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Prairie Song Reliability Project
1 of 2

Application for Opt-In Certification

Prairie Song Reliability Project
Los Angeles County, California

JUNE 2025

Prepared for:

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
µg/m3	micrograms per cubic meter
AAQA	ambient air quality analyses
AAQS	ambient air quality standard
AB	Assembly Bill
AC	alternating current
AERMOD	American Meteorological Society/EPA Regulatory Model
AHMP	All-Hazards Mitigation Plan
APN	Assessor's Parcel Number
ASF	age-sensitivity factor
ATCM	Air Toxic Control Measure
AVAQMD	Antelope Valley Air Quality Management District
AVEK	Antelope Valley–East Kern Water Agency
BESS	battery energy storage system
bgs	below ground surface
BMP	best management practice
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	California Fire Code
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CH_4	methane
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Los Angeles
CPM	Compliance Project Manager
CPUC	California Public Utilities Commission

Acronym/Abbreviation	Definition
CWA	Clean Water Act
cy	cubic yard
DC	direct current
DESCP	drainage, erosion, and sediment control plan
DPM	diesel particulate matter
DWR	California Department of Water Resources
EMF	electromagnetic field
EMS	Emergency Medical Services
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERP	Emergency Response Plan
ESA	Environmental Site Assessment
EWMP	enhanced watershed management program
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FIRM	Flood Insurance Rate Map
FRA	Federal Responsibility Area
FRAP	Fire and Resource Assessment Program
FTE	full-time equivalent
FY	fiscal year
gen-tie	generation interconnection
GHG	greenhouse gas
GLC	ground-level concentration
GO	General Order
GWP	global warming potential
HAP	hazardous air pollutant
HARP	Hotspots Analysis and Reporting Program
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HFTD	High Fire-Threat District
HMBP	Hazardous Materials Business Plan
hp	horsepower
HRA	Health Risk Assessment
I/O	input/output
IGP	Industrial Storm Water General Permit
IPCC	Intergovernmental Panel on Climate Change
KOP	key observation point
kV	kilovolt
LA	Los Angeles
LACFCD	Los Angeles County Flood Control District
LACoFD	Los Angeles County Fire Department
LACMTA	Los Angeles County Metropolitan Transportation Authority

Acronym/Abbreviation	Definition
LCR	Local Capacity Requirements
LFP	lithium iron phosphate
LID	Low Impact Development
LO/TO	lock-out/tag-out
LORS	laws, ordinances, regulations, and standards
LOS	level of service
LRA	Local Responsibility Area
MDAB	Mojave Desert Air Basin
MM	Mitigation Measure
mph	miles per hour
MPT	main power transformer
MT	metric tons
MV	medium voltage
MW	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NF_3	nitrogen trifluoride
NFPA	National Fire Protection Association
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O&M	operations and maintenance
O_3	ozone
OAEOP	Operational Area Emergency Operations Plan
OEHHA	Office of Environmental Health Hazard Assessment
OSFM	Office of the State Fire Marshal
OWTS	State Onsite Wastewater Treatment System
PCS	power conversion system
PFAS	per- and polyfluoroalkyl substances
PFC	perfluorocarbon
PFOA	perfluorooctanoic acid
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
PPE	personal protective equipment
ppm	parts per million
PRC	California Public Resources Code
Project	Prairie Song Reliability Project
PUMS	Public Use Microdata Sample
PWD	Palmdale Water District
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
REL	reference exposure level

Acronym/Abbreviation	Definition
RMP	risk management plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SF_6	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SIL	significant impact level
SO_2	sulfur dioxide
SO_x	sulfur oxides
SPCC	Spill Prevention Control and Countermeasures
SR	State Route
SRA	State Responsibility Area
SWP	State Water Project
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDML	total maximum daily load
TIA	Traffic Impact Analysis
UL	Underwriters Laboratory
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	waste discharge requirement
WMP	watershed management program
WQMP	Water Quality Management Plan
WSA	water supply assessment
WUI	wildland–urban interface
ZEV	zero-emission vehicle

1 Executive Summary

Prairie Song Reliability Project LLC, a Delaware limited liability company (Applicant), a subsidiary of Coval Infrastructure DevCo LLC, a Delaware limited liability company, proposes to construct, operate, and eventually repower or decommission the up to 1,150-megawatt (MW) Prairie Song Reliability Project (Project) located on up to approximately 107 acres in unincorporated Los Angeles County. The primary components of the Project include a containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation. The location and main elements of the Project are discussed in the following subsections. Figure 1-1, Regional Map, depicts the regional location and Project vicinity. Figure 1-2, Site Map, depicts the Project site.

The project will operate by transferring electrical energy from the existing power grid to the Project for storage and from the Project to the power grid when additional electricity is needed. The Project will provide additional capacity to the electrical grid to assist with serving load during periods of peak demand by charging when demand is low and discharging when demand is high. This operating principle increases the integration of additional intermittent renewable energy, such as wind and solar, in California's energy mix and reduces the need to operate natural gas power plants. The Project will also serve as an additional local/regional capacity resource that will enhance grid reliability, particularly to the Los Angeles (LA) Basin local reliability area and may allow for the deferral or avoidance of regional transmission facilities.

The Project will be remotely operated and monitored year-round as well as supported by on-site O&M staff 7 days a week. The Project will be available to receive or deliver energy 24 hours a day, 365 days a year. During the operational life of the Project, qualified technicians will inspect the Project facilities and conduct necessary maintenance to ensure reliable and safe operations.

