction, repair, or demolition activity. No person shall enter or remain or permit any person in their control to enter or remain in any such part of a city park when the same is closed to the public, unless authorized to do so by the director.
- B. No person shall unlock, open, remove, move, or tamper with any gate, door, window, ventilator, skylight, screen grate, fence, lock, or barrier, or any other thing maintained by the director to exclude the public from a city park or portion thereof, or tamper with, remove or deface any sign, legend, or other notice designating the same as dangerous or prohibiting entry therein.

City of Santa Clara General Plan

The City of Santa Clara General Plan notes that parks, open space, and recreation facilities are critical in satisfying the diverse outdoor needs of City of Santa Clara residents and visitors, improving the physical health of the community and providing opportunities for social interaction. Open spaces should offer options for all types of activities, from passive rest areas and trails for walking or jogging to fields and recreational facilities for organized sports. Overall, parks are an essential contributor to quality of life (City of Santa Clara, 2010). Recreation-related policies within

the City of Santa Clara focus on City actions to designate recreational facilities and requirements to ensure that recreational facilities are provided for new development, which do not apply to the Proposed Project.

City of Santa Clara Municipal Code

The City of Santa Clara's Municipal Code Chapter 9.05 provides laws applying In General over a variety of subjects.

Section 9.05.050 Violation of certain rules and regulations of the governing body of a school district or of the Parks and Recreation Department. Under subsection (b) it shall be unlawful for any person to violate, knowingly and intentionally, any rule or regulation of the Parks and Recreation Department of the City as such are from time to time approved by the City Council with regard to priority rights granted to a scheduled individual or to a scheduled group of individuals to utilize open space or recreational lands or facilities over which the Parks and Recreation Department of the City is operating and maintaining a program of recreational or athletic activities, including, but not limited to, scheduling and supervision of open space or recreational lands or facilities on school district lands within the geographical city limits of the City.

5.16.3 IMPACT QUESTIONS

5.16.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to recreation come from the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

5.16.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC, 2019), the following additional CEQA Impact Questions are required for recreation. Would the project:

- Reduce or prevent access to a designated recreation facility or area?
- Substantially change the character of a recreational area by reducing the scenic, biological, cultural, geologic, or other important characteristics that contribute to the value of recreational facilities or areas?
- Damage recreational trails or facilities?

5.16.4 IMPACT ANALYSIS

5.16.4.1 Recreation Impact Analysis

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?

Less-Than-Significant Impact. The use of parks and recreational facilities is closely tied to population; as population increases, the use of existing parks and recreational facilities can be expected to increase proportionally. Similarly, the loss of existing parks and recreational facilities would result in a concentration of use at remaining parks and facilities.

As presented in **Section 5.14, *Population and Housing***, the Proposed Project would not induce any population growth during the construction or operational phases. The Proposed Project would not create a need for additional housing or create long-term population immigration sufficient to result in a permanent increase in parks or recreational facilities use. One new local employee would be hired to operate and maintain the proposed high-voltage direct current (HVDC) terminals and transmission lines. Thus, there would be no impact.

In addition, the Proposed Project would not increase the use of the recreational resources identified in **Section 5.16.1, *Environmental Setting*** that are adjacent to and near the Proposed Project areas. During construction, roadways around Lafayette Street and Los Esteros Road may experience temporary delays due to lane or road closures; however, all recreational resources in these areas would be accessible through alternative routes, and, therefore, usage would not be directly impacted. Temporary restrictions (e.g., temporary closure of select segments of trails and/or temporary closure of select access areas) during construction may occur along Bay Trail (including the following trail segments: Boyce from Stevenson to Auto Mall, Rerouted Cushing Boulevard, Fremont Boulevard Trail, Between Dixon Landing and Fremont Boulevard, and Coyote Creek Trail), and Guadalupe River Trail, which may indirectly cause increased demand for nonrestricted public parks and trails in the vicinity of the Proposed Project. However, because of the number of other recreational resources in the Proposed Project area, the relatively short duration of the Proposed Project's construction within these resources, and the construction schedule (whereby it is unlikely that all of these resources would be restricted simultaneously), these impacts would be less than significant.

Furthermore, the Proposed Project would not increase the use of other existing recreational facilities in the vicinity such that physical deterioration would occur due to the quantity of existing local parks and the short construction duration; therefore, impacts would be less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, *Other Potentially Required Facilities***). The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited time. The Newark substation modifications would not increase the use of existing

recreational facilities. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Silicon Valley Power (SVP) would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation. Construction of these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited time. The NRS substation modifications would not increase the use of existing recreational facilities. No impacts would occur under this criterion as a result of the NRS substation modifications.

Would 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 any recreational facilities. The Proposed Project would not result in a population increase and would not require the construction or expansion of any recreational facilities. As a result, there would be no adverse physical effect on the environment from the construction of new, or expansion of existing, recreational facilities. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation modifications do not include recreational facilities, nor would they require the construction or expansion of recreational facilities. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The NRS substation modifications do not include recreational facilities, nor would they require the construction or expansion of recreational facilities. No impacts would occur under this criterion as a result of the NRS substation modifications.

Would the project reduce or prevent access to a designated recreation facility or area?

Less-Than-Significant Impact. There are 17 recreational resources within a 0.5-mile radius of the Proposed Project, including one planned park (Pacific Commons Sports Park) that does not yet provide recreational resources. Nine recreational resources are within the 0.5-mile radius but are not overlapping or adjacent to the proposed transmission lines or HVDC terminal sites. Therefore, construction of the Proposed Project would occur outside of trail easements for these existing recreational uses, and no restrictions to these recreational resources are anticipated. The remaining eight recreational resources are located adjacent to or overlap the Proposed Project components (Bay Trail [including the following trail segments: Boyce from Stevenson to Auto Mall, Rerouted Cushing Boulevard, Fremont Boulevard Trail, Between Dixon Landing and Fremont Boulevard, and Coyote Creek Trail]), Highway 237 Bikeway, Alviso Park Expansion Area,

Guadalupe River Trail, Santa Clara Youth Soccer Park, SCPAL BMX Track, Levi's Stadium, and Topgolf).

The proposed Albrae to Baylands 320 kV DC transmission line would be constructed adjacent to or along five segments of the Bay Trail. The proposed Albrae to Baylands 320 kV DC transmission line would be constructed underground along Boyce Road and the Boyce from Steveson to Auto Mall segments of the Bay Trail. A trench would be made along Boyce Road within the paved roadway to install the duct bank to house the transmission line and supporting equipment. During construction, it may be necessary to temporarily close portions of this section of the Bay Trail route to keep the public at safe distances from the construction area. The proposed Albrae to Baylands 320 kV DC transmission line would be constructed along Cushing Parkway, either via a trench within an existing utility easement corridor adjacent to and below the Cushing Parkway bridge, or it would be attached to the bridge. The Rerouted Cushing Boulevard segment of the Bay Trail is located along the sidewalk of Cushing Parkway. Therefore, the Proposed Project would occur outside the trail, and no restrictions or closures to this segment of the Bay Trail is anticipated. The proposed Albrae to Baylands 320 kV DC transmission line would also be constructed underground near an ingress/egress point to the Bay Trail/Fremont Boulevard Trail and the Coyote Creek Trail segments. The Bay Trail/Fremont Boulevard Trail segment is located perpendicular to and at a lower elevation than the proposed transmission line alignment, and no temporary restrictions or closures are anticipated at this location. A portion of the proposed Albrae to Baylands 320 kV DC transmission line would be constructed along the Bay Trail segment called Between Dixon Landing and Fremont Boulevard. A trench would be made along Fremont Boulevard within the paved roadway to install the duct bank to house the transmission line and supporting equipment. During construction, it may be necessary to temporarily close portions of this section of the Bay Trail route to keep the public at safe distances from the construction area. LS Power would implement **Applicant Proposed Measure (APM) REC-1, Trail Management Plan**, requiring LS Power to coordinate with the City of Fremont, City of San José, City of Santa Clara, the NPS, MTC, and the USFWS in preparing a trail management plan (TMP), ensuring that recreationists are properly notified and/or directed through the use of trail-specific traffic control and safety measures. Examples of these measures include identifying and designating trail detours, use of a crossing guard at these trail locations, if feasible, and use of signage and flagging to direct trail users and provide safety for both trail users and construction crews. These specific examples are not explicitly required by **APM REC-1**, as the TMP and required measures would be developed by LS Power in coordination with the applicable agencies. Implementation of **APM REC-1** would reduce potential impacts to the Bay Trail to less than significant.

The portion of the proposed Albrae to Baylands 320 kV DC transmission line where it transitions from underground to overhead is located near the ingress/egress of the Coyote Creek Trail segment of the Bay Trail. During construction, it may be necessary to temporarily close the ingress/egress point to this trail segment to keep the public at safe distances from the construction area. LS Power would implement **APM REC-1**, reducing potential impacts to the Bay Trail to less than significant.

In addition, the proposed Albrae to Baylands 320 kV DC transmission line and Baylands to NRS 230 kV transmission line would be constructed underground along Los Esteros Road. A planned segment of the Bay Trail is proposed to be co-located along Los Esteros Road. However, a trail does not currently exist in this location.

A City of San José proposed Coyote Creek Trail is planned to be located to the west of the Bay Trail and would run along and/or parallel to the proposed Albrae to Baylands 320 kV DC

transmission line alignment north of and within the City of San José's wastewater drying ponds; however, this trail does not exist at this time, and the area is currently gated to prevent the public from accessing the wastewater drying pond.

The proposed Baylands to NRS 230 kV transmission line would also be constructed adjacent to the Alviso Park Expansion Area, Guadalupe River Trail, SCPAL BMX Track, Santa Clara Youth Soccer Park, and Levi's Stadium. A trench would be made along the paved roadway to install the duct bank to house the transmission line and supporting equipment. No temporary restrictions or closures are proposed to these five existing recreational uses as a result of construction of the proposed Baylands to NRS 230 kV transmission line. In addition, the overhead alignment of the proposed Baylands to NRS 230 kV transmission line, to span across Guadalupe River, would result in the placement of a tubular steel transmission cable riser structure approximately 88 feet east of the Guadalupe River Trail. During construction, it may be necessary to temporarily close portions of this trail segment to keep the public at a safe distance from the construction area. This temporary disruption could result in a marginal reduction of access to this trail. Though the temporary disruptions in the use of this trail may be a short-term inconvenience to users, many other nearby public recreational options would remain available during the temporary access restriction. Implementation of **APM REC-1** would ensure implementation of a TMP outlining measures to provide trail-specific traffic control and safety for pedestrians, trail users, and motorists. Examples of measures that may be implemented by LS Power in accordance with the TMP include identifying and designating trail detours and the use of a crossing guard at these trail locations, if feasible, which would provide safety to both the trail users and the construction crews. Signage and flagging may also be used to help direct trail users and provide safety for both trail users and construction crews. These specific examples are not explicitly required by **APM REC-1**, as the TMP and required traffic control and safety measures would be developed in coordination with the applicable agencies. Implementation of **APM REC-1** would, therefore, reduce potential impacts from temporary construction restrictions to Guadalupe River Trail to a less-than-significant level.

Bicycle facilities are located along several segments of the proposed transmission lines. Along the proposed Albrae to Baylands 320 kV DC transmission line underground segment, a Class II bikeway is designated along Boyce Road and Cushing Parkway, and a Class III bikeway is located along Fremont Boulevard. A Class I bikeway is located along Fremont Boulevard north of Staging Area 4. In addition, a Class III bikeway is located along Los Esteros Road, and a Class II bikeway is designated along Disk Drive and Nortech Parkway (refer to **Figure 5.17-4, Bicycle Facilities Map**). There is also a Class I and Class II Bikeway on Lafayette Street, which overlaps and is adjacent to the proposed Baylands to NRS 230 kV transmission line. During construction, it may be necessary to temporarily close portions of these bikeway routes to keep the public at a safe distance from the construction area. As discussed further in **Section 5.17, Transportation, APM TRA-1, Traffic Control Plan** would ensure measures are taken to provide safe passage around construction areas which would include safe passage for bikes. Additionally, implementation of **APM REC-1** would ensure implementation of a TMP outlining measures to provide facility-specific traffic control and safety for cyclists. Examples of these measures may include bike detours and the use of a crossing guard along these bikeways to provide safety to both the recreationists and the construction crews. With implementation of **APMs TRA-1** and **REC-1**, potential impacts would be less –than significant.

O&M activities associated with the Proposed Project would not change, reduce, or prevent access to these designated recreation resources or areas. The majority of the proposed transmission lines would be constructed underground, and the area surrounding it would be restored to

previous conditions after construction. Once construction is complete on the overhead sections of the proposed transmission line, there would be no impacts to accessing these recreation resources and areas. Therefore, construction and O&M of the Proposed Project would not reduce or prevent access to a designated recreation facility or area, and less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation modifications would not reduce or prevent access to existing recreational facilities. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The NRS substation modifications would not reduce or prevent access to existing recreational facilities. No impacts would occur under this criterion as a result of the NRS substation modifications.

Would the project substantially change the character of a recreational area by reducing the scenic, biological, cultural, geologic, or other important characteristics that contribute to the value of recreational facilities or areas?

Less-Than-Significant Impact. The proposed Albrae terminal site is currently a storage yard for an operational manufacturing facility in an existing industrial area, approximately 0.2 mile northeast of the existing PG&E Newark substation. The proposed Baylands terminal site is currently a vacant lot. The construction of the proposed Baylands terminal would result in a visual change in use of the site; however, the site is located adjacent to an existing industrial area, including a wastewater facility, railroad track, and recycling trash center. Therefore, the proposed HVDC terminal sites would not substantially change the character of the recreational areas in the vicinity. As these sites are either vacant in an existing industrial area or consist of industrial uses in an industrial area, the Proposed Project would not result in a substantial change in character.

Much of the proposed Albrae to Baylands 320 kV DC transmission line and the Baylands to NRS 230 kV transmission line would be constructed underground. Short-term temporary construction changes would occur to the area; however, no substantial long-term changes would result from these Proposed Project features.

There are three transmission line segments proposed to be constructed overhead. The proposed Newark to Albrae 230 kV transmission line would span approximately 0.2 mile from Weber Road to the existing PG&E Newark substation on steel towers. This segment is located in an industrial area with existing utility lines and no significant biological, cultural, geological, or scenic resources. The segment of the proposed Albrae to Baylands 320 kV DC transmission line that runs parallel to Interstate 880 from McCarthy Boulevard southeast to Los Esteros Road is proposed to be constructed overhead on steel towers. This segment spans over existing wastewater drying ponds with existing utility lines present and would not result in a substantial change in character. The proposed Baylands to NRS 230 kV transmission line segment spans approximately 700 feet at the crossing of the Guadalupe River. This segment of the transmission line would transition from underground to overhead on steel riser structures and cross over the Guadalupe River and the Guadalupe River Trail. The Guadalupe River Trail crosses under SR-

237 in this location. The proposed overhead transmission segments would result in a visual change to the environment; however, these segments are located in existing developed areas with similar existing overhead transmission line features. Thus, the Proposed Project would not significantly change the character of adjacent recreational areas and impacts to recreational facilities would be less than significant for this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation modifications are not located in an area that would substantially modify the character of a nearby existing recreational facility. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The NRS substation modifications are not located in an area that would substantially modify the character of a nearby existing recreational facility. No impacts would occur under this criterion as a result of the NRS substation modifications.

Would the project damage recreational trails or facilities?

Less-Than-Significant Impact. The construction of the Proposed Project would result in direct impacts to approximately 1.2 miles of trail along the Bay Trail and would temporarily impact or limit access to bicycle facilities within roadways, including Boyce Road, Fremont Boulevard, Cushing Parkway, McCarthy Boulevard, Los Esteros Road, Nortech Parkway, Disk Drive, and Lafayette Street. However, as discussed in **Section 3.7.3.2, Site Restoration**, upon completion of construction activities, LS Power would restore the effected portions of the trails and roadways to preconstruction conditions. Additionally, as further discussed in **Section 5.17, APM TRA-3, Repair Infrastructure** would ensure that that LS Power repairs any damage caused by construction activities. Therefore, impacts to recreational facilities would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The Newark substation modifications are not located in an area that contains recreational resources that could be damaged. No impacts would occur under this criterion as a result of the Newark substation modifications.

SVP Substation Modifications

The SVP NRS modifications would occur within the existing substation. The NRS substation modifications are not located in an area that contains recreational resources that could be damaged. No impacts would occur under this criterion as a result of the NRS substation modifications.

5.16.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for recreation resources.

5.16.6 APPLICANT PROPOSED MEASURES

The following recreation-specific APM would be implemented for the Proposed Project.

APM REC-1: Trail Management Plan

LS Power shall coordinate with the City of Fremont, City of Milpitas, City of San José, City of Santa Clara, the NPS, MTC, and the USFWS for the preparation of the Proposed Project TMP. The TMP shall identify if a detour route(s) is required, as well as provide for trail-specific traffic control and safety measures for pedestrians, trail users, and motorists.

Measures that may be implemented by LS Power as part of the TMP include, but are not limited to, provision of a crossing guard during periods of active construction along the portions of the trails that would be directly impacted by construction of the Proposed Project, or designation of a detour route if use of a crossing guard is not practical. Signage and flagging may be used to help direct trail users and provide safety for both trail users and construction crews. A copy of the TMP shall be provided to CPUC for recordkeeping.

5.16.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for recreation would be implemented for PG&E's scope of work.

5.16.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for recreation would be implemented for SVP's scope of work.

5.17 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?			X	
b.	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d.	Result in inadequate emergency access?			X	
e.	Create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations?			X	
f.	Interfere with walking or bicycling accessibility?			X	
g.	Substantially delay public transit?			X	

This section describes transportation in the area of the Proposed Project, as well as potential impacts resulting from construction and operation and maintenance (O&M) of the Proposed Project.

5.17.1 ENVIRONMENTAL SETTING

5.17.1.1 Circulation System

The Proposed Project would be located within the Cities of Fremont, Milpitas, San José, and Santa Clara, California, which are situated within the Counties of Alameda and Santa Clara. The circulation system within the region is a mix of rural roadways and urban networks. State and U.S. highways are part of a regional network that provide intra- and interregional connections. The major regional vehicular access to the Proposed Project area is via Interstate (I)-880 and I-680, as well as State Route (SR)-237. **Figure 5.17-1, Regional Transportation-Related Infrastructure** illustrates the transportation-related infrastructure in the regional area of the Proposed Project.

I-880 extends north from the northern terminus of SR-17 at its interchange with I-280 in the City of San José and connects to I-80 in West Oakland. In the vicinity of the Proposed Project, I-880 is a generally north-south thoroughfare that consists of an eight-lane freeway. It also has auxiliary lanes between some interchanges. I-880 is located approximately 0.8 mile northeast of the proposed Albrae terminal; access from I-880 to this terminal site is provided via its interchange at

Auto Mall Parkway or Stevenson Boulevard. I-880 is approximately 1.8 miles east of the proposed Baylands terminal; access from I-880 to this terminal is provided via its interchange at Dixon Landing Road or indirectly through its junction with SR-237.

I-680 connects from I-280 and U.S. Route 101 in the City of San José to I-80 in the City of Cordelia. It generally parallels I-880 and consists of a six-lane freeway with auxiliary lanes in the vicinity of the Proposed Project. The connection from I-680 to the proposed Albrae terminal location is provided indirectly via an interchange at Auto Mall Parkway, approximately 2.65 miles east of the terminal site, or indirectly through its junction with SR-262. The connection from I-680 to the proposed Baylands terminal is provided indirectly via its junction with SR-237, approximately 1.9 miles southeast of the terminal site.

SR-237 connects from SR-82 in the City of Mountain View to I-680 in the City of Milpitas. It is generally a six-lane freeway in the vicinity of the proposed Baylands terminal area. SR-237 is located approximately 0.5 mile south of the proposed Baylands terminal. SR-237 provides access to the proposed Baylands terminal area via interchanges with Zanker Road and North First Street.

Vehicle travel is the primary form of transport in the area; however, public transportation, including rail and bus routes, is prevalent throughout the Proposed Project area. The Cities of Fremont, Milpitas, San José, and Santa Clara have extensive bicycle networks as well, generally collocated with local roadways. Local roads are depicted in **Figure 5.17-2, Local Transportation-Related Infrastructure Map**.

5.17.1.2 Existing Roadways and Circulation

As discussed in **Section 3.3.4.3, Access Roads**, the primary access to the proposed Albrae terminal site for both construction and O&M would be provided from Weber Road via Boyce Road, which is accessible via I-880 by Auto Mall Parkway or Stevenson Boulevard. Boyce Road is a four-lane primary arterial roadway with a wider right-of-way (ROW) to accommodate turn lanes, passing lanes, medians, or other improvements. Weber Road is a two-lane, approximately 30-foot-wide, undivided and paved road owned by Pacific Gas and Electric Company (PG&E). Boyce Road is maintained by the City of Fremont.

Primary access to the proposed Baylands terminal site for both construction and O&M would be provided from Los Esteros Road via Zanker Road. Zanker Road and Los Esteros Road are existing two-lane collector roads, which are both public, paved, and divided roads approximately 26 feet in width. No improvements are expected to be required along Zanker Road and Los Esteros Road. Zanker Road and Los Esteros Road are maintained by the City of San José.

The proposed Baylands to Northern Receiving Station (NRS) 230 kilovolt (kV) transmission line would travel underground from the existing NRS substation northwest along Lafayette Street within public ROW in the City of Santa Clara, then would travel in a northeastern direction to the proposed Baylands terminal on the following public roadways within the City of San José: Nortech Parkway, Disk Drive, and Los Esteros Road. A portion of the proposed Baylands to NRS 230 kV transmission line would transition overhead and cross over the Guadalupe River north of SR-237, but the overhead portion and supporting structures would not be located within public roads. The overhead portion of the proposed Baylands to NRS 230 kV transmission line would be accessed via existing industrial/commercial parking lots and access roads to the east and west of the Guadalupe River.

From the proposed Baylands terminal, the proposed Albrae to Baylands 320 kV direct current (DC) transmission line would continue underground northeast along Los Esteros Road, where it would transition overhead, traveling northeast through the private San José-Santa Clara Regional Wastewater Facility (RWF) land until it passes through a portion of the City of Milpitas and reaches the City of Fremont south of McCarthy Boulevard. The proposed Albrae to Baylands 320 kV DC transmission line would then transition back underground and travel in a generally northwest direction to the proposed Albrae terminal site on the following public roadways: McCarthy Boulevard in the City of Milpitas; and Fremont Boulevard, Cushing Parkway, Boyce Road, and Weber Road in the City of Fremont. Access to the overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would be on existing private access roads within the San José-Santa Clara RWF. No improvements to these roads are anticipated as part of the Proposed Project. Additional details are provided in **Section 3.5.1.1, Existing Access Roads**.

The proposed Newark to Albrae 230 kV transmission line would be located underground on a private section of Weber Road until it reaches the northwest corner of the existing Newark substation, where it would transition overhead to connect to the substation. Local roads are depicted in **Figure 5.17-2**.

Table 5.17-1, Existing Roadways Summary, provides a summary of existing roadways that would provide access to or otherwise serve the Proposed Project, including the jurisdiction, number of lanes, existing traffic volume, and closest Proposed Project feature.

Road Name	Jurisdiction	Number of Lanes ¹	Existing Daily Traffic Volume	Closest Proposed Project Feature
Weber Road ²	Private	2	Not Available (N/A)	Proposed Newark to Albrae 230 kV transmission line (0 feet)
Boyce Road ²	City of Fremont	4	25,372	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)
Cushing Parkway ²	City of Fremont	4	14,508	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)
			17,814	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)
			24,490	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)
Fremont Boulevard ²	City of Fremont	2	23,300	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)
			17,135	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)
			19,019	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)
McCarthy Boulevard ³	City of Milpitas	4	N/A	Proposed Albrae to Baylands 320 kV DC transmission line (0 feet)

Table 5.17-1. Existing Roadways Summary				
Road Name	Jurisdiction	Number of Lanes ¹	Existing Daily Traffic Volume	Closest Proposed Project Feature
Zanker Road ³	City of San José	2	2,156	Approximately 700 feet south of the proposed Albrae to Baylands 320 kV DC transmission line
Los Esteros Road ³	City of San José	2	2,155	Proposed Albrae to Baylands 320 kV DC and Baylands to NRS 230 kV transmission lines (0 feet)
Disk Drive ³	City of San José	2	2,106	Proposed Baylands to NRS 230 kV transmission line (0 feet)
Nortech Parkway ³	City of San José	2	N/A	Proposed Baylands to NRS 230 kV transmission line (0 feet)
Lafayette Street	City of Santa Clara	4	N/A	Proposed Baylands to NRS 230 kV transmission line (0 feet)
Notes:				
¹ Number of lanes indicates the total number of lanes in both directions of travel.				
² Source: City of Fremont, 2022. The City of Fremont traffic volumes are average two-way, 24-hour traffic counts. Traffic counts for certain roadways, such as Cushing Parkway and Fremont Boulevard, are separated into segments with individual counts within the Proposed Project area.				
³ Source: City of San José, 2021. City of San José traffic counts represent Average Daily Traffic (ADT) counts observed over the previous 15 years.				

The Proposed Project would include permanent access roads within each terminal site, which would provide internal access during construction and O&M and external access roads to transmission pole locations. The new roads at each proposed high-voltage direct current (HVDC) terminal site would be approximately 20 feet wide and 50 feet long for the Albrae terminal and approximately 20 feet wide and 1,000 feet long for the Baylands terminal. Permanent gates would be installed at both proposed HVDC terminal entrances. The access roads would be surfaced with dust-resistant base rock or gravel to maintain an all-weather roadway. Construction of these internal access roads would include grading and rocking per the final Proposed Project design. Additional details are provided in **Section 3.5.1.2, New Access Roads**.

5.17.1.3 Transit and Rail Services

Santa Clara Valley Transportation Authority (VTA) provides bus and light rail service for the County of Santa Clara, including one stop in the City of Santa Clara and five stops in the City of San José (**Figure 5.17-3, Local Transportation-Transit and Rail Map**). The Lick Mill Light Rail Station is located approximately 0.2 mile east of the proposed Baylands to NRS 230 kV underground transmission line on Tasman Avenue in the City of Santa Clara, and the Champion Station is located 1.2 miles south of the proposed Baylands terminal in the City of San José; these stations both provide access to the orange and green lines, along with special event lines. These lines operate between 5:16 a.m. and 12:22 a.m. in the northbound direction and between 5:10 a.m. and 12:39 a.m. in the southbound direction. Santa Clara VTA provides passenger train service seven days a week (Santa Clara VTA, 2023a and 2023b).

Bay Area Rapid Transit (BART) provides light rail service for the Greater Bay Area, which extends to the Cities of Fremont, Milpitas, and San José in the vicinity of the proposed Albrae terminal and the Albrae to Baylands 320 kV DC transmission line. Existing transit services in these Cities provided by BART include the orange and green lines, including two stops in the City of Fremont,

one stop in the City of Milpitas, and one stop in the City of San José. In proximity to the Proposed Project, the Warm Springs/South Fremont Station is located approximately 2.6 miles east of the proposed Albrae terminal in the City of Fremont. The Milpitas Station is located approximately 2.8 miles southeast of the proposed Albrae to Baylands 320 kV DC overhead transmission line in the City of Milpitas (**Figure 5.17-3**). BART operates between 5:00 a.m. and 12:00 a.m. on weekdays, 6:00 a.m. to 12:00 a.m. on Saturdays, and 8:00 a.m. to 12:00 a.m. on Sundays. BART provides passenger train service seven days a week (BART, 2023).

The nearest rail station is the Santa Clara, California/Great America Station located approximately 0.35 mile northwest of the existing NRS substation (**Figure 5.17-3**). It provides access to the Amtrak Capitol Corridor and Altamont Commuter Express (ACE) lines (Alameda-Contra Costa Transit District ["AC Transit"], 2023). The Amtrak Capitol Corridor is a 168-mile passenger train route operated between the City of San José in the Greater Bay Area and the City of Auburn in the Sacramento Valley. The route roughly parallels I-880 and I-80. In the Proposed Project area, the Amtrak Capitol Corridor train route parallels the portion of the proposed underground Baylands to NRS 230 kV transmission line on Lafayette Street in the City of Santa Clara (Amtrak, 2023).

There are numerous bus routes in the vicinity of the Proposed Project operated by Santa Clara VTA and AC Transit, many of which function on First Street, McCarthy Boulevard, Fremont Boulevard, and Auto Mall Parkway (**Figure 5.17-3**). The closest bus stop to the proposed Baylands terminal site is located approximately 0.7 mile west on North First Street and Nortech Parkway, and the closest bus stop to the proposed Albrae terminal is located approximately 0.7 mile east on Boscell Road and Braun Drive. There is one bus stop located along the proposed Albrae to Baylands 320 kV DC transmission line underground route near the intersections of Fremont Boulevard and Cushing Parkway. Temporary bus stop closures may be required as a result of Proposed Project traffic control activities, and any bus stop closures would be coordinated with Santa Clara VTA or AC Transit in advance (Santa Clara VTA, 2023a, 2023b; AC Transit, 2023).

5.17.1.4 Bicycle Facilities

The Cities of Fremont, Milpitas, San José, and Santa Clara have established bicycle networks that offer both separated and shared street space. Within all four jurisdictions, there are designated bicycle lanes, routes, and paths within 1,000 feet of the Proposed Project (Santa Clara VTA, 2020; see **Figure 5.17-4, Bicycle Facilities Map**). The City of Fremont Bicycle Master Plan, adopted in 2018, describes existing and proposed bikeways in Fremont City limits, within the County of Alameda. Bicycle facilities in the Cities of Milpitas, Santa Clara, and San José are planned under the City of Milpitas Trail, Pedestrian, and Bicycle Master Plan (City of Milpitas, 2021a) City of Santa Clara Bicycle Plan Update (City of Santa Clara, 2019), City of San José Better Bike Plan 2025 (City of San José, 2020), and the Santa Clara Countywide Bicycle Plan (Santa Clara VTA, 2018). The Santa Clara Countywide Bicycle Plan encompasses bicycle facilities in the Cities of Milpitas, Santa Clara, and San José (Santa Clara VTA, 2018).

Existing bicycle facilities in the Proposed Project area are classified as follows, according to the State of California's system of classification as identified in the Santa Clara Countywide Bicycle Plan and the City of Fremont Bicycle Master Plan (Santa Clara VTA, 2018; City of Fremont, 2018):

- Class I (bicycle path) – A Class I bicycle facility is completely separated from vehicles on a paved ROW and is commonly known as a bike path.

- Multi-use Pathway – A Multi-use Pathway is a Class I bicycle facility that allows both bicyclists and pedestrians to use the facility.
- Class II (bicycle lane) – A Class II bicycle facility is a striped and stenciled lane on an existing ROW shared with vehicles and is commonly known as a bike lane.
- Class III (bicycle route) – A Class III bicycle facility is identified through signage and/or pavement markings called “sharrows” indicating that bicyclists and drivers share the same travel lane and is commonly referred to as a bike route.
- Class IV (cycle track) – A Class IV bicycle facility is a striped lane with a vertical and physical barrier, such as parking or bollards, from the vehicle travel lane and is commonly referred to as a protected bike lane.

The City of Fremont’s existing bicycle network consists of paths, bicycle lanes, and bicycle routes. Fremont has over 175 miles of bicycle facilities, including approximately 36 miles of paved Class I bicycle paths (City of Fremont, 2018). The 2018 Bicycle Master Plan prioritizes construction of bike lanes along existing low-traffic roadways and introduces implementation strategies to increase separated bike lanes and improve overall safety of the bike network. Within the City of Fremont, there are existing Class II bike lanes along the proposed Albrae to Baylands 320 kV DC transmission line underground corridor on Boyce Road, Fremont Boulevard, and Cushing Parkway (City of Fremont, 2018). The Class II bike lanes on Fremont Boulevard provide an additional painted buffer to create space between vehicles and cyclists on the shared road.

Within the County of Santa Clara, there are existing Class II bike lanes along the proposed Albrae to Baylands 320 kV DC transmission line underground corridor on McCarthy Boulevard and along the proposed underground Baylands to NRS 230 kV transmission line on Nortech Parkway, Disk Drive, and Lafayette Street, and a Class III bike route along Los Esteros Road. An approximately 1.25-mile stretch of the proposed Albrae to Baylands 320 kV DC transmission line overhead corridor is located directly west of the Coyote Creek Trail, which is a designated Class I shared-use pedestrian and bike path (Santa Clara VTA, 2018). The closest proposed overhead structure is approximately 200 feet west of the Coyote Creek Trail.

The existing bicycle network in the City of Milpitas includes nearly 50 miles of designated bicycle facilities, including eight miles of Class I paved shared-use paths, 25 miles of Class II bike lanes, and 15 miles of Class III bike routes (City of Milpitas, 2021a). While there are 15 miles of designated bike routes in the City, most do not have signage or pavement marking to support bicyclists. The City of Milpitas currently does not have other bikeway types, such as Class IV bicycle tracks or buffered bike lanes, and most on-street bikeways are primarily located along major roadways. Bicycle facilities within the City of Milpitas in the Proposed Project vicinity include a Class II bike lane on McCarthy Boulevard and a Class I shared-use path along the Coyote Creek Trail. There is also a Class III designated bike route along Dixon Landing Road, which ends at its intersection with Fremont Boulevard and McCarthy Boulevard.

The City of San José has an established bike network with both traditional separated bike lanes and shared routes with pavement markings and signage for cyclists. After changes implemented from the Better Bike Plan 2025 in 2020, the City of San José now has a bikeway network of 392 miles, 3,450 bike parking spaces, and a new bikeshare program with 83 stations and over 1,000 bikes (City of San José, 2020). In addition, the Better Bike Plan 2025, approved in 2020, aims to expand its multi-use path system and on-street bike network by installing more on-street bikeways that appeal to more riders, such as separated bikeways and bike boulevards on low-traffic streets (City of San José, 2020). Designated bicycle facilities in the Proposed Project vicinity within the City of San José include Class II bike paths along Disk Drive and Nortech Parkway and a Class

III bike route along Los Esteros Road. The Guadalupe River Trail, which parallels the east side of the Guadalupe River and intersects the proposed overhead Baylands to NRS 230 kV transmission line, is a designated Class I shared-use trail. There is also a Class II bike path along First Street, which intersects the proposed Baylands to NRS 230 kV transmission line corridor at Nortech Parkway.

The City of Santa Clara has an established and planned comprehensive bicycling network that creates access to transit, schools, and other destinations. As of 2018, Santa Clara's bicycle network spans 70 miles of bikeways, including approximately 11 miles of Class I separated bike paths (City of Santa Clara, 2019). Short-term bicycle parking is available throughout the City on sidewalks and in plazas, and long-term bicycle parking is provided in 60 lockers at 12 locations across the City. The City of Santa Clara Bicycle Plan Update 2018 recommends over 70 miles of new or upgraded bikeways, including 21 miles of Class I bike paths, to improve connectivity and safety of the bike network and encourage City residents to commute via bicycle. Existing bicycle facilities in the Proposed Project vicinity within the City of Santa Clara include a Class II bike lane along Lafayette Street.

5.17.1.5 Pedestrian Facilities

Roadways along much of the proposed Albrae to Baylands 320 kV DC transmission line, and the proposed Newark to Albrae and Baylands to NRS 230 kV transmission line underground corridors have sidewalks including: Boyce Road, Cushing Parkway, Fremont Boulevard, Nortech Parkway, Disk Drive, and Lafayette Street (see **Figure 5.17-2**). There are no sidewalks along the overhead transmission line alignments or adjacent to either proposed HVDC terminal site. Many of the Class I bicycle facilities in the Proposed Project region (see **Figure 5.17-4**) are also Multi-use Pathways, which allow for shared use for cyclists and pedestrians. The Guadalupe River Trail, which parallels the Guadalupe River and intersects the proposed Baylands to NRS 230 kV overhead transmission line, and the Coyote Creek Trail, located east of the proposed Albrae to Baylands 320 kV DC transmission line, are examples of Multi-use Pathways. There are also networks of trails throughout the Proposed Project vicinity within the Counties of Santa Clara and Alameda that provide recreational pedestrian facilities, such as the Bay Trail network and trails within the Don Edwards San Francisco Bay National Wildlife Refuge (NWR). Trails are further discussed in **Section 5.16, Recreation** and shown on **Figure 5.16-1, Recreation Resources Map**.

5.17.1.6 Vehicle Miles Traveled

Vehicle Miles Traveled (VMT) is a method of transportation analysis that measures the amount of vehicular travel in a geographic region or a given time period. In accordance with Senate Bill (SB) 743, California Environmental Quality Act (CEQA) Guidelines section 15064.3, subdivision (b) was adopted in 2018 and established VMT as the criteria for determining the significance of transportation-related impacts. VMT is a measure of the total number of miles driven to or from a development, sometimes expressed as an average per trip or per person.

The City of Fremont is within the County of Alameda, and the Cities of Milpitas, San José, and Santa Clara are within the County of Santa Clara. The average daily VMT on rural and urbanized public roadways per resident is 34,407,520 miles for the County of Santa Clara and 35,245,220 miles for the County of Alameda (California Department of Transportation ["Caltrans"], 2023). There are VMT evaluation tools available for projects within the Counties of Alameda and Santa Clara that help users conduct a baseline VMT screening evaluation for small- to medium-sized residential, office, and industrial land use projects (Santa Clara VTA, 2023c, 2023d; Alameda

County Transportation Commission [CTC], 2023). The screening criteria of these tools generally consists of evaluating if a project falls within a low-VMT area and/or within proximity to transit, estimating the project-generated VMT, and calculating project-generated VMT after reductions from certain VMT-reducing measures have been applied (Santa Clara VTA, 2021; Alameda CTC, 2023). However, these evaluation tools, including screening criteria, are not applicable to the Proposed Project, as it is not a traditional land use project that would generate VMT on a regular basis.

5.17.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.17.2.1 Transportation Regulatory Setting

Federal

Americans with Disabilities Act Standards for Accessible Design

The Americans with Disabilities Act (ADA) sets forth what is required for a building or facility to be physically accessible to people with disabilities (U.S. Department of Justice, 2010). The Proposed Project would involve reconstruction of all removed curbs and gutters and would be required to comply with ADA standards. The Department of Justice enacted the ADA in 1990, which adopted enforceable accessibility standards for facility design. The revised ADA standards adopted in 2010 set minimum requirements for newly designed and constructed or altered state and local government facilities, public accommodations, and commercial facilities. State and local government facilities must adhere to the following requirements of the 2010 standards:

- Title II regulations at 28 Code of Federal Regulations (CFR) 35.151
- 2004 ADA Accessibility Guidelines at 36 CFR 1191, Appendices B and D

State

Caltrans owns the ROWs for the State highway system and is responsible for protecting the public and infrastructure. Caltrans is also the administering agency for regulations related to traffic safety, including the licensing of drivers, transportation of hazardous and combustible materials, and the safe operation of vehicles. Caltrans also requires transportation permits for the movement of vehicles or loads exceeding the limitations on the size and weight contained in Division 15, Chapter 5, Article 1, Section 35551, of the California Vehicle Code. The Counties of Santa Clara and Alameda are under the jurisdiction of Caltrans District 4. The Proposed Project would acquire ministerial transportation permits from Caltrans if required.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D , Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local

agencies, but City and County regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara and Counties of Alameda and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local transportation-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC (“LS Power”) is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

Alameda Countywide Transportation Plan

The Alameda Countywide Transportation Plan establishes near-term projects, programs, and strategic priorities, details a 30-year transportation vision, and guides the decision making of the Alameda Countywide Transportation Plan, an agency responsible for planning, funding, and delivering transportation improvements throughout the County of Alameda (Alameda CTC, 2020). Strategies and near-term actions are provided to advance the Countywide Transportation Plan vision and goals through policies, legislative advocacy, technical assistance, funding, and project implementation guidance.

Alameda Countywide Transit Plan

The Alameda Countywide Transit Plan provides a framework for the Alameda CTC and County of Alameda’s jurisdictions and transit agencies to align transit, land use, and economic development goals and objectives. The Countywide Transit Plan identifies strategies that address transit performance issues and system integration opportunities and focus on the physical and institutional needs to provide high quality transit services.

City of Fremont General Plan

The City of Fremont General Plan Mobility Element establishes policies for expanding transportation choices, reducing dependence on single passenger automobiles, and making it easier to walk, bicycle, and use public transportation in the City (City of Fremont, 2011). The Land Use Element is integrated with the Mobility Element to promote a future land use pattern that reflects the opportunities and constraints of the transportation system. The following policies related to transportation have been provided for informational purposes only:

- Policy 2-2.2** **Integrating Land Use and Transportation Choices.** Ensure that land use decisions consider the characteristics of the transportation network, including road capacity, the quality of the streetscape, and the availability of public transportation and other modes of travel.
- Policy 3-1.3** **Transit-Friendly Street Design.** As appropriate, apply street design and development standards that require transit-supportive facilities, such as bus stop curb extensions, bus shelters, benches, lighting, sidewalks, and convenient access to bus stops.
- Policy 3-1.4** **Walking, Bicycling, and Public Health.** Recognize the importance of a walkable, bicycle- and pedestrian-friendly city to overall public health and wellness.

- Policy 3-1.6 Pedestrian and Bicycle Safety.** Improve the safety of pedestrians and bicyclists throughout Fremont through design, signage, capital projects, pavement maintenance, street sweeping, and public education.
- Policy 3-3.6 Road Hazards.** Minimize road hazards associated with overgrown vegetation, structures blocking sight lines, and other visual obstructions. New development should be reviewed to ensure that ingress and egress locations, driveways, crosswalks, and other circulation features are sited to minimize accident hazards.

City of Fremont Bicycle Master Plan

The City of Fremont's 2018 Bicycle Master Plan identifies projects and programs to make the City of Fremont a city in which bicycling is safe, comfortable, and convenient for people of all ages and abilities. The Plan also addresses goals, policies, design guidelines, funding strategies, and supportive education, encouragement, and enforcement programs to support implementation of priority projects. The following goals and actions have been provided for informational purposes only:

- Goal 1** Implement a safe, convenient, connected, and comfortable citywide bicycling network for people of all ages and abilities who live, work, and visit Fremont.
- Action 5-1F** Include consideration of bicycle routing, safety, and comfort in each roadway construction and temporary traffic control modifications in the city, such as construction or repair activities affiliated with roadways or building development to ensure bicycle safety at all times, minimize disruptions to bicycle facilities, and provide well-marked and equivalent alternative routes with wayfinding when needed.

City of Fremont Transportation Impact Analysis Handbook

The City of Fremont Transportation Impact Analysis (TIA) Handbook outlines the review procedure for development projects subject to the CEQA in the City of Fremont and provides Local Transportation Analysis (LTA) requirements (City of Fremont, 2020). The City's TIA Handbook provides screening criteria for types of land use projects (e.g., small infill, local-serving retail, local-serving public utilities, office projects, or residential projects). However, transmission lines and regional utility infrastructure projects are not addressed or accounted for in the City's guidelines, and the screening criteria focus on operational transportation impacts following project construction. Therefore, the City's guidelines related to preparation of a TIA for operational impacts do not apply, and potential construction-related traffic impacts of the Proposed Project are analyzed in the discussion below.

Santa Clara Valley Transportation Plan 2040

The Santa Clara Valley Transportation Plan (VTP) 2040 provides a long-range vision for the transportation system in the County of Santa Clara (Santa Clara VTA, 2014). The Santa Clara VTA is responsible for preparing and updating the VTP on a four-year cycle coinciding with the update of the Bay Area's Regional Transportation Plan (RTP). Proposed transit improvements in the Proposed Project area include the Tasman Express Light Rail Improvement Project, which

runs along Tasman Avenue and intersects the Proposed Project's Baylands to NRS 230 kV transmission line underground corridor, and the ACE Upgrade, which is proposed along Lafayette Street. The VTP 2040 also includes proposed improvements to highways, expressways, local streets and county roads, regional bikeways, and pedestrian safety, and describes potential funding for each project.

Santa Clara Countywide Bicycle Plan

The 2018 Santa Clara Countywide Bicycle Plan updates the Santa Clara VTA's 2008 Countywide Bicycle Plan. It incorporates several new approaches and changes, including expansion and design expectations of the Cross County Bicycle Corridors (CCBCs) network to include low-stress bikeways. The Plan describes a vision of 10 connected bicycle superhighways, which are CCBCs that provide low-friction, long distance, unbroken bicycle travel, separated from motorists. It also updates the list of Across Barrier Connections (ABCs) to reflect completed projects and changing situations and prioritizes CCBCs and ABCs using criteria approved by the Santa Clara VTA Board of Directors. The Plan expands on recommendations to encompass innovative, cutting-edge solutions and describes Santa Clara VTA's role in implementing the capital projects and education encouragement programs (Santa Clara VTA, 2018). The Santa Clara Countywide Bicycle Plan identifies goals and policies for CCBCs as they connect jurisdictions and provide access to jobs, schools, transit, recreation, services, and homes such as:

- | | |
|------------------|--|
| Goal 1 | Develop a Comprehensive and Continuous Countywide Bicycle Network |
| Policy 1A | Expand the Network: VTA will support construction of CCBCs and ABCs throughout the county, both as stand-alone projects and as part of related transportation projects. |
| Policy 2B | Ensure the Network is Easy to Find and Use: VTA will work to ensure it is easy to navigate by bicycle along CCBCs using uniform wayfinding tools such as signs, on-street markings, kiosks, maps, and apps in the locally spoken language. |
| Goal 4 | Improve Transit Connectivity |
| Policy 4A | Improve Bicycle Access to Transit: VTA will link bicycle and transit routes by funding and constructing transit-connected bikeways. |

City of Milpitas General Plan

The City of Milpitas General Plan identifies the community's vision for the future and provides a framework that will guide decisions on growth, development, and conservation of open space and resources (City of Milpitas, 2021b). The following goals and policies are provided for informational purposes only:

- | | |
|----------------------|--|
| Goal LU-4 | Coordinate and integrate land use and transportation objectives. |
| Policy LU 4-1 | Coordinate land use and development decisions with the capacity of the transportation system and plans for future transportation improvements. |

- Policy LU 4-2** Emphasize efforts to reduce regional vehicle miles traveled by supporting land use patterns and site designs that promote active modes of transportation, including walking, biking, and public transit.
- Goal CIR-1** Provide a transportation system that efficiently, equitably, and effectively supports the City's land use vision, minimizes VMT, enhances connectivity of the existing network, and supports the use of all modes of transportation.
- Policy CIR 1-1** Prioritize and measure infrastructure and facility safety on streets and public ROWs.
- Policy CIR 1-2** Ensure that the City's transportation system supports planned land uses and removes barriers to all types of transportation options as envisioned in the Land Use Element.
- Policy CIR 1-3** Promote interconnectivity of the transportation network in existing and new developments and actively measure the quality of conditions in neighborhoods to better understand what barriers exist in order to support use of and access to the network.
- Policy CIR 4-2** Link and expand City pedestrian and bicycle circulation facilities to existing and planned local and regional networks, with an emphasis on expanding infrastructure options near transit.
- Policy CIR 4-9** Identify and investigate the feasibility of trail development along rights-of-way including abandoned, unused, or active railroad corridors, utility corridors, and waterways.
- Goal CIR-5** Implement measures that increase transit use and other non-motorized travel modes that lead to improved utilization of the existing transportation system, such as accessibility improvements to public transit stops and stations by walking and biking, and provide transit stops near employment centers and higher density residential developments and in areas where infrastructure is lacking and access without a car is unsafe.
- Policy CIR 5-1** Develop, implement, and monitor vehicle trip reduction requirements for large development projects – including all land use types – to minimize the impact of new development on traffic congestion and to reduce vehicle emissions.
- Policy CIR 5-3** Encourage existing employers to adopt strategies to implement programs to reduce employee vehicle trips, including purchasing passes through VTA's annual transit pass program; providing facilities such as secure bike parking, lockers, changing rooms, and showers; telework, and flexible work schedules.

City of Milpitas Trail, Pedestrian, and Bicycle Master Plan

The City of Milpitas Trail, Pedestrian, and Bicycle Master Plan provides a vision and action plan for the City to improve safe and convenient travel by active modes in the City of Milpitas. The plan aims to support connectivity between modes of transportation, improve safety, support active transportation network development and connection to transit, and increase access to recreational opportunities. The following policies are provided for informational purposes only:

Policy CIR 6-8 Use repaving projects as an opportunity to cost-effectively implement new bicycle facilities in accordance with City plans.

Policy CIR 7-4 Ensure that construction detour routes provide safe and convenient access for users of all modes of transportation, including people with disabilities.

City of Milpitas Transportation Analysis Guidelines

The City of Milpitas Transportation Analysis (TA) Guidelines were developed to assist applicants with assessing potential transportation impact of proposed projects in the City of Milpitas (City of Milpitas, 2022). The City's TA Guidelines were adopted to incorporate the City's updated Transportation Analysis Policy, adopted in 2018, which established VMT as the methodology for measuring potential transportation environmental impacts. The City's TA policy also established the requirement of a Transportation Operational Analysis (TOA) to identify transportation deficiencies resulting from a project's operations. The TA Guidelines do not provide direction or requirements for transmission line projects, and they do not specify thresholds of significance for construction. As stated in the TA Guidelines, transportation impact level of significance for mixed-use and all other project types shall be evaluated independently by applying the most appropriate threshold of significance to each land use type being proposed. Therefore, the City's Guidelines related to preparation of a TOA for operational impacts do not apply, and potential construction-related traffic impacts of the Proposed Project are analyzed in the discussion below.

City of San José General Plan

The City of San José General Plan sets forth a vision and a comprehensive road map to guide the City's continued growth through the year 2040 (City of San José, 2024). The various elements of the City of San José General Plan have been combined into a consistent and meaningful plan and organized in a manner designed to meet public needs. The following policies related to transportation have been provided for informational purposes only:

Policy TR-2.5 Integrate the financing, design, and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.

Policy TR-2.8 Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.

Policy TR-3.8 Collaborate with transit providers to site transit stops at safe, efficient, and convenient locations, and to develop and provide transit stop amenities

such as pedestrian pathways approaching stops, benches and shelters, nighttime lighting, traveler information systems, and bike storage to facilitate access to and from transit stops.

- Policy TR-3.9** Ensure that all street improvements allow for easier and more efficient bus operations and improved passenger access and safety, while maintaining overall pedestrian and bicycle safety and convenience.
- Policy TR-5.3** Development projects' effects on the transportation network will be evaluated during the entitlement process and will be required to fund or construct improvements in proportion to their impacts on the transportation system. Improvements will prioritize multimodal improvements that reduce VMT over automobile network improvements.
- Policy TR-5.4** Maintain and enhance the interconnected network of streets and short blocks that support all modes of travel, provide direct access, calm neighborhood traffic, reduce vehicle speeds, and enhance safety.
- Policy TR-7.1** Require large developments and employers to develop and maintain TDM programs with TDM services provided for their residents, full-time and subcontracted workers, and visitors to promote use of non-automobile modes and reduce the vehicle trips.

City of San José Better Bike Plan

After changes implemented from the Better Bike Plan 2025 in 2020, the City of San José now has a bikeway network of 392 miles, 3,450 bike parking spaces, and a new bikeshare program with 83 stations and over 1,000 bikes. The Better Bike Plan 2025 will expand its multi-use path system and on-street bike network and install more on-street bikeways that appeal to more riders, such as separated bikeways and bike boulevards on low-traffic streets. The Better Bike Plan 2025 aims to achieve the following three goals: Safety (increase safety for all people biking in the City of San José and align with Vision Zero San José), Mode Shift (increase the number of trips made by bike in San José), and Equity (apply the plan in a way that serves historically underserved communities) (City of San José, 2020).

City of San José Vision Zero Campaign

The City of San José's Vision Zero campaign, adopted in 2015, implements an action plan to increase road safety, which includes forming a Vision Zero Task Force, building analytical tools to understand why traffic incidents occur, increasing community outreach and engagement, implementing data-driven safety improvements, and focusing resources on corridors and districts with the highest amount of traffic safety incidents (City of San José, 2015). A segment of First Street, including its intersection with Nortech Parkway and the Proposed Project's Baylands to NRS 230 kV transmission line underground corridor, is designated as a Priority Safety Corridor.

City of San José Transportation Analysis Handbook

The City of San José TA Handbook provides the TA significance criteria, screening criteria, and thresholds of significance for environmental clearance for development projects, City transportation projects, and General Plan amendments. The City's Handbook is also a

comprehensive guide to appropriate methodologies, procedures, and process for the preparation of a TA report within the context of CEQA and provides the appropriate procedures for meeting the City's Transportation Demand Management (TDM) ordinance requirements and determining the effects of projects on the local transportation system (City of San José, 2023). The City's Handbook aligns with the City's TA Policy (Council Policy 5-1, 2018, amended 2022), Transportation Demand Management Ordinance, and Envision San José 2040 General Plan. City Council Policy 5-1 establishes the thresholds for transportation impact under CEQA, removing Level of Service (LOS) and replacing it with VMT.

The Handbook provides screening criteria that determines the need for certain levels of analysis, based on specific factors for types of projects (e.g., small infill, local-serving retail, local-serving public utilities, office projects, or residential projects). However, transmission lines and regional utility infrastructure projects are not addressed or accounted for in the City's guidelines, and the screening criteria focus on operational transportation impacts following project construction. As stated in the Handbook, all projects should anticipate construction impacts with new developments. To the extent possible, operational analysis should include information about the project's construction schedule, such as duration, hours of operations, any required grading, potential haul routes, traffic control plans, closure or relocation of bus stops, street closures, and construction entrances, etc., especially when adjacent to residents and businesses. Therefore, the City's guidelines related to preparation of a TA for operational impacts do not apply, and potential construction-related traffic impacts of the Proposed Project are analyzed in the discussion below.

City of Santa Clara General Plan

The City of Santa Clara General Plan describes the long-term goals for the City's future and guides daily decision-making. The Mobility and Transportation Element describes the goals and policies related to specific components of the transportation network, to Transportation Demand Management, to parking, and to rail and freight (City of Santa Clara, 2010). The following policies related to transportation have been provided for informational purposes only:

- Policy 5.8.2-G1** A street system that supports the safe and efficient movement of people, goods and services.
- Policy 5.8.2-G2** Roadway design, construction, operation, and maintenance that supports the goals for "Full-Service Streets" throughout the City.
- Policy 5.8.2-P1** Require that new and retrofitted roadways implement "Full-Service Streets" standards, including minimal vehicular travel lane widths, pedestrian amenities, adequate sidewalks, street trees, bicycle facilities, transit facilities, lighting, and signage, where feasible.
- Policy 5.8.2-P3** Encourage undergrounding of utilities and utility equipment within the public ROW and site these facilities to provide opportunities for street trees and adequate sidewalks.

City of Santa Clara Bicycle Plan

The City of Santa Clara Bicycle Plan, updated in 2018, establishes a long-term vision for improving bicycling in Santa Clara through policy, program, and project recommendations (City of Santa Clara, 2019). The following policies related to transportation have been provided for informational purposes only:

- Policy 2.C.3** Review striping plans for all roadways prior to resurfacing projects to consider upgrading or installing new bicycle facilities. The City's Complete Streets Policy shall be used as guidance and followed related to roadway resurfacing projects.
- Policy 2.C.4** Maintain bicycle lanes next to construction zones wherever feasible. The City's Complete Streets Policy shall be used as guidance and followed related to construction of projects.

City of Santa Clara Transportation Analysis Policy

The City of Santa Clara Transportation Analysis Policy establishes City of Santa Clara land use and transportation project requirements for evaluating transportation impacts under CEQA using VMT methodology, including baselines, thresholds, as well as criteria for exempting certain types of projects from VMT analysis. The policy also formalizes the TOA requirement outside of CEQA. The City of Santa Clara is in the process of developing a TA Guideline manual, which will include how to conduct a VMT analysis and a TOA for projects within the City of Santa Clara.

5.17.3 IMPACT QUESTIONS

5.17.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to transportation come from the CEQA, Appendix G, Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; or
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b); or
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

5.17.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), the following additional CEQA Impact Questions are required for transportation. Would the project:

- Create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations?
- Interfere with walking or bicycling accessibility?
- Substantially delay public transit?

5.17.4 IMPACT ANALYSIS

5.17.4.1 Transportation Impact Analysis

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 Impact. Though the CPUC has jurisdiction over the Proposed Project, this analysis considers the local land use plans and policies, per CPUC GO 131-D, Section III.C. Therefore, the applicable programs, plans, ordinances, and policies for the purposes of this analysis include the Alameda Countywide Transportation Plan; Alameda Countywide Transit Plan; City of Fremont General Plan; City of Fremont Bicycle Master Plan; Santa Clara VTP 2040; Santa Clara Countywide Bicycle Plan; City of Milpitas General Plan; City of Milpitas Trail, Pedestrian, and Bicycle Master Plan; City of San José General Plan; City of San José Better Bike Plan; City of San José Vision Zero campaign; City of Santa Clara General Plan; and the City of Santa Clara Bicycle Plan.

As described in **Section 5.17.2.1, *Transportation Regulatory Setting***, the City of Fremont TIA Handbook, City of Milpitas TA Guidelines, and City of San José TA Handbook provide guidelines for significance criteria, screening criteria, and thresholds of significance for environmental clearance for development projects. Each of the City's screening criteria determines the level of analysis required for specific project types based on several factors, including the project size, proposed occupancy, and type (e.g., small infill, local-serving retail, local-serving public utilities, office projects, or residential projects). However, each of the guidelines do not address or account for transmission lines or regional public utility infrastructure, and the screening criteria focus on operational transportation impacts following project construction. The Proposed Project does not meet the requirements of the City of Fremont TIA Handbook, City of Milpitas TA Guidelines, and City of San José TA Handbook to prepare a CEQA VMT analysis, a TDM Plan, TIA, TOA, or a local TA for long-term operations due to the negligible trips and VMT required for O&M of the Proposed Project. Therefore, the Cities of Fremont, Milpitas, and San José guidelines related to preparation of a TIA, TOA, or TA for operational impacts are not applicable to the Proposed Project. As stated in the City of San José TA Handbook, all projects should anticipate and analyze construction impacts with new developments. The analysis herein provides the proposed construction schedule, grading, traffic control plans, closure or relocation of bus stops, street closures, and construction entrances, and satisfies each of the City's requirements for analysis of transportation-related construction impacts.

As discussed in **Section 3.6.3, *Construction Traffic***, for the proposed Albrae terminal, all construction vehicles and equipment would access the site from Weber Road. For the proposed Baylands terminal, all construction vehicles and equipment would enter the site from Los Esteros Road. Although some disruption to traffic flow may occur on adjacent public streets during construction ingress and egress, such events would be periodic and temporary. Similarly, disruption to traffic flow may occur during installation of the proposed Baylands to NRS 230 KV

transmission line, primarily along Lafayette Street, Nortech Parkway, and Los Esteros Road, and the proposed Albrae to Baylands 320 kV DC transmission line, primarily along Fremont Boulevard, Cushing Parkway, and Boyce Road. However, encroachment permits and traffic control plans would be approved by the Cities of Fremont, Milpitas, San José, and Santa Clara, the Counties of Alameda and Santa Clara, or Caltrans, as applicable. **Applicant Proposed Measure (APM) TRA-1, Traffic Control Plan** would also require the preparation of a Traffic Control Plan (TCP). The TCP would provide detour routes or otherwise maintain access to the effected recreational resources, including pedestrian and bicycle access along trail routes within public roads, through the implementation of signage, barriers, traffic control personnel, etc.

The peak vehicle trips would occur during the duct bank excavation and installation portion of the Proposed Project (e.g., site development and below-grade construction activities) due to the number of crews and the hauling away or importation of fill, which would occur between approximately September 2026 and January 2027. Maximum daily vehicle trips were determined by totaling the average daily truck trips and average daily worker trips that would occur during construction phases that would overlap with the approximate September 2026 to January 2027 time period. Total maximum daily vehicle trips (i.e., roundtrips) during this time period would be approximately 500 trips per day, consisting of approximately 225 truck trips and 275 worker trips (see **Section 3.6.3**). Other periods of the Proposed Project duration would have lower average worker vehicle trips and would, therefore, have correspondingly lower impacts.

As discussed in **Section 5.17.1, Environmental Setting**, major regional vehicular access to the Proposed Project area is provided via I-880, I-680, and SR-262 to the proposed Albrae terminal and I-880, SR-237, and U.S. Route 101 to the proposed Baylands terminal. The annual average daily traffic (AADT) at the junction of I-880 and SR-262, closest to the Proposed Project, is 194,000 vehicles (Caltrans, 2021). The AADT at the junction of I-880 and SR-237 is 157,000 vehicles per day. The maximum daily vehicle trips of the Proposed Project (500 per day) would represent approximately 0.26 percent of the AADT for the junction of I-880 and SR-262 and 0.32 percent of the AADT for the junction of I-880 and SR-237. This would also assume that all Proposed Project vehicles would use the same major vehicular access, where the reality is Proposed Project vehicles would be travelling along a variety of routes depending on their purpose and destination (e.g., deliveries, spoils haul-off, tailboard meetings, traffic control, etc.) and would, therefore, be expected to account for a much smaller percentage of AADT at each of these junctions. As such, trips associated with daily construction personnel traffic are not anticipated to significantly disrupt traffic flow along public streets in the vicinity of Proposed Project components.

The Proposed Project would result in a negligible number of additional vehicle trips during operation because the new facilities would be remotely operated with no permanent workforce on-site. If equipment malfunctions, O&M personnel would be dispatched to the site to investigate the problem and take appropriate corrective action.

In addition, no alternative modes of transportation, such as rail, bus, or bicycle traffic or pedestrian circulation patterns, would be permanently altered or adversely affected by construction or O&M of the Proposed Project. Temporary bus stop closures may be required as a result of traffic control activities along Fremont Boulevard, Cushing Parkway, First Street, Nortech Parkway, and Lafayette Street, which would be coordinated in advance with Santa Clara VTA or AC Transit, as appropriate (**APM TRA-2, Coordinate Bus Stop Closures**). If bus closures are required, the Proposed Project would be constructed in segments; therefore, only a single individual bus stop is anticipated to be impacted at any given time. Where required, a County or City encroachment

permit would be acquired, and all applicable restrictions and requirements would be adhered to by the Proposed Project, which would further reduce potential impacts to traffic congestion. As the anticipated peak vehicle trips associated with construction of the Proposed Project would represent less than 0.5 percent of the AADT at the nearest roadway junctions (on a temporary basis), and compliance with local permits would occur as appropriate, construction and O&M of the Proposed Project would not conflict with the Alameda Countywide Transportation Plan; Alameda Countywide Transit Plan; City of Fremont General Plan; City of Fremont Bicycle Master Plan; Santa Clara VTP 2040; Santa Clara Countywide Bicycle Plan; City of Milpitas General Plan; City of Milpitas Trail, Pedestrian, and Bicycle Master Plan; City of San José General Plan; City of San José Better Bike Plan; City of San José Vision Zero campaign; City of Santa Clara General Plan; or the City of Santa Clara Bicycle Plan. Proposed Project-generated traffic would be temporary, periodic, and managed with the implementation of a TCP (**APM TRA-1**), which would further reduce impacts to traffic congestion. Therefore, impacts to occur under this criterion would be less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into their existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). These modifications would occur within and adjacent to the existing substation site (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. Construction of the proposed PG&E Newark substation modifications would result in 28 total daily vehicle trips, including 10 daily truck trips and 18 daily worker vehicle trips to and from the substation (refer to **Table 3-8, Estimated Average Daily Construction Traffic**). Permanent changes to the existing Newark substation would not result in impacts to the circulation system. Therefore, impacts to occur under this criterion would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Silicon Valley Power (SVP) would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. These modifications would occur within the existing substation site and would not result in permanent impacts to the circulation system. Construction of the proposed SVP substation modifications would result in 14 total daily vehicle trips, including five daily truck trips and nine daily worker vehicle trips to and from the substation (refer to **Table 3-8**). Less-than-significant impacts would occur under this criterion as a result of the SVP substation modifications.

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

Less-Than-Significant Impact. Section 15064.3 was added to the CEQA Guidelines to provide guidance for determining the significance of transportation impacts. This section provides criteria for determining a project's transportation impacts, including for land use projects (15064.3(b)(1)) and transportation projects (15064.3(b)(2)). The Proposed Project is not a traditional land use project that would generate VMT on a regular basis, and the Counties of Alameda and Santa

Clara have not developed a threshold of significance for VMT. Therefore, Criteria 1 is not applicable to the Proposed Project. The Proposed Project is also not a transportation project, and Criteria 2 would not be applicable. Therefore, for the Proposed Project, a qualitative analysis of transportation impacts is provided (15064.3(b)(3)).

As discussed in **Section 5.17.1.3, Transit and Rail Services**, there is a light rail station located approximately 0.2 mile east of the proposed Baylands to NRS 230 kV underground transmission line, which provides passenger train service. The nearest rail station is the Santa Clara, California/Great America Station located approximately 0.35 mile northwest of the existing NRS substation. The closest bus stop to the proposed Baylands terminal site is located approximately 0.7 mile west on North First Street and Nortech Parkway, and the closest bus stop to the proposed Albrae terminal is located approximately 0.7 mile east on Boscell Road and Braun Drive (**Figure 5.17-3**). There are no bus stops, light rail stations, or rail stations that would be impacted by construction of the proposed Albrae to Baylands 320 kV DC transmission line. As discussed in **Section 3.6, Construction Workforce, Equipment, Traffic, and Schedule**, the peak employment is anticipated to be approximately 300 workers per day, but, on average, the workforce on-site would be less. Total maximum daily vehicle roundtrips during this time would be approximately 500 trips per day, consisting of approximately 225 truck trips and 275 worker trips. Peak construction traffic periods would be temporary in nature, and average trips typically would be lower than the estimated maximum.

Local labor would be used to the maximum extent practicable. A 15-mile radius around the Proposed Project site includes the South Bay area, City of Newark, and City of Fremont to the north of the proposed Albrae terminal site; the Cities of San José and Alamos south of the proposed Baylands terminal site; and other smaller cities, towns, and unincorporated areas in central Santa Clara and Alameda Counties. Therefore, it is estimated that workers would commute to and from the Proposed Project site daily at an average one-way distance of approximately 15 miles, or 30 miles total. Workers would be encouraged to reduce their reliance on single occupancy vehicles by carpooling whenever possible. The peak VMT would occur during the duct bank excavation and installation portion of the Proposed Project (e.g., site development and below-grade construction activities) due to the number of crews and the hauling away or importation of fill, which would occur approximately between September 2026 and January 2027. Maximum VMT was determined by totaling the daily average VMT that would occur during construction phases that overlap with the approximate September 2026 to January 2027 time period (see **Table 3-8** and **Table 3-9, Proposed Preliminary Construction Schedule**). The maximum total daily average VMT would be approximately 19,739. VMT would include trips to import fill and haul away spoils, water truck trips for dust mitigation, worker trips, traffic control, equipment deliveries, etc. As the daily total average VMT in the County of Santa Clara is 34,407,520 miles, the Proposed Project VMT during peak construction would account for 0.06 percent. Within the County of Alameda, the Proposed Project would account for 0.06 percent of the County's average daily VMT of 35,245,220 miles (Caltrans, 2023). Considering that workers and deliveries would not all be coming from the same direction, the effect would not be considered substantial.

Once construction is complete, the Proposed Project would be unattended on a typical daily basis. In general, monthly visual inspections would be performed within the proposed HVDC terminals to inspect equipment in accordance with manufacturer recommendations. Due to the diversity of equipment and the individual system components, a small, specialized team would execute the maintenance requirements. Inspection and maintenance would be performed by a small crew of one to two high-voltage technicians and one to two personnel provided by the equipment vendor

with support provided by LS Power staff. The Proposed Project would be remotely operated with no permanent workforce on-site; therefore, Proposed Project operation would generate a negligible amount of VMT.

Implementation of the Proposed Project would generate vehicle trips predominantly during construction activities and would not result in any long-term increase in VMT. The Proposed Project is anticipated to have a less-than-significant impact on regional VMT because construction would generate a relatively low number of daily trips, which would be temporary and sporadic in nature. Proposed Project-generated traffic would result in a negligible number of additional vehicle trips during operation because the new facilities would be remotely operated with no permanent workforce on-site. Therefore, the Proposed Project would not result in transportation impacts related to increased VMT and would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). As such, less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. Workers and deliveries for the proposed modifications would be minimal, resulting in low VMT during construction. In addition, no new permanent workforce would be added for O&M. The total daily average VMT for the PG&E substation modifications would be approximately 940 miles (refer to **Table 3-8**), which would equate to a negligible percentage of the County of Alameda's average daily VMT of 35,245,220 miles (Caltrans, 2023). Less-than-significant impacts would occur under this criterion as a result of the PG&E substation modifications.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility. Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. Workers and deliveries for the proposed modifications would be minimal, resulting in low VMT during construction. In addition, no new permanent workforce would be added for O&M. The total daily average VMT for the SVP substation modifications would be approximately 470 miles (refer to **Table 3-8**), which would result in a negligible percentage of the County of Santa Clara's average daily VMT of 34,407,520 miles (Caltrans, 2023). Less-than-significant impacts would occur under this criterion as a result of the SVP substation modifications.

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 Impact. As discussed in **Sections 3.3.4.3** and **3.5.1.2**, *New Access Roads*, the Proposed Project includes three new permanent access roads for the proposed Albrae terminal, proposed Baylands terminal, and the new access road to overhead structure AC-3, located east of the Guadalupe River. The new access road for the proposed Albrae terminal would be approximately 50 feet long and 20 feet wide and provide ingress/egress from Weber Road, with a new driveway to be constructed on-site. The proposed Albrae terminal access road would be located within private property and would not have sharp curves or dangerous intersections. The new access road for the proposed Baylands terminal would be approximately 1,000 feet long

and 20 feet wide and provide ingress/egress from Los Esteros Road. The new access road to the proposed overhead structure AC-3 would be approximately 500 feet long and 20 feet wide and would provide access to the overhead structure from the existing commercial area north of SR-237 and west of First Street. This new access road would be constructed within State-owned land east of the Guadalupe River and would be constructed along the underground portion of the Baylands to NRS 230 kV transmission line. All access roads would be graded to level and constructed using crushed rock or gravel. The Proposed Project would not involve public roadway improvements or widening of existing access roads. In addition, the Proposed Project would not include uses incompatible with existing roads, such as farm equipment. Large construction trucks at local intersections would present temporary, limited-duration changes to driving conditions as the trucks travel back and forth to the construction site. The new HVDC terminals would be remotely operated with no permanent workforce on-site during operation.

As part of the Proposed Project, LS Power would prepare a TCP (**APM TRA-1**) that would describe actions to be taken during construction activities to guide traffic (e.g., signs, workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. Therefore, implementation of the Proposed Project would not substantially increase traffic hazards and would not introduce any incompatible uses to the area. As such, less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing Newark substation facility (located entirely within PG&E fee-owned property) and would not involve roadway improvements. Proposed Project construction and operation activities would not produce road hazards due to a geometrical design feature or involve incompatible uses such as farm equipment. Therefore, no impacts to this criterion would result.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing NRS substation site and would not involve roadway improvements. Proposed Project construction and operation activities would not produce road hazards due to a geometrical design feature or involve incompatible uses such as farm equipment. Therefore, no impacts to this criterion would result.

Would the project result in inadequate emergency access?

Less-Than-Significant Impact. To facilitate construction of the proposed transmission lines, traffic control measures would be implemented pursuant to all applicable industry standards and applicable local jurisdictional agency review. For the installation of underground transmission lines, LS Power would coordinate with the appropriate emergency (fire and police) personnel prior to construction to ensure that construction activities and associated lane closures or detours would not substantially affect emergency response vehicles. The Proposed Project is not anticipated to impede ingress and egress of emergency vehicles or impact emergency response times during construction or operation. Any lane or road closures associated with construction of the Proposed Project would be temporary and would be coordinated with local jurisdictions and emergency service providers and subject to local agency-approved traffic control plans.

Because the Project's proposed transmission lines would be constructed in segments, only small segments of each road are anticipated to be impacted by potential lane closures at a given time.

Traffic detours may be necessary as part of construction, particularly along Fremont Boulevard, Cushing Parkway, Boyce Road, and Los Esteors Road during the proposed Albrae to Baylands 320 kV DC transmission line construction. Flaggers or other traffic control measures would be utilized to guide traffic around active work areas in a safe manner. Further, LS Power would develop a TCP per **APM TRA-1** to allow for adequate emergency access during construction, including access to the proposed HVDC terminal construction sites and staging areas, and facilitate coordination with local law enforcement and fire protection providers, providing the timing, location, and duration of construction activities.

Improvements to the construction entrance to the proposed Albrae and Baylands terminals, such as upgrades to the gated entrance, would be implemented as required to comply with City regulations. Therefore, in the event of an emergency, vehicles and personnel inside the construction areas would be able to evacuate if needed. In addition, access routes for emergency vehicles within and near the Proposed Project area would be maintained and coordinated with emergency service providers with implementation of **APM TRA-1**, which would further assist with safe access during an emergency. Any lane or road closures associated with maintenance of the Proposed Project would be temporary and would be coordinated with local jurisdictions and emergency service providers. Operation of the Proposed Project facilities would not impede emergency vehicle access, as operation of the Proposed Project facilities would not require any lane or road closures. Temporary lane closures would be necessary for underground vault inspections that would occur periodically and during maintenance of the underground transmission line. Therefore, less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

PG&E Newark substation modifications would occur within and adjacent to the existing Newark substation facility (located entirely within PG&E fee-owned property). No road closures would be needed to implement the proposed modifications, and no emergency access routes would be impacted. Therefore, impacts to this criterion would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing NRS substation site and would not result in road closures or otherwise impede emergency access. If required, to comply with local or Caltrans regulations, a TCP would be implemented at the SVP modification area. Therefore, impacts to this criterion would be less than significant.

Would the project create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations?

Less-Than-Significant Impact. The majority of the bike lanes located within the Proposed Project area are located in existing in-road bike lanes designed for bikers to safely share the road with vehicles, including trucks. There are designated bicycle lanes along the proposed Albrae to Baylands 320 kV DC transmission line on Boyce Road, Fremont Boulevard, Cushing Parkway, McCarthy Boulevard, and Los Esteros Road, and along the proposed Baylands to NRS 230 kV transmission line on Los Esteros Road, Nortech Parkway, Grand Boulevard, Disk Drive, and Lafayette Street. An approximately 1.25-mile stretch of the proposed Albrae to Baylands 320 kV DC transmission line overhead corridor is located directly west of the Coyote Creek Trail, which is a designated Class I shared-use pedestrian and bike path (Santa Clara VTA, 2018). The closest proposed overhead structure is approximately 200 feet west of the Coyote Creek Trail; therefore,

no impacts to the Coyote Creek trail are anticipated. The underground and overhead portions of the proposed Newark to Albrae 230 kV transmission line would be located within and adjacent to Weber Road, which is not a designated bike path, lane, or route. The proposed Newark to Albrae 230 kV transmission line would, therefore, have no impact on designated bicycle lanes and would not create potentially hazardous conditions for people walking, bicycling, or driving with the implementation of **APM TRA-1**.

To facilitate the construction of the proposed Albrae to Baylands 320 kV DC transmission line and Baylands to NRS 230 kV transmission line, temporary road and sidewalk closures or detours would be necessary to allow adequate work area for construction. Flaggers or other traffic control measures would be utilized to guide traffic (including bicycle and pedestrian traffic) around active work areas in a safe manner. LS Power would implement **APM TRA-1** to prevent the creation of potentially hazardous conditions and assure the safety of motorists, bicyclists, and pedestrians within the Proposed Project area.

As discussed in **Section 5.17.1.3**, there are no public transit stations or stops within 1,000 feet of the proposed HVDC terminal sites. The nearest light rail station is located approximately 0.2 mile east of the proposed Baylands to NRS 230 kV underground transmission line on Tasman Avenue in the City of Santa Clara, and the nearest rail station, the Santa Clara, California/Great America Rail Station, is located approximately 0.35 mile northwest of the existing NRS substation. The Santa Clara, California/Great America Station is located directly west of the proposed Baylands to NRS 230 kV transmission line along Lafayette Street but would not be impacted by transmission line construction. The Proposed Project would not impact the rail or light rail routes or create hazardous conditions for their patrons.

There are no bus stops within 0.5 mile of the proposed Albrae and Baylands terminal sites; the closest bus stop to the proposed Baylands terminal site is located approximately 0.7 mile west on North First Street and Nortech Parkway, and the closest bus stop to the proposed Albrae terminal is located approximately 0.7 mile east on Boscell Road and Braun Drive (**Figure 5.17-3**). There are several bus stops located along the proposed Albrae to Baylands 320 kV DC underground transmission line route along Fremont Boulevard and Cushing Parkway, managed by AC Transit. There are also bus stops located along the proposed Baylands to NRS 230 kV underground transmission line route and staging areas along North First Street near its intersection with Nortech Parkway, managed by Santa Clara VTA. There are no bus routes or bus stops adjacent to the overhead portions of the proposed Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, or Newark to Albrae 230 kV transmission lines. Temporary bus stop closures may be required as a result of traffic control activities along Fremont Boulevard, Cushing Parkway, First Street, Nortech Parkway, and Lafayette Street; however, any bus stop closures would be coordinated with AC Transit and Santa Clara VTA in advance to assure its patrons would not be exposed to potentially hazardous conditions resulting from construction activities taking place in the vicinity of a bus stop (**APM TRA-2**).

As discussed above, traffic control procedures would be implemented as needed throughout the Proposed Project area. Any resulting lane restrictions would be temporary. Flaggers or other traffic control measures would be utilized to guide traffic around active work areas in a safe manner and in accordance with approved permits and TCPs, as applicable. In addition, implementation of **APM TRA-1** would require LS Power to implement standard safety practices and recommendations for safe traffic movement, which would also further reduce the potential for hazardous traffic conditions during construction activities.

Parking of worker vehicles would generally occur within the staging areas anticipated to be located near the Proposed Project components, including the Albrae terminal, Baylands terminal, and transmission line facilities, though some worker vehicle parking may occur on-site during construction of the proposed Albrae to Baylands 320 kV DC underground transmission line within existing roads. Any damage to public roads, including any damage from vehicle traffic, would be restored to preconstruction conditions following construction in accordance with **APM TRA-3, Repair Infrastructure**.

In addition, no alternative modes of transportation, such as rail, bus, or bicycle traffic or pedestrian circulation patterns, would be altered or adversely affected by long-term O&M activities. Therefore, given the traffic control measures that would be implemented, less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property) and would not impact existing roadways, bicycle or pedestrian facilities, or public transit operations. No road closures would be needed to implement the proposed modifications. PG&E would manage internal traffic accordingly to avoid hazardous conditions during construction of the Newark substation modifications. No impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS modifications would occur within the existing NRS substation site and would not impact existing roadways or public transit operations. No road closures would be needed to implement the proposed modifications. If required, to comply with local or Caltrans regulations, a TCP would be implemented at the SVP modification area to minimize traffic impacts during construction. Impacts to this criterion would be less than significant.

Would the project interfere with walking or bicycling accessibility?

Less-Than-Significant Impact. As discussed above, there are existing Class II shared route bike lanes along the proposed Albrae to Baylands 320 kV DC transmission line underground corridor on Boyce Road, Cushing Parkway, Fremont Boulevard, McCarthy Boulevard, Nortech Parkway, Disk Drive, and Lafayette Street, and a Class III bike route along Los Esteros Road (**Figure 5.17-4**). The Class III bike route along Dixon Landing Road would not intersect the transmission line corridor and, therefore, would not be impacted by Proposed Project construction. An approximately 1.25-mile stretch of the proposed Albrae to Baylands 320 kV DC transmission line overhead corridor is located directly west of Coyote Creek and the Coyote Creek Trail, which is a designated Class I shared-use pedestrian and bike path (Santa Clara VTA, 2018). The closest proposed overhead structure is approximately 80 feet west of Coyote Creek and 200 feet west of the Coyote Creek Trail. Therefore, no impacts to the Coyote Creek Trail are anticipated.

To facilitate transmission line construction, temporary bike lane closures or detours would be necessary to allow adequate work area for construction. Flaggers or other traffic control measures would be utilized to guide traffic (including bicycle and pedestrian traffic) around active work areas. LS Power would implement **APM TRA-1**, requiring development and implementation of a TCP that allows for safe passage of pedestrians and bicyclists and minimizes traffic impacts during construction. Implementation of a project-specific TCP would ensure the safety of

motorists, bicyclists, and pedestrians within the Proposed Project area. Bicycle facilities that would be subject to temporary closure or detour during construction of the underground portion of the proposed Albrae to Baylands 320 kV DC transmission line include bike lanes on Boyce Road, Cushing Parkway, Fremont Boulevard, and McCarthy Boulevard. During construction of the underground portion of the Baylands to NRS 230 kV transmission line, bicycle facilities that may be subject to temporary closure or detour include the bike route on Los Esteros Road and bike lanes on Nortech Parkway, Disk Drive, and Lafayette Street. There would be no impacts to bicycle facilities during construction of the overhead portions of the proposed Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, or Newark to Albrae 230 kV transmission lines. During construction, LS Power would install appropriate barriers between work zones and transportation facilities and post adequate signage to safely redirect cyclists around work areas (**APM TRA-1**). All bicycle facility closures would be temporary and cease following Proposed Project construction, and implementation of **APM TRA-3** would require that roadways are returned to preconstruction conditions and no long-term impacts to bicycle facilities would occur.

Most roadways around the proposed Albrae terminal site and much of the proposed Albrae to Baylands 320 kV DC transmission line underground corridor have sidewalks, including approximately 0.3 mile of Boyce Road (on one side), Cushing Parkway, and Fremont Boulevard. In proximity to the proposed Baylands terminal site and Baylands to NRS 230 kV transmission line underground corridor, there are existing sidewalks along Nortech Parkway, Disk Drive, and 0.5 mile of Lafayette Street. There are no sidewalk closures anticipated for Proposed Project activities, but, if required, traffic control personnel would safely guide pedestrians around construction activities.

As discussed above, any effects on bike lanes or sidewalks resulting from Proposed Project construction activities would be temporary and sporadic in nature. Operation of the Proposed Project would primarily be conducted remotely, and no changes to existing access would occur. Therefore, the Proposed Project would not interfere with walking or bicycling accessibility, and less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

PG&E Newark substation modifications would occur within and adjacent to the existing Newark substation facility (located entirely within PG&E fee-owned property) and would not result in permanent impacts to walking and bicycling accessibility. No road closures would be needed to implement the proposed modifications, and no public sidewalks or bikeways would be affected. Any internal pedestrian access that is impeded during substation modification activities would be restored following construction. Therefore, impacts under this criterion would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing NRS substation site and would not result in permanent impacts to walking and bicycling accessibility. No road closures would be needed to implement the proposed modifications, and no public sidewalks or bikeways would be affected. Any internal pedestrian access that is impeded during substation modification activities would be restored following construction. If required, to comply with local or Caltrans regulations, a TCP would be implemented at the SVP modification area so that access to the existing NRS substation and associated staging areas is not impeded. Therefore, impacts under this criterion would be less than significant.

Would the project substantially delay public transit?

Less-Than-Significant Impact. As discussed above, there are no public transit stations or stops within 1,000 feet of the proposed HVDC terminal sites. The nearest light rail station is located approximately 0.2 mile east of the proposed Baylands to NRS 230 kV underground transmission line on Tasman Avenue in the City of Santa Clara, and the nearest rail station, the Santa Clara, California/Great America Rail Station, is located approximately 0.35 mile northwest of the existing NRS substation. The Santa Clara, California/Great America Station is located directly west of the proposed Baylands to NRS 230 kV transmission line along Lafayette Street but would not be impacted by transmission line construction. Construction of the Proposed Project would not be expected to affect these train stations or create any delays or service interruptions. There are no bus stops within 0.5 mile of the proposed Albrae and Baylands terminal sites; the closest bus stop to the proposed Baylands terminal site is located approximately 0.7 mile west on North First Street and Nortech Parkway, and the closest bus stop to the proposed Albrae terminal is located approximately 0.7 mile east on Boscell Road and Braun Drive (**Figure 5.17-3**).

There are several bus stops located along the proposed Albrae to Baylands 320 kV DC underground transmission line route along Fremont Boulevard and Cushing Parkway, managed by AC Transit. There are also bus stops located along the proposed Baylands to NRS 230 kV underground transmission line route and staging areas along North First Street near its intersection with Nortech Parkway, managed by Santa Clara VTA. There are no bus routes or bus stops adjacent to the overhead portions of the proposed Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, or Newark to Albrae 230 kV transmission lines. Temporary bus stop closures may be required as a result of traffic control activities along Fremont Boulevard, Cushing Parkway, First Street, Nortech Parkway, and Lafayette Street; however, any bus stop closures would be coordinated with Santa Clara VTA and/or AC Transit in advance to minimize service disruptions (**APM TRA-2**). There are no permanent bus stop closures anticipated to be required as a result of the Proposed Project. As such, minimal delays to public transit are anticipated, and less-than-significant impacts would occur under this criterion.

PG&E Substation Modifications

PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). There are no public transit stations or stops adjacent to the existing Newark substation; therefore, the proposed substation modifications would not delay public transit. No impact would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing NRS substation. There are no public transit stations or stops adjacent to the existing NRS substation; therefore, the proposed substation modifications would not delay public transit. No impact would occur under this criterion.

5.17.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for transportation.

5.17.6 APPLICANT PROPOSED MEASURES

APM TRA-1: Traffic Control Plan

LS Power shall prepare a TCP to describe measures to guide traffic (such as signs and workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. LS Power shall follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. LS Power shall follow the recommendations regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. As required for obtaining a local encroachment permit, LS Power shall provide a TCP to the applicable local jurisdictions which shall comply with the U.S. Department of Transportation's (DOT) Manual on Uniform Traffic Control Devices (MUTCD). Construction activities shall be coordinated with local law enforcement and fire protection agencies, as required. Emergency service providers shall be notified, as required by the local permit, of the timing, location, and duration of construction activities. A copy of the TCP shall be provided to CPUC for recordkeeping.

APM TRA-2: Coordinate Bus Stop Closures

If bus stop closures are required for Proposed Project implementation, LS Power shall coordinate closures with Santa Clara VTA and/or AC Transit, as appropriate, in advance of closure to minimize disruptions to service. Where disruptions to service are anticipated, advanced notice shall be given to allow transit users on effected routes to identify and locate a temporary interim bus stop(s). Measures that may be implemented to give advanced notice of disruptions to service may include, but not necessarily be limited to, posting signage at bus stops with planned closures and posting notices for anticipated route detours and bus stop closures on the Santa Clara VTA and AC Transit websites. Identification and implementation of specific measures shall be implemented in coordination with Santa Clara VTA and AC Transit.

APM TRA-3: Repair Infrastructure

Following construction, LS Power shall confirm that contractors have repaired damage to roads, trails, and bicycle facilities resulting from Proposed Project construction activities. Existing conditions shall be documented to assure that roads, trails, and bicycle facilities are returned to preconstruction conditions. LS Power shall confer with local agencies, as needed, to confirm repairs are consistent with preconstruction conditions.

5.17.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for transportation would be implemented for PG&E's scope of work.

5.17.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for transportation would be implemented for SVP's scope of work.

5.18 TRIBAL CULTURAL RESOURCES

<p>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:</p>		<p>Potentially Significant Impact</p>	<p>Less Than Significant with Mitigation Incorporated</p>	<p>Less Than Significant Impact</p>	<p>No Impact</p>
<p>a.</p>	<p>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</p>			<p>X</p>	
<p>b.</p>	<p>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.</p>			<p>X</p>	

This section describes the Tribal cultural resources (TCRs) within the Proposed Project area, as well as potential impacts resulting from construction and operation and maintenance (O&M) of the Proposed Project.

5.18.1 ENVIRONMENTAL SETTING

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara. The Proposed Project includes the construction of two new high-voltage direct current (HVDC) terminals and associated transmission lines between two existing substations: the Pacific Gas and Electric Company (PG&E) Newark substation and the Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation. The Proposed Project would include modifications to the existing Newark and NRS substations. The land surrounding the Proposed Project area is primarily heavily developed light industry.

Proposed Project Area

The Proposed Project area covers approximately 269.4 acres, including 25.3 acres for the proposed Albrae terminal site, 9.2 acres for the proposed Baylands terminal site, 75.4 acres for

the proposed Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line, 3.1 acres for the proposed Newark to Albrae 230 kV transmission line, 25.1 acres for the proposed Baylands to NRS 230 kV transmission line, modifications to the existing PG&E Newark and SVP NRS substations (0.5 acre and 13.5 acres, respectively), and temporary staging areas (117.1 acres). Refer to **Section 3.0, Proposed Project Description** for further information regarding the Proposed Project's limits of disturbance, including depth of excavation and heights of structures.

5.18.1.1 Outreach to Tribes

A Sacred Lands File (SLF) search request of the Proposed Project area was submitted to the Native American Heritage Commission (NAHC) on May 16, 2023, by PanGIS, Inc. The SLF search was returned by the NAHC with positive results on June 14, 2023, with instructions to contact the North Valley Yokuts Tribe and the Ohlone Indian Tribe (in bold in **Table 5.18-1, Tribal Contacts**) (**Appendix 5.5-A, Cultural Resources Technical Report**). The NAHC provided a list of Native American contacts who may be able to supply information pertinent to the Proposed Project area (**Appendix 5.5A**). The 19 individuals listed were contacted by email sent January 10, 2024. A sample of the letter sent is attached (**Appendix 5.5-A**). A follow-up email was sent on January 24, 2024, to contacts who had not yet replied.

Name	Affiliation	Initial Contact	Initial Reply	Follow-up Contact	Follow-up Reply	Comments
Irene Zwierlein, Chairperson	Amah Mutsun Tribal Band of Mission San Juan Batista	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Tony Cerda, Chairperson	Costanoan Rumsen Carmel Tribe	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Ann Marie Sayers, Chairperson	Indian Canyon Mutsun Band of Costanoan	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Kanyon Sayers-Roods, MLD Contact	Indian Canyon Mutsun Band of Costanoan	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Monica Arellano, Vice Chairwoman	Muwekma Ohlone Indian Tribe of the San Francisco Bay Area	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Katherine Perez, Chairperson	North Valley Yokuts Tribe	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Timothy Perez	North Valley Yokuts Tribe	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Desiree Vigil, Tribal Historic Preservation Officer (THPO)	The Ohlone Indian Tribe	Email, 1/10/2024	Email, 1/10/2024	None	None	Acknowledged receipt, no other comment
Andrew Galvan, Chairperson	The Ohlone Indian Tribe	Email, 1/10/2024	Email, 1/10/2024	None	None	Requested NAHC documents; sent 1/11/2024; no further reply

Table 5.18-1: Tribal Contacts						
Name	Affiliation	Initial Contact	Initial Reply	Follow-up Contact	Follow-up Reply	Comments
Jesus Tarango, Chairperson	Wilton Rancheria	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Steven Hutchason, THPO	Wilton Rancheria	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Dahlton Brown, Director of Administration	Wilton Rancheria	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Kenneth Woodrow, Chairperson	Wuksachi Indian Tribe/ Eshom Valley Band	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Cheyenne Gould, Tribal Cultural Resource Manager	Confederated Villages of Lisjan Nation	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Corrina Gould, Chairperson	Confederated Villages of Lisjan Nation	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Deja Gould, Language Program Manager	Confederated Villages of Lisjan Nation	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Quirina Luna Geary, Chairperson	Tamien Nation	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Lillian Camarena, Secretary	Tamien Nation	Email, 1/10/2024	None	Email, 1/24/2024	None	--
Johnathan Wasaka Costillas, THPO	Tamien Nation	Email, 1/10/2024	None	Email, 1/24/2024	None	--

Note: Entries in bold represent SLF positive results.

On January 10, 2024, Desiree Vigil, THPO of the Ohlone Indian Tribe, replied via email to acknowledge receipt of initial contact. No further comment was provided within the initial reply. PanGIS, Inc. has not received a follow-up response or any information pertinent to the Proposed Project area.

On January 10, 2024, Andrew Galvan, Chairperson of the Ohlone Indian Tribe, replied via email requesting a copy of the SLF search results and contact list provided by the NAHC. These were sent to Chairperson Galvan via email on January 11, 2024. PanGIS, Inc. has not received a follow-up response or any information pertinent to the Proposed Project area.

5.18.1.2 Tribal Cultural Resources

No TCRs were identified through publicly available documentary resources or archaeological surveys. However, potentially unrecorded TCRs are indicated by the positive SLF search result.

The sections below describe the methods and results employed to identify TCRs within or adjacent to the Proposed Project area.

Identification via Records Search and Historical Research

A record search was conducted to determine if any TCRs listed or potentially eligible for listing on the National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR) were present within or immediately adjacent to the Proposed Project area. The record search request was submitted by PanGIS to the Northwest Information Center (NWIC) on May 16, 2023. Materials consulted by the NWIC included prehistoric and historic archaeological resource and report databases, NRHP, CRHR, California Historical Landmark, California Historical Points of Interest, California Inventory of Historic Resources, Archaeological Determinations of Eligibility, the California Office of Historic Preservation (OHP) Built Environment Resources Directory, and the California Department of Transportation ("Caltrans") Bridge Survey. The record search area included a one-mile buffer of the Proposed Project area.

The record search, fulfilled on June 20, 2023, identified no prehistoric or ethnographic archaeological sites or traditional cultural resources within the Proposed Project area. One previously recorded prehistoric resource was identified within 50 meters (m) of the Proposed Project area, as shown in **Table 5.18-2, Potential Tribal Cultural Resources Identified**. This resource (P-43-000486/SCL-000485) was recorded as a sandstone mortar and fire-cracked rock. The mortar was collected when recorded in 1982; no evaluation or curation details are provided in the site record.

Resource	Description	Within Proposed Project Area?	Component	Status	Comments
P-43-000486 (SCL-000485)	Prehistoric mortar and fire-cracked rock	No	Baylands to NRS 230 kV transmission line (33 m outside Proposed Project area)	Unevaluated	Collected 1982
CP-Iso-01	Potential groundstone	Yes	Cushing Parkway horizontal directional drilling (HDD)	Not evaluated	Isolate
SA10-Iso-02	Lithic core	Yes	Staging Area 10	Not evaluated	Isolate

PanGIS consulted historical maps and documents of the record search area, including original survey plats and land patents (Bureau of Land Management [BLM], 2024); historical topographic maps (United States Geological Survey [USGS], 2024); and aerial photographs (1946, 1948, 1956, 1958, 1959, 1960, 1966, 1968, and 1979) (NETROnline, 2024).

Historic map and document review did not identify any TCRs within or adjacent to the Proposed Project area. No Native American sites, villages, or place names are shown on historic maps within or adjacent to the Proposed Project area.

Identification via Archaeological Survey

A cultural resources pedestrian survey of the Proposed Project components was conducted on September 11, 2023, November 7 and 8, 2023, and January 24 and 25, and March 14 and 23, 2024, by PanGIS staff archaeologists under the direction of PanGIS Director of Cultural Resources, Douglas Mengers. The pedestrian survey included the proposed Albrae terminal site; the proposed Baylands terminal site; the PG&E-owned property surrounding the existing PG&E Newark substation, including the limits of construction for the proposed overhead structures AC-1, AC-2 and AC-4; the proposed Albrae to Baylands 320 kV DC transmission line right-of-way (ROW) (including Cushing Parkway HDD); the proposed Baylands to NRS 230 kV transmission line ROW (and a portion of the areas associated with proposed overhead structures DC-1 through DC-11); proposed Staging Areas 2 and 11; and a portion of proposed Staging Area 10 (see **Figure 5.5-1, Cultural Survey Area Map**). A visual survey of additional components was conducted from the public ROW where pedestrian access was not available, including the existing PG&E Newark substation; the existing SVP NRS substation; proposed Staging Areas 3, 4, 5, 6, 8, and the remainder of 10; overhead structure AC-3; and the remainder of proposed overhead structures DC-1 through DC-11. No pedestrian or visual survey was conducted at proposed Staging Areas 1, 7, or 9.

The proposed Albrae terminal site entirely consists of asphalt pavement with no bare ground. The proposed Baylands terminal site is on former agricultural land with uneven terrain due to spoils piles; ground visibility was generally poor due to invasive tall grasses and small shrubs. The majority of the proposed transmission line ROWs consist of asphalt pavement and landscaped sidewalks in a developed suburban environment. Survey areas are flat; ground visibility varied from zero percent in paved areas to 10 to 100 percent in road shoulders, depending on ground cover. An approximately 1.6-mile portion of the proposed overhead Albrae to Baylands 320 kV DC transmission line is situated on gravel dikes between drying ponds of the San José-Santa Clara Regional Wastewater Facility, with a flat survey area and excellent ground visibility. In addition, an approximately 0.4-mile portion of the proposed Albrae to Baylands 320 kV DC transmission line (including both underground and overhead segments) is situated on a paved pedestrian and cycling trail on Santa Clara Valley Water District property with a flat survey area; ground visibility varied from zero percent in paved areas to 10 to 100 percent in road shoulders, depending on ground cover.