The Project's principle Basic Objectives, detailed in Section 1 of this Application, include the construction and operation of an up to 1,150 MW BESS facility in Los Angeles County with an interconnection utilizing available system capacity at the existing SCE Vincent Substation to balance intermittent renewable generation and serve as an additional capacity resource that will enhance grid reliability. The facility will also provide new energy storage capacity to assist California electric utilities in meeting obligations under California's Renewable Portfolio Standard renewable energy sources and zero-carbon policy objectives; assist the State of California in meeting its goal of reducing statewide annual greenhouse gas emissions reduction goals; provide storage capacity to help balance electricity generation from intermittent renewable sources; provide energy storage to curtail dispatch of renewable resources and displace fossil fuel based generating stations; provide a storage facility in close proximity to a utility grid-connected substation with existing capacity to relieve grid congestion and enhance electricity reliability; provide economic benefits to the County, creating prevailing wage construction jobs, and facilitating local community benefits; and develop an energy storage project that is in close proximity to existing electrical infrastructure and the Vincent Substation, to avoid and minimize potential impacts from long 500kV gen-tie lines, among other purposes.

1.1 Project Location

A Project at the Vincent Substation creates a unique opportunity to help California achieve its greenhouse gas (GHG) reduction requirements and support LA Basin reliability requirements. The Vincent substation is located at a key

point in the electrical grid, Service Path 26, which enables it to deliver energy from renewable resources outside of the LA Basin Resource Area to meet LA Basin Local Capacity Requirements (LCR), with tie lines into the Western and Eastern LA Basin. LCR refers to the minimum amount of local generation capacity needed within specific areas to meet reliability criteria, particularly in areas where transmission constraints limit the ability to import power and is a critical metric for understand energy needs which are necessary to meet future grid demand. The LA Basin LCR is increasing, primarily due to load growth. The 2024-2025 Transmission Plan shows that peak load in the SCE Main area is forecasted to grow from 25,265MW in 2026 to 27,929MW in 2034 (CAISO 2025a), representing a 9.5% increase over 8 years. The 2026 LCR Tech Study also shows that the local capacity needed in the LA Basin is expected to increase from 5,812MW in 2026 to 7,226MW in 2030, which is an approximate 20% increase in required capacity in 4 years. Compared with the 2025 LCR study, demand for the LA Basin is 429MW higher than last year's forecast and the forecasted LCR needs have increased by 1,689MW due to load forecast increase (CAISO 2025b). In addition, California Independent System Operator is projecting that there will be a total potential curtailment of 1,300GWh of wind and solar from the SCE North area in 2034 (CAISO 2025a). The Project is sited at a location that can help reduce wind and solar curtailment while also supporting the growing LCR needs in the LA Basin.

Land uses in the immediate vicinity of the Project include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, State Route 14, and railroad lines. The nearest incorporated municipality to the Project site is the City of Palmdale, which is approximately 4 miles to the northeast.

Table 1-1 provides the section, township, range, and assessor's parcel number (APN) for all parcels located within the Project site. A list of the owners and occupants of property within 1,000 feet of the Project facilities and 500 feet of the gen-tie line routes, as well as a map of the APNs within these areas and within the Project site are provided in Appendix 1A.

Table 1-1. Project Parcels

Project Component	Assessor Parcel Number	Section, Township, Range
BESS Facility Site	3056-017-007	Section 28, Township 5N, Range 12W
	3056-017-020	Section 28, Township 5N, Range 12W
	3056-017-021	Section 28, Township 5N, Range 12W
	3056-019-013	Section 28, Township 5N, Range 12W
	3056-019-026	Section 28, Township 5N, Range 12W
	3056-019-037	Section 28, Township 5N, Range 12W
	3056-019-040	Section 28, Township 5N, Range 12W
Northern Gen-Tie Route	3056-015-008	Section 27, Township 5N, Range 12W
	3056-015-023	Section 27, Township 5N, Range 12W
	3056-017-026	Section 28, Township 5N, Range 12W
	3056-017-904	Section 28, Township 5N, Range 12W
	3056-017-905	Section 28, Township 5N, Range 12W
	3056-005-816	Section 27, Township 5N, Range 12W
	3056-005-817	Section 27, Township 5N, Range 12W
	3056-005-818	Section 27, Township 5N, Range 12W
	3056-015-801	Section 27, Township 5N, Range 12W
	3056-015-802	Section 27, Township 5N, Range 12W

Table 1-1. Project Parcels

Project Component	Assessor Parcel Number	Section, Township, Range
Southern Gen-Tie Route	3056-015-008	Section 27, Township 5N, Range 12W
	3056-015-023	Section 27, Township 5N, Range 12W
	3056-017-016	Section 28, Township 5N, Range 12W
	3056-017-022	Section 28, Township 5N, Range 12W
	3056-017-026	Section 28, Township 5N, Range 12W
	3056-017-027	Section 28, Township 5N, Range 12W
	3056-017-028	Section 28, Township 5N, Range 12W
	3056-027-007	Section 33, Township 5N, Range 12W
	3056-027-031	Section 33, Township 5N, Range 12W
	3056-005-816	Section 27, Township 5N, Range 12W
	3056-005-817	Section 27, Township 5N, Range 12W
	3056-005-818	Section 27, Township 5N, Range 12W
	3056-015-801	Section 27, Township 5N, Range 12W
	3056-015-802	Section 27, Township 5N, Range 12W

Note: BESS = battery energy storage system.

1.2 Project Elements

The Project will include construction, O&M, and eventual decommissioning of an approximately 1,150 MW BESS. A 500kV gen-tie connecting the Project substation to the POI within the existing SCE Vincent Substation will be used to charge from and discharge to the electrical grid. Figure 1-3, Site Layout, shows the Project site layout. Figure 1-4, Visual Appearance of the Site Prior to Construction, and Figure 1-5, Visual Appearance of the Site After Construction, includes a rendering of the site and all Project components after construction.

The Project will include the following components:

- **Battery Energy Storage System (BESS) Enclosures:** Lithium-iron phosphate cells, or similar technology, form the core of the battery energy storage system. The cells are the basic functional electrochemical unit containing an assembly of electrodes, electrolyte, separators, container, and terminals. Cells store electrical energy through direct conversion of chemical energy. The cells will be installed in battery modules on racks and enclosed in prefabricated, non-habitable enclosures. The BESS enclosures will also have a thermal management system for optimal performance and safety in accordance with UL 9540. Power for the HVAC system, lighting, and other electrical systems will be provided through separate auxiliary power connection to the on-site Project substation with connection lines installed above and/or below ground. The Sungrow Power Titan II has been selected for this project application as a representative BESS Enclosure. Sungrow Power Titan II design and operation information is used in this application to set maximum potential impact envelopes, for site design and modeling analysis, and to set baseline safety standards. A final manufacturer for the BESS Enclosures will be selected during the detailed design process post-certification.
- **Power Conversion Systems (PCS):** A PCS can be packaged and partially integrated in the BESS enclosure, or it can be an assembled system consisting of a bi-directional inverter, MV transformers, protection equipment, direct current (DC) and alternating current (AC) circuit breakers, harmonic filters, equipment

terminals, and a connection cabling system. A PCS functions to both convert between DC/AC and change the voltage level from the MV collection voltage to the working voltage output of the BESS enclosures.

- The PCS will convert electric energy from AC to DC when the energy is transferred from the grid to the battery, and from DC to AC when the energy is transferred from the battery to the grid. Each PCS will also include transformers that convert the AC side output of the inverter between low and medium AC voltage to increase the overall efficiency of the BESS. Inverters within the PCS units will be unattended systems designed to operate in all conditions. The inverters will be monitored and controlled remotely. The PCS units will have on-site disconnects for use in case of an emergency or a situation requiring unscheduled maintenance.
- **Medium Voltage (MV) Collection System:** The MV collection system will include multiple components that connect the PCS units to the Project substation including underground conductor circuits, switchboards, switchgear, and panels at 34.5kV voltage. The conductors for the MV collection system will be installed underground using trenching.
- **Project Substation, Control Building, and Telecommunications Facilities:** The Project substation will include up to six (6) main power transformers (MPTs). When the BESS facility is charging, power from the regional electric transmission grid will be stepped down from 500kV to 34.5kV and sent from the Project substation through the MV collection system and PCS units into the battery packs within the BESS enclosures. When the BESS facility is discharging, power from the battery packs within the BESS enclosures will be sent to the PCS units, stepped up to 34.5kV, and transported to the Project substation through the MV collection system before being stepped up to 500kV at the MPTs and delivered back to the regional electric transmission grid. A control building will be installed within the Project substation area and contain an energy management system and metering and telecommunication equipment for communication with SCE/California Independent System Operator facilities and to support remote Project operations and monitoring. The Project substation area will also include seven (7) static masts, up to 150 feet tall, for lightning protection.

O&M buildings will be constructed for the Project's anticipated 16 full-time operations staff. The O&M area will include parking, outside equipment and laydown areas, and two (2) permanent buildings with basic offices, meeting rooms, washroom facilities and climate-controlled storage for certain equipment and materials. An existing on-site water well and septic system will serve the O&M building. The O&M building will be powered with a distribution line from the Project substation.

- **Access Roads:** The BESS yard roadway system will include new facility access roads and driveways, a perimeter road, and internal access roads. All new BESS yard access roads, driveways, internal and perimeter roads will be bladed, compacted, and surfaced with asphalt. All internal roadways and private driveways will be constructed to meet access requirements for construction, O&M, and emergency response requirements.

  The Project substation roadway system will include new facility access roads and driveways. These roads will be bladed, compacted, and surfaced with stone. These roads will all be constructed to meet access requirements for construction, O&M, and emergency response requirements.
- **Laydown Yards:** The Project will include up to three (3) laydown yards for equipment and material staging and storage during construction. These areas will also be used for worker parking during construction. The primary laydown yard will be located at the north end of the BESS Site as shown in Figure 1-3. The primary laydown yard will be bladed, compacted, and surfaced with aggregate, while additional laydown yards will be cleared of vegetation and surfaced with aggregate or other soil stabilizing materials. Portions of

additional laydown yards may also be graded, if necessary. Landscape fabric may also be installed under the surface of all laydown yards to prevent vegetation growth, if required to comply with fire prevention standards.

- **Stormwater Detention Facilities:** Regulatory standards require that volumes and flow rates of stormwater discharge after construction are not to exceed pre-development conditions. Stormwater generated on site will flow to underground detention chambers. Stormwater treatment and storage sizing will be designed to hold the anticipated runoff from a 50-year, 24-hour storm event in compliance with applicable regulations. Stormwater will infiltrate into the subgrade underneath the stormwater chambers. If the design capacity of the stormwater chambers is exceeded, however, stormwater may be stored in available upstream areas such as catch basins, infiltration trenches, or drain as sheet flow from the surface.
- **Site Security and Fencing, including fire detection system:** The BESS Site will be enclosed with a minimum 8-foot-tall block wall topped with 1 foot of three-strand barbed wire or razor wire. The wall will be installed on the outside of the perimeter road. An additional internal wall will be installed around the Project substation area. The walls will be required to prevent unauthorized access and to comply with human health and safety regulations. A chain link fence will separate the BESS yard from the Project substation yard. Gates will be installed at various access points along the fence lines and equipped with locks and Knox boxes to allow for authorized personnel (e.g., transmission service provider, O&M staff, and emergency response) to access appropriate portions of the BESS Site.

Lighting will only be in areas where required for safety, security, or operations. Controlled security lighting up to 28 feet in height will be installed at the Project substation and around the BESS yards, in accordance with applicable laws, ordinances, regulations, and standards (LORS). Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around the substation area and points of ingress/egress. All non-task lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. Security cameras will be placed on site and monitored 24/7.

Fire protection will include multiple fire detection systems on site and within the individual BESS enclosures. Each BESS enclosure will have a fire rating in conformance with the California Fire Code 2022. In addition, each BESS enclosure will contain an onboard battery management system that monitors the state of individual battery cells and relays information 24/7. In the event of an anomaly, the system is designed to shut down and mitigate the hazard. Each BESS enclosure will have internal Fire Alarm Control Panels. The Fire Alarm Control Panels will identify which units have incidents and will notify the Fire Department and First Responders.