Two new prehistoric archaeological resources were located during the surface survey, as shown in **Table 5.18-2**. Resource CP-Iso-01 is a potential groundstone artifact with unifacial wear, and resource SA10-Iso-02 is a small green chert core with evidence of flake removal; both are isolated finds in disturbed context. The location of one previously recorded resource adjacent to the Proposed Project area, P-43-000486 (SCL-000485) was revisited during the surface survey but was unable to be located. No additional ethnohistoric archaeological resources or TCRs were located during the surface survey. Detailed survey methods and results are described in **Section 5.5, Cultural Resources** and **Appendix 5.5-A**.

Identification via Tribal Representatives

As detailed above in **Section 5.18.1.1**, *Outreach to Tribes*, the SLF search was positive for sacred lands within the search area, with instructions to contact the North Valley Yokuts Tribe and the Ohlone Indian Tribe. Responses to outreach were received from the Ohlone Indian Tribe, but no information was provided about Tribal resources in the Proposed Project area.

5.18.1.3 Ethnographic Study

Detailed prehistoric and historic contexts of the region, as well as bibliographic citations for the ethnographic summary below, are included in **Appendix 5.5-A**. The general ethnography for the Bay Area and the sections on the Ohlone people and Tamien Nation were developed from *Punctuated Culture Change in the San Francisco Bay Area* (Milliken et al., 2007). The Amah Mutsun section was developed from the official Tribal history (Amah Mutsun Tribal Band, 2024).

The Bay-Delta study area, based on ethnohistorical reconstructions, falls within the aboriginal territory of several distinct, federally recognized Native American groups. Each of these Native groups were hunter-gatherers, lived in villages with well-defined Tribal territories, interacted and traded extensively with neighboring groups, and spoke unique languages. These languages were, however, all part of the Penutian-speaking phylum, with the Ohlone and Miwok languages more closely related to each other (both within the Utian language group) than to the Patwin (part of the Wintuan language family). Some San Francisco Bay Costanoan-speaking local Tribes had overlapping social and marriage networks with neighboring Coast Miwok, Bay Miwok, and Delta Yokuts-speaking groups and, thus, shared genetic relationships with them and probably some cultural relationships as well.

In the study area, traditional Native lifeways were disrupted first by the influx of European explorers and then profoundly altered by the establishment of Spanish missions in the late eighteenth century. Colonization and occupation quickly reduced Native populations, displaced them, and dramatically altered their traditional way of life. As a result, these groups are not as well-known ethnographically compared to groups in some other regions of California. Much of what we know comes from early European accounts (both explorers and mission staff), along with a few twentieth-century interviews by anthropologists who gathered information on remembered lifeways.

As such, any discussion of Native lifeways at contact is a reconstruction based on incomplete data and a low level of rigor invested by early ethnographers and subject to varying perspectives and analytical efforts, particularly with respect to group size and territorial extent. Recent interpretations of Native populations, sometimes contradictory with earlier studies, are largely based on detailed research using mission records, particularly those carried out by Milliken (2010). Notably, this report relies upon Milliken's most recent research results, referred to as the Community Distribution Model (CDM) for estimating populations and their density, and distinguishing Tribelets and their spatial extent (identified as "regions").

With respect to reconstructing population estimates at Spanish contact, Milliken's approach placed more emphasis on the impact of post-contact diseases on Native populations than previous reconstructions. The basic premise is that Tribelets recruited into the missions later in time (typically those further from a mission) have lower mission baptismal numbers due to the greater impact of Euro-American diseases. To correct for these impacts and obtain the most

accurate estimate of individual Tribelet's population at contact, three steps were taken by Milliken. First, only adults (15 and above) were used to calculate population estimates, since children, especially infants, were most likely to have been impacted by disease vectors. Second, a mortality factor was used to estimate the impact of diseases on the total population. Finally, the estimated adult population was doubled to obtain an estimate of total population. The results yield much more precise and accurate population estimates, undoubtedly represent the most accurate reconstruction to date, and are the results used most often by current researchers. Each of the three groups that inhabited the study area in the late eighteenth century is discussed below.

Ohlone

Ohlone (also referred to as Costanos, Spanish for "coastal people") is a linguistic subfamily of the Penutian language stock. Western Miwok (such as that spoken by the Coast Miwok north of Golden Gate) is the closest related language. According to early linguists, there were eight branches of the Costanoan language, each associated with a geographic location and the Tribelet(s) that inhabited the locality. Four of these groups, the Ramaytush, Chochenyo, Tamyen, and Karkin, fall within the Proposed Project study area. Whether these were distinct languages or dialects is uncertain.

The territory of the Ohlone covered around 17,350 square kilometers (6,700 square miles), extending 177 kilometers (110 miles) along the Pacific Coast from south of Monterey Bay all the way up the San Francisco Peninsula and inland some 32 to 72 kilometers (20 to 45 miles) into the Coast Ranges, running along the east side of San Francisco Bay to the Carquinez Strait. At the time of Spanish contact, the Bay-Delta Area and Coast Range valleys were dotted with Ohlone villages. Based on mission records, Milliken estimates that the Ohlone population was around 16,000, with an average population density of 2.4 per mile.

For the Ohlone as a whole, the basic unit of political organization was a territory-holding group of one or more associated villages and smaller temporary encampments. Often referred to as a Tribe or Tribelet, these groups were generally considered independent, multi-family, landholding groups. Each regional community was a largely autonomous polity numbering typically between 150 and 400 people falling under the jurisdiction of a headman and council of elders who served as advisors to the villagers. Permanent villages were established near the coast, the bay, and along river drainages, while temporary camps were in prime resource-processing areas. Some Tribes occupied a central village, while others had several villages within a few miles of each other. Milliken has identified 59 Ohlone Tribelets, of which 20 have more than half their territory within the Proposed Project study area. Notably, the Tribelets within the study area, especially along the eastern and southern margins of the bay, had a considerably larger population density (4.3 per square mile for the study area) than the Ohlone as a whole.

Tribelet organization included a chief, which could be a man or woman, although the office was generally inherited via patrilineal descent. The chief represented a Tribal council of elders and took a leadership role in such important tasks as hosting visitors and leading food procurement expeditions. War leaders and shaman also played key roles in each community. The Ohlone had clans and moieties, and households appear to have been large, with 10 to 15 individuals per family. Patrilineal extended households were common, sororal polygamous households (where wives are sisters) were also present, and patrilocal lineages played an important role in group interaction.

Tamien Nation

The Tamien people (also spelled as Tamyen and Thamien) are one of eight linguistic divisions of the Ohlone (Costanoan) groups of Native Americans who live in northern California. The Tamien traditionally lived throughout the Santa Clara Valley. The use of the name Tamien is on record as early as 1777, and it comes from the Ohlone name for the location of the first Mission Santa Clara (Mission Santa Clara de Tamine) on the Guadalupe River. Father Pena mentioned in a letter to Junipero Serra that the area around the Mission was called Thamien by the native people. The missionary fathers erected the Mission on January 17, 1777, at the native village of So-co-is-u-ka.

Traditionally, the Tamien people spoke the Tamien language, a Northern Ohlone language, which ceased to be spoken since possibly the early nineteenth century. "Tamyen", also called Santa Clara Costanoan, has been extended to mean the Native people of Santa Clara Valley, as well as the language they spoke. Tamien is listed as one of eight Costanoan language dialects in the Utian family, although the legitimacy of the Utian genetic group is contested. Tamien was the primary language of the Native people living at the first and second Mission Santa Clara (both founded in 1777). Linguistically, it is thought that Chochenyo, Tamyen and Ramaytush are dialects of a single language. However, this has not been proven, and Chochenyo, Tamien, and Ramaytush remain separate political Tribes.

Tamien territory extends over most of the present-day County of Santa Clara, California and was bordered by communities that spoke other Ohlone languages: Ramaytush to the northwest on the San Francisco Peninsula; Chochenyo, East Bay; Mutsun, south of San Martin; and the Akwaswas to the southwest. Tamien villages were not "Tribelets" but an actual Nation of Tamien speaking villages.

Amah Mutsun

The Amah Mutsun occupied the San Juan Valley for thousands of years before the Spanish arrived in the late 1700s (Amah Mutsun Tribal Band, 2024). The community was originally made up of approximately 20 to 30 contiguous villages stretched across the Pajaro River Basin and surrounding region. Members of these different villages were united by shared cultural practices and Tribal traditions, including religious practices, method of fishing and hunting, ceremonial dress, craftsmanship, and shelter.

Most significantly, Amah villages were distinct from Tribes outside their valley because of their unique language; no other Indian Tribe spoke Mutsun. While the Costanoan/Ohlone language family was made up of eight separate languages, including Mutsun, each language was different from one another.

The Amah Mutsun Tribe had been drawn to the triangle of land formed by the Monterey Bay and the Pajaro and San Benito rivers due to the abundance of fresh water and fish. The Tribe was geographically isolated from its neighbors due to the physiography of the San Juan Valley (Tratrah).

Some Tribal ways of life for the Mutsun were that chiefs were responsible for feeding visitors; providing for the impoverished; directing ceremonial activities; and directing hunting, fishing, gathering, and warfare expeditions. The Mutsun ensured a sustained yield of plant and animal

foods by careful management of the lands. Controlled burning of extensive areas of land was carried out each fall to promote the growth of seed-bearing annuals. The Mutsun diet consisted of acorns, hazelnuts, blackberries, elderberries, strawberries, gooseberries, madrone berries, wild grapes, wild onions, cattail roots chuchupate (herb), wild carrots, deer, elk, antelope, bear, rabbit, raccoon, squirrel, rat, mouse, sea lion, whale, duck, geese, and a variety of birds. Also eaten were salmon, steelhead, sardine, shark, swordfish, trout, lampreys, mussels, abalone, octopus, grasshoppers, caterpillars, and most varieties of reptiles. The Mutsun never ate eagles, owls, ravens, buzzards, frogs, or toads.

Family dwellings were domed structures thatched with tule, grass, ferns, etc. A small sweathouse was constructed by digging a pit in the bank of a stream and building the remainder of the structure against the bank. Dance enclosures were constructed in the middle of the village and were circular or oval in shape and consisted of a woven fence of brush or laurel branches about four and one-half feet high. There was a single doorway and a small opening opposite it. Tule boats (balsas) were used by the Mutsun for transportation, fishing, and hunting. Bow and arrows, spears, nets, and basket traps were used for hunting and fishing. Fish poisoning and fishhooks were also used. Tools were made of bone, wood, rocks, and minerals. Baskets were used in the collection, preparation, and storage of food.

The Spanish started their colonization of Central California in 1770, founding Mission San Carlos Borromeo del Rio Marmelo (Carmel) by Junipero Serra, second of the 21 missions. Mission Santa Cruz was founded in 1797, and the construction of Mission San Juan Bautista began in 1797. The Amah Mutsun people were aware of the actions of the Spanish; many village and religious sites were abandoned, and spies were sent to the Missions at Monterey and Santa Cruz. They witnessed the destruction of the sacred tree near Monterey and the subjugation of the villages of Rumsen (Carmel), Awaswas (Santa Cruz), and other neighboring villages. When the Spanish came to Tratrah, they conducted a campaign to subjugate the Amah Mutsun. First, they invaded the religious shrines of the Amah replacing them with Christian icons. When this was not totally successful, the Spanish soldiers forcibly removed the Indians from their villages and brought them to the Mission compound, separating children from parents. The Amah Mutsun were considered Mission property upon baptism and were not permitted to return to their Tribal Lands.

Many of the Christianized Indians, who were called "neophytes," attempted to flee the harsh conditions and slavery of the Mission. As a result, Spanish military expeditions were routinely dispatched to look for runaways and bring them back to the Mission. For this reason, some of the Amah took up weapons against the Spanish. First were the Ausaima, and, in 1802 after a series of battles, the Ausaima were defeated. Some records indicate that they may have moved to the central valley near the Merced River. The Orestac also battled the Spanish, but with little success. Under these oppressive conditions, the Amah were forced to conduct their Tribal activities and speak their language in secret. At the same time, while life at the Mission was repressive, the plight they experienced broke down any barriers that may have existed between the inhabitants of the different Amah Mutsun villages.

Although the stated goal of the Missions was to return land to the Indians, no land was ever provided. During the Mission period, over 19,421 Indians died at Mission San Juan Bautista and approximately 150,000 Indians died in California. According to anthropologist estimates, the California Indian population was reduced from 350,000 to 200,000 during this time.

The San Juan Bautista Mission priests maintained meticulous documentation of many Amah Mutsun activities. In 1841, Father Felipe de la Cuesta, a priest of Mission San Juan Bautista, published the Mutsun language in Europe, which was followed by a much later release in America. Father Felipe de la Cuesta translated prayers, songs, doctrines, confessions, and all primary vocabulary.

The Mission library contained records about the local Amah, including records of births, baptisms, marriages, and funerals, as well as punishment and imprisonments. From these records, journals, and other documents, it is apparent that the priests attempted to inculcate the Amah Mutsun with a new value system, so as to “civilize” them. Tribal activity was forbidden. Neophytes were not allowed to speak the Mutsun language, conduct Tribal ceremonies, or use their own Indian names. They were punished if these rules were broken. In addition to battling assaults on their culture, the Indians were also afflicted with foreign diseases brought by the Spanish, including smallpox, measles, and venereal diseases. As a result, by 1833 there had been a total of 3,396 baptisms, 858 marriages, and 19,421 deaths at Mission San Juan Bautista.

Life for the Amah Mutsun changed when, in the early 1820s, Mexico won independence from Spain, and more Mexicans began to arrive in the San Juan Valley. The Mexicans consolidated control of outlying lands, and by 1833 they forced the Mexican Government to turn over and secularize the Mission. Shortly thereafter, the remaining Amah Mutsun were finally allowed to leave the Mission compound. However, their problems continued with the Mexican authorities. Although the Mexicans promised a return of ancestral land, the officials reneged under pressure from Mexican and Spanish citizens who wanted land. Forced to scavenge for land and work, the Amah Mutsun settled for a time in the Town of San Juan Bautista.

During the Mexican period, Indians were forced to work under a peonage system. They worked in slave or near slave-like conditions, performing work such as shearing sheep, herding cattle, cutting lumber, harvesting crops, pounding grain into flour, building houses, tanning hides, cleaning houses, serving meals, and making tile and adobe bricks. During the Mexican period, shipping traffic increased. Ships from the eastern coast would bring manufactured goods such as fishhooks, cotton cloth, blankets, shoes, exotic spices, etc. to the California coast. These items were traded for the skins of wolverines, fisher martens, mink, beaver, otters, and whale oil. The trapping and hunting of these species greatly reduced the populations of these animals. During this period, native plants such as oak trees were logged for fuel, carts, and other purposes. Native plants were eaten by cattle and sheep before they could seed, and the population of these plants was drastically reduced.

Throughout the Mexican period, measles, pneumonia, diphtheria, and venereal and other diseases spread throughout the Native population. During the Mexican period, it is estimated that the population of California Indians was reduced by as much as 100,000; their population went from approximately 200,000 to 100,000 in this short period of time.

In 1848, the Amah Mutsun were disturbed again when Anglo settlers came to the region. The Anglos had no respect for the culture and traditional ways of the aboriginal people nor for their rights to occupancy of the land. Anglos, furthermore, were afraid of the California Indians from the outset. Due to the Anglos' experiences with the Plains Indians, the California Indians were treated with brutality.

In the early 1850s, both the Federal and the State governments concluded there was an “Indian problem.” To deal with this “problem”, both governments developed their own solution. The

Federal government became alarmed by reports of violence against the aboriginal populations, and in 1852 it established special military reservations to remove some of the Indians from the general population. At these military compounds, the Federal government conducted treaty negotiations with local Indians. Some of the San Juan Indians participated in the negotiations, serving as interpreters between the Americans and Tribal chiefs, and were signatories to the treaties signed near Pleasanton. Immediately after the treaties were completed, a powerful California business and political lobby quashed all hopes of getting the treaties ratified in the Senate. The U.S. Senate placed the treaties in confidential files and ordered that they be sealed for 50 years. In 1905 the Senate voted to remove the injunction of secrecy, but the proposed reservation land was now spoken for by the Anglo settlers. Because the treaties were never signed, all California Indians not living on reservations, such as the Mutsun, became landless Indians. The California solution to the Indian problem was that the Governor of California, Peter H. Burnett, signed an Executive Order to exterminate all Indians.

As a result of this Executive Order, the State of California paid between 35 cents and five dollars as a bounty for every Indian killed and funded military expeditions for the sole purpose of exterminating Indians. During this campaign, the State paid out over \$1,200,000.00. A report by the California State Library shows that over \$259,000 were spent on efforts in the Counties of Monterey and Mariposa alone. County lines were drawn differently during this time, but the County of Monterey incorporated the traditional Tribal territory of the Amah Mutsun. These campaigns continued until 1859.

During the last half of the nineteenth century, state hostility toward Indians continued, manifesting itself in numerous legal restrictions that deprived Indians of civil rights, voting rights, and basic judicial protections. Their subsistence was again threatened by the government, which considered ejecting all Indians from the State. Obviously, this environment was not conducive to Indian proclamations of sovereignty, demands for ancestral lands, or declarations of Tribal identity. This pervasive, Statewide persecution sent an unambiguous message to the Amah Mutsun: hide or be eradicated.

In 1891, the President of the United States signed an act for the relief of the Mission Indians in the State of California, as directed in the Mission Indian Act of 1891. This act provided that "a just and satisfactory settlement of the Mission Indians residing in the State of California upon reservations which shall be secured to them as hereafter provided," and "That it shall be the duty of said commissioners to select a reservation for each band or village of the Mission Indians residing within said State, which reservation shall include, as far as practicable the lands and villages which have been in the actual occupation and possession of said Indians, and which shall be sufficient in extent to meet their just requirements, which selection shall be valid when approved by the President and Secretary of the Interior."

It appears the Act for the Relief of the Mission Indians of the State of California was relegated to those Mission Tribes of southern California who obtained land and have reservations. It also appears that the State of California opposed other Mission Tribes obtaining lands or a reservation. The Amah Mutsun believe that this act gives Federal Recognition Status to the Amah Mutsun Tribe and that the Tribe was illegally denied a reservation in both San Juan Bautista and Santa Cruz. Through the 1900 census and a separate census authorized by Congress in 1906 that targeted non-reservation California Indians, the Federal government took a renewed and somewhat more positive interest in Indians. The Tribe's re-emergence during this period can be heavily attributed to Ascencion Solorsano de Cervantes, around whose home much Tribal activity

was centered. Ascencion's house became a place where members came daily to enlist Ascencion's support and to share news with other members. Ascencion became a repository for Tribal history, learning stories from others and passing on traditions and Tribal lore to the next generation. She took on the responsibility for finding employment, food, and medicine for members of the Tribe who needed her help. Her leadership in the first three decades of the twentieth century was critical to the future of the Tribe and coincided with the time when the Tribe's members were finally able to practice their culture publicly. Alfred Kroeber extended the first and second volumes of Father Felipe de la Cuesta's work on the Mutsun language and Tribal customs in the early 1920s. Subsequently, John Peabody Harrington continued his research by conducting follow-up interviews with Ascencion Solorsano and the San Juan community throughout the 1930s.

Harrington and the Smithsonian Institute employed Ascencion Solorsano's granddaughter, Martha Herrera. They met when Mr. Harrington went to New Monterey to interview Ascencion before her death. Martha was hired as his secretary and traveled with him to various California Missions transcribing notes from Spanish to English. He also requested other information, ranging from plants and their medicinal uses to recipes.

By 1928, many Tribal members were not afraid to cooperate with Federal authorities and were included in the 1928 Indian Enrollment Process. On their enrollment forms, members were accurately identified as "Mission Indian, San Juan Bautista" for the first time. At least 65 members of the Amah Mutsun were enrolled, including the ancestors of several prominent Mutsun families of today. By this time, the Amah Mutsun had resurfaced as a cohesive Tribal unit, allowing itself to be publicly visible to whites and Hispanics after years of suppression and compulsory sequestration. Ascencion had succeeded in reinvigorating Amah Mutsun identity and raising non-Indian awareness of the Tribe.

Since Ascencion's death in 1930, the Tribe has become stronger, and a series of leaders have ushered in a new era of Tribal growth. The 1930s brought regular Tribal gatherings at marriages, funerals, and baptisms, as it was required that all members assemble for the funeral of another. Many of these events were used to conduct informal Tribal business and exchange family and other Tribal information. In 1947, the Tribe participated in federal litigation to recover compensation from the government for promises it had made during the 1850 negotiations. During the 1950s and 1960s, gatherings of the Amah Mutsun Tribe were held as part of the San Juan Bautista Powwow, an annual three-day celebration at which members would participate in activities to celebrate their Amah Mutsun heritage. In 1991, the Amah Mutsun Tribe formed a government and passed a constitution. In 1992, the Amah Mutsun submitted documents requesting to have their federal recognition restored. The Amah Mutsun Tribal Band is currently listed as number two on the "Ready for Active Consideration", which means the review of the petition should begin sometime within the next few years.

Today the Amah Mutsun Tribe is an active community of nearly 600 members, each of whom can trace their individual descent directly to a Mission San Juan Bautista Indian and/or a Mission Santa Cruz Indian. In addition to the annual gatherings discussed above, the Tribe also holds regular membership meetings of the Tribal Council. The Council is responsible for governing the day-to-day operations of the Tribe. The Tribal Council works closely with its elders, and within the traditional Tribal structure, to resolve member concerns and carry on the business of the Tribe.

5.18.2 REGULATORY SETTING

5.18.2.1 Tribal Cultural Resources Regulatory Setting

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

Federal

There are no applicable regulations for TCRs that apply to the Proposed Project.

State

California Health and Safety Code and Public Resources Code

Broad provisions for the protection of Native American cultural resources are contained in the California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010 through 8030). Several provisions of the Public Resources Code (PRC) also govern archaeological finds of human remains and associated objects. Procedures are detailed under PRC Section 5097.98 through 5097.996 for actions to be taken whenever Native American remains are discovered. Furthermore, Section 7050.5 of the California Health and Safety Code states that any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in PRC Section 5097.99. Any person removing human remains without authority of law or written permission of the person or persons having the right to control the remains under PRC Section 7100 has committed a public offense that is punishable by imprisonment.

PRC Chapter 1.7, Section 5097.5/5097.9 (Stats. 1965, c. 1136, p. 2792), entitled Archaeological, Paleontological, and Historical Sites, defines any unauthorized disturbance or removal of a fossil site or remains on public land as a misdemeanor. A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological, or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

Section 21074 of the PRC states that "tribal cultural resources" are:

- (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed, or determined to be eligible for listing, in the national or state register of historical resources, or listed in a local register of historic resources; or
- (2) resources that the lead agency determines, in its discretion, are TCRs.

Any lead agency determination that a resource should be treated as a TCR must be made using the criteria set forth in subdivision (c) of § 5024.1 of the historical register.

The agency must also consider the significance of the resource to a California Native American Tribe (PRC §§ 5024.1, 21074). California Native American Tribes traditionally and culturally affiliated with the geographic area of a project may have expertise concerning their TCRs (PRC

§ 21080.3.1). Courts will defer to a lead agency's factual determination that a resource is a TCR if that decision is supported by substantial evidence in the record. Evidence that may support such a finding could include elder testimony, oral history, Tribal government archival information, testimony of a qualified archaeologist certified by the relevant Tribe, testimony of an expert certified by the Tribal government, official Tribal government declarations or resolutions, formal statements from a certified Tribal Historic Preservation Officer, or historical/anthropological records.

Regarding mitigation, public agencies must, when feasible, avoid damaging effects to any TCR (PRC § 21084.3(a)). Appropriate mitigation for a TCR is different than mitigation for archeological resources. If the lead agency determines that a project may cause a substantial adverse change to a TCR, mitigation measures should be identified through consultation with the Tribal government. If measures are not otherwise identified in the consultation process, the PRC describes mitigation measures that may avoid or minimize the significant adverse impacts (PRC § 21084.3(b)). Examples include:

- (1) Avoidance and preservation of the resources in place, including planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- (2) Treating the resource with culturally appropriate dignity, taking into account the Tribal cultural values and meaning of the resource, including the following:
 - A) Protecting the cultural character and integrity of the resource;
 - B) Protecting the traditional use of the resource; or
 - C) Protecting the confidentiality of the resource.
- (3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- (4) Protecting the resource.

Assembly Bill 52

Assembly Bill (AB) 52 established that a TCR must be considered under California Environmental Quality Act (CEQA) and also provided for additional Native American consultation requirements for the lead agency. A TCR is a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American Tribe. A TCR is either:

- On the CRHR or a local historic register;
- Eligible for the CRHR or a local historic register; or
- The lead agency determines that the resource meets the register criteria.

A project that has potential to impact a TCR such that it would cause a substantial adverse change constitutes a significant effect on the environment unless mitigation reduces such effects to a less-than-significant level. On July 30, 2016, the California Natural Resources Agency adopted the final text for TCRs update to Appendix G of the CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016. AB 52 amended California PRC Section

5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact or a Tribal representative of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the Tribe's request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of TCRs; the significance of the project's impacts on the TCRs; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American Tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American Tribe has failed to request consultation within 30 days, the lead agency may certify an Environmental Impact Report (EIR) or adopt an Mitigated Negative Declaration (MND) (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the TCRs, that is submitted by a California Native American Tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the Tribe that provided the information. If the lead agency publishes any information submitted by a California Native American Tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the Tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Confidentiality does not, however, apply to data or information that are, or become, publicly available, are already in lawful possession of the project applicant before the provision of the information by the California Native American Tribe, are independently developed by the project applicant or the project applicant's agents, or are lawfully obtained by the project applicant from a third party that is not the lead agency, a California Native American Tribe, or another public agency (PRC Section 21082.3(c)(2)(B)).

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D,

Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local TCRs-related policies, plans, or programs for informational purposes. Although LS Power Grid California, LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

Cultural resources are addressed in the Community Character Element of the City of Fremont General Plan (City of Fremont, 2011). The General Plan identifies the following goals and policies pertaining to TCRs:

Implementation 4-5.3.B Impacts of Utilities. Review planned utility undergrounding, sidewalk repair and other infrastructure projects to avoid unnecessary removal of important design features, trees, or historic features.

Goal 4-6 Historic Preservation and Cultural Resources. Conservation and enhancement of Fremont's historic sites, buildings, structures, objects, and landscapes into the 21st Century and beyond.

Policy 4-6.1 Protection of Historic Resources. Identify, preserve, protect and maintain buildings, structures, objects, sites, and districts which are reminders of past eras, events, and persons important in local, state, or national history. Historic structures which provide significant examples of architectural periods and styles of the past are irreplaceable assets. They should be protected to provide present and future generations with examples of the physical environments in which past generations lived and worked. The needless destruction and impairment of significant historic resources must be prevented so that opportunities for public enjoyment and economic utilization of such resources are not diminished or lost.

Policy 4-6.4 Historic Settings and Landscapes. Identify and pursue measures to protect the historic settings and landscapes that contribute to Fremont's historic resources. The City shall review proposed development and redevelopment projects to ensure their compatibility with existing historic settings. In particular, such review shall address the scale, massing, and on-site improvements of proposed development as it relates to historic settings. This policy recognizes that the historic value of a site may extend beyond structures and include the landscape and setting around a structure.

This could include heritage trees, gardens, historic plantings, significant landscape elements, fences and outbuildings, and other character-defining features.

Policy 4-6.6 **Historic Preservation Regulations.** Observe local, State, and federal historic preservation laws, regulations, and codes to ensure conservation of Fremont's significant historic resources. These laws include but are not limited to Mills Act Historic Property contracts, the California Historical Building Code, and State laws related to archaeological resources.

Policy 4-6.10 **Protection of Native American Remains.** Coordinate with representatives of local Native American organizations to ensure the protection of Native American resources and to follow appropriate mitigation, preservation, and recovery measures in the event such resources could be impacted by development.

City of Fremont Historic Resources Ordinance

Chapter 18.175 of the City of Fremont Municipal Code provides Fremont's Historic Resources Ordinance (City of Fremont, 2023). The purpose of the Historic Resources Ordinance is to safeguard the City's heritage by encouraging the protection of historic resources that have important associations with past eras, events, and persons important in local, state, or national history, or which provide significant examples of architectural styles of the past or are historical architectural resources. Historic resources also may include structures that are unique and irreplaceable assets to the city and its neighborhoods, or which provide examples of the physical surroundings in which past generations lived. Components of the Historic Resources Ordinance include its purpose and intent, overview of the historical architecture review board, City of Fremont register of historic resources, historic overlay districts, evaluation of buildings, structures, or objects, approach to historic preservation, and procedures for permitting minor alterations or demolition of historic resources.

City of Milpitas General Plan

The City of Milpitas General Plan (City of Milpitas, 2021) guides physical development in the City through 2040. The following goals and policies related to TCRs are provided for informational purposes only:

Policy CD 1-4 Recognize, enhance, celebrate, and preserve, where possible, natural features and ecosystems, and protect cultural and historic resources.

Goal CON-4 Preserve and protect prehistoric, historic, archaeological, and paleontological resources in Milpitas.

Policy CON 4-1 Review proposed developments and work in conjunction with the California Historical Resources Information System, Northwest Information Center at Sonoma State University, to determine whether project areas contain known archaeological resources, either prehistoric and/or historic-era, or have the potential for such resources.

- Policy CON 4-2** If found during construction, ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.
- Policy CON 4-3** Work with Native American representatives to identify and appropriately address, through avoidance or mitigation, impacts to Native American cultural resources and sacred sites during the development review process.
- Policy CON 4-4** Consistent with State, local, and tribal intergovernmental consultation requirements such as Senate Bill 18 and AB 52, the City shall consult as necessary with Native American Tribes that may be interested in proposed new development and land use policy changes.
- Goal CON-5** Protect and enhance historic resources- including places, buildings, or landmarks with historic, architectural, cultural, and/or aesthetic significance.
- Policy CON 5-1** Protect significant historic resources and use these resources to promote a sense of place and history in Milpitas through implementation of the Milpitas Cultural Resources Preservation Program (Municipal Code, Title XI, Chapter 4), the Conceptual Historic Resources Master Plan, the conservation and preservation of the City's historical collection at the Milpitas Community Museum, and other applicable codes, regulations, and area plans.

City of Milpitas Cultural Resources Preservation Program

Title XI, Chapter 4 of the City of Milpitas Municipal Code provides the City's Cultural Resources Preservation Program (City of Milpitas, 2023). The Cultural Resources Preservation Program aims to balance the needs of the community for preservation and development by creating a Parks, Recreation, and Cultural Resources Commission, setting forth procedures to allow the inventory and classification of community cultural resources, and providing guidance to owners in the preservation of valuable cultural assets. Components in the Cultural Resources Preservation Program include general objectives; purpose; definitions; Parks, Recreation, and Cultural Resources Commission; powers and duties; designation criteria and procedures; permits; permit procedures; maintenance and repair; showing of hardship; rules and regulations; and violations.

City of San José General Plan

The City of San José General Plan sets forth a vision and a comprehensive road map to guide the City's continued growth through the year 2040 (City of San José, 2024). The various elements of the City of San José General Plan have been combined into a consistent and meaningful plan and organized in a manner designed to meet public needs. The following policies and goals related to cultural resources have been provided for informational purposes only:

- Policy CD-1.26** Apply the Historic Preservation Goals and Policies of this Plan to proposals that modify historic resources or include development near historic resources.
- Goal ER-10** Preserve and conserve archaeological significant structures, sites, districts, and artifacts in order to promote a greater sense of historic awareness and community identity.
- Policy ER-10.1** For proposed development sites that have been identified as archaeologically or paleontologically sensitive, require investigation during the planning process in order to determine whether potentially significant archaeological or paleontological information may be affected by the project and then require, if needed, that appropriate mitigation measures be incorporated into the project design.
- Policy ER-10.2** Recognizing that Native American human remains may be encountered at unexpected locations, impose a requirement on all development permits and tentative subdivision maps that upon their discovery during construction, development activity will cease until professional archaeological examination confirms whether the burial is human. If the remains are determined to be Native American, applicable state laws shall be enforced.
- Policy ER-10.3** Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.
- Goal LU-13** **Landmarks and Districts.** Preserve and enhance historic landmarks and districts in order to promote a greater sense of historic awareness and community identity and contribute toward a sense of place.
- Policy LU-13.12** Develop and encourage public/public and public/private partnerships as a means to support, expand, and promote historic preservation.
- Policy LU-13.15** Implement City, State, and Federal historic preservation laws, regulations, and codes to ensure the adequate protection of historic resources.
- Policy LU-13.16** Alert property owners, land developers, and the building industry to historic preservation goals and policies and their implications early in the development process.
- Goal IP-10** **Site Development.** Use the Site Development permit process to implement the Environ General Plan goals and policies.
- Policy IP-10.3** In addition to a Site Development permit, require an Historic Preservation permit for modifications to a designated Historic Landmark structure. This permit process fosters the implementation of Historic Preservation goals and policies of the Envision General Plan

No City of San José Standard Conditions of Approval related to TCRs were available for review.

City of San José Historic Preservation

The Council of the City of San José adopted the Historic Preservation Ordinance (Section 13.48 of the City's Municipal Code) to promote a harmonious outward appearance of structures in the historic styles and a general harmony as to style, form, color, proportion, texture, and material between buildings of historic design and those of more modern design; that such purpose is advanced through the preservation and protection of the old historic or architecturally worthy structures and neighborhoods which impart a distinct aspect to the City of San José and which serve as visible reminders of the historical and cultural heritage of the City of San José. Basic components of the ordinance include purpose, definitions, historic landmark commission, historic resource inventory, historic preservation officer, procedures for designation of a landmark, procedures for designation of historic districts, notice of amendment or rescission of designation, historic preservation permits, historic property contracts, and conservation areas.

City of Santa Clara General Plan

The City of Santa Clara General Plan sets forth policies and goals to provide direction for city development through 2035 (City of Santa Clara, 2010). A list of architecturally or historically significant resources is maintained as Appendix 8.9 of the General Plan, which provides a list of the names and locations of the historic properties in the City of Santa Clara including the Areas of Historic Sensitivity, defined as 100 feet from the property line of an identified historically significant property. Appendix 8.9 also provides the Criteria for Local Significance, which establish evaluation measures that help to determine significance for properties not yet included on the list. The following policies and goals related to TCRs are provided for informational purposes only:

- Policy 5.6.1-P1** Discourage the demolition or inappropriate alterations of historic buildings and ensure the protection of historic resources through the continued enforcement of codes and design guidelines.
- Policy 5.6.1-P3** Protect historic resources from demolition, inappropriate alterations, and incompatible development.
- Goal 5.6.2-G1** New development that is compatible with nearby historic resources.
- Policy 5.6.2-P1** Evaluate any proposed changes to properties within 100 feet of historic resources on the City's list of Architecturally or Historically Significant Properties for potential negative effects on the historic integrity of the resource or its historic context.
- 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.

- Policy 5.6.3-P1** Require that new development avoid or reduce potential impacts to archaeological, paleontological, and cultural resources.
- Policy 5.6.3-P4** Require that a qualified paleontologist/archaeologist monitor all grading and/or excavation if there is a potential to affect archeological or paleontological resources, including sites within 500 feet of natural water courses and in the Old Quad neighborhood.
- Policy 5.6.3-P5** In the event that archaeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archaeologist/paleontologist.
- Policy 5.6.3-P6** In the event that human remains are discovered, work with the appropriate Native American representative and follow the procedures set forth in State law.

City of Santa Clara Historic Preservation Ordinance

The City of Santa Clara adopted the Historic Preservation Ordinance (Chapter 18.106 of the City's Municipal Code) to promote the identification, protection, enhancement, and perpetuation of buildings, structures, and properties within the City (City of Santa Clara, 2023). The Historic Preservation Ordinance outlines the designation criteria for a property to be placed on the Historic Resources Inventory (HRI). Designated properties reflect special elements of the City's social, economic, historical, architectural, engineering, archaeological, cultural, natural, or aesthetic heritage. Components of the ordinance include definitions, intent, identification of HRI properties, HRI property designation, permits required for property alterations, demolition permits, and Historical and Landmarks Commission referral for projects near HRI properties.

5.18.3 IMPACT QUESTIONS

5.18.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to TCRs come from the CEQA Appendix G Environmental Checklist. According to the CEQA Checklist, a project may cause a potentially significant impact if it would:

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:

- 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
- 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 Resources Code Section 50421.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

5.18.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for TCRs.

5.18.4 IMPACT ANALYSIS

5.18.4.1 Tribal Cultural Resources Impact Analysis

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 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 Impact. There are no known prehistoric sites within the Proposed Project area that may be eligible for listing on the CRHR and would, therefore, qualify as TCRs as defined in PRC Section 21074. However, the SLF search and Tribal outreach indicates that lands sacred to the Ohlone Indian Tribe and the North Valley Yokuts Tribe are present within the Proposed Project search area; therefore, unrecorded TCRs may exist within or adjacent to the Proposed Project area. While unanticipated, the Proposed Project would involve excavation activities that have the potential to expose TCRs that are eligible for listing in the CRHR or in a local register. Should previously unidentified TCRs be encountered during construction, the following **Applicant Proposed Measures (APMs)** would reduce impacts to less than significant by ensuring that all Proposed Project construction personnel can recognize TCRs, avoid known resources, and appropriately respond to unanticipated discoveries: **APM TCR-1, Worker Environmental Awareness Program (WEAP) Training** requires the development and implementation of a WEAP that includes definition and identification of TCRs; **APM TCR-2, Native American Monitoring** requires Native American monitoring to assist in identification and evaluation of potential TCRs; and **APM CUL-3, Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources** specifies the procedures needed to occur if previously unidentified TCRs are uncovered during implementation of the Proposed Project. **APM CUL-4, Cultural Resources Surveys** would require a cultural survey prior to construction at the temporary construction staging areas, which would reduce impacts to less than significant by ensuring that any newly identified TCRs are either avoided by project redesign or evaluated and treated. Unrecorded human remains may be present within the Proposed Project area; if encountered, implementation of **APM CUL-5, Unanticipated Discovery of Human Remains** provides avoidance and protection of the remains by ensuring that appropriate personnel are present and appropriate procedures are followed, ensuring that impacts to human remains are reduced to less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at the existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). These substation modifications would occur within and adjacent to Newark substation (located entirely within PG&E fee-owned property). Construction on these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a similarly limited duration. Similar to the Proposed Project, modifications to the existing Newark substation would involve earthmoving activities that may have the potential to expose TCRs that are eligible for listing in the CRHR or in a local register. Implementation of PG&E **Best Management Practices (BMPs) CULT-1 through CULT-3** would reduce potential impacts by ensuring that all Proposed Project personnel can recognize TCRs; avoid known TCRs; appropriately respond to unanticipated discoveries of any newly identified TCRs; and ensure that appropriate personnel are present and appropriate procedures are followed. Therefore, impacts to TCRs would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at the existing NRS substation (refer to **Section 3.3.5**). These substation modifications would occur within the NRS substation. Construction on these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a similarly limited duration. As the existing NRS substation is fully developed, no impacts to TCRs would result.

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 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 Resources Code Section 50421.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less-Than-Significant Impact. There are no known TCRs located within the Proposed Project area. However, the SLF search and Tribal outreach indicate that lands sacred to the Ohlone Indian Tribe and the North Valley Yokuts Tribe are present within the Proposed Project search area; therefore, unrecorded TCRs that may be determined by the lead agency to be significant may exist within or adjacent to the Proposed Project area. While unanticipated, the Proposed Project would involve excavation activities that have the potential to expose TCRs that may be determined by the lead agency to be significant. Should TCRs determined by the lead agency to be significant be encountered during construction, **APMs TCR-1, TCR-2, and CUL-3** would reduce impacts to less than significant by ensuring that all Proposed Project personnel can recognize TCRs, avoid known TCRs, and appropriately respond to unanticipated discoveries. **APM CUL-4** would require a cultural survey prior to construction for the temporary construction staging areas and if the Proposed Project area is expanded or adjusted, which would reduce

impacts to less than significant by ensuring that any newly identified TCRs are either avoided by project redesign or evaluated and treated. While unlikely, unrecorded human remains may be present within the Proposed Project area; if encountered, **APM CUL-5** would ensure that impacts to human remains are reduced to less than significant by ensuring that appropriate personnel are present and appropriate procedures are followed. Therefore, impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Similar to the Proposed Project, modifications to the existing Newark substation would involve earthmoving activities that may have the potential to expose TCRs that may be determined by the lead agency to be significant. Implementation of PG&E **BMPs CULT-1** through **CULT-3** would reduce potential impacts by ensuring that all Proposed Project personnel can recognize TCRs; appropriately respond to unanticipated discoveries of any newly identified TCRs; and ensure that appropriate personnel are present and appropriate procedures are followed. Therefore, impacts to this criterion would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. These substation modifications would occur within the NRS substation. Construction on these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a similarly limited duration. As the existing NRS substation is fully developed, no impacts to TCRs would result.

5.18.4.2 Information Provided by Tribes

No information on recorded TCRs within the Proposed Project area was provided by Tribes. However, the SLF search indicates that lands sacred to the Ohlone Indian Tribe and the North Valley Yokuts Tribe are present within the Proposed Project search area; therefore, unrecorded TCRs may exist within or adjacent to the Proposed Project area. While unanticipated, the Proposed Project would involve excavation activities that have the potential to expose TCRs that may be identified through further information provided by Tribes. If undocumented subsurface TCRs are present in the Proposed Project area, ground-disturbing activities might cause a substantial adverse change in the significance of these TCRs. Should TCRs identified through further information provided by Tribes be encountered during construction, **APMs TCR-1, TCR-2, and CULT-3** would reduce impacts to less than significant by ensuring that all Proposed Project personnel can recognize TCRs, avoid known TCRs, and appropriately respond to unanticipated discoveries. **APM CUL-4** would reduce impacts to less than significant if the Proposed Project area is expanded or adjusted by ensuring that any newly identified TCRs are either avoided by project redesign or evaluated and treated. Unrecorded human remains may be present within the Proposed Project area; if encountered, **APM CUL-5** would ensure that impacts to human remains are reduced to less than significant by ensuring that appropriate personnel are present and appropriate procedures are followed. Therefore, impacts would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Similar to the Proposed Project, modifications to the existing Newark substation would involve earthmoving activities that may have the potential to expose TCRs that may be identified through further information provided by Tribes. Implementation of PG&E **BMPs CULT-1** through **CULT-3** would reduce potential impacts by ensuring that all Proposed Project personnel can recognize TCRs; appropriately respond to unanticipated discoveries of any newly identified TCRs; and ensure that appropriate personnel are present and appropriate procedures are followed. Therefore, impacts to this criterion would be less than significant.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing NRS substation. These substation modifications would occur within the NRS substation. Construction on these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a similarly limited duration. As the existing NRS substation is fully developed, impacts to this criterion would not result.

5.18.5 CPUC DRAFT ENVIRONMENTAL MEASURES

There are no CPUC Draft Environmental Measures suggested for TCRs.

5.18.6 APPLICANT PROPOSED MEASURES

LS Power has developed the following TCR APMs based on the Governor's Office of Planning and Research (OPR) Technical Advisory: AB 52 and TCRs in CEQA (OPR, 2020), but the CPUC (as the lead agency) would consult with the Tribes and these APMs may be superseded based on the results of the government-to-government consultation. Refer to Section 5.5 for reference to **APMs CUL-1** through **CUL-5**.

APM TCR-1: WEAP Training

LS Power shall work with interested Tribes to design the TCRs component of a WEAP that shall be provided to all Proposed Project personnel who may encounter and/or alter TCRs or prehistoric/ethnohistoric archaeological properties, including construction supervisors and field personnel. The WEAP shall be submitted to the CPUC prior to construction. No construction worker shall be involved in ground-disturbing activities without having participated in the WEAP.

The WEAP shall include, at a minimum:

- Training on how to identify potential TCRs and human remains during the construction process;
- A review of applicable regulations pertaining to TCRs;
- A discussion of procedures to be followed in the event that unanticipated TCRs are discovered during implementation of the Proposed Project;

- A discussion of culturally appropriate dignity, taking into account the Tribal cultural values and meaning of the resource, including the cultural character and integrity, traditional uses, and confidentiality of resources.
- A statement by the construction company or applicable employer agreeing to abide by the WEAP, LS Power policies, and other applicable laws and regulations.

The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Proposed Project, provided that the program elements pertaining to cultural resources are designed with the input of interested Tribes.

APM TCR-2: Native American Monitoring

Native American monitoring shall be conducted during ground disturbance associated with the Proposed Project when within 100 feet (30 meters) of previously recorded prehistoric, ethnohistoric, or TCRs. Prehistoric and/or ethnohistoric archaeological sites have been recorded within the Proposed Project area, and the SLF search and Tribal outreach indicates that lands sacred to the North Valley Yokuts Tribe and the Ohlone Indian Tribe are present within the Proposed Project search area. A Native American monitor determined during Tribal consultation shall be retained by LS Power to monitor excavation associated with the Proposed Project to ensure that there is no impact to any significant unanticipated prehistoric, ethnohistoric, or TCR. Prior to construction, LS Power shall confer with a designated Tribal representative on the appropriate course of action to be taken should unanticipated cultural materials, and specifically human remains, be discovered during construction. Native American monitoring requirements established in this APM may be superseded by government-to-government consultation conducted between the CPUC and Tribal organizations as part of the AB 52 process or otherwise.

5.18.7 PG&E BEST MANAGEMENT PRACTICES

PG&E would implement **BMPs CULT-1** through **CULT-3**, as discussed in **Section 5.5**. No additional BMPs specific to TCRs have been included for PG&E's scope of work.

5.18.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for TCRs would be implemented for SVP's scope of work.

5.19 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 stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
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?				X
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?			X	
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X
f.	Increase the rate of corrosion of adjacent utility lines as a result of alternating current impacts?			X	

This section describes the utilities and service systems within the vicinity of the Proposed Project, as well as the potential impacts that could result from construction and operation and maintenance (O&M) of the Proposed Project.

5.19.1 ENVIRONMENTAL SETTING

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, California. Each City's respective General Plan, Urban Water Management Plan (UWMP), the California Code of Regulations (CCR), and local relevant websites were reviewed for regulatory information and for background information related to water, gas and electrical, sewer, stormwater, and telecommunication service providers for the Proposed Project area.

5.19.1.1 Utility Providers

The following identifies the existing utility providers and the associated infrastructure that serves the Proposed Project area.

Water

The City of Fremont residents and businesses receive their water supply from the Alameda County Water District (ACWD). About 27 percent of the total water supply is purchased from the State Water Project (SWP). Approximately 19 percent of the total supply originates from the San Francisco Regional Water System (RWS), which is operated by the San Francisco Public Utilities Commission (SFPUC). The remainder, about 54 percent of the total water supply, originates locally from the Del Valle Reservoir, Alameda Creek Watershed, and the Niles Cone groundwater basin. ACWD treats its water to meet and surpass all state and federal drinking water standards (City of Fremont, 2011).

ACWD supplies water to a service area of approximately 104.8 square miles encompassing the Cities of Fremont, Newark, and Union City ("Tri-Cities"). Approximately 68 percent of ACWD's demand is from residential customers, with the balance utilized by commercial, industrial, institutional, and large landscape customers. Total distribution system water use (excluding system losses) was approximately 137 acre-feet (AF) per day, or 45 million gallons per day (mgd) (50,000 acre-feet per year [AF/year]) in fiscal year 2007-2008. The groundwater system use includes private (non-ACWD) groundwater pumping used primarily for industrial, agriculture, and municipal landscape irrigation uses. In addition, the Aquifer Reclamation Program (ARP) is an ongoing ACWD program to pump saline groundwater out of the groundwater basin and replace it with fresh water at the ACWD's recharge facilities which consists of Alameda Creek and Quarry Lakes. Saline groundwater outflow to San Francisco Bay is required to prevent seawater intrusion into the local aquifer and drinking water system. ACWD also operates the Newark Desalination Facility which treats brackish groundwater to remove salts and other impurities (City of Fremont, 2011; ACWD, 2023).