The Project's fire protection design will comply with California Fire Code 2022, Section 1207 Electrical Energy Storage Systems, which adopts the National Fire Protection Association's Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). BESS enclosures will be Underwriters Laboratories (UL) listed, tested, and certified to the most rigorous international safety standards. UL independently tests equipment for compliance with the latest fire safety code requirements, and the methods were developed to minimize fire risk and safety concerns about battery storage equipment raised by fire departments and building officials in the United States.

- **500kV Gen-Tie Line including Transmission Structures and Conductors:** The Project will be interconnected to the regional electrical transmission grid via a new single-circuit 500kV gen-tie line within an up to 150-foot-wide corridor between the Project substation and the SCE Vincent Substation. The gen-tie line will consist of up to 11 tubular steel poles or steel lattice tower structures. The Applicant will construct and own the portion of the gen-tie line between the Project substation and the Point of Change of Ownership (POCO)

transmission structure, and SCE will construct and own the remaining portion of the gen-tie from the POCO to the POI within the Vincent Substation.

As described above, two (2) potential gen-tie line routes are under consideration. Either route will be overhead and originate at the Project substation located within the BESS Site, and extend south and east, crossing the railroad tracks and West Carson Mesa Road, as close to perpendicular as possible, until reaching the SCE Vincent Substation. In total, the Northern Gen-Tie Route will be approximately 1.1 miles long. In total, the Southern Gen-Tie Route will be approximately 1.8 miles long. The gen-tie will be designed consistent with the Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee 2006), where feasible.

- **Fiber Optic Telecommunications Lines:** Telecommunications equipment will be installed between the control building at the Project substation and the Vincent Substation to facilitate communication with SCE/California Independent System Operator facilities. SCE interconnection policies for 500kV systems require three (3) redundant fiber optic cables to be installed on diverse paths without a single point of failure (i.e., all fiber optic lines cannot be installed on a single set of structures). Between the control building within the Project substation area and the Vincent Substation, the Applicant and SCE will install one (1) of the three (3) fiber optic lines aboveground on the gen-tie structures. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor and separated by at least 25 feet. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor regardless of which Gen-Tie Route corridor option is selected.
- **Transmission Structure Access Path:** A combination of existing access roads and new access roads will be used to access the transmission structures. The new access roads will mostly follow the centerline of the gen-tie. The new access roads were designed to utilize existing roads as much as possible to minimize the need for new disturbance.
- **Interconnection Facilities within Existing SCE Vincent Substation Footprint (SCE constructed and owned):** To facilitate interconnection of the BESS facility to the electric transmission grid, SCE will need to install one (1) 500kV dead end structure, nine (9) 500kV coupling capacitor voltage transformers, three (3) 500kV line drops, three (3) line current relays, and one (1) 500kv line position, which includes the following equipment: seven (7) 500kV circuit breakers, seven (7) 500kV disconnect switches, 84 insulators, and two (2) breaker failure backup relays.

1.3 Project Schedule

The Project is anticipated to be built over an approximately 20-month period from the onset of site preparation activities through energization. Following energization, testing and commissioning will take place over 6 months. Initial mobilization and site preparation is anticipated to begin no later than March 2027. Testing and commissioning is anticipated to conclude no later than April 2029. The commercial operation date is expected shortly following the completion of testing and commissioning in June 2029. It is anticipated that construction crews will work 8 hours to 10 hours per day, with work occurring Monday through Friday. Overtime, night work, and weekend work will be used only as necessary to meet the Project schedule or complete time-sensitive or safety critical work. All work schedules will comply with applicable LORS.

1.4 Project Ownership

Prairie Song Reliability Project LLC (Applicant), a subsidiary of Coval Infrastructure DevCo LLC, a Delaware limited liability company, and/or its affiliate(s) will be the owner and operator of the Project, including the BESS enclosures, power inverters and transformers, Project substation, and the gen-tie line to the POCO. SCE will be owner and operator of the gen-tie from the POCO to the interconnection at the SCE Vincent Substation.

The Applicant, or its affiliates, has site control of the BESS site including the Southern Gen-Tie Route. With respect to the Northern Gen-Tie Route, APNs 3056-017-904 and 3056-017-905 will not be owned by the Applicant. Instead, the Applicant will enter into an easement with the underlying landowner for approximately 0.15 miles of the Northern Gen-Tie Route.

1.5 Structure of this Application

This application is organized as follows:

- **Chapter 1: Executive Summary**. This chapter provides a discussion of the Project components and background, describes the Project benefits, summarizes the anticipated schedule, and summarizes the contents of the application.
- **Chapter 2: Project Description**. This chapter provides a detailed description of the Project and its various components; identifies the Project's location; Project purpose and objectives; specifies the General Plan and zoning designations; and provides details regarding the Project's construction, operations, and decommissioning; and explains the intended uses of the application and authorizing actions.
- **Chapter 3: Environmental Analysis**. This chapter includes a description of the environmental setting, regulatory setting, cumulative setting, and impact analysis for each environmental factor (resource area). The resource areas addressed in Sections 3.1 through 3.17 include all resource areas identified in the most recently adopted version of the CEC Appendix B checklist and all additional relevant resource areas and impact questions that are defined in the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). Each section addresses the baseline conditions, applicable regulations, impact questions, analysis methodology, environmental impacts, and mitigation measures to reduce or avoid significant effects. A determination is provided in each section to summarize the level of impact (i.e., No Impact, Less-Than-Significant Impact, Less-Than-Significant Impact with Mitigation Incorporated, and Potentially Significant Impact) to each resource area, according to CEQA and other applicable significance criteria. The following resource areas are included in Chapter 3:
  - ***Section 3.1:*** Air Quality
  - ***Section 3.2:*** Biological Resources
  - ***Section 3.3:*** Cultural Resources and Tribal Cultural Resources
  - ***Section 3.4:*** Geological Hazards and Resources
  - ***Section 3.5:*** Hazardous Materials Handling
  - ***Section 3.6:*** Land Use
  - ***Section 3.7:*** Noise
  - ***Section 3.8:*** Paleontological Resources
  - ***Section 3.9:*** Public Health

- ***Section 3.10:*** Socioeconomics
- ***Section 3.11:*** Soils
- ***Section 3.12:*** Traffic and Transportation
- ***Section 3.13:*** Visual Resources
- ***Section 3.14:*** Waste Management
- ***Section 3.15:*** Water Resources
- ***Section 3.16:*** Wildfire
- ***Section 3.17:*** Worker Health and Safety

- **Chapter 4: Alternatives.** This chapter identifies alternatives to the Project in accordance with CEQA Guidelines Section 15126.6, including a thorough description of the No Project Alternative and all alternatives considered and rejected.
- **Chapter 5: Laws, Ordinances, Regulations, and Standards (LORS).** This chapter contains a comprehensive list of LORS applicable to the Project. The LORS contained in this chapter are also reflected and discussed in each Chapter 3 subsection but are provided in this chapter for comprehensive visibility.
- **Chapter 6: Permits and Approvals Table.** This chapter contains a comprehensive list of permits and approvals necessary for the Project and their status. The permits and approvals contained in this chapter are also reflected and discussed in each Chapter 3 subsection but are provided in this chapter for comprehensive visibility.
- **Chapter 7: Persons Who Prepared the Application.** This chapter identifies all persons responsible for preparation of the application.
- **Chapter 8: Environmental Analysis Summary.** This chapter contains a comprehensive summary table of impact significance determinations. The determinations contained in this chapter are also reflected and discussed in each Chapter 3 subsection but are provided in this chapter for comprehensive visibility.

1.6 Mandatory Opt-In Requirements

This Application was prepared pursuant to the requirements of Public Resources Code sections 25520 and 25545.2, and the California Energy Commission's siting regulations relating to non-fossil-fueled powerplants, energy storage facilities, and related facilities (Cal. Code of Regs., tit. 20 Section 1875 et seq.) In accordance with Section 1876.5 of the CEC's regulations, the Applicant met with CEC Staff for a pre-filing consultation on May 21, 2025, more than 30 days prior to filing this opt-in application.

1.6.1 Authority and Verification

A letter signed and dated by the Applicant attesting under penalty of perjury to the truth and accuracy of this application (see Appendix 1D Attestation Letter). The Attestation meets the requirements of Cal. Code Regs., tit. 20 Section 1707 and 1876.

1.6.2 Facility Definition

Consistent with Section 1877(b) of the CEC's regulations, this section provides information stating how the Project meets the definition of "facility" set forth in Public Resources Code (PRC) section 25545(b)(2). Section 25545(b)(2) defines a "facility" as:

> An energy storage system as defined in Section 2835 of the Public Utilities Code that is capable of storing 200 megawatt-hours or more of electrical energy.
>
> Public Utilities Code section 2835 provides, in pertinent part, that an energy storage system is "commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy." An energy storage system must be "cost effective and either reduce emissions of greenhouse gases, reduce demand for peak electrical generation, defer or substitute for an investment in generation, transmission, or distribution assets, or improve the reliable operation of the electrical transmission or distribution grid." Public Utilities Code section 2835(a)(4) also provides that an energy storage system must do one or more of the following:
>
> - Use mechanical, chemical, or thermal processes to store energy that was generated at one time for use at a later time.
> - Store thermal energy for direct use for heating or cooling at a later time in a manner that avoids the need to use electricity at that later time.
> - Use mechanical, chemical, or thermal processes to store energy generated from renewable resources for use at a later time.
> - Use mechanical, chemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time.

This application seeks certification of the Project as an energy storage system capable of storing 200 megawatt-hours or more of electrical energy, as defined in PRC section 25545(b)(2) and Public Utilities Code section 2835. As described throughout this Application and in greater detail in Section 2.0, Project Description, the Project will utilize commercially available technology to store up to 9,200 MWh of electricity for later dispatch to the grid. The Project may allow for the deferral or avoidance of regional transmission facilities, and will improve the reliable operation of the electrical transmission grid.

1.6.3 Project Labor Code Requirements

Consistent with Section 1877(c) of the CEC's regulations, this opt-in application contains all certifications required by PRC sections 25545.3.3 and 25545.3.5.

Sections 25545.3.3 and 25545.3.5 require this application to include a certification relating to specific commitments concerning labor used to construct the facility. The Applicant "certifies" that it will meet the requirements of a covered project and that a skilled and trained workforce will be used to perform all construction work on the project. The Applicant certifies the construction of the covered project is not in its entirety a public work for purposes of Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 of the Labor Code. The Applicant further certifies that the Project will be constructed pursuant to a project labor agreement (PLA) and that the terms of the PLA will comply with Section 25545.3.3 (b) (6) and Section 25545.3.5 (e) and therefore will meet the

requirements of all of the applicable provisions of Section 25545.3. These certifications are provided in Appendix 1C.

1.6.4 Permit Application Submission History

Consistent with Section 1877(d) of the CEC's regulations, this section identifies and discusses whether the Applicant has submitted any local, state, or federal permit applications, and the plan to obtain any required permit that has not yet been submitted to the relevant state agency. The Applicant has not submitted any local, state, or federal permit applications. Below is a list and brief description of federal, state, and local permits and approvals that may be required to implement the proposed project.

Federal

No federal permits will be required to implement the proposed project.

State

The following state applications may be required:

- California Public Utilities Commission (CPUC): Since the Project interconnection facilities (e.g., gen-tie line) are required to be owned in part by SCE, the CPUC would have jurisdiction over the approval of those portions of the Project, pursuant to General Order 131-D, and may rely on the this application and the CEC's analysis to fulfill its California Environmental Quality Act (CEQA) review obligations of any substation or interconnection facility improvements under its jurisdiction that are necessary to serve the Project. SCE will be responsible for this submittal and coordination with the CPUC after the CEC issues its Decision on the Application.
- Regional Water Quality Control Board (RWQCB) - Pursuant to provisions of the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). All waters of the United States are waters of the state. Wetlands, such as isolated seasonal wetlands, that are not generally considered waters of the United States are considered waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act. The Project is expected to require a WDR from RWQCB.