The City of Milpitas owns, operates, and maintains a potable water distribution system which services over 80,000 customers in the City. The City purchases treated potable water from two wholesalers, the SFPUC RWS and the Santa Clara Valley Water District (SCVWD or "Valley Water") (City of Milpitas, 2021a). The SFPUC RWS supply is predominantly snowmelt from the Sierra Nevada Mountains, delivered through the Hetch Hetchy aqueducts, but it also includes treated water produced by the SFPUC from its local watersheds and facilities in the Counties of Alameda and San Mateo. SCVWD provides treated water from its Penitencia and Santa Teresa treatment plant via its Milpitas Pipeline which terminates in the City (City of Milpitas, 2021a).

The three potable water suppliers who serve the City of San José are San José Municipal Water System ("Muni Water"), San José Water (SJW), and Great Oaks Water Company (GOWC). Muni Water is owned and operated by the City of San José, while SJW and GOWC are privately owned (City of San José, 2013). The Proposed Project spans across the Muni Water service area. Muni Water has grown from a relatively small water utility to the fourth largest water retailer in the County of Santa Clara. Muni Water serves approximately 130,000 customers in the City of San José. Muni Water relies on water supply from surface water from SFPUC, local and imported surface water from SCVWD, groundwater from the Santa Clara Subbasin, and recycled water from South Bay Water Recycling (SBWR) (City of San José, 2021). The SFPUC supply is

predominately from the Sierra Nevada Mountain range, delivered through the Hetch Hetchy aqueducts, but also includes treated water from its local watersheds and facilities.

The City of Santa Clara's water service area covers only those water services connections found within City limits. The City of Santa Clara receives its potable water supply from a combination of the City of San Francisco's Hetch Hetchy aqueduct system, the SCVWD, local groundwater from City-owned wells, and recycled water from SBWR (City of Santa Clara, 2021). Groundwater coming from the Santa Clara Subbasin contributes the predominant portion, at almost 70 percent, of the City's supply. The City of Santa Clara also uses recycled wastewater for certain landscape irrigation, industrial, and construction purposes. Currently, water production wells in the Santa Clara Valley average about 278 feet in depth below ground surface and yield an average of 425 gallons per minute (City of Santa Clara, 2010). The water system within the City of Santa Clara consists of approximately 335 miles of water mains, 26 wells, and seven storage tanks with 29 million gallons of water capacity, and three booster pump stations (City of Santa Clara, 2023a). SCVWD and the SFPUC Hetch Hetchy system provide imported water for the remaining supply. In 2020, the City's Department of Water and Sewer Utilities had approximately 25,828 water service connections with an average potable water demand of 16.3 mgd (18,302 AF) and 3.1 mgd (3,499 AF) recycled water demand. Recycled water comprises approximately 10 percent of the City's overall water supply and is supplied from the San José-Santa Clara Water Pollution Control Plant (WPCP), which is an advanced tertiary treatment plant. The primary use for recycled water is for irrigation of large turf areas at golf courses, parks, schools, industrial processing of water, cooling towers, toilet flushing in dual-plumbed buildings, and the City's electric utility-operated 147-megawatt power plant's cooling and steaming process (City of Santa Clara, 2021).

Gas and Electrical

Pacific Gas and Electric Company (PG&E) provides electric and natural gas to the Cities of Fremont, Milpitas, and San José; and Silicon Valley Power (SVP) provides electricity to the City of Santa Clara. The existing PG&E Newark substation and SVP Northern Receiving Station (NRS) substation are an integral part of the Greater Bay Area transmission system by facilitating the transfer of energy in the South Bay area.

There are numerous local electrical distribution lines in the area that could serve the Proposed Project during construction and during O&M. The Proposed Project would have connections to an existing PG&E distribution line south of the proposed Albrae terminal site and an existing SVP distribution line that runs southwest of the proposed Baylands terminal site. In addition, the Proposed Project would have connections to existing overhead or underground distribution lines near the staging areas. Distribution lines would be installed overhead on wood poles or underground to provide power to the proposed staging areas and both high-voltage direct current (HVDC) terminal sites. The use of temporary generators for construction at the proposed HVDC terminals and staging areas would be a contingency if distribution power is not available in a timely manner prior to construction. Temporary mobile generators would be required during construction of the proposed underground transmission lines, as needed.

PG&E operates transmission and distribution-level natural gas lines throughout the Proposed Project area. The Proposed Project would not require a natural gas distribution connection.

Sewer

The Proposed Project area is served by the Union Sanitary District Wastewater Facility ("Union Sanitary District") and the San José-Santa Clara Regional Wastewater Facility (RWF). The Union Sanitary District is an independent special district which provides wastewater collection, treatment, and disposal services to the residents and businesses of the Cities of Fremont, Newark, and Union City, in southern Alameda County, California. The Union Sanitary District serves a total of 60.2 square miles, including 36.4 square miles in the City of Fremont, serving residential, commercial, and industrial areas (City of Fremont, 2011). The Union Sanitary District maintains approximately 839 miles of underground sewer infrastructure with seven pump stations within the service area. The facility services 343,680 residents and treats an average of 27.5 million gallons of wastewater each day (Union Sanitary District, 2023).

The City of Milpitas owns and operates its own sewer collection system, which includes main sewer connections, gravity pipes, force mains, and pump stations. The main sewer station has a capacity of 45 mgd and pumps sewage through 2.5 miles of sewer connections to the San José-Santa Clara RWF for treatment (City of Milpitas, 2021b).

The San José-Santa Clara RWF sanitary sewer system includes the piping and substations that transport the wastewater from households and businesses to the San José-Santa Clara RWF (City of San José, 2023). The facility services 1.4 million residents and over 17,000 businesses in eight cities and four sanitation districts. The facility is jointly owned by the Cities of San José and Santa Clara and is managed and operated by the City of San José's Environmental Services Department (City of San José, 2023). During construction of the Proposed Project, portable toilets would be used, and all sanitary waste would be disposed of off-site. Once constructed, the Proposed Project would be remotely operated with no permanent workforce on-site and would not generate wastewater or connect to a wastewater collection system.

Stormwater

The Alameda County Flood Control and Water Conservation District (ACFC/WCD) and the City of Fremont share the responsibility for storm drainage within the City of Fremont. The District's primary focus is to plan, design, and inspect construction of flood control projects and to maintain flood control infrastructure that preserves the natural environment through pollution control regulations. The ACFC/WCD has delineated watersheds into management zones. In the City of Fremont area, two management zones exist: Zone 5 is generally located in the northern part of the City and Zone 6 in the south. Each zone contains several watersheds. The boundary between the two zones generally runs northeast to southwest along Stevenson Avenue and Grimmer Boulevard. Zone 5 incorporates over 36 miles of natural waterways, including Alameda Creek, Crandall Creek, Dry Creek, and Plummer Creek. It also includes 50 miles of engineered flood control channels. Stormwater in this watershed travels through channels, pipelines, and underground culverts to three pump stations which lift and discharge stormwater to San Francisco Bay. Zone 6 includes the following creeks: Laguna, Mission, Canada Del Aliso, Agua Caliente, Agua Fria, Toroges, and Scott. Water from these creeks flows to a series of pipelines and channels that discharge to either Coyote Creek or Mowry Slough before continuing to San Francisco Bay. Alameda Creek, as well as all the creeks and channels that comprise the ACFC/WCD drainage facilities, along with Lake Elizabeth, accommodate floodwater for purposes of stormwater management. The City of Fremont is responsible for maintaining the majority of the storm drainage system and ensuring that adequate storm drainage facilities are built to support new development. These drainage improvements are constructed as new development occurs.

The City of Fremont maintains local storm drains, replacing pipes and other facilities as needed (City of Fremont, 2011).

The Cities of Fremont and San José have a storm sewer system, also known as a Municipal Separate Storm Sewer System ("MS4"), which directs runoff into inlets (storm drains) and gutters on local streets, as well as pipes and outfalls, to a local water body, such as a creek or river (City of Fremont, 2024; City of San José, 2024a).

The Cities of Milpitas, San José, and Santa Clara are members of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), which consists of 13 cities that share a common National Pollutant Discharge Elimination System (NPDES) permit to discharge to the South San Francisco Bay. The NPDES permit is the In June 1990, the Program received the first municipal stormwater permit in the nation from the San Francisco Bay Regional Water Quality Control Board (RWQCB). The permit was reissued in 1995, 2001, 2009, and 2015 (SCVURPPP, 2024). The stormwater drainage system for these Cities, consisting of curb inlets that collect and channel surface water, discharges via gravity outfalls, underground pipelines, and pump stations into three ephemeral creeks: Calabazas, Saratoga, and San Tomas Aquino Creek (City of Santa Clara, 2023b). These channelized creeks then direct flow into the San Francisco Bay (City of Santa Clara, 2010). The NPDES permit was reissued in 2022 and is referred to as the Municipal Regional Stormwater (MRP) NPDES Permit issued by the San Francisco RWQCB, which covers stormwater discharges from a total of 76 municipalities and local agencies in Alameda, Contra Costa, San Mateo and Santa Clara Counties, including the City of Fremont (San Francisco Bay RWQCB, 2022).

Stormwater Best Management Practices (BMPs) would be outlined in the Proposed Project's Stormwater Pollution Prevention Plan (SWPPP) and BMP Manual and implemented during construction (discussed in more detail in **Section 5.10, Hydrology and Water Quality**). The SWPPP BMPs would remain in place and would be maintained until construction is complete and the work sites are stabilized. As described in **Section 3.5.9.3, Runoff**, operation of the Proposed Project would include a stormwater management system consisting of a stormwater drainage and conveyance system and a stormwater detention system at each proposed HVDC terminal location. The size of the detention system would vary for each proposed HVDC terminal site, depending on site-specific conditions, and may include a detention basin, underground detention vaults, or a combination thereof.

Telecommunications

Communications within the vicinity of the Proposed Project include telephone services provided by T-Mobile USA, Inc., AT&T Inc., and Verizon Communications Inc.; cable television service is provided by several providers including AT&T Inc., Xfinity Internet, EarthLink Internet, T-Mobile Internet, EarthLink 5G Internet, HughesNet Internet, Viasat Internet; and several internet providers including AT&T Fiber, Xfinity Internet, Verizon Communications, Inc., Viasat Internet, HughesNet Internet, Always On, Tekify Fiber & Wireless, Sail Internet, Raw Bandwidth Communications, Inc., and Starlink (United States Federal Communications Commission, 2021; Broadbandnow, 2014-2023). As discussed in **Section 3.0, Proposed Project Description**, it is anticipated that the Proposed Project would include new telecommunications infrastructure that would connect the new HVDC terminals to each other, connect the HVDC terminals to the existing PG&E substations, and connect each HVDC terminal to local existing third-party internet providers. Each telecommunication path would consist of fiber optic cables which would be installed underground and collocated with the new transmission lines where practical.

5.19.1.2 Utility Lines

Based on preliminary design, LS Power has identified over 200 potential existing utilities located within the vicinity of the Proposed Project, including one gas pipeline that would cross and parallel the proposed Albrae to Baylands 320 kV DC transmission line for approximately three miles along Fremont Boulevard, and two gas pipelines that would cross and parallel the proposed Baylands to NRS 230 kV AC transmission line along Lafayette Street. The only known existing metallic utilities located in the vicinity of the proposed Newark to Albrae 230 kV transmission line are overhead PG&E electric distribution and transmission lines and the existing Newark substation. As described in **Section 3.5.4.2, Utilities**, prior to initiating construction, LS Power Grid California, LLC ("LS Power") would contact Underground Service Alert (USA), also known as USA North 811, to identify underground utilities in the immediate area of the Proposed Project. In addition, as part of Proposed Project construction, excavation and installation of the concrete-encased duct bank and associated splice vaults may require the relocation of unconnected utilities in areas of conflict. In the event underground utilities are identified, LS Power would work with the owner of those utilities to determine if design changes can be made or if relocation procedures and locations are necessary (as provided in **Applicant Proposed Measure [APM] UTIL-1, Coordination with Utilities**). Utilities would be avoided where practical, but some utilities would require relocation. Utilities that could require relocation may include sanitary sewer, stormwater, gas, water, electric, and telecommunication.

5.19.1.3 Approved Utility Projects

No new unconstructed utilities or planned service systems projects have been approved for construction within the right-of-way (ROW) of the Proposed Project. However, the Proposed Project's transmission lines are located primarily within existing roads and would be collocated in the roads with existing utilities, such as sewer, stormwater, gas, water, electric, and telecommunications. As such, utility work is anticipated to occur within the Proposed Project area periodically during construction.

5.19.1.4 Water Supplies

Water would be required for construction activities, such as for dust suppression and compaction requirements, and would be trucked into the Proposed Project sites from available nearby off-site locations (see **Section 5.19.1.1, Utility Providers**). As described in **Section 3.5.10, Water Use and Dewatering**, the Proposed Project would not require a distribution water connection for O&M activities, as the facility would be remotely operated with no permanent workforce on-site. LS Power personnel would be responsible for providing their own drinking water during O&M activities.

It is estimated that a total of up to approximately 15,000,000 gallons of water would be used for construction purposes during an approximately 24-month portion of construction when the site development and below-grade construction phases occur at the proposed terminal sites.

As discussed in **Section 5.19.1.1**, the City of Fremont receives their water supply from ACWD, which sources water from the SWP, SFPUC RWS, and local supplies, including groundwater from the Niles Cone Subbasin. ACWD currently projects adequate water supply to meet projected future water demands, as adjusted for estimated future water use efficiency savings (ACWD, 2021). By the year 2030, when Proposed Project construction is anticipated to be completed, the

ACWD's total projected water supply of 68,200 AF would be sufficient to meet projected demand of 60,400 AF, with an excess of 7,800 AF (2,541 million gallons) per year (ACWD, 2021).

The City of Milpitas owns and maintains a potable water distribution system and purchases water from the SFPUC RWS and SCVWD. In 2020, the City had sufficient water supplies of 3,430 million gallons to meet its water demand of 3,073 million gallons. By the year 2030, the City's projected water supply and demand is 4,626 million gallons, with no excess supplies during a normal water year. According to the City of Milpitas UWMP, SFPUC normal year supply is expected to meet the City's projected demands through 2045 (City of Milpitas, 2021a).

The City of San José is served by Muni Water, SJW, and GOWC. The GOWC service area includes the southern portion of the City of San José and unincorporated County of Santa Clara and does not serve the Proposed Project area; therefore, GOWC supplies are not further discussed. Muni Water serves certain portions of the City of San José, including the Alviso area west of the Guadalupe River and south of the San Francisco Bay. According to Muni Water's water supply reliability assessment, they will be able to meet water demands in their service area in normal water years through 2045. However, during a single dry year or multiple dry years, Muni Water would experience a supply shortage and would need to implement conservation measures identified in its Water Shortage Contingency Plan. Based on total potable water supplies, Muni Water may experience supply shortages between approximately five and ten percent during a drought (City of San José, 2021). According to the City of San José, Climate Smart San José estimates that current residential water demand in the City is approximately 73.71 gallons per person per day (City of San José, 2024b). Therefore, to serve its 130,000 customers, current Muni Water demand is approximately 9,582 million gallons per day.

According to the SJW UWMP, there would be adequate supplies to meet system demand for the years 2025 to 2030 over a multiple dry year supply and demand comparison (SJW, 2021). Total water demand in 2020 was 39,592 million gallons. The projected total water demand and supply in 2030 is 44,275 million gallons, and no excess supplies are anticipated in a normal water year (SJW, 2021). Multi-year droughts present the greatest challenge to SJW's and SCVWD's water supply reliability. To account for potential water shortages under severe drought conditions, SJW has adopted a Water Shortage Contingency Plan, which requires a staged water reduction process (SJW, 2021).

The City of Santa Clara receives its potable water supply from the Hetch Hetchy aqueduct system, the SCVWD, local groundwater, and recycled water from SBWR. SCVWD's 2020 UWMP currently shows supply surpluses in all the supply reliability scenarios. SCVWD's basic water supply strategy to compensate for multi-year droughts is to store excess wet year supplies in the groundwater basin, local reservoirs, San Luis Reservoir, and/or Semitropic Groundwater Bank and draw on these reserve supplies during dry years to help meet demands (SCVWD, 2021). Current Countywide average annual water demand and use within the County of Santa Clara is estimated at approximately 310,000 AF. In 2020, SCVWD's total water demand and use of water supplies were approximately 306,000 AF (SCVWD, 2021). For estimated water use in the year 2025, SCVWD has calculated an excess of 116,000 AF based on its projected water demand (330,000 AF) and supply (446,000 AF). Over the long-term, projected water demand in 2030 is estimated at 325,000 AF, and projected water supply in 2030 is 518,000 AF, with an excess of 193,000 AF (62,889 million gallons) per year. SCVWD's long-term water supply level of service goal is to meet 100 percent of annual water demand during non-drought years and at least 80 percent of annual water demand in drought years, and SCVWD anticipates to meet and exceed

water demand through 2045. Water shortage contingency planning is also provided in the SCVWD UWMP to meet demand during years of drought and low water supplies.

Multi-year droughts present the greatest challenge to the ACWD, SCVWD, City of Milpitas, Muni Water, and SJW water supply reliability. To account for potential water shortages under severe drought conditions, each water supplier has adopted a Water Shortage Contingency Plan, which require water conservation measures such as a staged water reduction process (ACWD, 2021; SCVWD, 2021; City of San José, 2021; SJW, 2021).

5.19.1.5 Landfills and Recycling

Republic Services provides solid waste collection services to all businesses in the City of San José, as well as for construction waste operations in the City of Fremont; therefore, Republic Services would serve the Proposed Project sites. The landfills that serve the City of San José include Guadalupe Sanitary Landfill, Kirby Canyon Landfill, Newby Island Sanitary Landfill, and Ox Mountain Landfill. Through an agreement with International Disposal Corporation of California (IDC), municipal solid waste generated in the City of San José that is not diverted through recycling or composting must go to Newby Island Sanitary Landfill (City of San José, 2009). However, City-certified construction and demolition (C&D) recycling facilities can be used during the Proposed Project construction phase. Solid wastes generated during construction would primarily be non-hazardous wastes, including wood, metal, paper, and plastic packaging. LS Power would implement recycling as practicable during its construction and O&M activities by transporting the material to an approved recycling facility.

The Guadalupe Sanitary Landfill has a total capacity of 28.6 million cubic yards (CY), with a remaining capacity of 11 million CY. The types of waste permitted at the Guadalupe Sanitary Landfill include green materials, industrial, construction, demolition, and mixed municipal waste; it has a cease operation date of January 1, 2048 (California Department of Resources Recycling and Recovery ["CalRecycle"], 2023a).

The types of waste permitted at the Kirby Canyon Landfill include green materials, tires, construction, industrial, and mixed municipal waste, with a cease operation date of December 31, 2059. The Kirby Canyon Landfill has a total capacity of 36.4 million CY, with a remaining capacity of 16.2 million CY (CalRecycle, 2023b).

The Newby Island Sanitary Landfill facility has a permitted capacity of 57.5 million CY and is permitted to accept a maximum of 4,000 tons of solid waste per day. With a remaining disposal capacity of about 16.4 million CY, the Newby Island Sanitary Landfill is expected to cease operation on January 1, 2041 (CalRecycle, 2023c). The City of Santa Clara has disposal agreements for residential, commercial, and institutional property generated waste with the Newby Island Sanitary Landfill that runs through 2024, as well as with other landfills located outside of the County of Santa Clara. The County of Santa Clara Integrated Waste Management Plan estimates that there is adequate waste capacity through its planning horizon of 2024. An expansion of the Newby Island Sanitary Landfill is being evaluated. Increases in recycling and reductions in waste generation could prolong the life of the landfill. In addition, a prerequisite for new residential development in the City of Santa Clara General Plan requires that the City identify adequate solid waste disposal sites. The City of Santa Clara owns property outside its jurisdictional boundaries that could potentially provide this service (City of Santa Clara, 2010).

The Ox Mountain Landfill has a permitted capacity of 60.5 million CY and is permitted to accept a maximum of 3,598 tons of solid waste per day. With a remaining disposal capacity of about 22.1 million CY, the Ox Mountain Landfill is expected to cease operation on January 1, 2034 (CalRecycle, 2023d).

The City of Milpitas is served by Milpitas Sanitation, which serves residential, commercial, and institutional properties. Milpitas Sanitation also provides recycling services to its customers. Milpitas Sanitation has a disposal agreement with the Newby Island Sanitary Landfill, which is discussed above (City of Milpitas, 2021b).

The City of Santa Clara has an exclusive waste hauling franchise agreement with Mission Trail Waste Systems, in which they are the only contractor permitted to place and collect debris boxes throughout the City, except for those areas specifically zoned industrial. For construction projects, the use of a City-approved C&D recycling facility or transfer station is required. The current list of the City of Santa Clara's approved C&D recycling facilities includes CASS INC., Graniterock Company, Guadalupe Sanitary Landfill, Leo Recycle, Mission Trail Waste Systems, Newby Sanitary Island Landfill, Premier Recycling, Reed and Graham INC., Zanker Material Processing Facility, Stevens Creek Quarry Azevedo, Stevens Creek Quarry Sunnyvale, Stevens Creek Quarry Sheridan Plant, Stevens Creek Quarry Cupertino Plant, and Stevens Creek Quarry San Juan Plant.

The Kirby Canyon Landfill, Newby Island Sanitary Landfill, Guadalupe Landfill, and Ox Mountain Landfill are all treated-wood waste disposal sites in the area that could serve the Proposed Project. Construction debris materials from the Proposed Project would typically be processed at City-certified C&D recycling facilities, such as the Zanker Material Processing Facility, and materials that are not able to be processed would be disposed of at the nearby Newby Island Sanitary Landfill or another approved facility.

5.19.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.19.2.1 Utilities and Service Systems Regulatory Setting

Federal

There are no federal regulations for utilities and service systems that apply to the Proposed Project. Federal regulations pertaining to water supply are outlined in **Section 5.10**.

State

California Health and Safety Code § 25150.7(d)(1)

The Integrated Waste Management Act of 1989 (Public Resources Code [PRC] 40050 et seq.), administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. Senate Bill 1016 builds on Assembly Bill (AB) 939 by implementing simplified measures of performance toward meeting solid waste reduction goals (State of California, 2007). The California Integrated Waste Management Board was established in 1989 under AB 939 and

replaced in 2010 by CalRecycle. CalRecycle is under the umbrella of the California Environmental Protection Agency (CalEPA) and is responsible for the implementation of AB 939.

California Government Code

Section 4216 of the California Government Code protects underground structures during excavation. Under this law, excavators are required to contact a regional notification center at least two days prior to excavation of any subsurface installations. In the Proposed Project area, USA North 811 is the regional notification center. USA North 811 notifies utility providers with buried lines within 1,000 feet of the excavation, and those providers are required to mark the specific location of their facilities prior to excavation.

The code also requires excavators to probe and expose existing utilities, in accordance with state law, before using power equipment. CCR Title 20 contains statutes relating to power plant siting and certification (California Energy Commission [CEC], 2023).

California Code of Regulations (Title 27)

Title 27 of the CCR defines regulations for the treatment, storage, processing, and disposal of solid waste. The State Water Resources Control Board (SWRCB) maintains and regulates compliance with Title 27 of the CCR. The compliance of the Proposed Project would be enforced by the Central Valley (Region 5) RWQCB.

California Urban Water Management Planning Act

Section 10610 of the State Water Code, known as the California Urban Water Management Planning Act, states that each urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 AF of water annually, must prepare a UWMP and update it every five years to ensure that the reliability of its water service is sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes the contents of UWMPs and requires each agency's UWMP to assess the reliability of the agency's water resources over a 20-year planning horizon.

Additional requirements have been passed by the California Legislature for 2020 UWMPs, updating the 2015 UWMP guidance. Significant changes include the following: five consecutive dry-year water reliability assessment, drought risk assessment, seismic risk, energy use information, water loss reporting for five years, water shortage contingency plan, groundwater supplies coordination, and lay description.

California Green Building Standards

In January 2010, the State of California adopted the California Green Building Standards Code ("CALGreen"), establishing mandatory green building standards for all buildings in California. CALGreen, was most recently updated in January 2023. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and indoor environmental quality.

These standards include the following mandatory set of measures, as well as more rigorous voluntary guidelines, for new construction projects to achieve specific green building performance levels:

- Reducing indoor water use by 20 percent;
- Reducing wastewater by 20 percent;
- Recycling and/or salvaging 65 percent of nonhazardous C&D debris, or meeting the local C&D waste management ordinance, whichever is more stringent (see San José-specific CALGreen building code requirements in the local regulatory framework section below); and
- Providing readily accessible areas for recycling by occupants.

The City of San José requires 75 percent diversion of nonhazardous C&D debris for projects that qualify under CALGreen, which is more stringent than the state requirement of 65 percent (San José Municipal Code Section 9.10.2480). The City of Fremont Ordinance No.11-2008 also requires 75 percent diversion, and the City of Santa Clara has a 65 percent waste reduction goal as defined in Santa Clara's Construction & Demolition Debris Recycling Program (City of Fremont, 2008; City of San José, 2001; City of Santa Clara, 2023a). The City of Milpitas does not have a set diversion requirement, but they have pledged to meet or exceed the state standard of 65 percent (City of Milpitas, 2021b).

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local utilities and service systems-related policies, plans, or programs for informational purposes. Although LS Power is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following goals and policies from the City of Fremont General Plan are relevant to utilities and service systems and are provided for informational purposes (City of Fremont, 2011).

Goal 9-3 **Water, Sewer, and Flood Control.** Water, sewer and flood control systems that meet community needs are efficient and environmentally friendly.

Implementation 9-3.1.B **Agency Review of Development Projects.** Continue to invite the water, sewer, and flood control districts to review and comment on all regionally significant development projects.

Implementation 9-3.1.D **ACWD Development Requirements.** Individual development projects shall conform to ACWD's development specifications and

	standard specifications for water main installation and applicable ACWD policies related to development and redevelopment.
Goal 9-4	Gas and Electricity. Natural gas and electric infrastructure that meet the needs of new development.
Policy 9-4.1	Planning Consistency. Work with PG&E to ensure that their long-range plans are consistent with the Fremont General Plan and that infrastructure is sufficient to support new development.
Implementation 9-4.1.B	PG&E Project Review. Continue to provide opportunities for PG&E to review and comment on all major development projects.
Policy 9-4.2	Encourage PG&E to Upgrade Infrastructure.
Implementation 9-4.2.A	Infrastructure Improvements. Encourage PG&E to evaluate and upgrade aging infrastructure throughout Fremont.
Goal 9-6	Solid Waste Diversion. Waste diversion maximized with the long-term objective of eliminating landfill waste.
Policy 9-6.1	Increase Waste Diversion. Divert more of the City's solid waste stream to beneficial reuse, with a long-term objective of eliminating landfill waste.
Implementation 9-6.1.A	Expand Waste Diversion Programs. Implement new and expand existing waste diversion programs.
Policy 9-6.2	Protect Public Health and Safety. Implement waste diversion programs that protect public health and safety and the environment.
Implementation 9-6.2.A	Regulate Waste to Protect Public Health. Regulate the handling, processing, and disposal of waste to protect public health. Provide waste management services that minimize environmental impacts and ensure public health and safety.
Policy 9-6.3	Prioritize Waste Diversion Strategies. Implement waste diversion strategies in the following order, to promote the highest and best use of all materials: source reduction including redesign, reuse, recycling, organics processing, energy recovery, and disposal in the landfill as the last option.
Implementation 9-6.3.A	Support Legislation to Increase Waste Diversion. Support local, regional, and state legislation that is aligned with the City's waste diversion goals, such as regulations restricting polystyrene and plastic packaging.
Policy 9-6.4	Consider Environmental Benefits and Impacts. Implement waste diversion strategies that provide additional environmental

benefits when feasible, such as energy recovery, clean water, and reduced greenhouse gas emissions.

- Implementation 9-6.4.A Expand Litter Reduction Efforts.** Implement programs that minimize litter and pollution generated within the City.
- Implementation 9-6.4.B Support Businesses with an Environmental Focus.** Encourage and support local businesses through programs such as the state's Recycled Market Development Zone.
- Policy 9-6.5 Support Regional Public and Private Waste Diversion.** Support external, regional, global, and other public and private initiatives that are aligned with the City's waste diversion goals.
- Implementation 9-6.5.A Encourage Redesign of Products.** Encourage redesign of consumer products so that they do not become waste, requiring end of life disposal, but are incorporated back into useful products of materials for other processes.
- Implementation 9-6.5.B Support Extended Producer Responsibility.** Support Extended Producer Responsibility initiatives and similar legislation that drive end of product life management, encourage redesign of products, and provide "take back" programs at the end of the products' useful life.
- Policy 9-7.1 Develop/Utilize Infrastructure and Processing Facilities.** Develop or utilize infrastructure that leverages contracts, partnerships, and new technologies to ensure that the required processing capacity exists to effectively manage the City's waste and achieve diversion goals. Utilize existing infrastructure when possible to support innovative "take back" programs and recycling or processing of waste.
- Implementation 9-7.1.A Expand Diversion Processing Facilities.** Improve and increase the capability of local or regional reuse, recycling, and organics processing facilities.
- Implementation 9-7.1.B Maintain a Local Household Hazardous Waste Drop-off Location.** Maintain a convenient and accessible drop-off site for Household Hazardous Waste.
- Implementation 9-7.1.C Waste Disposal.** Provide continuous, efficient, cost-effective collection, processing, and disposal services, utilizing the waste management infrastructure.
- Implementation 9-7.1.D Evaluate Potential Materials for Diversion.** Implement diversion programs that capture recyclable materials currently being sent to the landfill. Increase the amount of recyclable material collected and processed before it gets to the landfill.

- Implementation 9-7.1.E Support Tools and Infrastructure.** Support the development of tools and infrastructure to increase the quantity and quality of divertible materials collected and processed.
- Policy 9-7.2 Require Development Projects to Provide for Waste Handling.** Ensure all development projects provide adequate space, design, and labeling for indoor and outdoor waste management supplies and equipment, such as trash enclosures.
- Implementation 9-7.2.A Provide Waste Handling Guidelines to Applicants.** Require all applicants to incorporate the City's most current waste handling guidelines into development projects.

City of Fremont Ordinance No. 11-2008

The following goal of the City of Fremont Ordinance No. 11-2008 is relevant to utilities and service systems and is provided for informational purposes (City of Fremont, 2008).

Section 1. Legislative Findings and Declarations. The City Council hereby adopts the following findings and declarations in support of this ordinance.

- (b) The voters of Alameda County, through the Waste Reduction and Recycling Act of 1990 (Measure D). Have adopted a policy goal to divert from the landfill 75 percent of the total tonnage of materials generated in Alameda County by the year 2010. In 1999, the City of Fremont also adopted a goal of 75 percent diversion from the landfill by 2010.

SCVWD 2020 Urban Water Management Plan

California's Urban Water Management Planning Act requires that "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 AF of water annually prepare and adopt, in accordance with prescribed requirements, an urban water management plan." The SCVWD UWMP documents information on water supply, water use, recycled water, water conservation programs, water shortage contingency planning, and water supply reliability in the County of Santa Clara under different scenarios. Every five years, urban water suppliers in California are required by state law to prepare a UWMP. The plan is a water agency's long-term water resource planning document to ensure that adequate water supplies are available to meet existing and future water needs within its service area. The UWMP provides an overall picture of a water agency's current and future water conditions and management over the next 25 years.

SCVWD is a special district that provides water resources management for all of the County of Santa Clara. SCVWD's water system includes local water from reservoirs, groundwater, imported water, and recycled water. These water sources are used to recharge local groundwater subbasins, treated at drinking water treatment plants, released to local creeks to meet environmental needs, or sent directly to water users. Climate change, new regulatory requirements, and population growth could affect Countywide water supply and demand in the future (SCVWD, 2021).

City of Milpitas General Plan

The following goals and policies from the City of Milpitas General Plan are relevant to utilities and service systems and are provided for informational purposes (City of Milpitas, 2021b).

- Goal UCS-1** Maintain and improve Milpitas' infrastructure to provide safe, reliable, and high-quality services.
- Policy UCS 1-1** Provide adequate public infrastructure (i.e., street, sewer, water, and storm drain systems) to meet the needs of existing and future development.
- Policy UCS 1-2** Require development and long-term planning projects to be consistent with all applicable City infrastructure plans, including the Water Master Plan, the UWMP, the Sewer Master Plan, the Sewer System Management Plan, the Green Infrastructure Plan, and the Capital Improvement Program.
- Policy UCS 1-3** Require all future development projects to analyze their infrastructure and service impacts and either demonstrate that the City's existing infrastructure, public services, and utilities can accommodate the increased demand for services, and that service levels for existing users will not be diminished or impaired, or make the necessary improvements to mitigate all potential impacts.
- Policy UCS 1-4** The City shall prioritize infrastructure improvements in areas identified for economic growth in the next 5-10 years.
- Policy UCS 1-5** Require the payment of impact fees for all new development.
- Goal UCS-5** Maintain adequate recycling and solid waste service for all users.
- Policy UCS 5-2** Implement and enforce the provisions of the City's Source Reduction and Recycling Program and update the program as necessary to meet or exceed the State waste diversion requirements.
- Goal UCS-6** Ensure adequate, reliable electric and natural gas service is available to all users.
- Policy UCS 6-1** Work cooperatively with utility providers to ensure the provision of adequate electric power and natural gas services and facilities to serve the needs of existing and future residents and businesses.
- Policy UCS 6-2** Coordinate with service providers in the siting and design of power facilities to minimize environmental, aesthetic, and safety impacts.
- Policy UCS 6-3** Require that all new power and gas lines and transformers are installed underground where feasible and promote the undergrounding of existing overhead facilities.

Milpitas Urban Water Management Plan

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 AF (approximately 980 million gallons) of water annually must prepare and adopt an UWMP and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. Additional requirements have been passed by the California Legislature for 2020 UWMPs, updating the 2015 UWMP guidance. Significant changes include the following: five consecutive dry-year water reliability assessment, drought risk assessment, seismic risk, energy use information, water loss reporting for five years, water shortage contingency plan, groundwater supplies coordination, and lay description. The City of Milpitas adopted its most recent UWMP in June 2021 (City of Milpitas, 2021a).

City of San José General Plan

The following policies from the City of San José General Plan are relevant to utilities and service systems and are provided for informational purposes (City of San José, 2024a).

- | | |
|-----------------------|---|
| Policy IN-1.2 | Consistent with fiscal sustainability goals, provide and maintain adequate water, wastewater, and stormwater services to areas in the City that do not currently receive these City services upon funding and construction of the infrastructure necessary to provide them. |
| Policy IN-1.5 | Require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels. |
| Policy IN-1.10 | Require undergrounding of all new publicly owned utility lines. Encourage undergrounding of all privately owned utility lines in new developments. Work with electricity and telecommunications providers to underground existing overhead lines. |
| Policy IN-1.11 | Locate and design utilities to avoid or minimize impacts to environmentally sensitive areas and habitats. |
| Policy IN-3.5 | Require mitigation for development which will have the potential to reduce downstream Level of Service (LOS) to lower than "D", or development which would be served by downstream lines already operating at a LOS lower than "D". Mitigation measures to improve the LOS to "D" or better can be provided by either acting independently or jointly with other developments in the same area or in coordination with the City's Sanitary Sewer Capital Improvement Program. |
| Policy IN-3.7 | Design new projects to minimize potential damage due to stormwaters and flooding to the site and other properties. |
| Policy IN-3.9 | Require developers to prepare drainage plans that define needed drainage improvements for proposed developments per City standards. |

- Policy IN-3.10** Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City's NPDES permit.
- Policy IN-3.13** Encourage the use of flood protection guidelines in development, such as those recommended by the SCVWD, Federal Emergency Management Agency (FEMA), and Department of Water Resources (DWR).
- Policy IN-6.4** Encourage compatible collocation of telecommunication facilities. Work with utility companies to provide opportunities for siting telecommunications facilities on City-owned property and public ROWs.
- Policy CD-1.27** When approving new construction, require the undergrounding of distribution utility lines serving the development. Encourage programs for undergrounding existing overhead distribution lines. Overhead lines providing electrical power to light rail transit vehicles and high-tension electrical transmission lines are exempt from this policy.

City of San José Municipal Code Section 9.10.2480

The following requirement from the City of San José Municipal Code Section 9.10.2480 are relevant to utilities and service systems and are provided for informational purposes (City of San José, 2001).

Persons applying for a permit from the City for new construction and building additions and alterations shall comply with the requirements of this Part and all required components of the California Green Building Standards Code, 24 CCR, Part 11 (CALGreen), as amended, if its project is covered by the scope of CALGreen and other applicable requirements of the City. If the requirements of CALGreen, as amended, are more stringent than the requirements of this Part, the CALGreen requirements shall apply.

Notwithstanding any other provision to the contrary, a building permit applicant that documents the completion of a construction waste management plan in accordance with CALGreen at the following diversion levels shall be deemed in compliance with the provisions of this Part:

- For building permit applications filed between January 1, 2011, and December 31, 2011, at a sixty percent diversion level as determined by the Director.
- For building permit applications filed between January 1, 2012, and December 31, 2012, at a sixty-five percent diversion level as determined by the Director.
- For building permit applications filed on or after January 1, 2013, at a seventy-five percent diversion level as determined by the Director.

City of San José 2020 Urban Water Management Plan

This document presents the City of San José's UWMP for Muni Water, the retail water supplier operated by the City of San José. The City of San José 2020 UWMP provides information on water management specific to Muni Water's service areas: North San José/Alviso, Evergreen, Edenvale, and Coyote Valley. The UWMP examines current and projected water supplies, demands, and sources; details Muni Water's water shortage contingency plan; presents a

comparison of the 2020 water use target; and discusses the City's conservation efforts. The UWMP documents the City of San José's planning efforts involved in ensuring a reliable, high-quality supply of water to the public (City of San José, 2021).

San José Water 2020 Urban Water Management Plan

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 AF (approximately 980 million gallons) of water annually must prepare and adopt an UWMP and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. Additional requirements have been passed by the California Legislature for 2020 UWMPs, updating the 2015 UWMP guidance. Significant changes include the following: five consecutive dry-year water reliability assessment, drought risk assessment, seismic risk, energy use information, water loss reporting for five years, water shortage contingency plan, groundwater supplies coordination, and lay description. The City of San José adopted its most recent UWMP in June 2021. Water service to the downtown area is provided by SJW, which gets its water from a variety of sources, including groundwater (approximately 43 percent), purchased or imported surface water (approximately 52 percent), recycled water (approximately two percent), and local mountain surface water (approximately three percent) (SJW, 2021).

City of Santa Clara General Plan

The following policies from the City of Santa Clara General Plan are relevant to utilities and service systems and are provided for informational purposes (City of Santa Clara, 2010).

- 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.
- Policy 5.8.2-P3** Encourage undergrounding of utilities and utility equipment within the public ROW and site these facilities to provide opportunities for street trees and adequate sidewalks.
- Policy 5.10.1-P6** Require adequate wastewater treatment and sewer conveyance capacity for all new development.
- Policy 5.10.1-P7** Encourage the use of local recycling facilities to divert waste from landfills.
- 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 SVP to implement adequate energy distribution facilities to meet the demand generated by new development.

- Policy 5.10.3-P14** Work with PG&E to ensure an adequate supply of natural gas to meet the demand generated by new development.
- Policy 5.10.4-P2** Expand water conservation and reuse efforts throughout the City in order to meet the conservation goals in the City's adopted UWMP to reduce per capita water use by 2020.
- 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.

City of Santa Clara Construction & Demolition Debris Recycling Program

The following requirement from the City of Santa Clara Construction & Demolition Debris Recycling Program is relevant to utilities and service systems and is provided for informational purposes (City of Santa Clara, 2023c).

The City of Santa Clara requires applicants seeking construction and/or demolition permits for projects greater than 5,000 square feet to track and divert a minimum of 65 percent of the discards created during the project. Diversion is achieved through recycling or reuse. All contractors and sub-contractors are responsible for the proper management of C&D debris on the project site. This may involve separating recyclable materials from non-recyclable materials before hauling to a recycling or disposal facility in order to achieve 65 percent diversion.

5.19.3 IMPACT QUESTIONS

5.19.3.1 CEQA Impact Questions

The significance criteria for assessing the impacts to utilities and service systems come from the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist. According to the CEQA Environmental Checklist, a project may cause a potentially significant impact if it would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; or
- Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years; or
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- 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; or

- Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

5.19.3.2 Additional CEQA Impact Question

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC, 2019), the following additional CEQA Impact Question is required for utilities and service systems. Would the project:

- Increase the rate of corrosion of adjacent utility lines as a result of alternating current impacts?

5.19.4 IMPACT ANALYSIS

5.19.4.1 Utilities and Service Systems Impact Analysis

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

Less-Than-Significant Impact. Proposed Project construction would require the temporary use of water and wastewater facilities by construction workers. Water used for construction activities, such as for dust suppression and compaction requirements, would be trucked in from an off-site location provided by ACWD, City of Milpitas, SCVWD, Muni Water, or SJW (see **Section 5.19.1.1** for a list of the local sources). Specific water sources for trucked water would be determined prior to construction in coordination with the water suppliers based on availability and proximity of supplies. It is estimated that up to 15,000,000 gallons of water would be used for construction purposes during the approximately 24-month portion of construction when the site development and below-grade construction phases occur at the proposed terminal sites, as described in **Section 3.5.10**. As described in **Section 5.19.1**, *Environmental Setting*, ACWD and SCVWD would have sufficient excess supplies to serve the Proposed Project and are among the potential sources of water during construction. City supplies from City of San José and City of Milpitas municipal water suppliers may potentially provide water to the Proposed Project during construction. Water used during construction activities would be temporary and would originate from local sources that have the existing capacity to service the needs of the Proposed Project. Once constructed, the Proposed Project would be remotely operated with no permanent workforce on-site and, therefore, would not require a source of potable water.

During construction, wastewater service would be provided by portable toilets, and solid waste would be disposed of at appropriately licensed off-site facilities, such as the San José-Santa Clara RWF. The construction workforce would be relatively small (maximum of approximately 300 workers at peak construction), and only minimal wastewater generation would be anticipated. Once constructed, the Proposed Project would be remotely operated with no permanent workforce on-site; therefore, the operational phase of the Proposed Project would not require wastewater treatment facilities.

During construction, on-site stormwater would be managed consistent with the Proposed Project-specific SWPPP and Spill Prevention Control and Countermeasure Plan (SPCCP) (see **Section 3.0** and **Section 5.10**, for more information). The Proposed Project footprint would minimally

increase the amount of impervious surface within the Proposed Project area. The Proposed Project would include a stormwater detention system at each HVDC terminal site which would be designed to capture runoff from a 100-year storm, 24-hour rainfall event. The size of the detention system would vary for each proposed HVDC terminal site, depending on site-specific conditions, and may include a detention basin, underground detention vaults, or a combination thereof. During O&M activities, runoff from each of the proposed HVDC terminal sites would be conveyed to the stormwater detention system, where it would then filter through the underlying soils or evaporate. Overflow from the detention system would be returned to sheet flow via a level spreader to the adjacent land surface during storms that exceed the system's design capacity. The level spreading approach would control erosion and prevent scouring at discharge locations. The stormwater detention basin at the proposed Albrae terminal would be constructed in an existing parking lot and would not significantly impact any existing stormwater drainage patterns. The stormwater detention basin at the proposed Baylands terminal would be constructed in an undeveloped lot and would not significantly impact any existing stormwater drainage patterns.

For electric power during construction, LS Power would coordinate the appropriate distribution connection locations with PG&E and SVP. The Proposed Project would require the construction of new distribution lines at both of the proposed HVDC terminals. The proposed Albrae terminal would be connected to the existing PG&E distribution network at the Newark substation. The proposed Baylands terminal would be connected to the PG&E distribution network via the Zanker 2 substation on the San José-Santa Clara RWF property. The extension of distribution power would result in the installation of wood poles or underground conduits near the proposed HVDC terminals and staging areas. Connections required to support construction activities would be temporary and would be removed following the completion of construction. The transmission lines being installed as part of the Proposed Project are primarily underground, with the exception of approximately 0.2 mile of the proposed Newark to Albrae 230 kilovolt (kV) transmission line through PG&E's property, approximately 1.9 miles of the proposed Albrae to Baylands 320 kV direct current (DC) transmission line spanning across the San José-Santa Clara RWF wastewater drying ponds, and approximately 0.1 mile of the proposed Baylands to NRS 230 kV transmission line at the crossing of the Guadalupe River. Operation of the proposed HVDC terminals is not anticipated to require nighttime illumination. The terminal station lighting would be photocell and motion controlled to provide illumination for security. Thus, operation of the proposed HVDC terminals would not result in inefficient use of electricity. Therefore, impacts related to electricity would be less than significant.

The use of temporary generators for construction at the proposed HVDC terminals and staging areas would be a contingency if distribution power is not available in a timely manner prior to construction commencing. Temporary mobile generators would be required during construction of the proposed underground transmission lines. When not in use, generators would be stored within the proposed staging areas or within the proposed Baylands terminal site, where practical.

The Proposed Project would not require new natural gas facilities. As discussed in **Section 3.0**, it is anticipated that the Proposed Project would include new telecommunications infrastructure that would connect the new HVDC terminals to each other, connect the HVDC terminals to the existing PG&E and SVP substations, and connect each HVDC terminal to local existing third-party internet providers. Each telecommunication path would consist of fiber optic cables. The telecommunication lines would be installed underground and overhead, collocated on overhead tubular steel poles or underground duct bank as appropriate, and would be designed to avoid conflicts with existing utilities, where feasible.

Prior to initiating construction, LS Power would contact USA North 811 to identify underground utilities in the immediate area. In addition, prior to excavating, LS Power would conduct exploratory excavations (i.e., potholing) in order to verify the locations of existing utility facilities in the ROW. In the event underground utilities are identified, LS Power would work with the owner of those utilities to determine if design changes can be made or if utility relocation is necessary.

The majority of the proposed Newark to Albrae 230 kV transmission line, proposed Albrae to Baylands 320 kV DC transmission line, and proposed Baylands to NRS 230 kV transmission line would be constructed underground, almost exclusively within existing roads. The proposed transmission lines would be collocated with existing utilities and designed to avoid conflicts with existing utilities, where feasible. However, excavation and installation of the concrete-encased duct bank and associated splice vaults would require the relocation of certain third-party utilities in areas of conflict. Utilities that would require relocation may include sanitary sewer, stormwater, gas, water, electric, and telecommunications. It is anticipated that all utility relocations would take place within the proposed limits of construction.

The Proposed Project would not require or result in the construction of new or expanded water, wastewater treatment, stormwater drainage, or natural gas facilities resulting in significant impacts to the environment. The existing PG&E and SVP distribution facilities and San José-Santa Clara RWF located within the vicinity of the Proposed Project HVDC terminals and/or transmission lines may be temporarily impacted during construction. However, implementation of **APM UTIL-1** would require LS Power to work with all utility companies with utilities located on or crossing the Proposed Project to locate and mark existing underground utilities where potential conflicts could occur. Any conflicts between the Proposed Project features and existing utilities would be mitigated by either redesign of the Proposed Project or relocation of the existing utility, as coordinated with each utility owner/operator, as outlined in **APM UTIL-1**. As stated above, it is anticipated that each utility relocation would take place within the proposed limits of construction. Therefore, with implementation of **APM UTIL-1**, impacts under this criterion would be less than significant.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and the Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). These proposed modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the remainder of the Proposed Project and would occur for a limited duration. These modifications to the existing substation would result in the improvement of existing electric facilities at these locations. This work would not require the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, natural gas, or telecommunications facilities. As the changes would improve electric infrastructure in an area with existing transmission infrastructure, impacts would be less than significant.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and the Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). These proposed

modifications would occur within the existing substation facility. Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. These modifications to the existing substation would result in the improvement of existing electric facilities at these locations. This work would not require the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, natural gas, or telecommunications facilities. As the changes would improve electric infrastructure in an area with existing transmission infrastructure and other industrial uses, impacts would be less than significant.

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 Impact. As described in **Section 5.19.1.4, Water Supplies**, construction crews would be responsible for providing their own drinking water during construction of the Proposed Project. During construction, water would be used for dust control, compaction requirements, and worker needs. As described above, it is estimated that a total of approximately 15,000,000 gallons of water would be used for construction purposes during the approximately 24-month portion of construction when the site development and below-grade construction phases occur at the proposed terminal sites and would be trucked in from an off-site location. Nearby water suppliers have adequate water supplies to serve the needs of the Proposed Project in normal, dry, and multiple dry years because the total water required for construction is a negligible portion of the water supplied daily by each water supplier. Based on projected water supply and demand, ACWD and SCVWD estimate having sufficient excess supplies in the years 2025 to 2030, which is when the Proposed Project construction period is anticipated to occur. Specifically, the ACWD and SCVWD have estimated their excess supplies in 2030 to be approximately 7,800 AF (2,541 million gallons) and 193,000 AF (62,889 million gallons), respectively, which would be more than sufficient to serve the Proposed Project. Water supplies from the City of Milpitas and City of San José municipal sources may be considered to serve the Proposed Project, although the City of Milpitas, Muni Water, and SJW do not project significant excess supplies in the 2025 to 2030 time period. It is not anticipated that water would be needed for O&M activities since the proposed Albrae and Baylands terminal facilities would not have permanent on-site staff requiring water; therefore, no impacts would occur during O&M activities.