Local

No discretionary local permits will be required to implement the proposed project. As discussed in this opt-in application, a ministerial lot line adjustment and three (3) franchise agreements for the crossing of Soledad Canyon Road, Carson Mesa Road, and the Los Angeles County Transit Metro Authority rail line may be needed from the County of Los Angeles and Los Angeles County Transit Metro Authority.

1.6.5 Public Resources Code Sections 25526 and 25527

Consistent with Section 1877(e) of the CEC's regulations, this section of the opt-in application discusses whether the Project is located on an area identified in Public Resources Code section 25527, on a site designated by the California Coastal Commission under PRC section 30413(b), or on a site designated by the San Francisco Bay Conservation and Development Commission under Government Code section 66645(b). The Project is located on private parcels, and is use consistent with the Los Angeles County's General Plan and zoning ordinance designations for the site. The Project is not located on an area identified in PRC section 25527, or on a site designated by the California Coastal Commission under PRC section 30413(b), or on a site designated by the San Francisco Bay Conservation and Development Commission under Government Code section 66645(b).

See Section 3.6, Land Use, for additional information regarding the Project site characteristics and designations.

1.6.6 Net Positive Economic Benefit to the Local Government

Consistent with Section 1877(f) of the CEC's regulations, this opt-in application contains information demonstrating that the Project will provide an overall, net positive economic benefit to the local government that would have had permitting authority over the site and related facilities, but for the CEC's exclusive jurisdiction. A full analysis of project benefits that the Project will provide is provided in Sections 1.0, 2.0, and 3.10, and Appendix 1E Net Benefit Analysis. A brief summary of the Project's key environmental and economic benefits is provided below:

- The Project is expected to generate 543 total jobs, $60.8 million in total labor income, and $145.1 million in total output during a 2-year construction in Los Angeles. Of the 543 total jobs during construction, 303 represent direct full-time equivalent (FTE) positions with an average compensation of $141,000 over the 2-year construction period. These jobs will include laborers, operators, electricians, and other skilled workers. Direct economic output will total an estimated $90.8 million. The indirect and induced impacts from the construction phase are estimated to generate an additional 240 full-time and part-time jobs with an average compensation of $75,400. Indirect and induced output totals an estimated $54.2 million.
- Project operations will generate 49 total jobs, $5.7 million in total labor income, and $14.4 million in total economic output. Of the 49 jobs associated with Project operations, the Applicant anticipates 20 FTEs will be required to directly manage the Project's ongoing operations with an average compensation of $181,500. The indirect and induced impacts of Project operations are estimated to generate an additional 29 full-time and part-time jobs with an average compensation of $70,500. Indirect and induced output totals an estimated $5.5 million.
- The Project will rely on the regional labor force and thus will have no impact on housing development.
- The Project will help improve economic efficiency through grid resilience and energy security while helping the State meet its GHG reduction goals.
- The Applicant will pay the statutory school impact fees to the Acton-Agua Dulce Unified School District, which is a positive economic benefit. Further, in addition to the statutory fees, the Applicant intends to fund education in some capacity in the County and plans to begin discussions with representatives of local schools regarding this community benefit.
- Through an already well-developed collaboration with the Los Angeles County Fire Department, the Applicant expects to assist in the funding of emergency response plans and regular fire and safety training.

- The Project is estimated to generate positive tax revenues for the County, totaling about $154.9 million, inclusive of both construction and operational phases.
- Reduction of approximately 19.7 metric tons of carbon dioxide emissions over a 40-year period compared to natural gas.
- Ability to store electricity when surplus to then be used to power approximately 880,900 homes, assuming an average consumption rate of 1.24 kilowatt per home.
- Estimated sales tax benefits of approximately $97.9 million during construction. Estimated average sales tax benefits of approximately $1.2 million annually during operations.
- During the 40-year operating period of the Project, the annual average property tax is estimated to generate $6.2 million. Additional bond revenue could average $3.7 million based on 2024-2025 Tax Rate Area allocations for the Project site.

The project's overall net economic benefits are discussed in detail in Appendix 1E of this application.

1.6.7 Legally Binding Enforceable Agreement(s) for Community Benefits of the Project

Consistent with Section 1877(g) of the CEC's regulations, this opt-in applications include the applicant's plan or strategy, including a timeline for execution, to obtain legally binding and enforceable agreement(s) with, or that benefit, a coalition of one or more community-based organizations prior to project certification, consistent with Public Resources Code section 25545.10.

As part of the Project, the Applicant plans on making significant investments over the next 5 years to 10 years with community-based initiatives and programs in the Antelope Valley and Los Angeles County area. The Applicant has been meeting with multiple County-based community organizations and will be meeting with additional County-based organizations to better understand their immediate and long-term needs and how their missions directly support the residents of the surrounding communities. A brief description of several of the opportunities currently under consideration, and a timeline for the execution of one or more legally binding and enforceable community benefits agreements is provided in the preliminary Community Benefits Plan in Appendix 1B.

1.6.8 Environmental Leadership Development Project Requirements

The Project meets the requirements of PRC sections 21183 and 21183.6 for the following reasons:

- The Project qualifies as a leadership project because it will comply with PRC section 21183 (a) (1) as it will result in a minimum investment of one hundred million dollars ($100,000,000) in California upon completion of construction. See Section 3.10 of this Application for a description of the Project's capital investment.
- The Project will be constructed in accordance with a PLA that will comply with Section 21183 (b).
- The Project will comply with Section 21183 (c) and Section 21183.6 because it will not result in significant GHG emission impacts as demonstrated in Section 3.1 Air Quality, of this Application. A discussion of baseline conditions of GHGs is included in Section 3.1.1, Affected Environment, of the application, and a discussion of GHGs emitted by the Project is included in Section 3.1.4, Impact Analysis, of the application.