No new or expanded entitlements would be required to accommodate the minimal, temporary, and short-term water needs of the Proposed Project. Additionally, the Proposed Project does not meet the criteria for consideration as a project subject to Water Supply Assessment Requirements under Water Code Section 10912 (State of California, 2016). Therefore, impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. Anticipated water use has been accounted for within the total amount for the Proposed Project, including the Newark substation modifications, and the new water use would be temporarily used during construction. The existing substation facility has no permanent staff on-site and would not require additional water or wastewater use once substation modifications are constructed. Therefore, there would be no impacts under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. Anticipated water use has been accounted for within the total amount for the Proposed Project, including the NRS substation modifications, and the new water use would be temporarily used during construction. The existing substation facility has no permanent staff on-site and would not require additional water or wastewater use once substation modifications are constructed. Therefore, there would be no impacts under this criterion.

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?

No Impact. Portable toilets would be provided for construction workers. Wastewater would be disposed of by a third-party wastewater disposal company at appropriately licensed facilities that have adequate capacity to accommodate the Proposed Project's needs. The proposed HVDC terminals would be remotely operated with no permanent workforce on-site; hence, the Proposed Project would not have permanent sanitary facilities. Portable toilet facilities would not be needed on-site for use during typical O&M activities. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. These modifications would not result in the addition of sanitary facilities; therefore, there would be no impact under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility. Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. These modifications would not result in the addition of sanitary facilities; therefore, there would be no impact under this criterion.

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 Impact. Solid wastes generated during construction of the Proposed Project would primarily be non-hazardous wastes, including wood, metal, paper, plastic packaging, and approximately 130,000 CY of excavated material. Construction debris volumes are estimated at a total of approximately 2,000 CY. The Proposed Project would divert C&D waste during construction to help the Cities of San José and Fremont reach their 75 percent waste diversion rates as required by the San José Municipal Code Section 9.10.2480 and the City of Fremont Ordinance No.11-2008, as well as helping the City of Santa Clara reach its 65 percent waste reduction goal as defined in Santa Clara's Construction & Demolition Debris Recycling Program (City of Fremont, 2008; City of San José, 2001; City of Santa Clara, 2023a). As shown

in **Table 5.19-1, Waste Volume by Type**, the Proposed Project would not 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 the Cities of Fremont, Milpitas, San José, or Santa Clara's solid waste reduction goals.

If possible, recyclable construction material such as metal poles, fencing, pavement, untreated wood, and clean soil would be transported to a City-certified C&D recycling facility, such as the Zanker Material Processing Facility. Construction waste that cannot be recycled would ultimately be disposed at the Kirby Canyon Landfill, Newby Island Sanitary Landfill, Guadalupe Sanitary Landfill, Ox Mountain Landfill, or another approved facility. Spoils that are not usable and/or are identified as contaminated through appearance would be tested to characterize before appropriate transportation to a licensed landfill facility. LS Power would dispose of utility-generated waste while PG&E would dispose of treated-wood waste generated from removal of four PG&E distribution poles, as discussed further below under *PG&E Facility Modifications*. Construction waste would be disposed of properly and in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste, including, but not limited to, the California Integrated Waste Management Act of 1989, which set reduction rates for the amount of solid waste sent to landfills. As described above in **Section 5.19.1.5, Landfills and Recycling**, the Kirby Canyon Landfill, the Newby Island Sanitary Landfill, the Guadalupe Sanitary Landfill, and the Ox Mountain Landfill would have sufficient capacity to accommodate the amount of waste anticipated to be generated during construction activities (CalRecycle, 2023a, 2023b, 2023c, 2023d).

The Proposed Project would be remotely operated with no permanent workforce on-site and would generate minimal solid waste since workers would only periodically visit the site to perform O&M activities. Any waste generated by O&M activities would also be disposed of at the Kirby Canyon Landfill, Newby Island Sanitary Landfill, Guadalupe Sanitary Landfill, or Ox Mountain Landfill, which have sufficient capacity.

Table 5.19-1 provides a breakdown of estimated waste volumes by waste type (wood, metal, plastic) generated during all phases of the Proposed Project.

Table 5.19-1: Waste Volume by Type							
	Proposed Project Phase						
	Construction				O&M		
Waste Type	Wood	Metal	Plastic	Spoils ¹	Wood	Metal	Plastic
Waste Composition	1.73%	0.28%	0.57%	97.4%	20%	20%	60%
Reuse/Recycling Rate	90%	80%	50%	95%	90%	80%	50%
Waste Volume (CY²)	132,000				10		
¹ Approximately 6,000 CY of total estimated spoils would be asphalt/concrete, and the remainder would be soils/dirt. ² Cubic yards presented as loose cubic yards, or "LCY". LCY represents estimated CY following excavation.							

The Proposed Project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure. Therefore, impacts would be less than significant under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. The Newark substation modifications would generate waste consisting of electrical control wiring (including copper and insulation material), electrical material (including low-voltage control switches, relays, meters, other monitoring equipment, and steel switchbacks), concrete, soils, and asphalt. The quantity of waste by waste type generated during construction at the existing Newark substation are pending and will be determined with the final engineering design. The Newark Substation modifications would also involve the disposal of four treated-wood poles. As discussed in **Section 5.9, Hazards, Hazardous Materials, and Public Safety**, treated-wood waste has the potential to be classified as hazardous if it contains certain levels of arsenic, chromium, copper, pentachlorophenol, or creosote. Treated-wood waste often can be identified visually by tags or markings on the wood, when cut staining is visible around the perimeter only, or by discoloration or odor. If encountered, the treated-wood waste would be managed in accordance with applicable State of California and federal regulations. PG&E would dispose of treated-wood waste generated from removal of two PG&E distribution poles, under the Hazardous Waste Fee Health and Safety Code (California Health and Safety Code Chapter 6.5, Section 25143 et seq.). Under this exemption, the wood waste would be disposed in a composite-lined portion of a municipal solid waste landfill that meets requirements imposed by the State policy adopted pursuant to Section 13140 of the Water Code and regulations adopted pursuant to Sections 13172 and 13173 of the Water Code. Further, the solid waste landfill used for disposal is authorized to accept the wood waste under waste discharge requirements issued by the RWQCB pursuant to Division 7 (commencing with Section 13000) of the Water Code. The Kirby Canyon Landfill, Newby Island Sanitary Landfill, Guadalupe Landfill, and Ox Mountain Landfill are all treated-wood waste disposal sites in the County of Santa Clara.

The proposed PG&E substation modifications would divert C&D waste during construction. The construction workforce would generate minimal solid waste from food, glass, paper, plastic, and packaging materials during construction. Construction debris would be collected and placed in approved containers on-site and periodically transported for recycling or proper disposal. Whenever feasible, waste materials generated during construction would undergo recycling and salvage efforts. Salvageable items, such as usable conductor, steel structures, high-voltage circuit breakers, high-voltage disconnect switches, instrument transformers, and hardware would be either sent to recycling facilities, stored at a PG&E facility, or disposed as hazardous material. Some of the native excess soils captured during construction may be reused on-site for grading and backfill purposes. For the handling of contaminated soil and hazardous materials disposal, refer to **Section 5.9**. The modifications would not generate solid waste in excess of state or local standards. There would be no change in solid waste generation from the existing substation to the modified substation during O&M activities, as there would be no additional permanent staff on-site. Therefore, impacts would be less than significant under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation facility, within the existing substation walls. Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. The NRS substation modifications would generate waste consisting of electrical control wiring (including copper and insulation material), electrical material (including low-voltage control switches, relays, meters,

other monitoring equipment, and steel switchbacks), concrete, soils, and asphalt. The quantity of waste by waste type generated during construction at the existing NRS substation are pending and will be determined with the final engineering design.

The proposed substation modifications would divert C&D waste during the Proposed Project construction. The construction workforce would generate minimal solid waste from food, glass, paper, plastic, and packaging materials during construction. Construction debris would be collected and placed in approved containers on-site and periodically transported for recycling or proper disposal. Whenever feasible, waste materials generated during construction would undergo recycling and salvage efforts. The proposed substation modifications would not generate solid waste in excess of state or local standards. There would be no change in solid waste generation from the existing substation to the modified substation during O&M activities, as there would be no permanent staff on-site. Therefore, impacts would be less than significant under this criterion.

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

No Impact. Construction and O&M activities of the Proposed Project would not be anticipated to generate a substantial amount of solid waste. As previously discussed, solid waste produced during construction and O&M would be recycled or disposed of at a nearby licensed landfill. Management and disposal of solid waste would comply with all applicable federal, state, and local statutes and regulations. As discussed in **Section 3.9.1, Decommissioning**, the plan is for the Proposed Project to be in operation or used indefinitely, with no currently established plans or timing for decommissioning. Therefore, there are no reasonably foreseeable plans for the disposal, recycling, or future abandonment of the Proposed Project facilities. The Proposed Project would not violate any solid waste management and reduction statutes or regulations. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. The modifications to the existing substation, during both construction and O&M, would not be anticipated to generate a substantial amount of solid waste, and any solid waste produced would be disposed of in compliance with all applicable federal, state, and local statutes and regulations. Thus, the proposed substation modifications would not violate any solid waste management and reduction statutes or regulations, and no impacts would occur under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. Construction of these modifications would occur concurrently with construction of the rest of the Proposed Project and for a limited duration. The proposed substation modifications would divert waste during the Proposed Project construction. The modifications to the existing substation, during both construction and O&M, would not be anticipated to generate a substantial amount of solid waste, and any solid waste produced would be disposed of in compliance with all applicable federal, state, and local statutes and regulations. Thus, the proposed substation modifications would not

violate any solid waste management and reduction statutes or regulations, and no impacts would occur under this criterion.

Would the project increase the rate of corrosion of adjacent utility lines as a result of alternating current impacts?

Less-Than-Significant Impact. As discussed in **Section 3.2.2, Proposed Project System**, the Proposed Project would introduce new electric transmission lines that would create an additional system tie between the existing PG&E Newark and SVP NRS substations. The Proposed Project would include the proposed Newark to Albrae 230 kV transmission line, Albrae to Baylands 320 kV DC transmission line, and Baylands to NRS 230 kV transmission line. The proposed transmission lines are anticipated to be primarily underground except for approximately 0.2 mile of the proposed Newark to Albrae 230 kV transmission line within PG&E's property, approximately 1.9 miles of the proposed Albrae to Baylands 320 kV DC transmission line through the center of the Proposed Project over the San José-Santa Clara RWF wastewater drying ponds, and approximately 0.2 mile of the proposed Baylands to NRS 230 kV transmission line at the crossing of the Guadalupe River. High induced voltages and currents from transmission lines in close proximity to pipelines can cause a number of issues if not mitigated effectively. The possible effects of this interference include, but are not limited to, accelerated corrosion, degradation of coating, and shock hazards on nearby unprotected metallic pipelines or required modifications to existing active cathodic protection systems. A preliminary analysis of the potential electromagnetic interference and induced current touch potential¹ for the Proposed Project is provided in **Appendix 5.9-C, Power the South Bay Transmission Reliability Project - Electromagnetic Effects of AC and DC High Voltage Circuit on Nearby Utilities**.

AC corrosion effects to a metallic pipeline can occur when induced AC current caused by an AC electromagnetic field (e.g., from an AC transmission) degrades or weakens the coating of a metallic pipeline. Industry standard from the National Association of Corrosion Engineers (NACE) SP21424-2018, *Alternating Current Corrosion on Cathodically Protected Pipelines: Risk Assessment, Mitigation and Monitoring*, Section 6.6.2 states that AC corrosion may occur when pipeline AC density levels increase above a time-weighted average of 30 ampere per meter squared² (A/m²) or if DC current density exceeds one A/m². AC potentials less than two volts would result in AC density levels less than this limit for pipelines with typical soil resistivity measurements (**Appendix 5.9-C**). Potential impacts associated with existing pipeline corrosion are discussed below for each new transmission line. Potential impacts relating to shock and touch potential are discussed in **Section 5.9**.

Newark to Albrae 230 kV AC Transmission Line Impacts

Based on preliminary design of the proposed Newark to Albrae 230 kV AC transmission line alignment, the only known existing metallic utilities located in the vicinity are overhead PG&E electric distribution and transmission lines and the existing Newark substation. The proposed Newark to Albrae 230 kV AC transmission line would be located entirely within private fee-owned PG&E property and private PG&E roads. Preliminary review of potential electromagnetic

¹ Touch potential refers to the measurement of voltage that passes between any two points on a person's body when exposed to electric current. Touch potential can become hazardous if an electric circuit induces current in another material, such as a pipeline, and presents a shock hazard to personnel.

² The ampere per meter squared, symbolized A/m², is the standard unit of electric current density. A current density of 1 A/m² represents one ampere of electric current flowing through a material with a cross-sectional area of one square meter.

interference (see **Appendix 5.9-C**) has not identified existing metallic natural gas pipelines located near the existing Newark substation or the proposed Albrae terminal. The Final Induction Study and Utility Coordination (**APM HAZ-5, Final Induction Study and Utility Coordination**) would include a detailed analysis of the proposed Newark to Albrae 230 kV transmission line alignment and identify any potential pipelines (**APM UTIL-1**) in proximity to grounding locations to prevent pipeline corrosion or pipeline coating degradation. Impacts would be less than significant.

Albrae to Baylands 320 kV DC Transmission Line Impacts

Based on preliminary design, LS Power has identified over 200 potential existing utilities located within the vicinity of the proposed Albrae to Baylands 320 kV DC transmission line, including metallic pipelines in the vicinity of the proposed Baylands terminal. There is one gas pipeline that would cross and parallel the proposed Albrae to Baylands 320 kV DC transmission line for approximately three miles along Fremont Boulevard. However, DC electromagnetic fields do not cause the same effect as AC transmission lines. While DC electric circuits do not generate the same electromagnetic fields that are caused by AC circuits, DC interference effects to the pipeline can still promote corrosion through potentials passed through the earth or directly connected to the pipeline. Based on the proposed alignment of the Albrae to Baylands 320 kV DC transmission line and the expected minimum separation distances between pipelines and the DC transmission circuit, any DC interference effects directly from the proposed transmission line are not expected to affect existing pipelines. However, DC interference may affect a nearby metallic pipeline, specifically a pipeline's existing cathodic protection system, during a fault condition on the HVDC circuit. These effects would be limited to the grounding locations. As stated above, one metallic pipeline was identified along the proposed Albrae to Baylands 320 kV DC transmission line alignment in Fremont Boulevard. The Final Induction Study and Utility Coordination (**APM HAZ-5**) would include a detailed analysis of this pipeline and any additional metallic pipelines identified during utility surveys (**APM UTIL-1**) in proximity to grounding locations to prevent pipeline corrosion or pipeline coating degradation. Impacts would be less than significant.

Baylands to NRS 230 kV AC Transmission Line Impacts

LS Power has identified two gas pipelines that would cross and parallel the proposed Baylands to NRS 230 kV AC transmission line along Lafayette Street in the City of Santa Clara. AC corrosion effects to a pipeline can occur when induced AC current caused by the proposed AC electromagnetic field leaves a metallic pipeline at a coating defect. Based on available information for the existing pipeline and the proposed Baylands to NRS 230 kV AC transmission line, potential AC interference was modeled to determine potential impacts, need for mitigation, or if additional analysis was warranted. For this analysis, it was assumed the existing pipelines are 24 inches in diameter with fusion bonded epoxy coating, and the proposed transmission line was assumed to be operating at steady state load conditions. Based on these assumptions, the maximum AC potential for the two pipelines were both computed to be less than one volt, with respect to remote earth. As outlined above and in **Appendix 5.9-C**, potential impacts requiring mitigation could occur, and further analysis of potential AC/DC interference (Final Induction Study) is required where AC potential is greater than two volts. Therefore, based on final design and additional utility location and design data (refer to **APM UTIL-1**), a Final Induction Study (**APM HAZ-5**) would be prepared. The Final Induction and AC/DC Interference Study would identify any measures required to prevent pipeline corrosion or pipeline coating degradation. The Final Induction and AC/DC Interference Study would also analyze any additional metallic pipelines identified during utility surveys (**APM UTIL-1**). Impacts would be less than significant.

Utility Locations and Final Induction Study

LS Power would implement **APM UTIL-1** to ensure impacts to any adjacent utility pipelines would be identified prior to construction. **APM UTIL-1** requires that LS Power notify all utility companies with utilities located within or crossing the Proposed Project site to locate and mark existing underground utilities. LS Power would also implement **APM HAZ-5**, which requires that LS Power complete a detailed Induction Study for the proposed transmission lines. If potential adverse effects would be identified, **APM HAZ-5** requires LS Power to develop appropriate interference mitigation measures in consultation with each utility owner/operator. Such mitigation would be incorporated in the final Proposed Project design. Therefore, impacts under this criterion would be less than significant.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property), which does not consist of structures that are subject to corrosion. Incompatible metallic utilities are not located within or adjacent to the existing substation. Therefore, the PG&E modifications would not increase the rate of corrosion of adjacent utility lines and would have no impact under this criterion.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation, which does not consist of structures that are subject to corrosion. Incompatible metallic utilities are not located within or adjacent to the existing substation. Therefore, the SVP modifications would not increase the rate of corrosion of adjacent utility lines and would have no impact under this criterion.

5.19.5 CPUC DRAFT ENVIRONMENTAL MEASURES

The CPUC recommends one Draft Environmental Measure for utilities and service systems, which the Proposed Project would implement, with minor edits to improve applicability to the Proposed Project, as **APM UTIL-1**.

5.19.6 APPLICANT PROPOSED MEASURES

APM UTIL-1: Coordination with Utilities

LS Power shall notify all utility companies with utilities located within or crossing the Proposed Project ROW to locate and mark existing underground utilities along the entire length of the Proposed Project. Due to the linear nature of transmission line construction, utilities shall be marked in short segments at least 14 days prior to construction within said segments. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering, or relocation of the existing utility shall be coordinated with each utility owner/operator. LS Power shall coordinate with third-party utilities and shall submit the intended construction methodology to the owner of the third-party utility for review and coordination. Construction methods shall be adjusted as necessary to ensure that the integrity of existing utility lines is not compromised.

5.19.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E BMPs for utilities and service systems would be implemented for PG&E's scope of work.

5.19.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for utilities and service systems would be implemented for SVP's scope of work.

5.20 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?				X
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?				X
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?				X
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?				X

This section describes the potential wildfire hazards and impacts within the vicinity of the Proposed Project, as well as the potential impacts resulting from construction and operation and maintenance (O&M) of the Proposed Project.

5.20.1 ENVIRONMENTAL SETTING

The Proposed Project is located in the Cities of Fremont, Milpitas, San José, and Santa Clara, which are situated in the Counties of Alameda and Santa Clara. The Proposed Project area is largely comprised of and surrounded by previously developed areas that are designated for industrial, light industrial, public, and commercial uses. The proposed Albrae terminal is located in the City of Fremont on an approximately 6.1-acre site along Weber Road, currently developed as a parking lot. The proposed site is approximately one mile east of the Don Edwards San Francisco Bay National Wildlife Refuge (NWR) and 0.2 mile northeast of the existing Pacific Gas and Electric Company (PG&E) Newark substation. Land uses surrounding the proposed Albrae terminal site consist of industrial facilities—glass and concrete fabrication—to the north, an electric utilities distribution center to the east, and a car repair and auction lot to the south and west.

The proposed Baylands terminal is located in the City of San José on an approximately 9.2-acre site. The proposed Baylands terminal site is undeveloped, and surrounding uses consist of Los Esteros Road and a recycling trash center to the north, San José-Santa Clara Regional Wastewater Facility (RWF) to the east, and undeveloped land to the south and west.

The proposed Albrae and Baylands terminals would be connected via the proposed approximately 8.6-mile-long Albrae to Baylands 320 kilovolt (kV) direct current (DC) overhead and underground transmission line that passes through the Cities of Fremont, Milpitas, and San José. The new Albrae terminal would be interconnected with the existing PG&E Newark substation via the new approximately 0.4-mile-long underground and overhead Newark to Albrae 230 kV transmission line that would connect to a future PG&E-owned dead-end structure in the City of Fremont. The proposed Baylands terminal would be interconnected with the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation via a new approximately 3.5-mile-long overhead and underground Baylands to NRS 230 kV transmission line that passes through the Cities of San José and Santa Clara. The existing SVP NRS substation is located in the City of Santa Clara.

5.20.1.1 High Fire Risk Areas and State Responsibility Areas

Wildland fire protection in the State of California is the responsibility of the state, local, or federal government. State Responsibility Areas (SRAs) are areas of the State in which the financial responsibility of preventing and suppressing fires has been determined to be primarily the responsibility of the California Department of Forestry and Fire Protection ("CAL FIRE") (Section 4102 Public Resources Code). Local Responsibility Areas (LRAs) include incorporated cities, cultivated agriculture lands, and portions of the desert where fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government.

CAL FIRE adopted Fire Hazard Severity Zone (FHSZ) maps for SRAs throughout the State in 2007, which were most recently revised and adopted on April 1, 2024. These maps identify wildfire hazard zones and rate them as "moderate," "high," or "very high" based on fuel loading, slope, fire weather, and other relevant factors. The Proposed Project is not located within an SRA. The closest SRA extent is approximately 1.6 miles east of the proposed Albrae to Baylands 320 kV DC transmission line corridor, 5.6 miles east of the proposed Albrae terminal, and 4.6 miles east of the proposed Baylands terminal (CAL FIRE, 2024a). This SRA is mapped as a Moderate FHSZ (see **Figure 5.20-1, SRA Fire Hazard Severity Zones – 2024 Adopted Map**). The nearest High FHSZ would be located approximately 3.8 miles east of the proposed Albrae to Baylands 320 kV DC transmission line.

Government Code Section 51175 requires CAL FIRE to also evaluate fire hazard severity in LRAs and to make a recommendation to the local jurisdiction where Very High Fire Hazard Severity Zones (VHFHSZ) exist. The Government Code then provides direction for the local jurisdiction to take appropriate action. CAL FIRE has prepared Draft FHSZ maps for LRAs and prepared Recommended Maps, which identify VHFHSZ and Non-VHFHSZ areas within LRAs. The Proposed Project area is located within an LRA, and CAL FIRE has mapped the Proposed Project area as being in an LRA Non-VHFHSZ area (CAL FIRE, 2008a; 2008b). Once the 2023 FHSZ mapping is adopted, the Proposed Project would still be mapped in a LRA Non-VHFHSZ area (CAL FIRE, 2024a). The nearest VHFHSZ to the Proposed Project site is located within the SRA approximately 6.2 miles northeast of the proposed Albrae terminal. The nearest VHFHSZ within an LRA is located approximately 6.4 miles southeast of the proposed underground Albrae to Baylands 320 kV DC transmission line in the City of San José.

The Proposed Project is partially located within the "influence" zone of the wildland urban interface (WUI) in the Counties of Alameda and Santa Clara (**Figure 5.20-2, Wildland Urban Interface**). The WUI is an area where human-made structures meet undeveloped wildlands. The Alameda

and Contra Costa County Regional Wildfire Prevention Plans classify different types of areas within the WUI, including intermixed areas, interface areas, and influence zones. Intermixed areas are where structures intermingle with wildland vegetation and the boundary between wildland and urban areas is hard to recognize. Interface areas are where a more defined boundary between structures and wildland vegetation is visible. Influence zones, while not directly classified as WUI, are typically uninhabited wildlands but given their proximity to the WUI can still be considered “at risk” to wildfire damage should a fire occur within the WUI (Alameda County and Contra Costa County Resource Conservation Districts, 2022). Portions of the proposed Albrae to Baylands 320 kV DC transmission line are partially within or adjacent to the influence zone of the WUI; however, these portions of the transmission line would be entirely underground within Fremont Boulevard, Cushing Parkway, and Boyce Road. A portion of the proposed underground and overhead Newark to Albrae 230 kV transmission line, including its connection to the existing PG&E Newark substation, would also be located within the influence zone. The County of Alameda Local Hazard Mitigation Plan (LHMP) maps undeveloped vegetated areas within and adjacent to the Proposed Project area as high wildfire severity zones; however, the areas adjacent to the Proposed Project site consist of grasses and a low fuel load that is not conducive to large or fast-spreading wildfire, and these areas are mapped as CAL FIRE non-VHFHSZ.

The Proposed Project is also located in the influence zone and partially within the interface zone in the County of Santa Clara WUI, as mapped in the County’s Community Wildfire Protection Plan (County of Santa Clara, 2023). Portions of the proposed overhead Albrae to Baylands 320 kV DC transmission line and its underground alignment in Los Esteros Road and the proposed underground and overhead Baylands to NRS 230 kV transmission line would be partially located within the influence zone. There is also an influence zone area located west of Lafayette Street and east of Levi’s Stadium that overlaps with the existing SVP NRS substation. The residential area located north of Grand Boulevard and west of Los Esteros Road is designated as the interface zone, which overlaps with the proposed underground Baylands to NRS 230 kV transmission line for approximately 400 feet. However, it should be noted that the WUI map developed by Santa Clara County Firesafe Council and provided on the WUI page of the City of San José website, shows the Proposed Project area is located in a Non-WUI region.

In response to the California Public Utilities Commission’s (CPUC’s) Fire Safety Rulemaking, the CPUC mapped high fire threat areas where more stringent requirements would be implemented due to the elevated risk for fires associated with utilities. As shown in **Figure 5.20-3, CPUC Fire Threat Districts Map**, the Proposed Project is not located within a CPUC-designated Fire Threat District (CPUC, 2021a). The nearest CPUC-designated Fire Threat District is over three miles to the east of the Proposed Project’s Albrae to Baylands 320 kV DC transmission line.

LS Power Grid California, LLC (“LS Power”), PG&E, and SVP have not independently identified High FHSZ areas within the vicinity of the Proposed Project.

5.20.1.2 Fire Occurrence

A “wildfire” is defined in Section 51177(j) of the California Government Code as “...an unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to extinguish the fire.” CAL FIRE defines a “large fire” as being 1,000 acres or greater (CAL FIRE, 2017). The CAL FIRE Incident Archive was reviewed for large fires within a 10-mile radius of the Proposed Project area that have occurred since 2014. The Santa Clara Unit (SCU) Lightning

Complex Fire is the only large fire that has occurred within this radius in the past 10 years (CAL FIRE, 2024b). The SCU Lightning Complex Fire started as 20 different wildland fires across five counties, sparked by lightning strikes in dry vegetation on August 16, 2020. These fires eventually merged into one large fire that burned 396,624 acres in total (County of Alameda, 2023). The extent of the area burned by the SCU Lightning Complex Fire is approximately 4.7 miles east of the proposed Albrae to Baylands 320 kV DC transmission line and 6.7 miles east of the proposed Albrae terminal.

Smaller fires of less than 1,000 acres have also occurred within the last 10 years but are not included in this analysis. See **Figure 5.20-4, Fire Occurrence near the Proposed Project** to view the location of the fire discussed above.

5.20.1.3 Fire Risk

Fuel modeling and digital elevation models were not prepared for the Proposed Project because of its location within a low fire risk area and being surrounded mainly by existing industrial and commercial development, with open space and wetland areas to the west of the proposed Albrae to Baylands 320 kV DC transmission corridor and north of the proposed Baylands terminal. A summary of the average wind direction and speed, relative humidity, temperature, elevation, terrain, and vegetation is provided below. Land cover and vegetation types within and surrounding the Proposed Project area were also analyzed as they relate to wildfire risk and described below.

The Proposed Project is situated in the southern portion of the San Francisco Bay area, in Santa Clara Valley, within the Cities of Fremont, Milpitas, San José, and Santa Clara. The Proposed Project area is low in altitude and ranges in elevation from approximately 10 feet to 22 feet above mean sea level, with slopes of zero to two percent across the Proposed Project area. The Cities have similar average climates, including temperature and precipitation, though average temperatures generally decrease in higher latitudes (i.e., the City of Fremont has a slightly lower average temperature in comparison to the City of San José). The Santa Clara Valley is known to have a Mediterranean climate with mild seasonal weather, including wind variation, with the wettest season occurring in the winter months and driest in the summer months. The summer season lasts for about four months (late June to early October), with an average daily high temperature above 78 degrees Fahrenheit that peaks in July and August. In the City of Fremont, where the proposed Albrae terminal would be located, the average high temperature is 79 degrees in July and August. In the City of San José, where the proposed Baylands terminal site would be located, the average high temperatures peak at 84 degrees in July and August. The average annual rainfall in the Proposed Project area varies slightly from 16.68 inches in the City of Fremont to 14.9 inches in the City of San José (U.S. Climate Data, 2024a, 2024b). Data from the weather station closest to the Proposed Project (San José Mineta International Airport [SJC] Station) were also retrieved, and average monthly precipitation, daily high temperatures, and average relative humidity were analyzed for the previous 11 years (2013 to 2023) (Iowa Environmental Mesonet [IEM], 2024). The average monthly precipitation at the SJC weather station peaks in the winter months, with the highest precipitation of 2.5 inches occurring in December, and the lowest precipitation occurring in July at an average of zero inches. The daily high temperatures peak in the mid to late summer months, with the highest average temperature of 81.4 degrees Fahrenheit occurring in August, and the lowest average temperature of 60.5 degrees Fahrenheit occurring in December. The average relative humidity is relatively stable throughout the year and typically remains between 60 and 72 percent. The average relative humidity peaks in the winter months and dries out through the year, with the highest relative

humidity of 72 percent occurring in January, and the lowest relative humidity of 60 percent occurring in October (IEM, 2024).

Data from the weather station closest to the Proposed Project (SJC Station) were also retrieved and analyzed for annual and monthly wind direction, velocity, speed, and percentage of calm weather. Wind data at the SJC Station reflects observations over the past 55 years, from December 1969 to April 2024. **Figure 5.20-5, Annual Summary of Wind Data from SJC Weather Station** shows the SJC Station wind roses with four attributes (direction, speed, average speed, and percentage of calm); and, in wedges, it shows the comparable amount of time the wind was blowing from a compass bearing point and the wind speed breakdown for that bearing. The bearing points were shown to be consistent and indicated a northwest to southeast bearing, with calm weather recorded approximately 23 percent annually. Average wind speed was 6.8 miles per hour at the SJC Station. These patterns were the same for the monthly wind roses, indicative of consistent and predictable prevailing winds. This weather station is close to the Proposed Project area, and there is no intervening topography to deflect the winds, so it is reasonable to conclude that wind driven fires would move in the same direction (IEM, 2024).

Vegetation along the proposed Albrae to Baylands 320 kV DC transmission line primarily consists of urban, landscape/ornamental, wastewater treatment area, annual grasslands, and riparian habitats. The proposed Albrae terminal is developed, and the proposed Baylands terminal primarily consists of annual grasslands. The existing PG&E Newark substation is currently developed, and the area just outside of the substation experiences continued vegetation management to minimize vegetation growth. The existing SVP NRS substation is fully developed with no vegetation, with landscaping between the substation and adjacent uses to the north, east, and south of the existing substation.

Land type and surface conditions for areas within 0.5 mile of the Proposed Project were identified for the purposes of examining their influence on wildfire behavior and determining what the corresponding Scott/Burgan fuel model category would be. Each fuel model category corresponds to a wildfire hazard level (WHL) on a low to high scale. Land type and surface conditions as well as the associated Scott/Burgan fuel models within the Proposed Project area are summarized below.

Salt Marsh Formation

Salt marshes are coastal wetlands that are flooded and drained by salt water brought in by the tides. They are marshy because the soil may be composed of deep mud and peat. Primary plants species found in this type are pickleweeds (*Salicornia* spp.), salt and inundation tolerant grasses (*Distichlis* and *Spartina* spp.), and *Grindelia* spp. These marshes are mosaics of vegetated surfaces and tidal drainage channels. Typically, this formation has a very low flammability potential due to the low stature (six to 18 inches) of the species present, lack of flammable fuel buildup, and diurnal inundation. There is not a strong Scott/Burgan standard fuel model cognate for this surface occupation type, but fire risk is considered to be low. In proximity to the Proposed Project, portions of the South San Francisco Bay consist of salt marshes, including the Don Edwards San Francisco Bay NWR adjacent to the proposed Albrae to Baylands 320 kV DC transmission line alignment on Cushing Parkway. This portion of the proposed Albrae to Baylands 320 kV DC transmission line would be underground within the existing roadway.

Complex: Salt Pans

This complex is associated with the commercial production of salt and shares a wildfire risk level with the San José-Santa Clara RWF drying ponds located in proximity to the Proposed Project. The primary surface occupation elements are the basin, bordering vegetation, and associated access roads. The basins go through a sequence of inundation to drying where the surface occupations go from open water (WS) to bare ground (BG). The Scott/Burgan cognates would be nonburnable (NB) fuel type models NB8 to NB9, which are devoid of enough fuel to support wildland fire spread. The fuel model cognate for the access roads within the San José-Santa Clara RWF property would be NB9 and, again, would not support wildfire. The bordering vegetation can be composed of either rush species or upland brush species. The rush dominated type does not have a Scott/Burgan fuel model cognate, but the upland brush species type can be considered to be a shrub (SH)5 fuel model, which consists of woody shrubs and shrub litter, with very high spread rates and flame lengths. The majority of the overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would be located in the salt pan and drying pond land type within the San José-Santa Clara RWF, including the proposed overhead structures. The proposed overhead structures would be constructed adjacent to existing access roads within the drying ponds and would have low wildfire risk due to the presence of water and absence of fuels in this area.

Complex: Commercial Sites

This complex is comprised of three principal surface occupation types: The Structure Footprint (footprint of the commercial buildings), Paved Parking and Access Roads, and Ancillary Vegetation (landscaping). There is no direct Scott/Burgan fuel model cognate for the structure element, but it can be considered as an NB1 type, which consists of land covered by urban and suburban development. Parking and access roads are considered to be bare ground with an NB9 designation, which consists of lands that are devoid of enough fuel to support wildland fire spread. The landscaping is a highly managed element and would not be considered to have the attributes of natural plant formations as they relate to wildfire behavior.

The Structure Footprint surface occupation type refers to structures and buildings and has a fire behavior that is a product of structural fire elements. The primary determinants include the materials used in the construction and availability/distribution of emergency fire suppression water. The paved areas are devoid of fuels and would not support wildfire. The Ancillary Vegetation is characterized by (1) having the species selected for specific purposes (ornamental appearances, fire resistance, etc.), (2) being subjected to constant management, (3) is generally accompanied by a water supply (irrigation and/or emergency fire suppression), and (4) is highly accessible for emergency fire response. The proposed Albrae terminal would be located on a previously disturbed, paved site that falls under the commercial sites description and is devoid of enough fuel to support wildland fire spread. A portion of the Proposed Project transmission lines would also be located within paved parking and access roads within commercial or industrial areas, including portions of the proposed Baylands to NRS 230 kV transmission line located east and west of where it crosses the Guadalupe River, in commercial areas north of State Route (SR)-237. Proposed transmission line segments within public roadways are discussed further under the "Road Surfaces" land cover type below.

Complex: Open Water Bodies

This complex is characterized by expanses of open water, a peripheral band of vegetation, and, in some cases, access roads. Depending on the degree of hydromorphic development of the soils on any particular site, there are two distinctly different groupings of plant species that can exhibit two significantly different wildfire behaviors. Where the site has soil profile characteristics supportive of the hydromorphic process and a consistent pattern of persistent inundation, rush, or reed-like, vegetation (i.e., species in the *Carex*, *Juncus*, and *Typha* genera) predominates. As the terrain rises above the level where the soils are hydrophytic, woody shrub and brush species can predominate. Both the actual open water expanses and the areas dominated by rushes would have low fire risk with an operational fuel model akin to the Scott/Burgan model NB8. The access roads typically have a surface of native soil materials and are kept barren by their usage. These surfaces are fully represented by the Scott/Burgan model NB9. Whereas, the sites exhibiting fuel models NB8 and NB9 have no surface fuels to carry a ground fire and/or are characterized by perennial species with high moisture content stems and leaves, the sites with more upland peripheral vegetation are (1) over a soil surface where litter can accumulate, and (2) has significant quantities of flammable materials in the canopy—conditions necessary for carrying a wildfire. The Open Water Bodies land cover type is present in the perennial waterbodies in the Proposed Project area, including Coyote Creek and the Guadalupe River, located east of the proposed Albrae to Baylands 320 kV DC transmission line, and east and west of the proposed Baylands to NRS 230 kV transmission line, respectively. The overhead portion of the proposed Baylands to NRS 230 kV transmission line would intersect this land cover type where it crosses the Guadalupe River.

Complex: Single-Family Residential

This complex is composed of four different surface occupation types: Structural Footprints, Ancillary Vegetation, Bare Ground, and Paved Access Roads. Although similar to the Commercial Complex in it being a matrix of individual components, there are significant differences in terms of the fire behavior that can be generated:

- The individual surface occupation types are, on the average, much smaller in surface occupied, resulting in a finer matrix and more complete blending into a resultant overall fire behavior;
- The structures in this example are all wood frame construction and have mature landscaping (Ancillary Vegetation).

The single-family residential complex is present in the Proposed Project vicinity east of Grand Boulevard and Disk Drive and the proposed Baylands to NRS 230 kV transmission line. This portion of the proposed Baylands to NRS 230 kV transmission line would be located underground within existing roadways and would not impact the existing single-family residential area.

Tree-Dominated Formations – Natural Riparian Gallery

This formation occupies floodplain zones along creeks found within the Proposed Project study area (primarily Coyote Creek). It is arranged as a gallery formation with dense trees and brush species that are adapted to higher soil moisture conditions. Dominant species in cottonwoods (*Populus fremontii*), sycamores (*Plantanus* spp.) and willows (*Salix* spp.). This type is a fully formed multistory formation with (1) an average total stand height on the order of 30 feet, (2) high volumes of fuel accumulations, and (3) high fuel-bed continuities at the surface level, “ladder fuel”

positions, and in the overstory canopy. This formation has the potential for a full involvement (surface and crown fire), can advance with moderate speed across the landscape, and can generate flame lengths in the 20-to-30-foot range. The closest Scott/Burgan cognate is timber litter (TL)9, which indicates a moderate flame length and fire spread rate. The tree-dominated formation land cover type is present near McCarthy Boulevard, where the proposed underground Albrae to Baylands 320 kV DC transmission line transitions from underground to overhead near Coyote Creek. The Proposed Project area and limits of construction are generally absent of the tree-dominated formation land cover types.

Tree-Dominated Formations – Oak Savannah

This formation occupies drier upland sites in the Proposed Project study area and is comprised of widely scattered trees (principally oak trees, *Quercus spp.* but can also include non-native ornamentals) within medium stature grasslands. The Scott/Burgan cognates would be grass fuel type (GR)3 and GR4 with high spread rates and flame lengths on the order of eight to 10 feet. If encountered, the individual trees can become fully involved with the generation of flame lengths on the order of 20 feet accompanied with ember production. The oak savannah is present intermittently in the Proposed Project vicinity west of Coyote Creek; however, this land cover type would not directly border the Proposed Project components contiguously.

Ancillary Vegetation Formations

Ancillary Vegetation formations consist of ornamental landscaping and typically occur as a component of the commercial and single-family residential complexes. They are composed of tree, brush, and grass species and used as landscaping. The formations involving trees often present as a long thin gallery aligned with road or pathways. They typically have high fuel-bed continuity in the crown area but have an absence of flammable material at the ground and “ladder fuel” positions. There is no Scott/Burgan fuel model cognate for this type. Although often showing high densities of plant material, the risk of dangerous fire behavior being generated is constrained by:

- Removal of flammable fuel through consistent maintenance;
- Association with an irrigation system;
- Accessibility to a high-volume community emergency water supply; and
- High accessibility for emergency fire suppression activities.

The Ancillary Vegetation land cover type is present in several commercial and residential areas adjacent to the Proposed Project, including the proposed Albrae to Baylands 320 kV DC transmission line alignment on Boyce Road, Cushing Parkway, Fremont Boulevard, and Los Esteros Road; and adjacent to the proposed Baylands to NRS 230 kV transmission line on Disk Drive, Nortech Parkway, and Lafayette Street. There is also Ancillary Vegetation fronting the existing SVP NRS substation within a parking area accessible via Lafayette Street.

Grass-Dominated Formations – Low Stature Grasses and Forbs

These formations are comprised of low-growing (i.e., no greater than 18 inches) plant and forb species and are found on sites with poorly drained soils. The Scott/Burgan fuel model cognate would be GR1 and, if allowed to mature and dry, could generate fire behaviors characterized by moderate spread rates and low flame lengths. This formation has been observed to be subject to heavy livestock grazing pressure with the result being very light levels of fuel loading. This land

cover type is dominant in the grassy undeveloped area directly east of Staging Area 2 and north of the existing PG&E Newark substation, as well as in grassy areas located south and east of the proposed Baylands terminal.

Grass-Dominated Formations – Medium Stature Grasses and Forbs

These formations were observed to be on more upland sites with comparatively well-drained soils. They are comprised of medium-height (i.e., no greater than one to four feet) plant and forb species and generally occupied 100 percent of the surface area. The Scott/Burgan fuel model cognates would be GR4 and GR6 and, if allowed to mature and dry, could generate fire behaviors characterized by high spread rates and moderately long flame lengths. This formation has been observed to be subject to both heavy livestock grazing pressure, or “haying” operations, with the result being very light levels of fuel loading. This land cover type is present in undeveloped areas south of Los Esteros Road, including the proposed Baylands terminal site, as well as upland areas of the Guadalupe River. A portion of the proposed underground and overhead Baylands to NRS 230 kV transmission line would be located within this land cover type near the Guadalupe River.

Grass/Brush Formations

This formation was observed to occupy upland sites on comparatively well-drained soils. The type is in the form of a mosaic of distinct patches of brush species (principally *Baccharis pilularis*) set within broader expanses of moderate stature grass and forb species. The overall site occupation is generally 100 percent. The Scott/Burgan fuel model cognate would be GS2 and, if allowed to mature and dry in place, could generate high spread rates and moderate (six to eight feet) flame lengths. This land cover type has been observed to be subject to mowing or discing practices in order to effect fuels reduction. This land cover type is present intermittently in undeveloped areas surrounding the proposed Baylands terminal site, as well as in undeveloped vegetated areas on the east and west sides of Lafayette Street in the City of Santa Clara. This portion of the proposed Baylands to NRS 230 kV transmission line would be entirely underground within Lafayette Street and would not be located within the grass/brush formation.

Road Surfaces

This land use type is comprised of surfaces that are either natural materials (BG) or paved (PV). The Scott/Burgan fuel model cognates would be either NB1 or NB9 and would not support the ignition or carrying of wildfire. The majority of the underground portions of the proposed Newark to Albrae 230 kV, Albrae to Baylands 320 kV DC, and Baylands to NRS 230 kV transmission lines would be within existing roadways that fall under the road surfaces land cover type and would be subject to a very low fire risk.

Project Topography and Fire Risk

The topographic profile of the Proposed Project, including the two high-voltage direct current (HVDC) terminals, the Newark to Albrae 230 kV, Albrae to Baylands 320 kV DC, and Baylands to NRS 230 kV transmission lines, and existing PG&E and SVP substation modification areas, was analyzed to determine fire risk. The Proposed Project Area is relatively flat and low in elevation, and generally lies at zero to 20 feet above mean sea level with gentle slopes. The majority of the Proposed Project transmission lines are sited within existing roadways that have been previously graded to a flat level and paved with concrete or asphalt. The Proposed Project area is relatively

flat and low-lying and consistent in topography, with mild wind patterns and mild climate that would not result in an exacerbated wildfire risk. In addition, the majority of the surface conditions within the Proposed Project study area are considered low or low-to-medium WHL. Although wildfire risk varies for individual segments along the Proposed Project alignment, considering the environmental conditions within and surrounding the Proposed Project as they relate to wildfire risk, overall wildfire risk for the area remains low.

5.20.1.4 Values at Risk

As discussed in **Section 5.11, Land Use and Planning**, the Proposed Project transmission line corridors run through numerous commercial, industrial, open space, public/quasi-public, public facility, residential, and planned development land use designations. Existing utility infrastructure located within 1,000 feet of the Proposed Project includes the existing PG&E Newark substation and the SVP NRS substation, consisting of predominately steel structures. There are also existing underground and overhead electric utilities that parallel the proposed underground Albrae to Baylands 320 kV DC transmission line route in some sections. The underground portions of the proposed Albrae to Baylands 320 kV DC, Newark to Albrae 230 kV, and Baylands to NRS 230 kV transmission lines would be located primarily in existing city streets and would not pose any additional fire hazards following construction. The proposed overhead transmission line structures would predominately be self-supported tubular steel monopoles, which have low flammability and associated fire risk. The overhead structures for the proposed Newark to Albrae 230 kV transmission line would be located within 1,000 feet of the existing Newark substation, within PG&E-owned property which consists of predominantly steel structures. The overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would predominantly be located within the San José-Santa Clara RWF over their wastewater drying ponds. The overhead portion of the proposed Baylands to NRS 230 kV transmission line that crosses the Guadalupe River would be constructed within 1,000 feet of a corporate office building surrounded by a paved parking lot and landscaped areas; however, fire risk is considered to be low due to the proposed structure materials and lack of vegetation.

The existing PG&E Newark substation and proposed Albrae terminal and Newark to Albrae 230 kV transmission line are located in the City of Fremont, which has a total population of 230,504 (City of Fremont, 2023). Land uses surrounding the proposed Albrae terminal site consist of industrial facilities, and structures within 1,000 feet of the proposed Albrae terminal consist of a glass and concrete fabrication facility to the north, an electric utilities distribution center to the east, and a car repair and auction lot to the south and west. Heavily populated commercial and industrial areas present a fire risk in the event of a fire due to the amount of flammable materials, such as wood and natural gas, located in close proximity. However, mitigating factors, such as the limited amount of vegetation, high physical access for responding fire personnel, and access to municipal water supplies for suppression, make the risk of significant fire damage in urban areas low. Since this area is entirely paved and previously developed with no natural vegetation, fire risk is considered to be low.

The proposed Albrae to Baylands 320 kV DC transmission line, including overhead and underground portions, passes through the Cities of Fremont, Milpitas, and San José. The portion of the proposed Albrae to Baylands 320 kV DC transmission line corridor that passes through City of Milpitas is an approximately 1,000-foot (0.19 mile) segment of the transmission line located on open space land, directly west of Coyote Creek. The City of Milpitas has a total population of 80,839 (City of Milpitas, 2024). Development within 1,000 feet of the Proposed Project site in the

City of Milpitas consists of McCarthy Boulevard, directly south of Dixon Landing Road, and commercial, industrial, and open space development located east of the proposed Albrae to Baylands 320 kV DC transmission line.

The proposed Baylands terminal is located in the City of San José, which has a total population of 971,223 (U.S. Census Bureau, 2022). The proposed Baylands terminal site is undeveloped land designated as Open Space – Parklands and Habitat. Surrounding land uses consist of Los Esteros Road and a recycling trash center to the north, San José-Santa Clara RWF to the east, and undeveloped land to the south and west. There are no residential communities within 1,000 feet of the proposed Baylands terminal site, though structures associated with the recycling and trash center to the north and the San José-Santa Clara RWF to the east would be vulnerable in the event of a wildfire in the area. The undeveloped areas to the south and west consist of annual grasslands that are maintained for a wildlife preserve and do not pose a significant wildfire risk. The proposed Albrae and Baylands terminals are within 0.4 mile of a federally protected California Conservation Easement associated with the Don Edwards San Francisco Bay NWR (see **Section 5.4, Biological Resources** for additional information).

The proposed Baylands to NRS 230 kV transmission line passes through the Cities of San José and Santa Clara. Within the City of San José, the proposed transmission line corridor would be surrounded by open space, residential, commercial, combined commercial/industrial, and light industrial uses. Within the City of Santa Clara, the proposed transmission line corridor would be surrounded by parks/open space, residential, and commercial uses. The proposed Baylands to NRS 230 kV transmission line would be constructed almost entirely underground in existing city streets, except for the approximately 750-foot overhead portion to cross the Guadalupe River, which would pose little additional fire risk following construction.

5.20.1.5 Evacuation Routes

Emergency planning and response documents from the Counties of Alameda and Santa Clara were reviewed to determine if evacuation routes could affect or be affected by the Proposed Project. These included the Draft County of Alameda Emergency Operations Plan (EOP) (2023), County of Santa Clara Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) (2017), County of Santa Clara EOP (2022), City of Fremont EOP (2020), City of Fremont LHMP (2016), the Wildfire Hazard-Specific Annex to the County of Santa Clara EOP (2019), the City of Milpitas EOP (2021a), the City of San José EOP (City of San José, 2019a), and Evacuation Support Annex to the EOP (City of San José, 2019b). There are no evacuation routes identified within these plans; however, Weber Road to Boyce Road to Interstate (I)-880 via Auto Mall Parkway or Stevenson Boulevard would presumably be the primary evacuation route from the proposed Albrae terminal site, and Los Esteros Road to Zanker Road to SR237 would presumably be the primary evacuation route from the proposed Baylands terminal site.

5.20.2 REGULATORY SETTING

Federal, state, and local regulations were evaluated with respect to the Proposed Project.

5.20.2.1 Wildfire Regulatory Setting

Federal

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) requires utilities to adopt and maintain minimum clearance standards between vegetation and transmission voltage power lines. These clearances vary depending on voltage. In most cases, the minimum clearances required in state regulations are greater than the federal requirement. In California for example, CPUC has adopted General Order (GO) 95 rather than the North American Electric Reliability Corporation (NERC) standards as the electric safety standard for the State.

North American Electric Reliability Corporation Standards

NERC is a not-for-profit international regulatory authority whose mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid (NERC, 2023). NERC develops and enforces reliability standards; annually assesses seasonal and long-term reliability; monitors the bulk power system through system awareness; and educates, trains, and certifies industry personnel. NERC is the Electric Reliability Organization (ERO) for North America, subject to oversight by FERC. To improve the reliability of regional electric transmission systems and in response to the massive widespread power outage that occurred on the Eastern Seaboard in 2003 as a result of a software malfunction, NERC developed a transmission vegetation management program that is applicable to all transmission lines operated at 200 kV and above and to lower-voltage lines designated by the Regional Reliability Organization as critical to the reliability of the electric system in the region (NERC, 2006).

Uniform Building Code and Uniform Fire Code

The Uniform Building Code (UBC) and the Uniform Fire Code (UFC) provide codes for fire protection at the federal level. To minimize potential fire risk and damage to structures, the UBC provides requirements to which building construction, materials, and other elements or construction practices must adhere. The UFC provides design measures for installation of fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards and safety measures, hazardous material storage and use, and other general and specialized requirements pertaining to fire safety and prevention.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995 and updated in 2001 by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions (National Interagency Fire Center, 2009). An important component of the Federal Wildland Fire Management Policy is the acknowledgment of the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation include the following guiding principles: risk management is a foundation for all fire management activities; fire management plans and activities are based upon the best available science; and standardization of policies and procedures among federal agencies is an ongoing objective.

State

2019 Strategic Fire Plan for California

Developed by the Board of Forestry and Fire Protection (“the Board”), the Strategic Fire Plan outlines goals and objectives to implement CAL FIRE’s overall policy direction and vision. The 2019 Plan demonstrates CAL FIRE’s focus on: (1) fire prevention and suppression activities to protect lives, property, and ecosystem services; and (2) natural resource management to maintain the State’s forests as a resilient carbon sink to meet California’s climate change goals and to serve as important habitat for adaptation and mitigation. Unit Plans are developed and updated in order to implement the programs and goals of the 2019 Plan. Through the Strategic Plan, CAL FIRE implements and enforces the policies and regulations set forth by the Board and carries forth the mandates of the Governor and the Legislature (CAL FIRE, 2019).

California Emergency Response Plan

Pursuant to the Emergency Services Act (Government Code §8550 et seq.), California developed an Emergency Plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan of which is administered by the State Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including the United States Environmental Protection Agency (USEPA), California Highway Patrol (CHP), California Department of Fish and Wildlife (CDFW), the Regional Water Quality Control Boards (RWQCBs) (in this case, the San Francisco Bay RWQCB), the local air districts (in this case, the Bay Area Air Quality Management District), and local agencies. The State Emergency Plan defines the “policies, concepts, and general protocols” for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multiagency response efforts whenever state agencies are involved.

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE’s firefighters, fire engines, and aircraft respond to an average of more than 6,000 wildland fires each year (CAL FIRE, 2019).

The Office of the State Fire Marshal supports CAL FIRE’s mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including regulating buildings in which people live, congregate, or are confined; controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; providing Statewide direction for fire prevention in wildland areas; regulating hazardous liquid pipelines; reviewing regulations and building standards; and providing training and education in fire protection methods and responsibilities (CAL FIRE, 2024c).

State Fire Regulations

Fire regulations for California are established in Sections 13000 et seq. of the California Health and Services Code and include regulations for structural standards (similar to those identified in

the California Building Code [CBC]); fire protection and public notification systems; fire protection devices such as extinguishers and smoke alarms; standards for high-rise structures and childcare facilities; and fire suppression training. The State Fire Marshal is responsible for enforcement of these established regulations and building standards for all state-owned buildings, state-occupied buildings, and state institutions within California.

Regulations of the Fire Marshal

The purpose of the California Code of Regulations Title 19, also known as Regulations of the Fire Marshal, is to establish minimum standards for the prevention of fire and for the protection of life and property against fire, explosion, and panic. Title 19 also specifies that the National Fire Protection Association (NFPA) standards and the NFPA Fire Protection Handbook may be used as authoritative guides in determining recognized fire prevention engineering practices.

California Fire Code

The purpose of the California Code of Regulations Title 24, Part 9, also known as the California Fire Code, is to establish the minimum requirements consistent with nationally recognized good practices 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.

California Building Code

The CBC provides design and construction measures for structures and other facilities with regard to fire protection and prevention. The CBC supplements the UBC by providing measures that are specific to potential conditions in California. Measures provided in the CBC are integrated and enforced through city and county review of building permits, the Office of the State Fire Marshal, and by local city or county fire chiefs or marshals.

California Public Resources Code

The California Public Resources Code (PRC) provides regulations to enhance safety with regard to the operation and management of electrical transmission lines. These include, but are not limited to, the following:

- PRC Section 4201-4204: This section and Government Code Sections 51175-89 direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as fire hazard severity zones, define the application of various mitigation strategies to reduce risk associated with wildland fires.
- PRC Section 4292: This section requires the clearing of flammable vegetation around specific structures that support certain connectors or types of electrical apparatus. An approximately 10-foot radius around such structures must remain clear of vegetation for the entirety of the fire season.
- PRC Section 4293: This section requires specific clearance between conductors and vegetation. As the line voltage increases, the radius of clearance also increases. It is also

required that some trees be removed if they pose the potential to fall on an electrical transmission line and cause damage.

CPUC

See **Section 5.20.2.2**, *CPUC Standards*, below.

Senate Bill 1028

Senate Bill 1028 (2016) requires each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that would minimize the risk of catastrophic wildfire posed by those electrical lines and equipment and makes a violation of these provisions by an electrical corporation a crime under state law. The bill also requires each electrical corporation to annually prepare and submit a wildfire mitigation plan to CPUC for review. The plan must include a statement of objectives, a description of preventive strategies and programs that are focused on minimizing risk associated with electric facilities, and a description of the metrics that the electric corporation uses to evaluate the overall wildfire mitigation plan performance and assumptions that underlie the use of the metrics.

Senate Bill 1241

In 2012, Senate Bill 1241 added Section 66474.02 to Title 7 Division 2 of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels designated as very high fire hazard, or that are in an SRA, unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. The three findings are, in brief: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290-91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City regulations are not applicable as the Cities of Fremont, Milpitas, San José, and Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local wildfire-related policies, plans, or programs for informational purposes. Although LS Power is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

City of Fremont General Plan

The following relevant goals and policies related to wildfire from the City of Fremont General Plan were reviewed and provided below for informational purposes (City of Fremont, 2011).

- Goal 10-4** **Fire Hazards.** Minimum risk to life and property resulting from fire hazards.
- Policy 10-4.2** **Development Standards.** Maintain development standards that limit potential health and safety risks, and the risks of structure damage and severe economic loss due to fire hazards.
- Implementation 10-4.2.A** **Fire Code Compliance.** Require all new development and renovations to comply with the CBC, Fire Code, and all local ordinances for construction and adequacy of water flow and pressure, ingress/egress, and other measures for fire protection.
- Implementation 10-4.2.B** **Designation of Very High Fire Hazard Severity Zones.** Designate areas of the City due to location, topography, vegetative cover, or other physical characteristics as Very High FHSZ. Require these areas to meet more stringent building code standards for exterior materials and construction methods for wildfire exposure.
- Policy 10-4.3** **Access and Clearance.** Require adequate access and clearance for fire equipment, fire suppression personnel, and evacuation for new development.

City of Fremont 2016-2021 Local Hazard Mitigation Plan

The City of Fremont's LHMP was most recently adopted in 2016, and a Tri-City Multi-jurisdictional LHMP including the City of Fremont is under development (City of Fremont, 2016). The 2016-2021 LHMP identifies local natural hazards, assesses community risk, and outlines the City's hazard mitigation goals and objectives, including strategies to address wildfire hazards. Strategies to address wildfire hazards involve Citywide hazard mitigation coordination, vegetation management, protection of water supplies, and code enforcement to reduce vulnerability of existing and proposed City-owned buildings and infrastructure. The following strategies related to wildfire are applicable to the Proposed Project:

- Strategy #7** Protect vulnerable water facilities to ensure an adequate water supply during emergencies and disaster recovery.
- Strategy #8** Protect vulnerable electric systems and facilities and build resiliency so disruption to the system is minimized during and following disasters. Ensure adequate redundancy and fuel is available to maintain critical facilities.
- Strategy #17** Reduce hazard vulnerabilities for non-City-owned buildings throughout Fremont.

County of Santa Clara Multi-Jurisdictional Hazard Mitigation Plan

The County of Santa Clara MJHMP was developed by the County and a partnership of local governments to reduce risks from natural disasters within the County of Santa Clara (County of Santa Clara OES, 2017). The current MJHMP was approved by the Federal Emergency Management Agency (FEMA) on December 19, 2017. Because mitigation plans have a five-year lifecycle, the County of Santa Clara MJHMP expired in December 2022, and the updated plan is under development. The MJHMP provides hazard mitigation planning for unincorporated Santa Clara County that addresses Countywide hazards and mitigation strategies, as well as individual annexes for each incorporated city, including the Cities of Milpitas, San José, and Santa Clara. The MJHMP includes an assessment of each potential hazard and provides mitigation alternatives for each hazard, organized by who would have responsibility for implementation: individuals (personal scale), businesses (corporate scale), and government (government scale). The following Countywide mitigation alternatives are provided to mitigate wildfire hazards on the corporate scale:

- **Manipulate the hazard:**
 - Clear potential fuels on property such as dry underbrush and diseased trees.
- **Reduce exposure to the hazard:**
 - Create and maintain defensible space around structures and infrastructure;
 - Locate outside of hazard area.
- **Reduce vulnerability to the hazard:**
 - Create and maintain defensible space around structures and infrastructure and provide water on-site;
 - Use fire-retardant building materials;
 - Use fire-resistant plantings in buffer areas of high wildfire threat.
- **Increase the ability to respond to or be prepared for the hazard:**
 - Support Firewise community initiatives;
 - Create/establish stored water supplies to be utilized for firefighting.

City of Milpitas General Plan

The following relevant goals and policies related to wildfire from the City of Milpitas General Plan were reviewed and provided below for informational purposes (City of Milpitas, 2021b).

- | | |
|----------------------|---|
| Goal SA-4 | Maintain a safe community by providing efficient and high quality police, fire, and emergency services. |
| Policy SA 3-6 | Maintain effective mutual aid agreements for fire, medical response, and other functions as appropriate. |
| Action SA-4b | As part of the development review process, require applications to be reviewed by the Public Works Department and Fire Department in order to |

ensure that development projects facilitate adequate fire services, access, and fire prevention measures.

- Policy SA 4-9** Ensure that fire and emergency medical services meet existing and future demand by maintaining a response time of four minutes or less for all urban service areas.

City of San José General Plan

The following relevant goals and policies related to wildfire from the City of San José General Plan were reviewed and provided below for informational purposes (City of San José, 2024).

- Goal EC-8** **Wildland and Urban Fire Hazard.** Protect lives and property from risks associated with fire-related emergencies at the urban/wildland interface.
- Policy EC-8.1** Minimize development in very high fire hazard zone areas. Plan and construct permitted development so as to reduce exposure to fire hazards and to facilitate fire suppression efforts in the event of a wildfire.
- Policy EC-8.2** Avoid actions which increase fire risk, such as increasing public access roads in very high fire hazard areas, because of the great environmental damage and economic loss associated with a large wildfire.
- Policy EC-8.3** For development proposed on parcels located within a very high FHSZ or wildland-urban interface area, implement requirements for building materials and assemblies to provide a reasonable level of exterior wildfire exposure protection in accordance with City-adopted requirements in the CBC.
- Policy EC-8.4** Require use of defensible space vegetation management best practices to protect structures at and near the urban/wildland interface.
- Goal CD-5** **Community Health, Safety, and Wellness.** Create great public places where the built environment creates attractive and vibrant spaces, provides a safe and healthful setting, fosters interaction among community members, and improves quality of life.
- Policy CD-5.5** Include design elements during the development review process that address security, aesthetics and safety. Safety issues include, but are not limited to, minimum clearances around buildings, fire protection measures such as peak load water requirements, construction techniques, and minimum standards for vehicular and pedestrian facilities and other standards set forth in local, state, and federal regulations.
- Goal ES-3** **Law Enforcement and Fire Protection.** Provide high-quality law enforcement and fire protection services to the San José community to protect life, property, and the environment through fire and crime prevention and response. Utilize land use planning, urban design and site development measures, and partnerships with the community and other

public agencies to support long-term community health, safety, and well-being.

Policy ES-3.11. Ensure that adequate water supplies are available for fire-suppression throughout the City. Require development to construct and include all fire suppression infrastructure and equipment needed for their projects.

Policy ES-3.20 Require private property owners to remove excessive/overgrown vegetation (e.g., trees, shrubs, weeds) and rubbish to the satisfaction of the Fire Chief to prevent and minimize fire risks to surrounding properties.

City of Santa Clara General Plan

As stated in the General Plan, the City of Santa Clara does not have the terrain or vegetation conditions for large or devastating wildfires (City of Santa Clara, 2010). The following relevant policy related to wildfire from the City of Santa Clara General Plan were reviewed and provided below for informational purposes:

Policy 5.9.3-P2 Provide police and fire services that respond to community goals for a safe and secure environment for people and property.

5.20.2.2 CPUC Standards

GO 95

The CPUC originally adopted GO 95 in 1941. GO 95 governs the design, construction, and maintenance of overhead electrical lines. On May 4, 2000, the CPUC issued D.98-07-097 to adopt revisions to GO 166 which addressed matters relating to electric service reliability and safety and focused on minimizing potential hazards posed by damage to electric distribution facilities. On January 18, 2012, the CPUC issued D.12-01-032, which adopted significant revisions to GO 95, Overhead Electric Line Construction, and GO 165, Inspection Requirements for Electric Distribution and Transmission Facilities. Phase I and Phase II revisions to GOs 95 and 165 addressed vegetation management practices, inspection cycles, corrective maintenance timeframes, and other fire-reduction measures in fire threat zones.

The CPUC also provides an annual guide to utilities for creating their Wildfire Mitigation Plans (WMPs) based on guidance provided in D.19-05-036. The WMP template includes substantive and procedural requirements for WMPs based on lessons learned and input from stakeholders and the Wildfire Safety Advisory Board. The most recent WMP 2021 Guidelines were focused on such principles as standardizing information collection, systematizing qualitative information, and tracking utility progress towards wildfire risk reduction (CPUC, 2021b).

The CPUC has promulgated various rules to implement the fire safety requirements of GO 95, including:

- **GO 95, Rule 18A**, which requires utility companies to place a high priority on the correction of significant fire hazards in high fire-threat areas of California and that each utility company establish an auditable maintenance program;

- **GO 95, Rule 31.1**, which generally requires that overhead electrical lines be designed, constructed, and maintained in accordance with accepted good practices for the given conditions known at the time;
- **GO 95, Rules 31.2, 80.1A, and 90.1B**, which set the minimum frequency for inspections of aerial communication facilities located in close proximity to power lines in high fire-threat areas throughout California;
- **GO 95, Rule 35, Table 1, Case 14**, which requires increased radial clearances between bare-line conductors and vegetation in high fire-threat areas of California;
- **GO 95, Rule 38**, which establishes minimum vertical, horizontal, and radial clearances of wires from other wires;
- **GO 95, Rule 43.2.A.2**, which requires that for lines located within Tier 2 or Tier 3 zones, the wind loads required in Rule 43.2.A.1 be multiplied by a wind load factor of 1.1; and
- **GO 95, Appendix E**, which authorizes increased time-of-trim clearances between bare-line conductors and vegetation in high fire-threat areas of California.

GO 165

GO 165 establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation. Utilities must perform “patrol” inspections, defined as a simple visual inspection of utility equipment and structures that is designed to identify obvious structural problems and hazards, at least once per year for each piece of equipment and structure. “Detailed” inspections, where individual pieces of equipment and structures are carefully examined, are required every five years for all overhead conductor and cables, transformers, switching/protective devices, and regulators/capacitors. By July 1st of each year, each utility subject to this GO must submit an annual report of its inspections for the previous year under penalty of perjury.

- **GO 165, Appendix A, Table 1** requires more frequent patrol inspections of overhead powerline facilities in rural, high fire-threat areas of California.

GO 166

GO 166 applies to all electric utilities subject to the jurisdiction of the CPUC with regard to matters relating to electric service reliability and/or safety. This standard requires that utility companies outline a plan to mitigate power line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning in a high fire threat area. Fire Prevention Plans created by utility companies are required to identify specific parts of the utility’s service territory where fire exacerbating conditions may occur simultaneously.

- **GO 166, Standard 1.E** requires each electric utility in California to develop and submit a plan to reduce the risk of fire ignitions by overhead facilities in high fire-threat areas during extreme fire-weather events.

- **GO 166, Standard 11** requires that utilities report annually to the CPUC regarding compliance with GO 166.

GO 174

GO 174 applies to electric utilities subject to the jurisdiction of the CPUC with regard to electric utility substations and facilities subject to the California Independent System Operator's (CAISO) operational control and/or subject to FERC reliability. This standard requires that utility companies outline requirements, including inspection and reporting, that will promote safety and adequacy of service.

5.20.3 IMPACT QUESTIONS

5.20.3.1 CEQA Impact Questions

According to Section 15002(g) of the California Environmental Quality Act (CEQA) Guidelines, "a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." As stated in Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. The potential significance of project-related impacts related to wildfire was evaluated for each of the criteria from Appendix G of the CEQA Guidelines, as discussed in the following sections.

The significance criteria for assessing the impacts to wildfire come from the CEQA Appendix G Environmental Checklist. According to the CEQA Checklist, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, a project may cause a potentially significant impact if it would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan; or
- 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; or
- 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; or
- 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.

5.20.3.2 Additional CEQA Impact Questions

Pursuant to the *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing Proponent's Environmental Assessments* (CPUC, 2019), there are no additional CEQA Impact Questions required for wildfire.

5.20.4 IMPACT ANALYSIS

5.20.4.1 Wildfire Impact Analysis

If located in or near state responsibility areas or land classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The Proposed Project is not located within an SRA or lands classified as VHFHSZ. The nearest VHFHSZ is located within the SRA approximately 6.2 miles northeast of the proposed Albrae terminal, and the nearest VHFHSZ within an LRA is located approximately 6.4 miles southeast of the proposed Albrae to Baylands 320 kV DC transmission line. The nearest SRA is approximately 1.6 miles east of a portion of the proposed Albrae to Baylands 320 kV DC transmission line and is classified as a Moderate FHSZ in the approved 2024 CAL FIRE FHSZ maps (see **Figure 5.20-1**). The majority of the Proposed Project is over 2.5 miles from an SRA.

Emergency planning and response documents from the Counties of Alameda and Santa Clara were reviewed to determine if evacuation routes could affect or be affected by the Proposed Project. These included the Draft County of Alameda EOP (2023, City of Fremont EOP (2020), City of Fremont LHMP (2016), County of Santa Clara MJHMP (County of Santa Clara OES, 2017), County of Santa Clara EOP (2022), the Wildfire Hazard-Specific Annex to the County of Santa Clara EOP (2019), the City of Milpitas EOP (2021a), the City of San José EOP (City of San José, 2019a), and Evacuation Support Annex to the EOP (City of San José, 2019b). The strategies and mitigation alternatives to address wildfire hazards in the City of Fremont LHMP and County of Santa Clara MJHMP are primarily preventative, and the Proposed Project would not impair the City and County actions to prevent and address wildfire hazards. The Proposed Project would be consistent with City and County policies that require vegetation trimming to reduce wildfire fuels and would not introduce new flammable materials or vegetation to the Proposed Project area. In the event of a wildfire-related emergency, evacuation routes would be identified depending on the source and location of the fire. The Proposed Project would establish electrical infrastructure and would not interfere with City or Countywide incident management or operation plans. There are no emergency evacuation routes identified within these plans that would be affected by the Proposed Project. The Counties of Alameda and Santa Clara provide guidance on preparing a plan in case of emergency and encourage individuals to identify and map their evacuation routes. As noted above, Weber Road to Boyce Road to I-880 via Auto Mall Parkway or Stevenson Boulevard would presumably be the primary evacuation route from the proposed Albrae terminal site, and Los Esteros Road to Zanker Road to SR-237 would presumably be the primary evacuation route from the proposed Baylands terminal site.

Moreover, in accordance with **Applicant Proposed Measure (APM) TRA-1, Traffic Control Plan**, potential lane closures or plans for the modification of traffic lanes and associated measures to guide traffic around construction would be outlined as part of a Proposed Project-specific Traffic Control Plan (TCP). The TCP would be provided to applicable local jurisdictions, as required by permit. Additionally, **APM TRA-1** requires construction activities be coordinated with emergency service providers, as required by permit, including notifications as to the timing, location, and duration of construction activities. Implementation of **APM TRA-1** would further assure the safety of both the public and project personnel during Proposed Project activities and would ensure that potential evacuation routes are not obstructed during an emergency. Proposed Project

construction within City roadways would be temporary, and no long-term impacts to evacuation routes would occur. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation (refer to **Section 3.3.5, Other Potentially Required Facilities**). These proposed modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). Construction of these modifications would occur concurrently with construction of the remainder of the Proposed Project and for a limited time. The existing Newark substation, including the proposed modification area, is not located within an SRA or lands classified as VHFHSZ. The nearest SRA and the proposed work at the existing Newark substation facility would not change the existing use of the sites and would not impair any emergency response plan or emergency evacuation plan. Therefore, no impact would occur.

SVP Substation Modifications

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, SVP would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). These proposed modifications would occur within the existing substation facility. The existing NRS substation is not located within an SRA or lands classified as VHFHSZ. The nearest SRA and the proposed work at the existing NRS substation facility would not change the existing use of the sites and would not impair any emergency response plan or emergency evacuation plan. Therefore, no impact would occur.

If located in or near state responsibility areas or land classified as very high fire hazard severity zones, 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?

No Impact. The Proposed Project is not located within an SRA or lands classified as VHFHSZ. The nearest VHFHSZ is approximately 6.2 miles northeast of the proposed Albrae terminal, while the nearest SRA is approximately 1.6 miles east of a portion of the proposed Albrae to Baylands 320 kV DC transmission line and is classified as a Moderate FHSZ in the approved 2024 CAL FIRE FHSZ maps (see **Figure 5.20-1**). The majority of the Proposed Project is over 2.5 miles from an SRA. The Proposed Project area is characterized by flat topography (zero to two percent slope and 10 to 20 feet in elevation), mild seasonal weather, and consistent, mild wind patterns that would not be expected to exacerbate wildfire risks (see **Section 5.20.1.3, Fire Risk**). Due to the Proposed Project area's flat topography and low wildfire risk according to CAL FIRE, digital elevation models pertaining to topography were not prepared. In addition, the majority of the surface conditions within the Proposed Project study area are considered to be low or low-to-medium WHL. The majority of the proposed Albrae to Baylands 320 kV DC, Newark to Albrae 230 kV, and Baylands to NRS 230 kV transmission lines would be located underground within existing roadways, which are paved and do not support the ignition or spread of wildfire. As discussed in **Section 5.20.1.3**, the Proposed Project would be located within and in proximity to various land cover types based on existing vegetation, including grass-dominated formations, salt

marsh formations, commercial sites, road surfaces, and Ancillary Vegetation formations. While areas of moderate fire risk exist in the Proposed Project vicinity, the majority of the Proposed Project alignment is absent of vegetation or fuels that would support spread of wildfire or within areas that are previously developed. Although wildfire risk varies for individual segments along the Proposed Project alignment, considering the environmental conditions within and surrounding the Proposed Project as they relate to wildfire risk, overall wildfire risk for the area remains low.

If required based on final design or permits, a Construction Fire Prevention Plan (or equivalent) would be prepared prior to construction based on final design and the approved Proposed Project footprint. The Construction Fire Prevention Plan would include measures to prevent and manage incidences of fire ignition that could lead to wildfire, such as responsibilities and duties for compliance, preparedness training for construction personnel, procedures for fire reporting response and prevention, and coordination procedures with local and state fire officials. In accordance with CPUC guidance and GO 95, LS Power would prepare a WMP for its existing California projects prior to their energization, and this plan would be updated to include the Proposed Project prior its energization. Additionally, the new HVDC terminal facilities would be operated remotely, and portions of the new Albrae to Baylands 320 kV DC, Baylands to NRS 230 kV, and Newark to Albrae 230 kV transmission lines would be underground, thereby reducing fire risk from overhead utilities. During O&M, Proposed Project-related activities have a minimal potential for exacerbating wildfire risks. Access to the two HVDC terminals would be provided via gravel roads. Additionally, Proposed Project-related maintenance activities would be limited in duration and would not be ground-disturbing or include activities that would produce a spark, fire, or flames. The Proposed Project would not have occupants and, therefore, would not potentially expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire caused by slope, prevailing winds, or other factors. No impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation, including the proposed modification area, is not located within an SRA or lands classified as VHFHSZ. The nearest SRA and the proposed modifications would not change the existing use of the site. Therefore, no impact would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation is not located within an SRA or lands classified as VHFHSZ. The nearest SRA and the proposed modifications would not change the existing use of the site. Therefore, no impact would occur.

If located in or near state responsibility areas or land classified as very high fire hazard severity zones, 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?

No Impact. The Proposed Project is not located within an SRA or lands classified as VHFHSZ. The nearest VHFHSZ is approximately 6.2 miles northeast of the proposed Albrae terminal, while the nearest SRA is approximately 1.6 miles east of a portion of the proposed underground Albrae to Baylands 320 kV DC transmission line and is classified as a Moderate FHSZ in the approved 2024 CAL FIRE FHSZ maps (see **Figure 5.20-1**). Since the proposed Albrae to Baylands 320 kV DC transmission line would be installed mainly underground or within areas of low wildfire risk, the new transmission line would not exacerbate the risk of wildfire in the Proposed Project area. The overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line, beginning south of Dixon Landing Road, is a non-LRA VHFHSZ and is located outside of the SRA and would not significantly affect existing vegetation nor pose additional wildfire risk. The majority of the Proposed Project is over 2.5 miles from an SRA.

As discussed in **Section 3.5.13, Fire Prevention and Response**, during construction activities that are considered “hot work” (e.g., welding, grinding, or any other activity that creates hot sparks), LS Power would implement a ten-foot buffer around that activity, and vegetation would be cleared to ensure sparks do not create a fire hazard. For activities that do not produce sparks but still have potential to produce a fire hazard, LS Power would implement a five-foot buffer to be cleared of vegetation, and additional detailed procedures (i.e., handling sparks) would be provided in the Construction Fire Prevention Plan. During operation, the new HVDC terminal facilities would maintain a buffer clear of vegetation. No vegetation would be installed or allowed to grow within the proposed fenced HVDC terminal facilities where aboveground energized equipment would be located. The proposed HVDC terminal facilities would be operated remotely, and the majority of the proposed transmission lines would be underground, thereby reducing potential fire risk related to overhead electrical utilities. Additionally, LS Power would prepare a WMP for its existing California projects prior to their energization; the WMP would be updated to include the Proposed Project prior to its energization. Therefore, the Proposed Project would not exacerbate fire risk such that temporary or ongoing impacts to the environment would occur. No impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation is fully developed, mostly covered with rocks or pavement, and not located within an SRA or lands classified as VHFHSZ. The nearest SRA and the proposed modifications would not change the existing use of the site. Therefore, no impact would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing fenced substation facility. The existing NRS substation is fully developed, mostly covered with rocks or pavement, and not located within an SRA or lands classified as VHFHSZ. The nearest SRA and the proposed modifications would not change the existing use of the sites. Therefore, no impact would occur.

If located in or near state responsibility areas or land classified as very high fire hazard severity zones, 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?

No Impact. The Proposed Project is not located within an SRA or lands classified as VHFHSZ. The nearest VHFHSZ is approximately 6.2 miles northeast of the proposed Albrae terminal, while the nearest SRA is approximately 1.6 miles east of a portion of the proposed Albrae to Baylands 320 kV DC transmission line and is classified as a Moderate FHSZ in the approved 2024 CAL FIRE FHSZ maps (see **Figure 5.20-1**). The Proposed Project alignment is relatively flat (zero to two percent slope) and lies at sea level, with the entire Proposed Project area varying from approximately 10 to 20 feet in elevation. As discussed in **Section 5.7, Geology, Soils, and Paleontological Resources**, there is a less-than-significant impact related to risk of landslides where the Proposed Project is located due to its relatively flat topography and distance from hills, mountains, or slopes. In addition, as discussed in **Section 5.10, Hydrology and Water Quality**, the Proposed Project would not significantly impact the drainage or existing runoff of the surrounding area. Therefore, no impacts would occur under this criterion.

PG&E Substation Modifications

The PG&E Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation, including the proposed modification area, is not located within an SRA or lands classified as VHFHSZ. The proposed modifications to the existing Newark substation facility would not change the existing use of the site. Furthermore, the existing Newark substation is on relatively flat ground and is not located in a landslide-prone area and would not significantly impact the drainage or runoff of the surrounding areas. Therefore, no impact would occur.

SVP Substation Modifications

The SVP NRS substation modifications would occur within the existing substation. The existing NRS substation is not located within an SRA or lands classified as VHFHSZ. The proposed work at the existing NRS substation facility would not change the existing use of the site. Furthermore, the existing NRS substation is not located in landslide-prone areas and would not significantly impact the drainage or runoff of the surrounding areas. Therefore, no impact would occur.

5.20.5 CPUC DRAFT ENVIRONMENTAL MEASURES

The CPUC Draft Environmental Measures for wildfire include a Construction Fire Prevention Plan and Fire Prevention Practices (Construction and Maintenance) to be considered as the basis for mitigation where appropriate to address potentially significant impacts. However, because the Proposed Project is not located within an area designated as Very High or High FHSZ and there would be no impacts, these measures are not warranted.

5.20.6 APPLICANT PROPOSED MEASURES

No Applicant Proposed Measures (APMs) for wildfires would be implemented for the Proposed Project.

5.20.7 PG&E BEST MANAGEMENT PRACTICES

No PG&E Best Management Practices (BMPs) for wildfire would be implemented for PG&E's scope of work.

5.20.8 SVP BEST MANAGEMENT PRACTICES

No SVP BMPs or Proposed Project APMs for wildfire would be implemented for SVP's scope of work.

5.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a.	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?			X	
b.	Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
c.	Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

This section provides an impact analysis for each of the mandatory findings of significance provided in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

5.21.1 IMPACT QUESTIONS

5.21.1.1 CEQA Impact Questions

The significance criteria for assessing the impacts to mandatory findings of significance come from the CEQA, Appendix G Environmental Checklist. According to the CEQA Checklist, a project may cause a potentially significant impact if it would:

- 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; or

- 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.); or
- Have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly.

5.21.2 IMPACT ANALYSIS

5.21.2.1 Mandatory Findings of Significance Impact Analysis

Would 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 Impact. See **Sections 5.4, Biological Resources; 5.5, Cultural Resources; 5.18, Tribal Cultural Resources; and Section 7.0, Cumulative and Other CEQA Considerations.** For the reasons explained therein, the Proposed Project does not 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 an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

The Proposed Project is primarily located within already modified and disturbed urban and developed lands and a small portion of open space areas. The current level of disturbance and human activity associated within the Cities of Fremont, Milpitas, San José, and Santa Clara is very high within a majority of the Proposed Project impact areas. Within the Proposed Project Survey Area, 13 moderate special-status plant species have the potential to occur, but none are expected to occur within temporary or permanent impact areas. Most of the plant species are most likely to occur within wetland, riparian, vernal pool, or estuary areas, which are considered sensitive vegetation communities. Of the 71 special status wildlife species that were evaluated for their potential to occur, 39 species were identified as having a moderate or high potential to occur within the Survey Area or were observed during field surveys: 26 bird species, one reptile, two amphibians, six invertebrates, three fish, and one mammal species (see **Section 5.4**). The Proposed Project area also has existing transmission structures nearby that can potentially support raven and raptor nests, and raptors (protected by the Migratory Bird Treatment Act [MBTA] and the California Fish and Game Code [CFGF]) were observed during field surveys and were identified as having a high potential to occur within the Survey Area. There is also the potential for migratory birds to nest on the ground or trees and shrubs located within and in the immediate vicinity of the Proposed Project area. The rest of the species that were analyzed for occurrence in the Survey Area are not expected to occur or are considered to have a low potential to occur.

The Guadalupe River and Coyote Creek are located within the Proposed Project area, and only one protected fish species with a high potential to occur was identified, the steelhead. Two fish

species have a moderate potential to occur: the longfin smelt and green sturgeon. There is designated critical habitat for steelhead along Coyote Creek and the Guadalupe River, and critical habitat for green sturgeon within Coyote Creek, San Tomas Aquino Creek, the Guadalupe River, along a tributary to Coyote Creek that passes under Cushing Parkway, and within estuary areas associated with San Francisco Bay. It is anticipated that all creeks, rivers, and streams would be spanned by overhead lines (i.e., Guadalupe River) or drilled under using horizontal boring (jack-and-bore) or horizontal directional drilling (HDD) trenchless techniques under these waterways. Potential direct impacts would be avoided or further minimized by the implementation of **Applicant Proposed Measures (APMs) BIO-9, Worker Environmental Awareness Program (WEAP) Training; BIO-4, Sensitive Area Demarcation; and BIO-1, Restoration of Disturbed Areas**. A WEAP training would be administered to all workers (**APM BIO-9**) to educate them on the potential for indirect impacts and to ensure that no spills, leaks, or trash dumping occurs within waterways, reducing the potential for water quality issues and indirect impacts to sensitive biological resources. Temporary impact areas within the vicinity of Coyote Creek and other waterways would be restored following construction, further reducing the potential impacts to habitat suitability (**APM BIO-1**). With the implementation of **APM BIO-17, Wetland, Vernal Pool, and Waterway Construction Timing Restrictions**, construction activities would be performed during the dry season to the maximum extent feasible when there is a very low chance for any of the special-status fish species to be using Coyote Creek or the Guadalupe River, further reducing the potential for indirect impacts related to increased noise and human activity. In addition, LS Power Grid California, LLC ("LS Power") would implement **APMs BIO-1 through BIO-19**, which would reduce the potential impacts to biological resources, including steelhead, to less than significant. In addition, Pacific Gas and Electric Company (PG&E) would implement **Field Protocols (FPs) 1 through 18** as well as construction **Best Management Practices (BMPs) BIO-1, Burrowing Owl, and BIO-2, Nesting Birds** during construction of their scope items at the existing Newark substation. The Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation modifications would occur within the existing substation facility containing no sensitive biological resources or habitat; therefore, no biological resource-specific BMPs have been included for SVP's scope of work and no impacts would occur.

There are no known unevaluated archaeological resources within the Proposed Project area. Two previously recorded resources were identified adjacent to the Proposed Project area (see **Table 5.5-2, Previously Recorded Cultural Resources Identified**); however, both of these are modern built environment resources and do not qualify as historical resources pursuant to Section 15064.5. No unrecorded cultural resources were encountered during the surface survey, conducted on November 8, 2023, and January 24 and 25, and March 14 and 23, 2024. However, there may be unrecorded subsurface archaeological resources, as indicated by recorded archaeological sites within the record search buffer. The Proposed Project would entail excavation that may encounter archaeological remains. Implementation of **APMs CUL-1, WEAP Training; CUL-2, Archaeological and Native American Monitoring; CUL-3, Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources, CUL-4, Cultural Resources Inventory; and CUL-5, Unanticipated Discovery of Human Remains** would reduce impacts to less than significant if previously unidentified cultural resources are encountered during construction. **APM CUL-4** would also reduce impacts to less than significant if the Proposed Project area is expanded or adjusted. There are no known archaeological resources, as defined in CEQA Section 15064.5, located within the PG&E facility upgrade area. However, there may be unrecorded subsurface archaeological resources encountered during construction activities. PG&E would implement **BMPs CULT-1 through CULT-3**, which would reduce potential impacts to less than significant. There are no known historical resources, as defined in CEQA Section 15064.5, located within the Proposed Project area; therefore, no impacts to historical resources would occur. There are no

known human remains located within the Proposed Project vicinity. However, based on the unknown nature of the sacred sites reported to exist in the area, unrecorded human remains may be present within the Proposed Project area. Because the Proposed Project would involve earthmoving activities, **APMs CUL-1, CUL-2, CUL-3, and CUL-5** and PG&E **BMPs CULT-1** through **CULT-3** would be implemented to ensure that impacts to human remains are less than significant.

There are no known prehistoric sites within the Proposed Project area that may be eligible for listing on the California Register of Historic Resources (CRHR) and would, therefore, qualify as Tribal cultural resources (TCRs) as defined in Public Resources Code (PRC) Section 21074. Two prehistoric archaeological resources were located during the surface survey, as shown in **Table 5.5-3, Archaeological Survey Results**; however, both are isolated finds in a disturbed context and, therefore, do not qualify as historical resources as defined in Section 15064.5. The Sacred Lands File (SLF) search and Tribal outreach indicates that lands sacred to the Ohlone Indian Tribe and the North Valley Yokuts Tribe are present within the Proposed Project search area; therefore, unrecorded TCRs may exist within or adjacent to the Proposed Project area. While unanticipated, the Proposed Project would involve excavation activities that have the potential to expose prehistoric resources and TCRs that may be determined by the lead agency to be significant. Implementation of **APMs TCR-1, WEAP Training; TCR-2, Native American Monitoring; APMs CUL-1** through **CUL-5**; and PG&E **BMPs CULT-1** through **CULT-3** would reduce potential impacts to less than significant.

Therefore, with implementation of **APMs BIO-1** through **BIO-19**, **CUL-1** through **CUL-4**, **TCR-1**, **TCR-2**, **PG&E FPs 1** through **18**, and **PG&E BMPs BIO-1** through **BIO-2** and **CULT-1** through **CULT-3**, impacts would be less than significant under this criterion.

Would 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)?

Less-Than-Significant Impact. The Proposed Project is largely sited in previously disturbed areas, with the proposed transmission lines primarily sited underground in existing roadway rights-of-way. The cumulative impacts of the Proposed Project are described in **Section 7.0**, and the impacts are anticipated to be less than significant. As discussed, approximately 50 projects are proposed for development or are being developed in the Proposed Project area with potential overlapping schedules with the Proposed Project. Negligible impacts were identified to wildfire, population, and housing. There would be no loss of forest land or loss of Prime Farmland. The Proposed Project would contribute incrementally to cumulative impacts during construction in the Proposed Project area related to air quality, greenhouse gas (GHG) emissions, hazardous materials, and transportation; however, the Proposed Project would not make a considerable contribution to any cumulative impacts. With respect to the Proposed Project’s potentially cumulative impacts relating to air quality, it is important to note that air quality and GHG impacts are inherently cumulative. Emissions from various sources throughout an Air Basin are additive and cumulatively contribute to the basin’s attainment status with respect to the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Because of this, most significance thresholds are developed such that an individual project’s significance determination can also be determinative of its cumulative impact. That is to say, if a project’s individual emissions exceed applicable significance thresholds, such impact would be considered individually significant as well as resulting in a cumulatively considerable contribution to a

significant cumulative impact. The Bay Area Air Quality Management District (BAAQMD) thresholds of significance that are used as the basis for determining the Proposed Project's impacts relating to criteria pollutants were developed with respect to the fact that air quality impacts are inherently cumulative. Similarly, GHG impact thresholds and the analysis for the Proposed Project account for cumulatively considerable contribution to global climate change. The Proposed Project's contribution to cumulative impacts for air quality and GHG are less than significant, as discussed in **Sections 5.3, Air Quality** and **5.8, Greenhouse Gas Emissions**. Thus, the Proposed Project would not have environmental effects that are individually limited but cumulatively considerable. Therefore, the impact would be less than significant under this criterion.

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

Less-Than-Significant Impact. The Proposed Project would not substantially adversely affect human beings, either directly or indirectly. Potential construction impacts associated with human health include the presence of hazards, hazardous materials use, temporary noise, air quality, and GHG emissions. As discussed in **Sections 5.9, Hazards, Hazardous Materials, and Public Safety; 5.13, Noise; 5.3;** and **5.8**, construction impacts would be less than significant. Implementation of Proposed Project APMs and PG&E BMPs would further reduce the potential for adverse effects.

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders, excavators, and scrapers, and other large and small construction equipment which can reach relatively high noise levels. The most effective method of controlling construction noise is through local control of construction hours by limiting the hours of construction to normal working hours. Impacts from construction-related ground-borne vibration, should they occur, would be intermittent and confined to the immediate area (i.e., within 50 feet) surrounding the activity. Construction noise impacts from the Proposed Project would be less than significant because construction activities are either temporary, noise increases would not substantially higher than ambient levels, or a combination of both. Noise impacts from the Proposed Project operations, such as from new converter transformers, would be less than significant because noise emissions would not exceed local noise standards.

As summarized in **Tables 5.3-5 through 5.3-10 in Section 5.3**, the Proposed Project would not exceed any of the BAAQMD thresholds, which would ensure compliance with CEQA requirements for the Cities of Fremont, Milpitas, San José, and Santa Clara. The Proposed Project would also implement BMPs during construction which would typically reduce emissions below what was captured within the Proposed Project modeling, which are also below the applicable CEQA thresholds. In addition, this section outlines **APM AQ-1, Construction Fleet Minimum Requirements and Tracking**, which requires at least 75 percent of construction equipment to include Tier 4 interim or Tier 4 final emissions controls, and **APM AQ-2, Dust Control Best Management Practices**, which would minimize nuisance dust from the Proposed Project construction.

The Proposed Project seeks to construct two stationary electrical high-voltage direct current (HVDC) terminals, and the primary sources of GHG emissions would be attributed to sulfur hexafluoride (SF₆) insulated switchgear and to a lesser extent vehicle trips associated with construction and maintenance of the proposed HVDC terminals and transmission lines. The

Proposed Project's estimated GHG emissions are analyzed based on stationary source recommendations provided in the 2022 CEQA Guidelines established by the BAAQMD (BAAQMD, 2022). Based on this guidance, if GHG emissions are less than 10,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year, the impact would be less than significant. The Proposed Project's annualized GHG emissions would be well below this threshold, and impacts would be less than significant. Further information is available in **Section 5.8**.

The Proposed Project would include design specifications and operation and maintenance (O&M) procedures in order to minimize the potential for the release or improper disposal of hazardous materials during Proposed Project construction and operation. As described in **Section 5.9**, construction of the Proposed Project would require the routine use of construction equipment that would use or contain hazardous materials, including, but not limited to, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and cement slurry. Equipment containing or transporting these materials would regularly travel throughout the Proposed Project area and region during construction periods. Additionally, the Proposed Project would include transformers containing mineral oil, which is considered a hazardous material in the State of California. Each transformer would have an oil containment system consisting of an impervious, lined, open, or stone-filled sump area around the transformer. Implementation of a site-specific Spill Prevention, Control, and Countermeasure Plan (SPCCP) would ensure that any accidental spills are contained, consistent with **APM HAZ-1, Site-Specific Spill Prevention, Control, and Countermeasure Plan**.

As detailed in **Section 5.9.1.1, Hazardous Materials Report**, there are two documented facilities within 200 feet of the Proposed Project where existing contamination of soil or groundwater is present and has the potential to be encountered during construction of the Proposed Project (refer to **Figure 5.9-1, Contaminated Sites Map**). O&M activities associated with the Proposed Project would not result in impacts related to existing contamination. The proposed HVDC terminal sites would be remotely operated with no permanent workforce on-site, and the finished ground cover and other structures would consist of pervious and impervious surfaces. While contaminated soils may be present within the Proposed Project area, implementation of **APMs HAZ-2, Hazardous Materials Management Plan; HAZ-3, Compliance with the Covenant to Restrict Use of Property (Cisco Systems Site 6/Syntax Court Disposal Site); and HAZ-4, Compliance with the Covenant and Agreement for Environmental Restriction (South Bay Asbestos Area)** would ensure that the soil and groundwater is tested, handled, and disposed of properly, according to testing results. Implementation of **APM HAZ-5, Final Induction Study and Utility Coordination** would require coordination with utility owners, as applicable, to avoid unsafe electromagnetic induction effects on any existing metallic utilities located in close proximity to the proposed transmission lines and prevent potential shock hazards. Further, PG&E would implement PG&E **BMPs HAZ-1 through HAZ-11** to address potential impacts related to hazards and hazardous materials. Therefore, impacts would be less than significant under this criterion.

6.0 COMPARISON OF ALTERNATIVES

This section includes a comparison of the alternatives described in **Section 4.0, Description of Alternatives** of the Proponent's Environmental Assessment (PEA). As discussed in **Section 4.0**, the PEA focuses on site and route alternatives because the California Independent System Operator (CAISO) conducted a detailed analysis of project need and suite of solutions, culminating with the publication of the Functional Specifications for the Proposed Project in the 2021-2022 Transmission Plan (CAISO, 2022). The Functional Specifications included specific design parameters that were required to be included in bids submitted to CAISO for the Proposed Project. LS Power Grid California, LLC ("LS Power"), in its successful bid to CAISO for the Proposed Project, committed to meeting the Functional Specifications and memorialized this commitment in the Approved Project Sponsor Agreement executed on August 28, 2023. For example, the Proposed Project included in this PEA (refer to **Section 3.0, Proposed Project Description**), includes construction of a new 320 kilovolt (kV) direct current (DC) transmission line and two high-voltage direct current (HVDC) terminals designed to connect to an existing Pacific Gas and Electric Company (PG&E) Newark substation and an existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation. Alternatives that would not achieve the minimum Functional Specifications, such as construction of an alternating current (AC) transmission line between the Newark and NRS substations or construction of battery energy storage, were thus not analyzed herein.

6.1 ALTERNATIVES COMPARISON

A comparison of the alternatives is provided in the following subsections, including the following specific alternative categories:

- HVDC Terminal Site Alternatives
 - Albrae Terminal
 - Baylands Terminal
- Albrae to Baylands 320 kV DC Transmission Line Alternatives
- Newark to Albrae 230 kV AC Transmission Line Alternatives
- Baylands to NRS 230 kV AC Transmission Line Alternatives

Alternatives that were rejected from comparison here are discussed in **Section 4.3, Rejected Alternatives**. These include alternatives and alternative types that did not meet the CAISO Functional Specifications, even if they may have reduced or eliminated one or more impacts when compared to the Proposed Project.

The comparison of alternatives is provided below, by alternative type. No significant unavoidable impacts were identified for the Proposed Project; therefore, the alternatives comparison herein focuses on where alternatives would have comparatively greater or lesser impacts to specific resources or significance criteria. Comparisons to the Proposed Project are provided using the following descriptors with respect to potential adverse impacts:

- *Similar (S)*. Impacts are anticipated to be substantially similar to those of the Proposed Project, as analyzed within PEA **Section 5.0, Environmental Analysis**.
- *Less (L)*. Impacts are anticipated to be measurably less than those of the Proposed Project, as analyzed within PEA **Section 5.0**.