GHG emissions emitted by the Project are primarily a result of energy consumption associated with round trip efficiency and transmission losses when operating the BESS facility. As SCE, the energy provider for the Project, moves towards meeting the state's Renewable Portfolio Standard (RPS) goals of 100% renewable energy by 2045 as established in Senate Bill (SB) 100, GHG emissions from the Project would be reduced. Additionally, the Project would assist SCE and the state in meeting RPS goals by supporting the use of intermittent renewable energy sources, such as solar and wind. Therefore, the Project's emissions associated with electricity would become net-zero over time as SCE's electricity generation sources shift toward renewables, and the Project would assist the state and local utility in meeting its renewable energy goals outlined in SB 100.

- The Project will generate very little solid and no organic waste and therefore it will not be required to comply with the waste-related laws referenced in Section 21183 (d).
- By filing this Opt-In Application with the CEC, the Applicant agrees to be legally bound by the terms and conditions of the CEC License, thereby satisfying Section 21183 (e).
- The Applicant also agrees to pay the court and record preparation costs identified in Section 21183 (f) and (g).
- With respect to Section 21183(h), the Applicant acknowledges its understanding that, at the time the draft EIR is released, all then-available materials to be included in the record of proceedings must be publicly available and downloadable from an internet website maintained by the Commission. The Applicant further acknowledges its understanding that materials prepared or received after the release of the draft EIR must be promptly posted from the same website within the time limits prescribed by Public Resources Code Section 21186.

1.7 References

Avian Power Line Interaction Committee. 2006. *Suggested Practices for Avian Protection On Power Lines: The State of the Art in 2006*. Accessed June 18, 2025. https://www.nrc.gov/docs/ml1224/ml12243a391.pdf.

CAISO (California Independent System Operator). 2025a. *2024-2025 Transmission Plan*. May 30, 2025. Accessed June 2025. https://www.caiso.com/documents/iso-board-approved-2024-2025-transmission-plan.pdf.

CAISO. 2025b. "2026 Local Capacity Technical Study, Final Report and Study Results." April 30, 2025. Accessed June 2025. https://stakeholdercenter.caiso.com/InitiativeDocuments/Final-2026-Local-Capacity-Technical-Report.pdf.

SWRCB. 2019. State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019 and revised April 6, 2021. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf.

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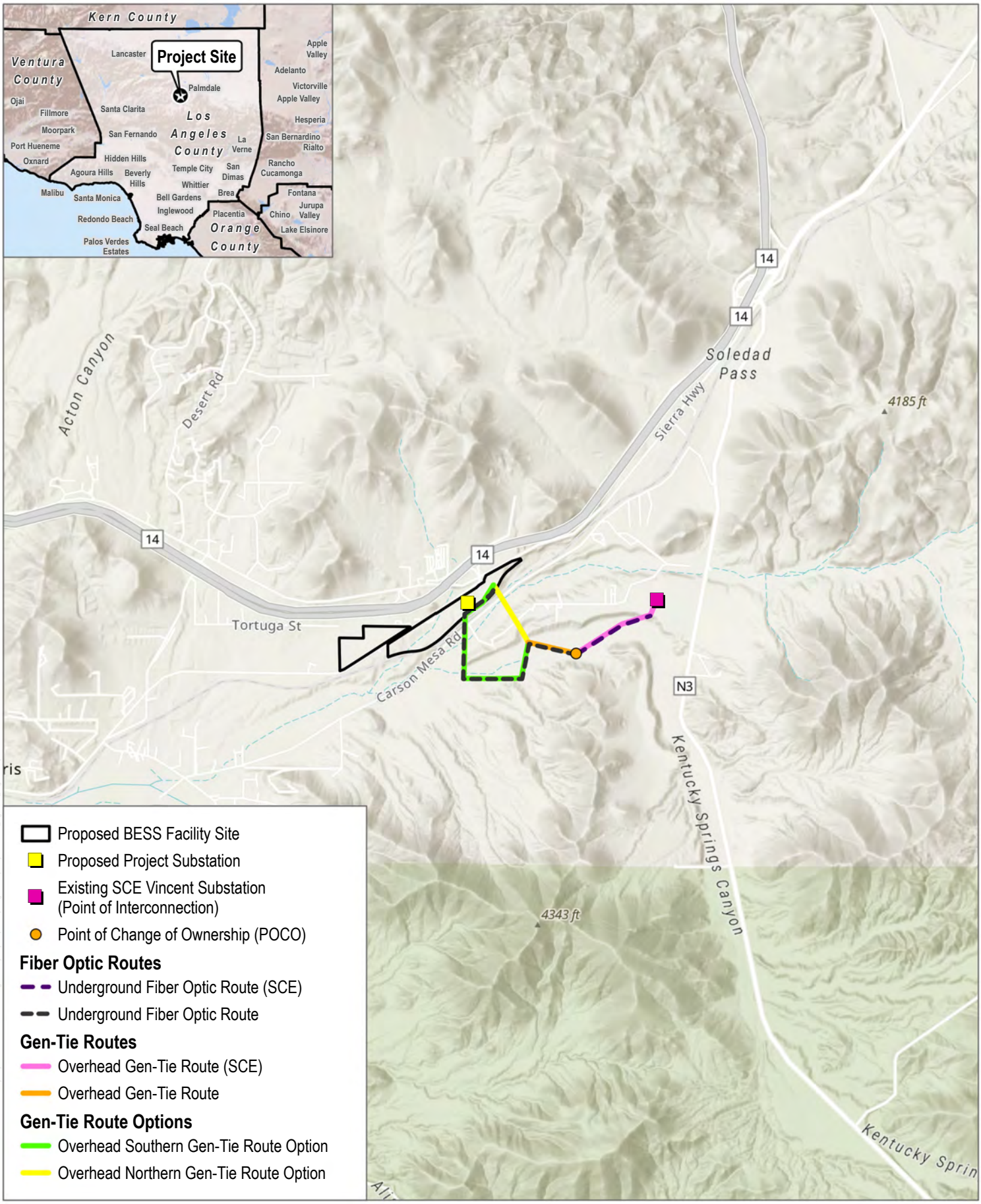