- *Greater (G)*. Impacts are anticipated to be measurably greater than those of the Proposed Project, as analyzed within PEA **Section 5.0**.
- *Unknown (U)*. Impacts compared to the Proposed Project are unknown due to lack of data or similar required information.

Where impacts would differ between the alternatives and the Proposed Project, these impacts are further explained.

6.1.1 COMPARISON OF TERMINAL SITE ALTERNATIVES

Terminal site alternatives were analyzed to compare potential adverse environmental effects based on the topic areas included within the California Public Utilities Commission (CPUC) PEA Guidelines (CPUC, 2019).

6.1.1.1 Albrae Terminal Site Alternatives

As discussed in **Section 4.1.1**, *Albrae Terminal Site Alternatives* and shown on **Figure 4-1**, *Albrae Terminal Alternative Sites Map*, the following two alternative sites were considered for the Albrae terminal site:

- Alternative Albrae 1
- Alternative Albrae 2

Table 6-1, *Impact Comparison for the Albrae Terminal Alternatives* compares the anticipated impacts for each Albrae terminal alternative to those of the proposed Albrae terminal site using the descriptor system explained above. As shown in **Table 6-1**, Alternative Albrae 1 has similar impacts compared to the proposed Albrae terminal site. Alternative Albrae 2 would have greater impacts in three resource areas. Specific differences between each Albrae terminal alternative and the Proposed Project are explained below.

Table 6-1: Impact Comparison for the Albrae Terminal Alternatives																				
Alternative	Aesthetics	Agriculture	Air Quality	Biology	Cultural	Energy	Geology	GHGs	Hazards	Hydrology	Land Use	Minerals	Noise	Population	Pub. Services	Recreation	Transportation	Tribal CRs	Utilities	Wildfire
Alt. Albrae 1	S	S	S	S	U ¹	S	S	S	S	S	S	S	S	S	S	S	S	U ¹	S	S
Alt. Albrae 2	S	S	G	G	S	S	S	G	S	S	S	S	S	S	S	S	S	S	S	S
Notes:																				
¹ Impacts are unknown for the Alternative Albrae 1 for cultural, Tribal, and historic resources because the site has not been surveyed or reviewed for recorded historic, prehistoric, or Tribal cultural resources. However, it is not anticipated that impacts to these resources would occur.																				

Alternative Albrae 1

Alternative Albrae 1, located approximately 300 feet northwest of the existing Newark substation (refer to **Figure 4-1**), would have similar impacts to the proposed Albrae terminal for all of the California Environmental Quality Act (CEQA) resource areas and criterion. Similar to the proposed Albrae terminal site, utilization of Alternative Albrae 1 is not anticipated to result in significant

unavoidable impacts. Thus, there are no impact comparisons for environmental resources that would increase or decrease with the implementation of Alternative Albrae 1.

Alternative Albrae 2

Alternative Albrae 2 is located approximately 0.1 mile south of the existing Newark substation (refer to **Figure 4-1**) and would have substantially similar impacts to the proposed Albrae terminal for almost all of the CEQA resource areas and criterion. However, it would be anticipated to have greater impacts associated with biological resources and slightly greater impacts for air quality and greenhouse gases (GHGs) associated with the transmission lines. All other impacts are anticipated to be substantially similar. As with the proposed Albrae terminal site, utilization of Alternative Albrae 2 is not anticipated to result in significant unavoidable impacts; however, the potential biological impacts have not been fully evaluated to determine appropriate mitigation. The applicable impact comparisons are further explained below.

Air Quality Impacts

Alternative Albrae 2 would require additional transmission line reconfiguration to connect to the existing Newark substation. This would result in slightly greater impacts to air quality during construction because the additional transmission line modifications would require more construction activities, including off-road construction equipment and haul trips. This additional construction would result in additional emissions of criteria pollutants. Therefore, impacts to air quality for Alternative Albrae 2 would be slightly greater than the Proposed Project.

Biological Resource Impacts

Alternative Albrae 2 would be anticipated to have greater impacts to biological resources when compared to the proposed Albrae terminal site. According to the City of Fremont's Conservation Element, the Alternative Albrae 2 site is designated as herbaceous. The site consists of native grasses and scattered utility poles. Alternative Albrae 2 is located on potential burrowing owl habitat and would require focused surveys to determine the presence of burrowing owls and associated potential impacts with developing that site. The proposed Albrae terminal site is disturbed and developed, resulting in no impacts to biological resources. The potential severity of the biological impacts at the Alternative Albrae 2 site are not known at this time, but potential impacts to biological resources are considered to be greater for Alternative Albrae 2 because of the potential for biological resources on-site.

GHG Impacts

As explained above, Alternative Albrae 2 would require additional transmission line reconfiguration to connect to the existing Newark substation. This would result in additional construction activities and equipment usage, which would increase emission of GHGs. Therefore, impacts from GHG emissions for Alternative Albrae 2 would be slightly greater than the Proposed Project.

6.1.1.2 Baylands Terminal Site Alternatives

As discussed in **Section 4.1.2, Baylands Terminal Site Alternatives** and shown on **Figure 4-2, Baylands Terminal Alternative Sites Map**, the following three alternative sites were considered for the Baylands terminal site:

- Alternative Baylands 1
- Alternative Baylands 2

- Alternative Baylands 3

Table 6-2, Impact Comparison for the Baylands Terminal Alternatives compares the anticipated impacts for each Baylands terminal alternative to those of the proposed Baylands terminal site using the descriptor system explained above. As shown in **Table 6-2**, Alternative Baylands 1 would have greater impacts for air quality and GHGs when compared to the proposed Baylands terminal. Impacts for the proposed Baylands terminal site and Alternative Baylands 2 site are very similar. However, the Alternative Baylands 2 site is being utilized by a dewatering facility, and the site is not currently available for use by the Proposed Project. Alternative Baylands 3 would have greater impacts for aesthetics, air quality, GHGs, noise, and transportation when compared to the other alternatives. Specific differences between each Baylands terminal alternative and the Proposed Project are explained below.

Table 6-2: Impact Comparison for the Baylands Terminal Alternatives																				
Alternative	Aesthetics	Agriculture	Air Quality	Biology	Cultural	Energy	Geology	GHGs	Hazards	Hydrology	Land Use	Minerals	Noise	Population	Pub. Services	Recreation	Transportation	Tribal CRs	Utilities	Wildfire
Alt. Baylands 1	S	S	G	S	S	S	S	G	S	S	S	S	S	S	S	S	S	S	S	S
Alt. Baylands 2	S	S	S	S	U ¹	S	S	S	S	S	S	S	S	S	S	S	S	U ¹	G	S
Alt. Baylands 3	G	S	G	S	U ¹	S	S	G	S	S	S	S	G	S	S	S	G	U ¹	S	S
Notes: ¹ Impacts are unknown for Alternative Baylands sites 2 and 3 for cultural, Tribal, and historic resources because the sites have not been surveyed or reviewed for recorded historic, prehistoric, or Tribal cultural resources. However, impacts are anticipated to be similar to those of the proposed Baylands terminal.																				

Alternative Baylands 1

Alternative Baylands 1 is located approximately 3.8 miles northeast of the existing NRS substation and 1.8 miles northeast of the proposed Baylands terminal site (refer to **Figure 4-2**). Alternative Baylands 1 would have substantially similar impacts to the proposed Baylands terminal for almost all of the CEQA resource areas and criterion. However, as the site is a soon-to-be retired drying pond used as part of the existing San José-Santa Clara Regional Wastewater Facility (RWF), development of the site may result in greater impacts due to the significant amount of fill required to raise the site. Additionally, the site would likely require additional improvements for construction and operations traffic. The site would require significant amounts of fill to raise the site out of the floodplain. Therefore, this alternative may result in increased air quality and GHG emissions due to the number of equipment hours and diesel truck haul trips needed. The applicable impact comparisons are further discussed below.

Air Quality Impacts

Alternative Baylands 1 would require additional construction truck trips as the site would require significant amounts of fill. The diesel truck trips would contribute to increased pollutants compared to the proposed Baylands terminal site. The additional improvements for construction traffic would also contribute to increased pollutants when compared to the proposed Baylands terminal.

GHG Impacts

As discussed above, Alternative Baylands 1 would require additional construction activities as part of the terminal site and access road development. This increased construction activity would result in increased emissions of GHGs when compared to the proposed Baylands terminal.

Alternative Baylands 2

Alternative Baylands 2 is a 12.1-acre lot located approximately 2.3 miles northeast of the existing NRS substation and 0.6 mile east of the proposed Baylands terminal site (refer to **Figure 4-2**). Alternative Baylands 2 would have substantially similar impacts to the proposed Baylands terminal for all of the CEQA resource areas and criterion, except utilities. The site is located on the east side of Zanker Road, adjacent to the Silicon Valley Advanced Water Purification Center. The site is surrounded by Zanker Road and the San José-Santa Clara RWF to the west, McCarthy Lane followed by a dewatering facility to the south, and undeveloped land and drying ponds to the north and east. This site, while originally recommended by the City of San José during the proposal stage of the Newark to NRS HVDC Project for all bidders to utilize, is not currently available due to the construction of a dewatering facility on-site and potential associated uses. The applicable impact comparison is further explained below.

Impacts to Utilities

The Alternative Baylands 2 site is being developed as a dewatering facility that will support local water and wastewater utilities. If the Baylands terminal was to be constructed on this alternative site, the dewatering facility and utilities would need to be relocated, which could result in additional adverse impacts on the environment. The proposed Baylands terminal is currently undeveloped and could be constructed with minimal impacts associated with the relocation or reconstruction of existing utilities. Therefore, Alternative Baylands 2 would have greater impacts than the Proposed Project in this regard.

Alternative Baylands 3

Alternative Baylands 3 is an approximately 4.7-acre lot located approximately 1.5 miles north of the existing NRS substation and 1.1 miles west of the proposed Baylands terminal site (refer to **Figure 4-2**). Alternative Baylands 3 would have substantially similar impacts to the proposed Baylands terminal in most of the CEQA resource areas and criterion but would result in greater impacts for aesthetics, air quality, GHGs, noise, and transportation. The Alternative Baylands 3 site is located southeast of the intersection of Liberty Street and North First Street in the City of San José and is surrounded by residential uses to the west, northwest, south, and northeast. The applicable impact comparisons are further explained below.

Aesthetic Resource Impacts

Alternative Baylands 3 would be located on an undeveloped parcel adjacent to residential uses to the south, west, and northeast. Impacts to aesthetics are anticipated to be greater at the Alternative Baylands 3 site as it would develop an undeveloped parcel in close proximity to residences in a predominantly developed area. The proposed Baylands terminal site is located within an industrial area and is consistent with the surrounding uses from a visual impacts' perspective. Thus, impacts to aesthetics would be greater at the Alternative Baylands 3 site when compared to the Proposed Project.

Air Quality Impacts

Alternative Baylands 3 would be located approximately 51 feet from the closest sensitive receptor to the west. Additional sensitive receptors are located to the west, south, and northeast. Therefore, development of Alternative Baylands 3 would result in increased exposure to sensitive receptors during construction. Similar to the proposed Baylands terminal, Alternative Baylands 3 would require construction activities lasting approximately two years. The duration of construction and the proximity to sensitive receptors would result in increased potential for adverse health risk effects that may result in a significant impact due to construction of the terminal. The proposed Baylands terminal site is located approximately 0.5 mile from the nearest sensitive receptor, and health risk impacts would not be potentially significant. Therefore, impacts to air quality and health risk would be greater at the Alternative Baylands 3 site.

GHG Impacts

As discussed above, Alternative Baylands 3 would require additional construction activities as part of the longer transmission line alignment. This increased construction activity would result in increased emissions of GHGs when compared to the proposed Baylands terminal. However, impacts would not be anticipated to be significant.

Noise Impacts

Alternative Baylands 3 would be located approximately 51 feet from the closest sensitive receptor to the west. At this distance to sensitive receptors, construction-generated noise levels would be approximately 80 A-weighted decibels (dBA). While noise measures have not been taken at this location, the residential nature of the site indicates an existing ambient noise level likely to be well below 80 dBA. Since construction of the Baylands terminal would require longer than 12 months, potentially significant noise impacts would occur. Noise impacts from construction would be greater for Alternative Baylands 3 than for the Proposed Project.

In addition, noise from terminal equipment such as power transformers would emit noise in close proximity to these same noise-sensitive land uses (residences). Conversely, the proposed Baylands terminal is not located in close proximity to noise-sensitive land uses; therefore, noise impacts from operations would also be greater for the Alternative Baylands 3.

Transportation Impacts

Alternative Baylands 3 is located in an urban area that is predominately developed with residential, commercial, and industrial uses. Construction of Alternative Baylands 3 would require undergrounding through North First Street, which is adjacent to residential tracts and provides access to State Route (SR)-237. Alternative Baylands 3 would require more construction within public roadways, as such resulting in more impacts to said roadways. The proposed Baylands site is in an industrial area and is not adjacent to any highways. Therefore, construction traffic impacts would be greater for Alternative Baylands 3.

6.1.2 COMPARISON OF ALBRAE TO BAYLANDS 320 KV DC TRANSMISSION LINE ALTERNATIVES

As discussed in **Section 4.1.3**, *Albrae to Baylands 320 kV DC Transmission Line Route Alternatives* and shown on **Figure 4-3**, *Albrae to Baylands 320 kV DC Transmission Line Alternatives*, two alternatives were considered. **Table 6-3**, *Impact Comparison for the Albrae to Baylands Transmission Line Alternatives* compares the anticipated impacts for each Albrae to Baylands 320 kV DC transmission line alternative to those of the proposed Albrae to Baylands transmission line using the descriptor system explained above. Specific differences between each alternative and the Proposed Project are explained below.

Table 6-3: Impact Comparison for the Albrae to Baylands Transmission Line Alternatives

Alternative	Aesthetics	Agriculture	Air Quality	Biology	Cultural	Energy	Geology	GHGs	Hazards	Hydrology	Land Use	Minerals	Noise	Population	Pub. Services	Recreation	Transportation	Tribal CRs	Utilities	Wildfire
Albrae to Baylands Alternative 1	G	S	S	G	U ¹	S	S	S	S	S	S	S	S	S	S	S	L	U ¹	L	S
Albrae to Baylands Alternative 2	G	S	S	G	U ¹	S	S	S	S	S	S	S	S	S	S	S	S	U ¹	S	S

Notes:
¹ Impacts are unknown for the Albrae to Baylands 320 kV DC Transmission Line Alternatives for cultural, Tribal, and historic resources because portions of the alternative routes have not been fully surveyed or reviewed for recorded historic, prehistoric, or Tribal cultural resources.

Albrae to Baylands Alternative 1

Albrae to Baylands Alternative 1 would follow the Proposed Project alignment underground out of the proposed Albrae terminal. The transmission line would diverge from the Proposed Project alignment along Fremont Boulevard, approximately 250 feet south of the intersection with Lakeview Boulevard, at which point the Albrae to Baylands Alternative 1 would transition to an overhead position along Fremont Boulevard. Once in an overhead position, the transmission line would travel generally south along Fremont Boulevard and McCarthy Boulevard. The alignment would cross a portion of the San José-Santa Clara RWF and would then head south along Zanker Road then west towards the southern end of the proposed Baylands terminal (refer to **Figure 4-3**). The total length of the Albrae to Baylands Alternative 1 would be approximately 8.8 miles (approximately 3.9 miles overhead and 4.9 miles underground), extending from the proposed Albrae terminal to the proposed Baylands terminal. The proposed route and Albrae to Baylands Alternative 1 would be identical until the transmission line transitions to an overhead position near the southern boundary of the City of Fremont. Therefore, impact comparisons between the two are focused on the portion of the routes between the intersection of the Coyote Creek Trail and Fremont Boulevard and the proposed Baylands terminal. As further explained below, the Albrae to Baylands Alternative 1 would have greater impacts to aesthetic and biological resources but would have slightly less impacts to transportation and utilities when compared to the Proposed Project.

Aesthetic Resource Impacts

The Albrae to Baylands Alternative 1 would include approximately 0.7 mile of new overhead 320 kV transmission lines that would be visible from public viewpoints from Interstate (I)-880 and other locations within the City of Fremont. However, the majority of the overhead transmission lines would be shielded from I-880 due to existing industrial buildings that are adjacent to the highway. This alternative would also introduce overhead poles to the south of the proposed Baylands terminal that would be visible from public viewpoints along SR-237. Existing transmission lines are visible from SR-237. Although this alternative would introduce new overhead transmission lines in comparison to the Proposed Project, the presence of existing transmission lines along the route would reduce the visual contrast of the new transmission line. However, aesthetic impacts would be considered greater for the Albrae to Baylands Alternative 1 due to the additional overhead transmission lines. While impacts would be greater, they are anticipated to remain less than significant.

Biological Resource Impacts

Albrae to Baylands Alternative 1 would differ from the Proposed Project where Fremont Boulevard meets Coyote Creek. This alternative would result in overhead transmission lines in a floodplain area with multiple streams, wetlands, and ponds. Based on the California Natural Diversity Database search results, the overhead transmission lines would be within potential salt marsh harvest mouse and western pond turtle habitat. Therefore, unlike the underground lines, development of the poles would be placed within the floodplain area and could potentially impact wetland habitat and/or wetland species.

In comparison to the Proposed Project Albrae to Baylands 320 kV DC transmission line alignment, Albrae to Baylands Alternative 1 would result in a greater potential for adverse effects on biological resources, as the construction and operation of Albrae to Baylands Alternative 1 would require new transmission structures (steel monopoles or lattice towers) and new work pads in areas with potentially sensitive biological and wetland resources. These features would all require temporary and permanent removal of natural habitat areas and could impact the species and habitats listed above. Therefore, the Albrae to Baylands Alternative 1 would result in greater impacts to biological resources than the Proposed Project Albrae to Baylands 320 kV DC transmission line alignment.

Transportation Impacts

Albrae to Baylands Alternative 1 would include a large section of new overhead transmission line where the Proposed Project alignment would be located underground within paved streets. While the overhead transmission line would result in greater impacts to other resource areas when compared to the underground transmission lines, it would reduce overall impacts relating to transportation. This is because the Albrae to Baylands Alternative 1 would result in less construction within public roadways, and roadway impacts due to lane closures and traffic control would be reduced. Therefore, the Albrae to Baylands Alternative 1 would be anticipated to have less impacts to traffic and transportation when compared to the Proposed Project.

Impacts to Utilities

Similar to the impacts relating to traffic and transportation, Albrae to Baylands Alternative 1 would represent a reduction in potential impacts to existing buried utilities because of the shorter underground segment. Most of the potential utility conflicts would occur where new underground transmission lines would be installed in existing roadways and streets. Therefore, the Albrae to Baylands Alternative 1 would be expected to result in less impacts to existing utilities when compared to the Proposed Project.

Albrae to Baylands Alternative 2

The underground segment of the Albrae to Baylands Alternative 2 from the proposed Albrae terminal to McCarthy Boulevard would be the same as the Proposed Project alignment. The underground line would then diverge from the proposed alignment and continue underground in McCarthy Boulevard. Albrae to Baylands Alternative 2 would then transition to an overhead position along McCarthy Boulevard, near a Coyote Creek Trail trailhead (see **Figure 4-3**). The Albrae to Baylands Alternative 2 would travel south then travel west over Coyote Creek and cross two existing PG&E transmission lines before turning south, roughly paralleling the existing transmission lines through the San José-Santa Clara RWF drying beds and around the Los Esteros Energy Center towards McCarthy Lane. The overhead transmission line would continue going south along Thomas Foon Chew Way, adjacent to the Los Esteros Energy Center, then west adjacent to existing transmission lines and SR-237 and crossing over Zanker Road. The line would continue traveling west adjacent to existing transmission lines, along SR-237, until turning

north to the southern end of the proposed Baylands terminal. The total length of this alternative is 9.8 miles (approximately 3.5 miles overhead and 6.3 miles underground), extending from the proposed Albrae terminal to the proposed Baylands terminal. The underground segment from the Albrae terminal to McCarthy Boulevard would be the same as the Proposed Project alignment. This alternative first varies from the Proposed Project south of the Coyote Creek crossing on McCarthy Boulevard and requires an additional Coyote Creek crossing, which would require an additional horizontal directional drilling (HDD) crossing as well as an additional overhead crossing of Coyote Creek. Albrae to Baylands Alternative 2 would also differ from the other alternatives south of the Los Esteros Energy Center to the proposed Baylands terminal, where the transmission line would follow existing transmission lines along SR-237 before turning north into the proposed Baylands terminal site (refer to **Figure 4-3**). Therefore, this section includes a full comparison between the portions of Albrae to Baylands Alternative 2 that differ from the Proposed Project. As further explained below, the Albrae to Baylands Alternative 2 route would have greater impacts to aesthetic and biological resources when compared to the Proposed Project. While Albrae to Baylands Alternative 2 would have more underground transmission lines installed along McCarthy Boulevard, it would not include underground transmission lines along Los Esteros Road. Therefore, impacts relating to transportation and conflicts with existing underground utilities are considered similar.

Aesthetic Resource Impacts

Albrae to Baylands Alternative 2 would include approximately 1.5 miles of new overhead transmission line south of the proposed Baylands terminal along SR-237. There are existing transmission lines along SR-237, and the presence of the existing transmission lines along most of the overhead portion of the Albrae to Baylands Alternative 2 route would reduce the visual contrast of the new transmission line. However, aesthetic impacts would be increased compared to the Proposed Project as new overhead lines would be visible from numerous public viewpoints, including an aerial crossing of the Coyote Creek Trail. While the aesthetic impacts for the overhead portion of Albrae to Baylands Alternative 2 are not anticipated to be significant, they would be greater than those of the Proposed Project.

Biological Resource Impacts

The underground portion of Albrae to Baylands Alternative 2 would require an additional HDD crossing along Coyote Creek, which may impact biological resources. The overhead transmission lines south of the proposed Baylands terminal would be within a burrowing owl habitat managed by the Santa Clara Valley Habitat Agency. Thus, this alternative would require additional burrowing owl surveys and may potentially impact burrowing owls and the established habitat located south of the proposed Baylands terminal. Approval from the Santa Clara Valley Habitat Agency would be required. Although a detailed analysis of biological impacts for the overhead portion of Albrae to Baylands Alternative 2 has not been conducted, it is anticipated that biological impacts would be greater than those of the Proposed Project.

6.1.3 COMPARISON OF NEWARK TO ALBRAE 230 kV AC TRANSMISSION LINE ALTERNATIVES

As discussed in **Section 4.1.4**, *Newark to Albrae 230 kV AC Transmission Line Route Alternatives* and shown on **Figure 4-4**, *Newark to Albrae 230 kV AC Transmission Line Alternatives Map*, one alternative route was considered. **Table 6-4**, *Impact Comparison for the Newark to Albrae 230 kV AC Transmission Line Alternative* compares the anticipated impacts for the Newark to Albrae 230 kV AC transmission line alternative to those of the proposed Newark to Albrae transmission line using the descriptor system explained above. As shown in **Table 6-4** and the following subsections, the Newark to Albrae alternative route would have greater impacts to biological resources and utilities

when compared to the proposed transmission line. Specific differences between the alternative and the Proposed Project are explained below.

Table 6-4: Impact Comparison for the Newark to Albrae Transmission Line Alternative

Alternative	Aesthetics	Agriculture	Air Quality	Biology	Cultural	Energy	Geology	GHGs	Hazards	Hydrology	Land Use	Minerals	Noise	Population	Pub. Services	Recreation	Transportation	Tribal CRs	Utilities	Wildfire
Alternative 1	S	S	S	G	S	S	S	S	S	S	S	S	S	S	S	S	S	S	G	S

Newark to Albrae Alternative 1

The Newark to Albrae Alternative 1 would exit the proposed Albrae terminal to the south and would include three overhead poles located on PG&E land, which contains existing transmission lines. The alignment would be located entirely in an overhead position and would be approximately 0.3 mile in length (refer to **Figure 4-4**). The Newark to Albrae Alternative 1 would require relocation of existing PG&E transmission lines and would likely utilize multiple three-pole structures to guide the Newark to Albrae Alternative 1 transmission line under an existing PG&E 230 kV transmission line. Newark to Albrae Alternative 1 would have greater impacts to biological resources and utilities than those of the Proposed Project.

Biological Resource Impacts

Newark to Albrae Alternative 1 would place an additional overhead transmission line in potential vernal pool tadpole shrimp habitat compared to the Proposed Project. Additionally, as this alternative would not include underground transmission lines in existing roadways, it is more likely to impact potential burrowing owl habitat. Although a detailed analysis of biological impacts for the overhead portion of Newark to Albrae Alternative 1 has not been conducted, it is anticipated that biological impacts would be greater for Newark to Albrae Alternative 1 than the Proposed Project.

Impacts to Utilities

The Newark to Albrae Alternative 1 would result in potential conflicts with existing PG&E transmission lines associated with the existing Newark substation. Utilization of Newark to Albrae Alternative 1 would require the relocation of some of PG&E's existing lines. PG&E identified the Proposed Project route in part because it minimized potential conflicts with existing lines and avoided potential relocations. Therefore, the Newark to Albrae Alternative 1 would be expected to result in greater impacts to existing utilities than the Proposed Project.

6.1.4 COMPARISON OF BAYLANDS TO NRS 230 kV AC TRANSMISSION LINE ALTERNATIVES

As discussed in **Section 4.1.5, Baylands to NRS 230 kV Transmission Line Route Alternatives** and shown on **Figure 4-5, Baylands to NRS 230 kV AC Transmission Line Alternatives Map**, two alternative routes were considered. **Table 6-5, Impact Comparison for the Baylands to NRS Transmission Line Alternatives** compares the anticipated impacts for the Baylands to NRS 230 kV AC transmission line alternative to those of the proposed Baylands to NRS transmission line using the descriptor system explained above. As shown in **Table 6-5** and the following subsections, the Baylands to NRS Alternative 1 route would have greater impacts to biological resources and less impacts in five resource areas when compared to the Proposed Project

transmission line. Baylands to NRS Alternative 2 would have less impacts to biological resources and greater impacts to hazards, noise, transportation, and utilities as compared to the Proposed Project. Specific differences between the alternative and the Proposed Project are explained below.

Table 6-5: Impact Comparison for the Baylands to NRS Transmission Line Alternatives

Alternative	Aesthetics	Agriculture	Air Quality	Biology	Cultural	Energy	Geology	GHGs	Hazards	Hydrology	Land Use	Minerals	Noise	Population	Pub. Services	Recreation	Transportation	TCRs	Utilities	Wildfire
Alternative 1	S	S	L	G	S	S	S	L	S	S	S	S	L	S	S	S	L	S	L	S
Alternative 2	S	S	S	L	S	S	S	S	G	S	S	S	G	S	S	S	G	S	G	S

Baylands to NRS Alternative 1

Baylands to NRS Alternative 1 would exit the proposed Baylands terminal underground to the south and would include approximately 0.3 mile of HDD through vacant land and then continue underground for approximately 0.3 mile in Nortech Parkway before connecting with the Proposed Project alignment (see **Figure 4-5**). The Baylands to NRS Alternative 1 would be surrounded by vacant land (burrowing owl habitat¹ and release site) to the west and east, the proposed Baylands terminal to the north, and commercial and industrial uses to the south. This alternative would be surrounded by commercial and industrial uses to the north and south for the underground portion in Nortech Parkway.

Air Quality Impacts

Baylands to NRS Alternative 1 would exit the proposed Baylands terminal at the southern end of the terminal and would include an approximately 0.3-mile-long HDD through (under) burrowing owl habitat and then continue for approximately 0.3 mile underground in Nortech Parkway before connecting with the Proposed Project alignment. Construction of the Proposed Project Baylands to NRS 230 kV AC transmission line would be located within Los Esteros Road, Grand Boulevard, and Disk Drive for a total of approximately 1.2 miles (with an additional 0.2 mile on the terminal site). Construction of the proposed 1.4 miles of total underground transmission line would result in substantially more emissions when compared to the 0.6-mile Baylands to NRS Alternative 1 route. Therefore, the Proposed Project would have a higher construction air quality impact when compared to Baylands to NRS Alternative 1.

Biological Resource Impacts

The Baylands to NRS Alternative 1 would require an approximately 0.3-mile-long HDD through vacant land that is currently set aside as burrowing owl habitat and release site. The burrowing owl habitat is managed by the Santa Clara Valley Habitat Agency. LS Power has begun discussions with the Santa Clara Valley Habitat Agency, United States Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) regarding the potential HDD through the burrowing owl habitat. The area also has the potential for other sensitive species, such as the tricolored blackbird, and golden eagle. Conversely, the Proposed Project would

¹ The burrowing owl habitat is managed by the Santa Clara Valley Habitat Agency. LS Power has begun discussions with the Santa Clara Valley Habitat Agency, United States Fish and Wildlife Service, and California Department of Fish and Wildlife regarding the potential HDD through the burrowing owl habitat.

construct the Baylands to NRS 230 kV transmission line entirely underground (utilizing mainly trenching) within existing roadways. Because the proposed Baylands to NRS transmission line would be located in existing roads, it would not result in direct impacts to biological resources or sensitive habitat. Although a detailed analysis of biological impacts for the Baylands to NRS Alternative 1 has not been conducted, it is anticipated that impacts to biological resources would be greater for Baylands to NRS Alternative 1 than those of the Proposed Project simply because the alternative alignment would be located within a designated sensitive biological resource area. However, it is important to note that impacts to biological resources from Baylands to NRS Alternative 1 are not anticipated to be significant and would be closely coordinated with the Santa Clara Valley Habitat Agency, USFWS, and CDFW.

GHG Impacts

As discussed above, the Proposed Project would require additional construction activities as part of the longer underground transmission line alignment when compared to the Baylands to NRS Alternative 1. This increased construction activity would result in increased emissions of GHGs for the Proposed Project when compared to the Baylands to NRS Alternative 1. Therefore, the Proposed Project would have greater impacts relating to emissions of GHGs. However, impacts for the Proposed Project would be less than significant.

Noise Impacts

Baylands to NRS Alternative 1 would exit the proposed Baylands terminal at the southern end of the terminal and would include an approximately 0.3-mile-long HDD through vacant land and then continue for approximately 0.3 mile underground in Nortech Parkway before connecting with the Proposed Project alignment. The Proposed Project would include an underground transmission line along Los Esteros Road and Grand Boulevard, in close proximity to existing noise sensitive residential uses. Therefore, while less than significant, the noise and vibration impacts during construction of the Proposed Project would be greater than those of the Baylands to NRS Alternative 1.

Transportation Impacts

Baylands to NRS Alternative 1 would be constructed by utilizing an HDD through vacant land then connecting to Nortech Parkway, which is an existing paved road, for approximately 0.3 mile. The Proposed Project would construct underground transmission lines through Los Esteros Road, Grand Boulevard, and Disk Drive for approximately 1.2 miles. Construction of underground transmission lines within roadways could cause traffic delays and would require detailed traffic control plans and coordination with local agencies in order to avoid potentially significant impacts. While impacts to transportation from the Proposed Project are anticipated to be less than significant, the Baylands to NRS Alternative 1 would have less impacts because of the substantially shorter length of transmission lines to be located within public streets.

Impacts to Utilities

Baylands to NRS Alternative 1 would represent a reduction in potential impacts to existing buried utilities because the amount of underground transmission line within existing roads is substantially less than for the proposed alignment. While the Baylands to NRS Alternative 1 includes approximately 0.3 mile of new underground transmission line within Nortech Parkway, the proposed alignment would include approximately 1.2 miles of new underground transmission line before reaching the same point. Most of the potential utility conflicts would occur where new underground transmission lines would be installed in existing roadways and streets for the Proposed Project. Therefore, the Baylands to NRS Alternative 1 would be expected to result in less impacts to existing utilities.

Baylands to NRS Alternative 2

Baylands to NRS Alternative 2 would exit the proposed Baylands terminal underground in the same manner as the proposed Baylands to NRS transmission line and would follow the same route until reaching the private property parking lot at structure AC-4. The line would travel underground northwest to Gold Street then south for a total of 0.16 mile. This alternative would remain the same from the intersection of Gold Street and Great American Parkway to the existing NRS substation (see **Figure 4-5**). The Baylands to NRS Alternative 2 would be surrounded by commercial uses to the north followed by residential uses, vacant land to the south and west, and commercial uses to the east. Baylands to NRS Alternative 2 would have greater impacts to hazards, transportation, utilities, and noise than those of the Proposed Project.

Biological Resource Impacts

Baylands to NRS Alternative 2 would be constructed underground in existing paved roads and parking lot and would have no direct impacts to biological resources. The Proposed Project would instead install the transmission line mostly through undeveloped areas, including within potential wetlands other habitat for biological resources. Therefore, impacts to biological resources would be reduced when compared to the Proposed Project.

Hazards and Hazardous Materials Impacts

Baylands to NRS Alternative 2 would be located within the boundaries of the South Bay Asbestos Area, which is a Superfund site containing soils contaminated with asbestos. While the proposed transmission line alignment is also within the boundaries of the South Bay Asbestos Area, the Bayland to NRS Alternative 2 alignment would almost entirely be location within the area and would, therefore, have greater impacts relating to hazardous waste. However, impacts would remain less than significant.

Noise Impacts

This alternative would result in an increase in construction noise to the nearest sensitive receptors to the north compared to the proposed Baylands to NRS transmission line due to the decreased distance between construction and existing receptors. However, impacts would be temporary during construction and are anticipated to remain less than significant.

Transportation Impacts

Baylands to NRS Alternative 2 would be constructed underground within an existing parking lot, paved access road, and Gold Street. The Proposed Project would also be constructed underground; however, the proposed alignment would utilize undeveloped areas. Construction of underground transmission lines within roadways, driveways, and parking lots could cause traffic delays and would require traffic control plans and coordination with local agencies, the property owner, and occupants in order to avoid potentially significant impacts. While impacts to transportation from the Baylands to NRS Alternative 2 are anticipated to be less than significant, the proposed alignment would have less impacts because of the shorter length of transmission lines to be located within public and private streets and parking lots.

Impacts to Utilities

Baylands to NRS Alternative 2 would represent an increase in potential impacts to existing buried utilities because the amount of underground transmission line within existing roads, driveways, and parking lot is greater than for the proposed alignment. The Baylands to NRS Alternative 2 includes approximately 0.16 mile of new underground transmission line within Gold Street and a

private driveway and parking lot. Conversely, the proposed alignment would include an underground transmission line within undeveloped areas between structure AC-4 and Lafayette Street. Most of the potential utility conflicts would occur where new underground transmission lines would be installed in existing roadways and streets. Therefore, Baylands to NRS Alternative 2 would be expected to result in greater impacts to existing utilities when compared to the Proposed Project. While impacts to utilities would be greater, they would be expected to be less than significant.

6.2 ALTERNATIVES RANKING

Tables 6-1 through **6-5** above show whether alternative projects considered herein would impact environmental resources as compared to the Proposed Project. The subsections below rank the alternatives in order of environmental superiority.

6.2.1 ALBRAE TERMINAL ALTERNATIVE SITE RANKINGS

The rankings of the Albrae terminal alternatives in order of environmental superiority are as follows:

1. Proposed Albrae Terminal Site and Alternative Albrae 1
2. Alternative Albrae 2

Alternative Albrae 1 and the Proposed Project would have substantially similar impacts and would be considered more or less equal. Both the Proposed Project and Alternative Albrae 1 would have less impacts when compared to the Alternative Albrae 2 site. None of the proposed Albrae terminal sites are currently projected to have significant unavoidable impacts.

Rationale for Proposed Albrae Terminal Site Selection

While the Alternative Albrae 1 site has similar impacts to the proposed Albrae terminal site, and all other sites considered, it was not selected for the Proposed Project because the current landowner of the Alternative Albrae 1 site is not receptive to leasing/selling as it would interrupt their current business. Therefore, the proposed Albrae terminal site was included in the Proposed Project.

6.2.2 BAYLANDS TERMINAL ALTERNATIVE SITE RANKINGS

The rankings of the Baylands terminal alternatives in order of environmental superiority are as follows:

1. Proposed Baylands Terminal Site
2. Alternative Baylands 2
3. Alternative Baylands 1
4. Alternative Baylands 3

The proposed Baylands terminal site is considered environmentally superior in comparison to the other alternatives. While potential impacts from the proposed terminal site and Alternative Baylands 2 are very similar, utilization of Alternative Baylands 2 would require the relocation of a dewatering facility, which could result in greater impacts to the environment. Both the proposed Baylands terminal and Alternative Baylands 2 would be expected to have less impacts than the other alternative sites. However, the Alternative Baylands 2 site is not available due to the

construction of a dewatering facility and potential associated uses. Alternative Baylands 3 is the least environmentally superior alternative due to the close proximity of sensitive receptors and associated impacts to aesthetics, air quality, GHGs, noise, and transportation. The proposed Baylands site was selected because of its relatively lower level of impacts and because the Alternative Baylands 2 site was not available.

6.2.3 ALBRAE TO BAYLANDS TRANSMISSION LINE ALTERNATIVE RANKINGS

The rankings of the Albrae to Baylands transmission line alternatives in order of environmental superiority are as follows:

1. Proposed Albrae to Baylands Transmission Line
2. Albrae to Baylands Alternative 2
3. Albrae to Baylands Alternative 1

The Albrae to Baylands Alternative 2 transmission line is environmentally superior when compared to the other alternative. However, potential impacts for both alternatives are similar, with the exception of increased biological impacts for Albrae to Baylands Alternative 1. The overhead transmission line segments in Albrae to Baylands Alternative 1 would introduce impacts that the proposed Albrae to Baylands transmission line route would not, including impacts to aesthetic resources and biological resources. The proposed Albrae to Baylands transmission line route, because it would be located underground within paved streets in areas that are visible from public roadways and other disturbed areas, would not result in these same impacts. Therefore, the proposed Albrae to Baylands transmission line route was selected.

6.2.4 NEWARK TO ALBRAE 230 KV AC TRANSMISSION LINE ALTERNATIVE RANKINGS

As the Newark to Albrae transmission line had one alternative, the Proposed Project was selected due to the ability to construct the transmission lines within existing roadways and requiring two overhead transmission structures. Newark to Albrae Alternative 1 would require relocation of existing PG&E transmission lines, which would result in additional impacts and would likely require additional new structures and associated impacts. Finally, PG&E was consulted for the selection of the Newark to Albrae transmission line alignment, as most of the line would be located on PG&E property. PG&E identified the proposed Newark to Albrae transmission line route as the preferred route.

6.2.5 BAYLANDS TO NRS 230 KV AC TRANSMISSION LINE ALTERNATIVE RANKINGS

The rankings of the Baylands to NRS transmission line alternatives in order of environmental superiority are as follows:

1. Baylands to NRS Alternative 1
2. Proposed Baylands to NRS Transmission Line
3. Baylands to NRS Alternative 2

Although Baylands to NRS Alternative 1 ranks higher for environmental performance, it would require an additional HDD beneath sensitive biological habitat, which may not be feasible because it would require approval from the Santa Clara Valley Habitat Agency, with input from the stakeholder agencies, including USFWS and CDFW. While LS Power has discussed the potential alternative route with the Santa Clara Valley Habitat Authority and stakeholder agencies, it has not yet been verified that the Baylands to NRS Alternative 1 would be feasible. However, LS

Power continues to evaluate this alternative route due to potential challenges associated with the Proposed Project alignment. The Baylands to NRS Alternative 2 would have greater impacts to hazards, transportation, utilities, and noise than those of the Proposed Project, and less impacts to biological resources and wetlands. Impacts for Baylands to NRS Alternative 2 are anticipated to remain less than significant. LS Power continues to evaluate Baylands to NRS Alternative 2 due to potential conflicts with the California Department of Transportation ("Caltrans") as an easement would have to be granted by Caltrans for the proposed route.

7.0 CUMULATIVE AND OTHER CEQA CONSIDERATIONS

7.1 CUMULATIVE IMPACTS

7.1.1 LIST OF CUMULATIVE PROJECTS

Projects included in the cumulative impact assessment were identified by using a list approach (California Environmental Quality Act [CEQA] Guidelines Section 15130[b][1][A]), including pending development projects within an approximately two-mile radius of the Proposed Project. **Appendix 7-A, Cumulative Projects Table** summarizes these pending development projects. **Figure 7-1, Cumulative Projects** depicts these projects.

7.1.2 GEOGRAPHIC SCOPE

The geographic scope of analysis for cumulative impacts varies depending on the resource and considers the extent to which impacts can be cumulative. Therefore, the sections below describe the appropriate geographic scope for each resource that would be analyzed for cumulative impacts.

As shown in **Section 5.0, Environmental Analysis**, implementation of the Proposed Project would result in no impacts or negligible impacts on agriculture and forestry, mineral resources, population and housing, and wildfire. Consequently, the Proposed Project would not have the potential to contribute to cumulative impacts related to these resource areas, and they are not discussed further herein.

Aesthetics. The geographic scope of analysis for cumulative aesthetic impacts to which the Proposed Project may contribute includes the Proposed Project's foreground, middle ground, and background viewshed, as described in **Section 5.1.1.3, Viewshed Analysis**. Typically, the cumulative aesthetics impact analysis area generally encompasses the visual landscape within an approximately five-mile radius; however, although Proposed Project components would potentially be visible from a distance of up to five miles, the intervening structures and vegetation constrain distant views. Additionally, portions of the Proposed Project transmission lines would be installed underground and would not contribute to cumulative aesthetic resource impacts in those areas. Therefore, the geographic scope primarily includes the foreground viewshed, including motorist and pedestrian views from the proposed Albrae terminal to the Fremont Boulevard Trail Segment of the Bay Trail and Fremont Boulevard Trail Segment to Grand Boulevard and Spreckles Avenue. Resident, pedestrian, and motorist views were analyzed from Grand Boulevard and Spreckles Avenue to the existing Northern Receiving Station (NRS) substation.

Air Quality. The San Francisco Air Basin (SFAB), which is governed by the Bay Area Air Quality Management District (BAAQMD), covers approximately 6,966 square miles within the Bay Area. This area represents the cumulative geographic scope for air quality because plans and thresholds are established at the basin level to attain air quality standards that are assigned for the entire air basin. Cumulative impacts on sensitive receptors, construction workers, and odors are considered at a far more localized level due to the more limited area of dispersion. The geographic scope for cumulative impacts related to sensitive receptors, construction workers, odor is limited to projects in the immediate vicinity or within a quarter mile. Impacts from projects located beyond this distance would not combine with the Proposed Project to create cumulative effects.

Biological Resources. The geographic scope of analysis for cumulative biological resource impacts is a two-mile radius around the Proposed Project area. This allows for a cumulative analysis of habitat, wildlife corridors, or other sensitive natural communities that stretch beyond the Proposed Project area while taking into account the developed nature of the surrounding area.

Cultural Resources and Tribal Cultural Resources (TCRs). The geographic scope of analysis for cumulative cultural resource impacts depends on the type of resource. Typically, prehistoric and historic resources are located subsurface; therefore, cumulative impacts are considered at a localized level, which for the Proposed Project includes the Proposed Project area, as defined in **Section 5.5, Cultural Resources**. The geographic scope for historic built environment resources and TCRs includes a one-mile buffer around the Proposed Project area because these resources can be impacted by changes in the visual landscape or by increases in ambient noise levels, as well as direct impacts.

Energy. The geographic scope of analysis for energy usage (i.e., fuels) and compliance with local plans are the Counties of Santa Clara and Alameda, which comprise approximately 1,292 and 738 square miles, respectively. The Proposed Project's fuel usage statistics were compared against fuels usage rates for both Counties. With respect to renewable energy usage, the Pacific Gas and Electric Company (PG&E) and Silicon Valley Power (SVP) service territories are used as the geographic scope of analysis because the renewable energy usage statistics applicable to the Proposed Project are those of PG&E and SVP. Finally, the State of California is the geographic scope for cumulative impacts relating to Statewide plans.

Geology, Soils, and Paleontological Resources. The geographic scope for cumulative impacts on geology, soils, and paleontology depends on the geologic issue. The geographic scope with respect to seismicity includes the Proposed Project area and those projects within a two-mile radius because an earthquake capable of creating substantial damage or injury at the Proposed Project area could cause similar damage throughout this area. The geographic scope for other geologic issues is considered at a more localized level because impacts are generally site-specific and not additive across a landscape.

Greenhouse Gas (GHG) Emissions. The geographic scope of cumulative analysis for GHGs is the State of California because GHG reduction regulations are at the state level, and the impacts of global climate change affect the entire State.

Hazards, Hazardous Materials, and Public Safety. The hazards and hazardous materials cumulative impact geographic scope consists of the areas that could be affected by Proposed Project activities, as well as areas affected by other projects whose activities could directly or indirectly affect the proposed activities within the Proposed Project area. Therefore, a two-mile radius was considered in this analysis.

Hydrology and Water Quality. The geographic scope of analysis for cumulative impacts on hydrology and water quality typically includes the hydrologic region and groundwater basin because water sources throughout the region are interconnected. The Proposed Project is within the San Francisco Bay and Coyote watersheds and the Santa Clara Valley Groundwater Basin, specifically the Santa Clara and Niles Cone Subbasins.

Land Use and Planning. The geographic scope of analysis for cumulative impacts of land use impacts is a two-mile radius around the Proposed Project area within the Cities of Fremont,

Milpitas, San José, and Santa Clara. A significant cumulative impact on land use and planning could result if the Proposed Project were to contribute to physically dividing an established community or conflict with a land use plan, policy, or regulation.

Noise. The geographic scope of analysis for cumulative noise impacts includes a 2,000-foot buffer around the Proposed Project area and adjacent parcels because noise attenuates rapidly with distance, equaling an approximate reduction of six decibels (dB) for every doubling of distance from the noise source. Noise generated from a greater distance would not be cumulative with noise generated on the Proposed Project site.

Public Services. The geographic scope of analysis for cumulative public service impacts includes the service areas of the service providers discussed in **Section 5.15, Public Services** because substantial changes to a provided service would influence the entire service area for each specific service.

Recreation. The geographic scope for considering cumulative impacts on recreation are the Cities of Fremont, Milpitas, San José, and Santa Clara. This geographic extent is appropriate as residents would utilize Citywide recreational facilities. However, residents are unlikely to travel multiple miles from their residences to visit recreational facilities on a regular basis; therefore, this analysis primarily focuses on a two-mile radius.

Transportation. A typical geographic scope for cumulative transportation impacts includes all regional and local roadways used to access the Proposed Project or that could otherwise be impacted by the Proposed Project during construction. Therefore, the geographic scope of analysis for cumulative transportation impacts focuses on the roadways that are adjacent to the Proposed Project area but also considers roadways within approximately two miles of the Proposed Project area.

Utilities and Service Systems. A significant cumulative impact would result if the Proposed Project were to contribute to impacts that exceeded the planned use and capacity of the wastewater, water, solid waste, and/or energy service providers in the area of the Proposed Project. Therefore, the geographic scope of analysis for this resource includes the utility providers service areas identified in **Section 5.19, Utilities and Service Systems**.

7.1.3 CUMULATIVE IMPACT ANALYSIS

The discussion below evaluates the potential for the Proposed Project to contribute to a cumulatively considerable impact on the environment. As shown in **Section 5.0**, implementation of the Proposed Project would result in no impacts or negligible impacts on agriculture and forestry, mineral resources, population and housing, and wildfire. Consequently, the Proposed Project would not have the potential to contribute to cumulative impacts related to these resource areas, and they are not discussed in the cumulative impact analysis below.

The cumulative analysis that follows addresses the incremental contribution of the Proposed Project to cumulative impacts associated with aesthetics; air quality; biological resources; cultural resources; energy; geology, soils, and paleontological resources; GHG emissions; hazards, hazardous materials, and public safety; hydrology and water quality; land use and planning; noise; public services; recreation; transportation; TCRs; and utilities and service systems.

Aesthetics. A cumulatively considerable impact on aesthetics could result if the Proposed Project would contribute to a significant cumulative impact related to a substantial adverse effect on a scenic vista; substantially damage scenic resources within a scenic highway; substantially degrade the existing visual character or quality of public views; conflict with applicable zoning and other regulations governing scenic quality; or result in the addition of a substantial cumulative amount of light and/or glare. At the project level, there were determined to be less-than-significant impacts relating to all impact questions, with the exception of substantial damage to scenic resources within a scenic highway which was determined to have no impacts. Therefore, cumulative impacts for these applicable issues are evaluated below.

The Proposed Project would primarily be located within an urban area. Commercial, industrial, and undeveloped open land and wetlands surround the proposed Baylands terminal site, while developed industrial uses comprise the dominant land use in the area of the proposed Albrae terminal site. As discussed in **Section 5.1, Aesthetics**, the Proposed Project includes the following scenic vistas and corridors that have a view of the Proposed Project: high elevation points of the Diablo Mountain Range, the City of San José skyline, Don Edwards San Francisco Bay National Wildlife Refuge (NWR), portions of the Bay Trail network, Guadalupe River Trail, Alviso Park, Santa Clara Youth Soccer Park, two City of Fremont gateways, and the City of San José-designated urban corridors—Interstate (I)-880 and State Route (SR)-237. The Diablo Mountain Range is between three and five miles from the Proposed Project area; therefore, while the Proposed Project area would be visible from this scenic vista, the individual structures are not visible due to distance. The Proposed Project would prominently be visible from portions of the Bay Trail network, the Don Edwards San Francisco Bay NWR, Guadalupe River Trail, Alviso Park, Santa Clara Youth Soccer Park, two City of Fremont gateways, and the City of San José-designated urban corridors—I-880 and SR-237; however, the portions of the Proposed Project that are within the viewshed of Alviso Park, Santa Clara Youth Soccer Park, and the City of Fremont gateways would be underground and are, therefore, not visible. As detailed in **Section 5.1.4.1, Aesthetics Impact Analysis**, the Proposed Project would introduce new structures in the surrounding areas and would not substantially affect the existing landscape character. Implementation of **Applicant Proposed Measure (APM) AES-1** would ensure that all Proposed Project construction sites be maintained in an orderly state and return temporary staging and work sites to their approximate pre-project conditions. Permanent and temporary impacts would be less than significant.

The Proposed Project's primary permanent visual components include the proposed Albrae and Baylands terminal sites, as well as the new utility structures for the overhead Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line, the Guadalupe River crossing of the NRS to Baylands 230 kV transmission line, and the overhead portion of the Newark to Albrae 230 kV transmission line. The closest projects in proximity to these areas that could possibly be considered within the same viewshed as the Proposed Project include: 43151 Christy Street, 44100 Christy Street, 1355 California Circle, 1301 California Circle, 1201 Cadillac Court, 625 North McCarthy Boulevard, 205 North McCarthy Boulevard, Charities Housing/Vista Montana, Tasman East – 2343 Calle Del Mundo (Summerhill), Tasman East – 2354 Calle Del Mundo (Ensemble), Tasman East – 5185 Lafayette (Ensemble), and Tasman East – 2300 Calle De Luna (Related).

The projects at 43151 Christy Street and 44100 Christy Street are located within 0.5 mile to the east of the proposed Albrae terminal site; however, they would not be considered to be in the same viewshed due to surrounding building, lots, and roads that inhibit a cumulative view when combined with the Proposed Project. The project sites at 1355 California Circle, 1301 California

Circle, and 1201 Cadillac Court are located approximately 0.2 mile east of the anticipated new structures associated with the proposed Albrae to Baylands 320 kV DC transmission line but are separated by I-880, North McCarthy Boulevard, and Coyote Creek Trail, as well as parking lots and buildings dispersed between Coyote Creek Trail and North McCarthy Boulevard. Therefore, these projects would not be considered to be in the same viewshed as the proposed Albrae to Baylands 320 kV DC transmission line.

Additionally, the projects at 625 North McCarthy Boulevard and 205 North McCarthy Boulevard are also located within 0.5 mile southeast of the proposed new structures associated with the proposed Albrae to Baylands 320 kV DC transmission line but do not share a viewshed with the Proposed Project due to visual separation from the Proposed Project area caused by vast parking lots, tall vegetation from ornamental landscaping, and vegetation along Coyote Creek. The closest project in proximity to the proposed Baylands terminal would be Charities Housing/Vista Montana, located 0.7 mile south; however, this project would not be considered to be within the same viewshed as the proposed Baylands terminal site due to the presence of numerous warehouse and commercial industrial buildings, as well as SR-237, which inhibits a cumulative view with the Proposed Project. Tasman East – 2343 Calle Del Mundo (Summerhill), Tasman East – 2354 Calle Del Mundo (Ensemble), Tasman East – 5185 Lafayette (Ensemble), and Tasman East – 2300 Calle De Luna (Related) are located immediately east of the proposed Baylands to NRS 230 kV transmission line; however, this portion of the Baylands to NRS 230 kV transmission line would be installed underground and, therefore, would not contribute to a cumulative aesthetic impact.

Therefore, the Proposed Project's incremental contribution to cumulative aesthetic impacts would not be cumulatively considerable and would be less than significant.

Air Quality. The Proposed Project was analyzed for construction and operational air quality emissions. Under this analysis, the Proposed Project would generate less-than-significant air quality impacts. Implementation of **APM AQ-1** and **APM AQ-2** would ensure that at least 75 percent of construction equipment includes Tier 4 emissions control engines and that measures are taken to control fugitive dust during construction. Further, PG&E would implement **Best Management Practices (BMPs) AQ-1** through **AQ-4** during construction of the PG&E substation modifications to reduce potential cumulative air quality impacts resulting from the existing PG&E substation. With respect to an analysis of the Proposed Project's cumulative impacts, it is important to note that air quality impacts relating to criteria pollutants are inherently cumulative. Emissions from various sources throughout the Air Basin are additive and cumulatively contribute to the basin's attainment status with respect to National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS).

Because of this, most significance thresholds are developed such that an individual project's significance determination can also be determinative of its cumulative impact. That is to say, if a project's individual emissions exceed applicable significance thresholds, such impact would be considered individually significant as well as resulting in a cumulatively considerable contribution to a significant cumulative impact. The BAAQMD thresholds of significance that are used as the basis for determining the Proposed Project's impacts relating to criteria pollutants were developed with respect to the fact that air quality impacts are inherently cumulative.

Therefore, while additional projects and other emissions sources would be active concurrently with the Proposed Project, the severity of the Proposed Project's cumulative effect on air quality can be determined by its comparison to the BAAQMD significance thresholds. As described summarized in **Tables 5.3-5** through **5.3-10** in **Section 5.3, Air Quality**, the Proposed Project

would not exceed any of the BAAQMD thresholds for criteria pollutants and would not conflict with existing air quality plans. Therefore, while emissions of criteria pollutants are cumulatively considerable, the impact would be less than significant. Similarly, the BAAQMD identifies an individual project increased health risk of 10 individuals per one million exposed and a cumulative operational increased health risk of 100 individuals per one million exposed. The Proposed Project does not exceed the individual project threshold and, thus, would not exceed the cumulative operational threshold. Thus, health risk impacts would be less than significant.

Potential impacts from localized air quality emissions resulting in human health risk or nuisance odors could occur if such emissions occur simultaneously, in close enough proximity to each other and to potential receptors. The Proposed Project was identified to have less-than-significant impacts in this regard during construction, with the greatest impacts occurring at the existing NRS substation where construction would last approximately two years in relatively close proximity to potential receptors (refer to **Figure 5.3-5, NRS Substation Project Nearby Sensitive Receptors**). However, no potentially cumulative projects were identified in close enough proximity (either by distance or construction schedule) to the existing NRS substation (refer to **Figure 7-1 and Appendix 7-A**) to contribute to such impacts. With respect to emissions leading to potential nuisance odors, less-than-significant impacts would occur during construction. However, impacts related to odors are not anticipated to occur once the Proposed Project is operational. Localized air emissions leading to odors could be cumulatively considerable if the proximity and duration was such that the odor(s) could adversely affect a substantial number of people. Because potential less-than-significant impacts would only occur during construction, any such potential cumulative impact could also only occur during construction. The temporary nature of construction, and the minor nature of potential odors from construction activities would not be anticipated to create a significant adverse effect to a substantial number of people. SVP would implement Proposed Project **APM AQ-1**, ensuring at least 75 percent of equipment utilize Tier 4 engines. Potential cumulative impacts associated with localized air quality and health risk would be less than significant.

Therefore, the Proposed Project's contribution to potential significant cumulative air quality impacts and health risk impacts are not considered to be significant. Impacts under this criterion are less than significant.

Biological Resources. A significant cumulative impact on biological resources could result if the Proposed Project would contribute to cumulative impacts related to sensitive habitat or species, sensitive habitat/natural communities, or wildlife movement corridors. A significant cumulative impact could also occur if the Proposed Project conflicts with local policies or ordinances protecting biological resources, such as a tree preservation ordinance, conflicts with the provisions of an adopted habitat conservation plan (HCP), or creates a cumulatively substantial collision or electrocution risk for birds or bats.

Direct impacts to special-status plant species and sensitive vegetation communities could include destruction of individual plants, and indirect impacts could include loss of areas that contain suitable microhabitat conditions for special-status plants and introduction of non-native weed species that may out-compete these plants. The Proposed Project would result in a total of approximately 15.65 acres of permanent habitat disturbance (7.0 acres of disturbed/urban land, 8.63 acres of annual grassland, 0.02 acres of San José-Santa Clara Regional Wastewater Facility [RWF] wastewater treatment ponds, and less than 0.01 acre of riparian habitat) and 238.65 acres of temporary habitat disturbance (150.0 acres of disturbed/urban land, 81.53 acres of annual grassland, 6.69 acres of San José-Santa Clara RWF wastewater treatment ponds, 0.31 acre of

wetland, and 0.12 acre of riparian habitat as shown in **Table 5.4-4, Impacts to Vegetation Communities by Location (for non-PG&E/SVP-owned Property)** and **Figure 5.4-8, Biological Impact Area Map**. The existing PG&E Newark modifications and overhead structure AC-1 would result in approximately 1.07 acres of temporary impacts (less than 0.01 acre of disturbed/urban, 0.98 acre of annual grassland, and 0.09 acre of vernal pools), and approximately 0.5 acre of permanent impacts (0.5 acre of disturbed/urban and less than 0.01 acre of annual grassland habitat) (refer to **Table 5.4-5, Impacts by Vegetation Community for PG&E-owned Property**). The existing SVP NRS substation facility is entirely developed, consisting of approximately 13.5 acres of urban/disturbed areas, and does not support candidate, sensitive, or special-status species or habitats that would be impacted by the substation modifications. LS Power Grid California, LLC ("LS Power") would restore all sensitive areas that are temporarily disturbed by the Proposed Project activities to approximate preconstruction conditions, which is included as **APM BIO-1**. Focused surveys for rare plants would be conducted (February 1 through June 15) (**APM BIO-2**), and any populations that are found during preconstruction sweeps would be clearly marked and avoided to the extent practicable (**APMs BIO-2; BIO-3; and BIO-4**). Any riparian habitat, wetlands, vernal pools, and estuary areas and other water features would be avoided to the extent practicable by construction activities (**APM BIO-4**); preconstruction sweeps would occur within disturbance areas (**APM BIO-3**); and vehicles would be cleaned prior to arriving on-site in sensitive natural areas and include speed limits of 15 miles per hour (**APMs BIO-5 and BIO-6**), limiting the potential spread of noxious weeds within the Proposed Project area. Protocol surveys and preconstruction surveys would occur for the salt marsh harvest mouse (**APM BIO-7**). Excavation wildlife safety BMPs and Workers Environmental Awareness Program (WEAP) training would occur for on-site construction workers (**APMs BIO-8 and BIO-9**). Outdoor lighting would be minimized during construction and operation and maintenance (O&M) to reduce impacts to potentially sensitive biological areas (**APM BIO-10**). Nesting birds and raptors APMs would be included (**APMs BIO-11, BIO 12, BIO-13, BIO-14, and BIO-15**). Special-status invertebrate and amphibian surveys would occur (**APMs BIO-16 and BIO-18**). A wetland and aquatic resource delineation would be conducted prior to construction (**APM BIO-19**). Construction in the vicinity of waterways, wetlands, and vernal pools would be restricted to occur during the dry season (**APM BIO-17**).

The current level of disturbance and human activity associated with the Cities of Fremont, Milpitas, San José, and Santa Clara is very high within a majority of the Proposed Project impact areas. Even in areas that contain native habitats, such as along Coyote Creek near the San José-Santa Clara RWF, along Fremont Boulevard, the Don Edwards San Francisco Bay NWR alongside Cushing Parkway and Los Esteros Road, in the vicinity of the proposed Baylands terminal site, and the Guadalupe River and associated riparian habitat north of SR-237, disturbance and human activity in the immediate vicinity is present at a high level. A small amount of direct impacts to special-status species, such as potential for mortality, destruction of nesting or breeding habitat, and loss of foraging habitat may occur in association with the construction of the Proposed Project in the vicinity of the above natural habitat areas. The temporary nature of the construction of the Proposed Project would only slightly increase the levels of disturbance and human activity that may indirectly impact wildlife species. The level of disturbance associated with long-term operation would be low due to portions of the proposed transmission lines being underground and the current level of disturbance in the area associated with overhead portions, including other overhead transmission lines in the vicinity. Additionally, because a majority of the Proposed Project is expected to be constructed within existing disturbed roadways and temporary work areas are also expected to be primarily within previously disturbed habitats, the new disturbance is expected to be minimal. There is a large amount of similar habitat suitable for special-status species in the vicinity of Coyote Creek and the Don Edwards San Francisco Bay

NWR so that the temporary impacts to 88.65 acres and permanent loss of approximately 8.66 acres of potentially suitable habitat for special-status wildlife species (81.53 acres of temporary impacts and 8.63 acres of permanent impacts to annual grassland; 6.69 acres of temporary impacts and 0.02 acre of permanent impacts to wastewater treatment ponds; 0.12 acre of temporary impacts and less than 0.01 acre of permanent impacts to riparian; and 0.31 acre of temporary impacts to wetlands and potential wetlands) would be less than significant. Additionally, a majority of the temporary impacts are associated with the 11 proposed staging areas—a majority of which are not expected to be used by construction.

There are multiple mapped streams, creeks, rivers, and drainage ditches that cross the path of the Proposed Project alignment (**Figure 5.4-4, Aquatic Resources Map**). All of the mapped streams would be avoided by using horizontal boring (jack-and-bore) or HDD trenchless techniques under these waterways if conventional trenching is not feasible or by constructing overhead lines that would span the waterways. Several other areas have the potential to be impacted, such as riparian areas, wetlands, and vernal pools that would likely be California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and/or United States Army Corps of Engineers (USACE) jurisdictional areas. These areas have not been mapped in detail, so impact acreages cannot be provided, but it is anticipated that all impacts to these areas would be temporary in nature. A wetland survey should be conducted within all impact areas prior to construction to determine exact impact acreages and determine the proper permits that would be needed. The only areas that have been mapped in detail (i.e., formally delineated) are those associated with the overhead transmission lines in the vicinity of Coyote Creek just south of McCarthy Boulevard (near proposed overhead structures DC-1 and DC-2) and the underground alignment along the Cushing Parkway bridge.

State and federal aquatic permits would be required for any change to existing channel, bed, or bank; removal or deposit of material; or diverting or obstructing the natural flow of a jurisdictional water feature. Currently, anticipated construction activities associated with structures being placed in the vicinity of Coyote Creek would result in one or more of these permit triggers. Therefore, the following permits are anticipated to be required: Section 1602 Lake or Streambed Alteration Agreement from CDFW; Clean Water Act (CWA) Section 401 Water Quality Certification from the RWQCB; and CWA Section 404 Permit from USACE (nationwide or individual, depending on the impact acreage).

The proposed high-voltage direct current (HVDC) terminal locations do not have any known aquatic or jurisdictional waters on-site, and they would be built to drain stormwater to an on-site detention system. Stormwater would be conveyed as it normally is along a majority of the proposed transmission line alignments and would drain into roadside collection facilities. Stormwater runoff during construction and O&M activities would be managed according to a stormwater management plan and BMPs established in the associated Stormwater Pollution Prevention Plan (SWPPP).

Construction of the Proposed Project would involve vegetation clearing and tree removal, specifically for the permanent facilities located outside of existing roadways. Based on preliminary design, approximately 24 trees would be removed (approximately 14 trees along the proposed Albrae to Baylands 320 kV DC transmission line and approximately 10 along the proposed Baylands to NRS 230 kV transmission line) as a result of the Proposed Project. Tree trimming as required pursuant to General Order (GO) 95-D would be performed as part of ongoing Proposed Project transmission line operation, if needed. Currently, no trees are present under the proposed overhead transmission line segments such that trimming would be required. Although not

required, LS Power would coordinate with the Cities of Fremont, Milpitas, San José, and Santa Clara to obtain applicable tree removal permits for the removal of existing trees. Any tree removal or trimming within a two-mile radius of the Proposed Project site would be required to comply with City regulations and obtain a permit under the City-specific ordinance, which would avoid potential cumulative impacts related to conflict with tree preservation ordinances.

The Proposed Project lies within PG&E's San Francisco Bay Area Operations and Maintenance Habitat Conservation Plan (Bay Area O&M HCP) (PG&E, 2017), Don Edwards San Francisco Bay National Wildlife Refuge (NWR) Comprehensive Conservation Plan (CCP) (United States Fish and Wildlife Service [USFWS], 2012), Alameda County Resource Conservation District (ARCRD) Voluntary Local Program (VLP) (ARCRD, 2012), and the Santa Clara Valley HCP (County of Santa Clara et al., 2012). LS Power is not a stakeholder of PG&E's Bay Area O&M HCP, and the activities proposed are not covered activities under this HCP. LS Power is also not a stakeholder of the Don Edwards San Francisco Bay NWR CCP, and it does not cover the type of activities that are associated with the Proposed Project. The Alameda County VLP covers the entire County but primarily serves residents conducting routine and on-going agricultural activities in the eastern, rural portion of the County of Alameda, and LS Power is not a stakeholder of the VLP. The Santa Clara Valley HCP covers public and private utility activities within the planning limits of urban growth (as defined by the HCP) such as those that are associated with the Proposed Project, and a majority of the Proposed Project occurs within the HCP planning limits and may be covered activities. If impacts are identified to HCP-covered species, LS Power would coordinate with the stakeholders of the Santa Clara Valley HCP to obtain coverage for the Proposed Project as required or otherwise consult with the applicable wildlife agencies to obtain project-specific permits. The Proposed Project's APMs generally align with the measures that are proposed to reduce impacts to these species in the HCPs to reduce cumulatively considerable impacts on special-status species. Compliance with the Santa Clara Valley HCP is designed to address potential effects at a regional level and, therefore, is intended to mitigate potential adverse effects resulting from multiple discrete projects or locations (i.e., cumulative impacts).

Direct impacts to bird and bat species could include collision and electrocution associated with the proposed HVDC terminal facilities and transmission lines, excluding the underground portions of each transmission line. The existing urban development within the Proposed Project vicinity already creates collision risks for avian species, and the number of tall towers and other potential obstacles in the area would only be increased slightly by the construction of the Proposed Project. The risks of collision and electrocution associated with this slight increase would be minimized by using appropriate Avian Power Line Interaction Committee (APLIC) methods incorporated into the design of the Proposed Project. The Proposed Project would therefore not result in a cumulatively considerable impact related to collision or electrocution risk for birds or bats.

All present and future projects would be required to mitigate for impacts to biological resources, and it is anticipated that other projects would be subject to similar measures, as well as the applicable federal, state, and local laws and regulations that protect biological resources. Therefore, the Proposed Project's incremental contribution to cumulative biological resources impacts would not be cumulatively considerable and would be less than significant.

Cultural Resources. A significant cumulative impact on cultural resources could result if the Proposed Project would contribute to cumulative direct or indirect impacts on significant historical or archaeological resources and/or inadvertently discovered human remains.

There are no known historical resources within the Proposed Project area, as defined in Section 15064.5; therefore, less-than-significant impacts would occur to historical resources. There are no known archaeological resources within the Proposed Project area; however, there may be unrecorded subsurface archaeological resources, as indicated by recorded archaeological sites adjacent to the Proposed Project area. There are no known archaeological resources, as defined in CEQA Section 15064.5, located within the PG&E or SVP substation modification areas. However, there may be unrecorded subsurface archaeological resources. While the possibility exists that subsurface resources or remains could be unearthed during construction, the implementation of **APMs CUL-1 through CUL-5** and PG&E **BMPs CULT-1 through CULT-3** would ensure that impacts remain at less-than-significant levels. There are no known human remains located within the Proposed Project vicinity. However, based on the unknown nature of the sacred sites reported to exist in the area, unrecorded human remains may be present within the Proposed Project area. Because the Proposed Project would involve earthmoving activities, **APMs CUL-1, CUL-2, CUL-3, and CUL-5** and PG&E **BMPs CULT-1 through CULT-3** would be implemented to ensure that impacts to human remains are less than significant.

While present and reasonably foreseeable future projects could also encounter subsurface resources or remains, the existing regulations and plans, as well as standard mitigation measures, would reduce potentially significant impacts to less-than-significant levels. In addition, impacts to cultural resources are site-specific, and as such are not expected to combine with the development of other projects to cumulatively increase the risk of impacting subsurface resources or remains. The Proposed Project would be designed to avoid known cultural resources and includes APMs to ensure impacts to any cultural resources that are unexpectedly discovered within the Proposed Project area are less than significant.

Therefore, the Proposed Project's incremental contribution to cumulative cultural resources impacts would not be cumulatively considerable and would be less than significant.

Energy. As explained in **Section 5.6, Energy**, the Proposed Project would have no impact with respect to conflicts with state or local plans for renewable energy or with respect to adding capacity for the purpose of serving a non-renewable energy source (significance criteria b and c, respectively). Therefore, the Proposed Project would not contribute to a cumulatively significant impact for either of these criteria.

With respect to adverse environmental impacts resulting from wasteful, inefficient, or unnecessary consumption of energy resources, the Proposed Project was found to have a less-than-significant impact because construction and operation would utilize a small amount of energy and fossil fuels, while increasing the electrical system efficiency for future uses of renewable energy within the region. While other projects and activities within the Proposed Project vicinity and beyond would also utilize fossil fuels and electrical energy from the PG&E and SVP electrical grids, the Proposed Project's contribution to any potentially significant effect would not be considerable. Even if, as a worst case, a cumulatively significant impact was to occur regarding fossil fuel usage in the Proposed Project vicinity, the Cities of Fremont, Milpitas, San José, or Santa Clara or in California as a whole, the Proposed Project's contribution to such an impact would not be cumulatively considerable. Therefore, the Proposed Project's incremental contribution to energy impacts would not be cumulatively considerable, and the Proposed Project's impacts to cumulative energy resources would be less than significant.

Geology, Soils, and Paleontological Resources. A significant impact on geology and soils could result if the Proposed Project would contribute to cumulative impacts related to exacerbating

the risk of seismic activity, unstable soils, or lateral spreading. A significant cumulative impact on paleontological resources would result if the Proposed Project would contribute to destruction of significant resources, sites, or unique geologic features. At the project level, there were determined to be no impacts related to soils incapable of supporting septic tanks; as such, cumulative impacts for these issues are not evaluated because the Proposed Project has no impacts in this category of analysis.

As shown in **Section 5.7, *Geology, Soils, and Paleontological Resources***, the Proposed Project would be located within a seismically active area, and active faults are located within 10 miles of the site. Faults in surrounding areas could result in ground shaking within the Proposed Project area, though there is low likelihood of an earthquake fault rupture considering the short construction period. The Proposed Project area also sits within a large liquefaction zone and consists of gently sloping topography; however, it does not involve the withdrawal of fluid from geologic materials, nor would it alter slope stability factors in a way that would increase the area's susceptibility to landslides. Soils within the Proposed Project area have a low to moderate erosion potential, and the Proposed Project would result in more than one acre of soil disturbance. As a result, the Proposed Project would be required to prepare and implement a SWPPP. Additionally, a Proposed Project-specific Paleontological Resources Mitigation and Monitoring Plan (PRMMP) would be developed and employed to reduce potentially adverse impacts to paleontological resources through the recovery and conservation of any fossils that are unearthed during construction, as impacts to paleontological resources may occur during the Proposed Project excavations that would disturb Pleistocene-age alluvia deposits. **APMs GEO-1, PALEO-1, PALEO-2, and PG&E BMP PALEO-1** would reduce impacts related to unstable soils and paleontological resources to less-than-significant levels.

While present and reasonably foreseeable future projects within the geographic scope for cumulative impacts could also result in soil erosion, loss of topsoil, or other impacts related to geologic hazards or unstable soils, none of these projects would be capable of exacerbating the potential for a geologic hazard given their limited impact on the area's geologic setting and the requirement to grade and compact soils in accordance with local and state standards designed to prevent soil hazards from occurring. Moreover, specific regulations that address worker safety would be in place if a seismic event were to occur, helping to avoid any harm to people or extensive damage to structures. In addition, the existing regulations and plans, as well as standard mitigation measures, in place to protect paleontological resources would reduce potentially significant impacts to less-than-significant levels.

Therefore, the Proposed Project's incremental contribution to cumulative geology, soils, and paleontological resource impacts would not be cumulatively considerable and would be less than significant.

Greenhouse Gas Emissions. GHG emissions directly generated during construction and operation would result in a less-than-significant, short-term impact to climate change (refer to **Section 5.8, *Greenhouse Gas Emissions***). GHG impacts within the SFAB are assessed based on a yearly operations emissions threshold. As shown in **Table 5.8-4, *Operational Emissions Summary MT/Year***, the Proposed Project would have less-than-significant impacts from emission of GHGs, including operations and annualized construction. In addition, the Proposed Project would ultimately increase the efficiency of integrating existing and future renewable energy projects. As a result, the Proposed Project would not considerably contribute to the emissions associated with the construction or operation of other projects planned in the Proposed Project

vicinity or within the basin as a whole. Thus, the Proposed Project's impacts from GHG emissions would not be cumulatively considerable and would be less than significant.

Hazards, Hazardous Materials, and Public Safety: A significant cumulative impact on hazards, hazardous materials, and public safety could result if the Proposed Project were to contribute to impacts related to the release, transport, use, or disposal of hazardous materials, substances, or waste. At the project level, there were determined to be no impacts related to unexploded ordinances; as such, cumulative impacts for this issue are not evaluated.

As discussed in **Section 5.9, Hazards, Hazardous Materials, and Public Safety**, the Proposed Project would not result in any significant impacts to this issue area. **APMs HAZ-1 through HAZ-5** and PG&E **BMPs HAZ-1 through HAZ-11** would be implemented to ensure potential impacts remain less than significant. Other present and reasonably foreseeable future projects within the geographic scope, including the projects listed in **Appendix 7-A**, could involve hazards and hazardous materials similar to those identified for the Proposed Project; however, it is anticipated that these projects would be required to follow applicable regulations for characterization, handling, and disposing of any hazards or hazardous materials. Therefore, potentially cumulative impacts from routine use, handling, and disposal of hazardous materials would be less than significant. The likelihood of upset, emergency, or other abnormal conditions occurring on multiple projects simultaneously is very low.

Therefore, the Proposed Project's incremental contribution to cumulative hazards, hazardous materials, and public safety impacts would not be cumulatively considerable and would be less than significant.

Hydrology and Water Quality. A significant cumulative impact on hydrology and water quality could result if the Proposed Project were to contribute to impacts related to water quality, depletion of groundwater supplies or interference with recharge, alteration to drainage patterns, exacerbating flood hazards, or conflicting with applicable plans.

As shown in **Section 5.10, Hydrology and Water Quality**, the Proposed Project would not violate any water quality or waste discharge requirements. Implementation of **APM WQ-1** would further reduce Proposed Project-level impacts to less-than-significant levels. The majority of the cumulative projects listed in **Appendix 7-A** would involve at least one acre of soil disturbance; therefore, a SWPPP would be prepared as required by the state National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Stormwater Associated with Construction Activity. All listed projects would also be subject to regulations that require compliance with water quality standards, including state and local water quality regulations. Compliance with existing laws, ordinances, regulations, and standards in place for the protection of water quality are designed to address potential effects at a regional level and, therefore, are designed and intended to mitigate potential adverse effects resulting from multiple discrete projects or locations (i.e., cumulative impacts).

Therefore, the Proposed Project's incremental contribution to cumulative hydrology and water quality impacts would not be cumulatively considerable and would be less than significant.

Land Use and Planning. A significant cumulative impact on land use and planning could result if the Proposed Project were to contribute to physically dividing an established community or conflict with a land use plan, policy, or regulation.

As shown in **Section 5.11, Land Use and Planning**, implementation of the Proposed Project would result in no impacts to physically dividing an established community. Consequently, the Proposed Project would not have the potential to contribute to cumulative impacts related to physically dividing an established community, and they are not discussed in the cumulative impact analysis below.

As discussed in **Section 5.11**, the California Public Utilities Commission (CPUC) has regulatory authority over the Proposed Project. Thus, the Proposed Project would not be under the discretionary jurisdiction of the Cities of Fremont, Milpitas, San José, and Santa Clara and, therefore, would not be subject to local agency discretionary regulations. However, the Proposed Project would be compatible with the municipal codes for these Cities. The Proposed Project is consistent with the applicable land use plans, policies, and regulations and would result in less-than-significant impacts at the project level.

The cumulative projects listed in **Appendix 7-A** would also be subject to regulations that require compliance with local land use plans and municipal codes relating to zoning and development standards. Therefore, the Proposed Project would not be cumulatively considerable, and impacts would be less than significant.

Noise. For the Proposed Project, both construction and operational noise and vibration levels were analyzed in **Section 5.13, Noise**. Construction of the Proposed Project would temporarily increase noise levels in the area; however, no impacts would occur as a result of operational noise at the nearest sensitive receptors as operational noise levels are below the existing ambient noise environment, and no APMs were proposed. The Proposed Project was found to not exceed the noise levels limit at any property boundary during O&M activities. In addition, operations-related vibration was determined to not be noticeable at the nearest sensitive receptor. A significant cumulative impact on noise and vibration would result if the Proposed Project were to contribute to impacts related to exceedances of noise standards or ground-borne vibration when evaluated within the context of past, present, and reasonably foreseeable future projects.

Construction-related vibrations would not exceed thresholds where vibration-inducing construction would occur within 25 feet of vibration-sensitive structures. The Proposed Project's vibration-related impacts would occur from the installation of underground transmission line construction. While the proposed Albrae to Baylands 320 kV DC transmission line alignment does contain multiple cumulative projects in the close vicinity, none are located within 25 feet. Therefore, potential cumulative impacts would be less than significant.

The Proposed Project would not be expected to contribute to cumulatively significant impacts relating to airport noise because the Proposed Project's impacts in this regard would not be cumulatively considerable. That is to say, the Proposed Project's impacts relating to the existing SVP NRS substation and proposed Baylands and Albrae terminals' proximity to the San José Mineta International Airport would not increase or otherwise alter similar impacts from any other project located in close proximity to the airport.

Construction of the Proposed Project would partially overlap with construction of some of the cumulative projects listed in **Appendix 7-A**, which could further increase noise levels in the surrounding area(s). Construction for the Proposed Project transmission lines would move in a linear fashion and would not affect receptors for long periods of time. Any cumulative noise impacts would be less than significant. While the proposed HVDC terminal sites and existing substation sites would involve longer construction schedules, they do not occur in close proximity

to potential cumulative projects and would be less likely to create cumulatively considerable noise should multiple projects have overlapping construction.

Therefore, the cumulative construction noise levels would not be anticipated to create cumulatively significant impacts. As such, the Proposed Project's incremental contribution to potential cumulative noise and vibration impacts would be less than significant.

Public Services. Cumulative impacts on public services, including fire and police protection, could result when past, present, and reasonably foreseeable future projects combine to increase demand on public services facilities such that additional facilities must be constructed to maintain acceptable levels of service, and the construction of such facilities would result in a physical impact on the environment.

As discussed in **Section 5.15, Public Services**, the Proposed Project would not permanently affect service ratios, response times, or other objectives for fire and police protection services in the area. Construction would not be anticipated to permanently affect response times because construction lane or road closures would be temporary and would be coordinated with local jurisdictions and emergency service providers, and traffic control would be implemented, as necessary and described in **Section 5.17, Transportation**.

The cumulative projects listed in **Appendix 7-A** would have construction workers on-site, which could incrementally increase the potential need for fire or medical resource services if an emergency were to occur. However, the likelihood of such an emergency is low, and the likelihood of simultaneous emergencies at multiple construction sites would be even lower. Additionally, because the increased need would be temporary, no new or physically altered public service facilities would be required to meet demand. During operation, the Proposed Project would not require regular oversight, service, or management. The facilities would be remotely operated with no permanent workforce on-site. This minimizes the number of public services that would be required during operation.

Therefore, the Proposed Project's incremental contribution to cumulative public services impacts would not be cumulatively considerable and would be less than significant.

Recreation. A significant cumulative impact on recreation could result if the Proposed Project were to contribute to an increased use of existing neighborhood and regional parks causing substantial deterioration of recreational facilities, require construction or expansion of recreational facilities, prevent access to a designated recreational facility, substantially change the character of a recreational area, or damage recreational trails and facilities. The Proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment. Therefore, cumulative impacts regarding that criterion are not evaluated.

The Proposed Project would not increase the use of recreational resources identified in **Section 5.16.1, Environmental Setting**, that are adjacent to and near the Proposed Project areas such that physical deterioration would occur due to the quantity of existing local parks and the short construction duration. O&M activities associated with the Proposed Project would not change, reduce, or prevent access to these designated recreation resources or areas because the majority of the proposed transmission lines would be constructed underground, and the area surrounding them would be restored after construction. The Proposed Project would not result in a substantial change to the character of the recreational areas, as the proposed Albrae and Baylands terminal

sites are located in close proximity to industrial areas. Additionally, the transmission line segments proposed to be constructed overhead are located in existing developed areas with similar overhead transmission line features; thus, the Proposed Project would not significantly change the character of adjacent recreational areas. The construction of the Proposed Project would result in direct impacts to approximately 1.2 miles of trail along the Bay Trail and would temporarily impact or limit access to bicycle facilities within roadways, including Boyce Road, Fremont Boulevard, Cushing Parkway, McCarthy Boulevard, Los Esteros Road, Nortech Parkway, Disk Drive, and Lafayette Street. As discussed in **Section 5.17**, implementation of **APM TRA-1** would require the preparation of a Traffic Control Plan (TCP), which would provide detour routes or otherwise maintain access to the effected recreational resources, including pedestrian and bicycle access along trail routes within public roads. Implementation of **APM TRA-1** would also require that damage to roads, trails, and bicycle facilities resulting from Proposed Project construction activities are returned to pre-project conditions. Further, as discussed in **Section 3.7.3.2, Site Restoration**, upon completion of construction activities, LS Power would restore the effected portions of the trails to preconstruction conditions. Implementation of **APM REC-1** would ensure that impacts under all criteria remain less than significant.

Several cumulative projects identified in **Appendix 7-A** are located near the Proposed Project area and identified recreational resources, such as Tasman East – 2200 Calle De Luna (Holland), Tasman East – 2343 Calle Del Mundo (Summerhill), Tasman East – 2354 Calle Del Mundo (Ensemble), Tasman East – 5185 Lafayette (Ensemble), Tasman East – 2300 Calle De Luna (Related), Related Santa Clara, Tasman East – 2200 Calle De Luna (Holland), and Tasman East – 2101 Tasman Drive (Related). However, these other projects are either in construction or likely would have construction completed prior to initiation of the Proposed Project construction. As discussed in **Section 5.16, Recreation**, portions of the Proposed Project that would involve temporary disruptions in recreational resource access include: segments of the proposed Albrae to Baylands 320 kV DC transmission line near an ingress/egress point to the Bay Trail/Fremont Boulevard Trail and sections of the Coyote Creek Trail, a segment of overhead alignment of the proposed Baylands to NRS 230 kV transmission line near the Guadalupe River Trail, and areas where bicycle facilities approach the Proposed Project along the proposed Albrae to Baylands 320 kV DC transmission line, north of Staging Area 5, and along Boyce Road, Cushing Parkway, Fremont Boulevard, Los Esteros Road, Disk Drive, and Nortech Parkway. During construction, it may be necessary to temporarily close portions of the aforementioned trails and bicycle routes to keep the public at safe distances from the construction areas. Implementation of **APM REC-1**, which would require LS Power to coordinate with the Cities of Fremont, San José, and Santa Clara, the National Park Service, Metropolitan Transportation Commission, and the United States Fish and Wildlife Service in preparing a Trail Management Plan (TMP), would ensure recreationists are properly notified and that other measures are implemented to provide safety to both trail users and construction crews. Thus, potential impacts from temporary construction restrictions to the Bay Trail/Fremont Boulevard Trail, Coyote Creek Trail, Guadalupe River Trail, and bicycle facilities would be reduced to a less-than-significant level at the project level. Additionally, all cumulative projects would be required to mitigate for direct impacts to recreation, and it is anticipated that other projects would be subject to similar measures, as well as the applicable federal, state, and local laws and regulations that protect recreational facilities. Therefore, the Proposed Project's incremental contribution to cumulative recreation impacts would not be cumulatively considerable and would be less than significant.

Transportation. The cumulative assessment of transportation impacts includes existing traffic volumes, Proposed Project-generated construction traffic, operational transportation, and traffic from future projects on roads and highways in the Proposed Project vicinity.

As shown in **Section 5.17**, the anticipated peak vehicle trips associated with construction of the Proposed Project would represent less than 0.4 percent of the Annual Average Daily Traffic (AADT) at the nearest roadway junctions (on a temporary basis). The implementation of a TCP (**APM TRA-1**) would further reduce impacts to less-than-significant levels. Cumulative traffic impacts could occur during construction from related projects having overlapping construction timeframes, particularly if the related projects generated traffic on the same roads at the same time as the Proposed Project. Most of the projects listed in **Appendix 7-A** would partially overlap with construction of the Proposed Project and would likely be subject to regulations that would require the preparation of a TCP. Cumulative traffic impacts would be less than significant given the temporary, short duration of the anticipated construction overlap with other projects, and the Proposed Project's contribution to construction traffic would be minimal, and all projects would be required to implement similar traffic control measures required by the local jurisdictions. Temporary bus stop closures may be required as a result of traffic control activities along Fremont Boulevard, Cushing Parkway, First Street, Nortech Parkway, and Lafayette Street. Any bus stop closures would be coordinated with Santa Clara Valley Transportation Authority (VTA) or Alameda-Contra Costa Transit District ("AC Transit") in advance to ensure its patrons are not exposed to potentially hazardous conditions resulting from construction activities taking place in the vicinity of a bus stop as required by **APM TRA-2**. Furthermore, any damage to public roads, including any damage from vehicle traffic, would be restored to pre-project conditions following construction in accordance with **APM TRA-3**.

Any projects that add access (driveways, streets) are required to provide access for emergency vehicles (including adequate turning radius). Similarly, construction zones must provide emergency vehicle access to and, if applicable, through the construction zone at all times. Thus, there would be no adverse effects on emergency access at a particular site. Emergency access along the road network may be slightly affected by cumulative construction traffic if vehicles are not able to move off the road quickly to allow emergency vehicles to pass by. However, the Proposed Project's contribution to construction traffic would be minimal, and all projects would be required to implement a TCP that would address emergency vehicle access. Each cumulative project would need to coordinate with Santa Clara VTA in advance if they would result in impacts to bus stops, thereby reducing the potential for cumulative impacts to public transportation. Furthermore, each individual cumulative project would be required to address any damage to public roads generated by reducing the potential for cumulative hazardous traffic conditions. In addition, construction traffic would be temporary and would not permanently affect transportation issues such that a conflict with a program, plan, or other regulations would occur.

Therefore, the Proposed Project's incremental contribution to cumulative transportation impacts would not be cumulatively considerable and would be less than significant.

Tribal Cultural Resources. A cumulatively considerable impact on TCRs could result if the Proposed Project resulted in a considerable contribution to significant cumulative TCR impact. As discussed in **Section 5.18, Tribal Cultural Resources**, there are no recorded TCRs within the Proposed Project area or geographic scope; however, potentially unrecorded subsurface TCRs are indicated by the Sacred Lands File (SLF) search result. Therefore, **APMs CUL-1 through CUL-5, TCR-1, TCR-2**, and PG&E **BMPs CULT-1 through CULT-3** would be implemented to reduce potential impacts to less-than-significant levels.

The cumulative projects identified in **Appendix 7-A** are located within a similar area as the Proposed Project and have the potential to uncover TCRs during ground disturbing activities.

However, all projects are required to comply with state regulations that protect TCRs. In addition, impacts to TCRs are site-specific and as such are not expected to combine with the development of other projects to cumulatively increase the risk of impacting TCRs. Potential impacts are evaluated on a case-by-case basis. The Proposed Project includes APMs to ensure impacts to any TCRs within the Proposed Project area are less than significant. Therefore, the Proposed Project's incremental contribution to cumulative TCRs impacts would not be cumulatively considerable and would be less than significant.

Utilities and Service Systems. Cumulative impacts to utilities or service systems have the potential to occur within the utility service areas if multiple projects have a combined impact on local utility services or infrastructure. At the project level, there were determined to be no impacts related to wastewater treatment or solid waste; as such, cumulative impacts for these issues are not evaluated.

As discussed in **Section 5.19, Utilities and Service Systems**, the Proposed Project would require the temporary use of utilities such as water, wastewater facilities, and electric power during construction, and runoff would be managed by a stormwater detention system. In addition, construction would generate solid waste that would be disposed of in a local landfill or another approved facility in accordance with applicable federal, state, and local laws. Based on the anticipated landfill capacity described in **Section 5.19.1, Environmental Setting**, sufficient capacity would be available to handle disposal of waste generated by the Proposed Project during construction. The cumulative projects listed in **Appendix 7-A** and within the local landfill service areas would be required to comply with all applicable federal, state, and local laws regarding solid and hazardous waste, including, but not limited to, the California Integrated Waste Management Act of 1989 which has set reduction rates for the amount of solid waste sent to landfills. Therefore, the total volume of waste that would be landfilled under the cumulative scenario would not be expected to exceed the permitted capacity of available landfills.

The cumulative projects listed in **Appendix 7-A** would also require water and electric power during construction and would generate wastewater. The use of electric power during construction of the Proposed Project and cumulative projects would not be a substantial increase in usage from existing levels and would be temporary. Operational electrical power requirements of the Proposed Project would be minor and would be served via existing local PG&E distribution lines that have the capacity to serve all projects in the area. The Proposed Project would not require large quantities of water during operations and would not generate wastewater. Potential cumulative impacts would, thus, be less than significant.

Therefore, the Proposed Project's incremental contribution to cumulative utilities and service systems impacts would not be cumulatively considerable and would be less than significant.

7.2 GROWTH-INDUCING IMPACTS

7.2.1 GROWTH-INDUCING IMPACTS

Growth-inducing impacts per the CPUC CEQA Guidelines (CPUC, 2019) consider ways in which a project could induce growth. The analysis considers if the Proposed Project would foster any economic or population growth either directly or indirectly in the surrounding environment, increase population that would tax existing community services, remove obstacles to population growth, and/or encourage and facilitate other activities that would cause population growth and that could significantly affect the environment, either individually or cumulatively.

The California Independent System Operator (CAISO) 2021-2022 Transmission Plan identified a need for increased resource development driven by numerous factors, including the escalating need to decarbonize the electricity grid because of emerging climate change impacts, the higher electricity forecasts driven by expected electrification of transportation and other carbon-emitting industries, and greater than anticipated impacts of peak loads shifting to later-day hours when solar resources are not available (CAISO, 2022). The Proposed Project would address the CAISO-identified reliability issues and would provide system reliability benefits for the Greater Bay Area. The primary objective of the Proposed Project is to resolve several reliability concerns, including multiple near-term and long-term overloads identified in the San José area 115 kV transmission system. Additionally, the Proposed Project provides benefits in reducing local capacity requirements in the San José sub-area and overall Greater Bay Area that reduces reliance on the local gas-fired generation.

As discussed above and as described in more detail in **Section 2.1.1, Purpose and Need**, the Proposed Project would provide a range of important reliability and economic benefits to the transmission system in the Proposed Project area. At the same time, the system reliability and economic benefits resulting directly and indirectly from the Proposed Project are not expected to foster economic or population growth, remove obstacles to population growth, or otherwise encourage or facilitate activities that would translate into significant environmental effects, whether considered individually or cumulatively.

Considering potential effects on economic growth, the Proposed Project would improve the overall transmission system capability to adequately serve existing and forecasted load demand. However, it does not increase power supplies on the California electric grid but rather the Proposed Project only moves power controllably and efficiently around the system. This means that while the Proposed Project does not necessarily drive economic growth, it has the ability to support economic growth within certain portions of the San José and south San Francisco Bay area where electric power access is currently constrained, shifting that capability from less developed areas where electric power access may currently be more available. From this standpoint, the Proposed Project may support local economic growth through in-fill development and redevelopment that may have otherwise taken place in less developed, greenfield areas. As a result of this shifting and rebalancing, economic growth benefits are likely to result in net balance regionally, and impacts are considered less than significant.

In terms of the Proposed Project's effects on fostering population growth in the area, the Proposed Project would primarily draw from the existing workforce during construction and operation. The peak employment during construction is anticipated to be approximately 300 workers per day, but, on average, the workforce on-site would be less. The workers would likely commute from the Greater Bay Area at an average one-way distance of approximately 15 miles. The labor demands of the Proposed Project would be met by existing LS Power-affiliate employees, by hiring specialty construction and electrical contractors who already reside in the surrounding areas, or by hiring specialty construction and electrical contractors from outside the local area who may temporarily reside in the vicinity of the Proposed Project while completing their roles in the construction process. However, such non-local specialty workers are likely to travel from job to job and stay in the area only for the construction phase in which they are involved. During operations, the Proposed Project would be remotely operated with no permanent workforce on-site and one local direct position expected for O&M. Given the construction and O&M work force expectations, the Proposed Project would not induce significant or permanent direct population growth through employment.

Evaluating the Proposed Project's effects on existing community services, construction and operation of the Proposed Project would not create substantial direct increases in population as explained above. The temporary construction and limited permanent Proposed Project work forces would not tax existing community services. The majority of the construction work force would be fulfilled by the local (Greater Bay Area) workforce such that existing community services are already serving this population. In terms of direct effects, the number of Proposed Project construction workers who would visit the area would be too small to drive a need for new employees to be hired in service businesses or affect obstacles to population growth. Proposed Project operation would not provide substantial new employment or introduce an increase in population that would tax existing community service facilities, including fire, police, hospitals, or schools. Instead, the Proposed Project would generate a significant new property tax base that would help to fund these community services without the increased population burdens of typical housing or commercial developments. Therefore, impacts from direct population growth related to Proposed Project operations would be less than significant.

Also as stated above, a majority of the planned load growth and physical development of the Cities of Fremont, Milpitas, San José, and Santa Clara occurs within existing developed areas. As shown in **Figure 7-1** and **Appendix 7-A**, the Cities of Fremont, Milpitas, San José, and Santa Clara are undergoing substantial in-fill development and redevelopment. These areas are currently served by existing utilities and public services. While the Proposed Project would allow for forecasted load growth and planned development, the impact to existing utilities and public services would not be significant. Therefore, the Proposed Project would not directly cause a population increase and would not induce growth by direct or indirect employment that would tax the existing community services. Impacts to existing community and public services would be less than significant.

The Proposed Project would not directly remove any obstacles to population growth. Rather, the Proposed Project would improve the existing transmission system, which would allow for more efficient supply of power to the area while also supporting continued integration of clean energy. While the Proposed Project would provide important reliability and economic benefits, the Proposed Project is not expected to directly or indirectly facilitate other activities that would cause population growth that would significantly affect the environment. The Cities of Fremont, Milpitas, San José, and Santa Clara planning documents already anticipate and permit a certain level of growth in the area based on regional population projections, and the Proposed Project would not affect anticipated growth.

Although the Proposed Project would improve system reliability that would benefit both existing and planned growth in the Cities of Fremont, Milpitas, San José, and Santa Clara, the Proposed Project is not expected to directly or indirectly support new planned development in the Greater Bay Area or otherwise support any growth-related activities that could lead to a significant effect on the environment. While the Proposed Project would facilitate reliable operation of the transmission system in the electrical proximity of the existing PG&E Newark and SVP NRS substations, it would not directly induce population growth or create new demand because the proposed HVDC terminal and transmission facilities would support the existing regional transmission system for existing customer demand and forecasted electrical load demand. O&M of the Proposed Project would not provide substantial new jobs nor require development of new housing and, therefore, would not induce, either directly or indirectly, substantial population growth in the area. Therefore, while the Proposed Project would not induce growth or remove obstacles to population growth in the area, it would allow for reliable and efficient delivery of

electricity which would help accommodate projected electrical load in the area and allow for increased utilization of clean energy. For all these reasons, the Proposed Project would have less-than-significant growth-inducing impacts.

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9.1 REFERENCE LIST

The following section is organized to include all references cited in the PEA by section.

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