SOURCE: World Topographic

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0 1,500 3,000 Feet

FIGURE 1-1

Regional Map

Prairie Song Reliability Project

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- Proposed BESS Facility Site
- Proposed Project Substation
- Existing SCE Vincent Substation (Point of Interconnection)
- Transmission Pole (SCE)
- Transmission Pole

Proposed Fiber Optic and Gen-Tie Routes

Fiber Optic Routes

- Underground Fiber Optic Route (SCE)
- Underground Fiber Optic Route

Gen-Tie Routes

- Overhead Gen-Tie Route (SCE)
- Overhead Gen-Tie Route

Gen-Tie Route Options

- Overhead Southern Gen-Tie Route Option
- Overhead Northern Gen-Tie Route Option

Work Areas

- Gen-Tie Work Area
- Construction Laydown Area
- Gen-Tie Access Roads

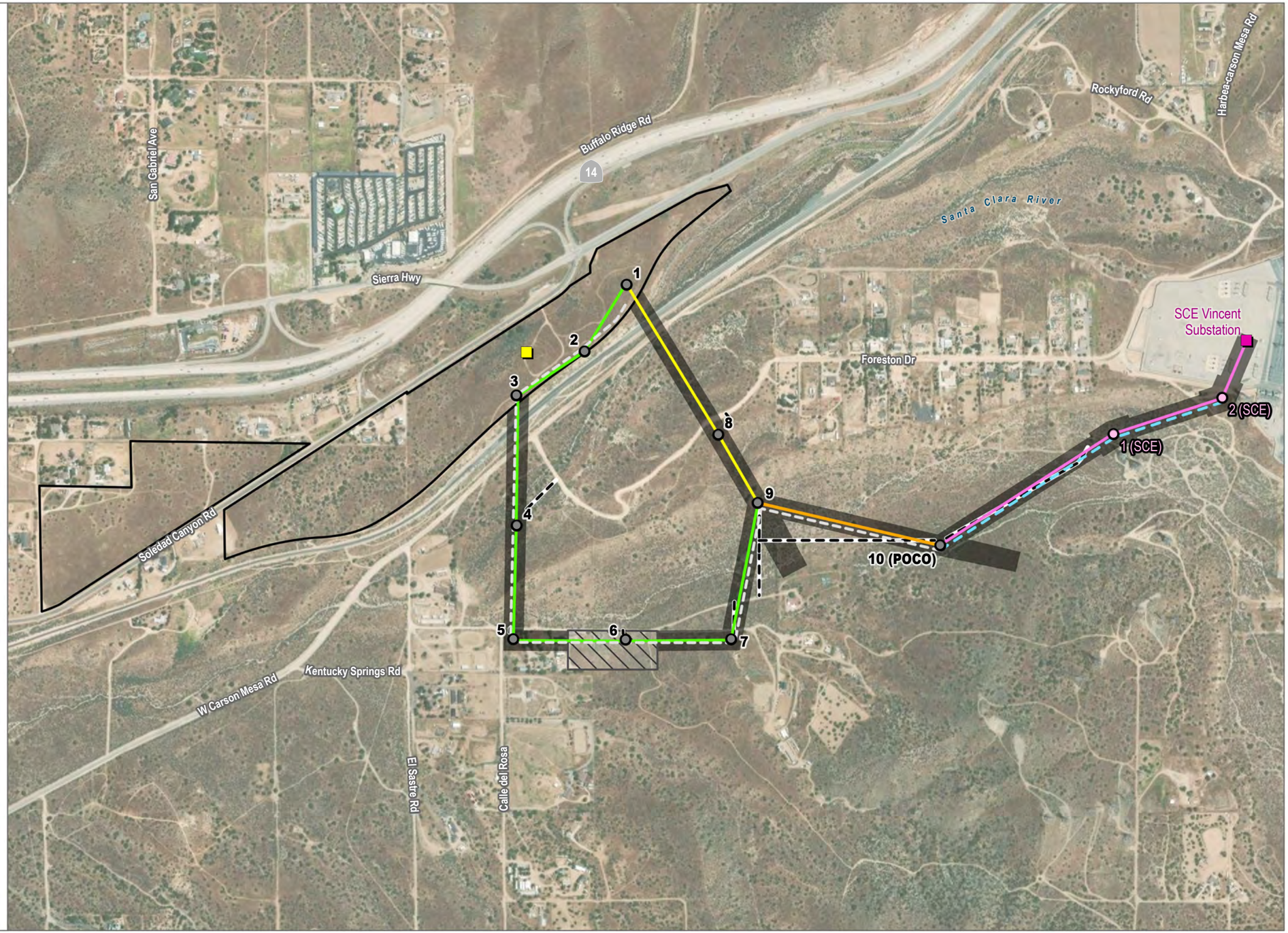

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FIGURE 1-2

Site Map

Prairie Song Reliability Project

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- Proposed BESS Facility Site
- Existing SCE Vincent Substation (Point of Interconnection)

BESS Proposed Features

- BESS Array
- Project Substation
- Storm Water Retention Area
- O&M Area
- Laydown Area
- BESS Access Roads
- Driveway Entrance
- Water Tank and Fire Pump House

Proposed Fiber Optic and Gen-Tie Routes

Fiber Optic Routes

- Underground Fiber Optic Route (SCE)
- Underground Fiber Optic Route

Gen-Tie Routes

- Overhead Gen-Tie Route (SCE)
- Overhead Gen-Tie Route

Gen-Tie Route Options

- Overhead Southern Gen-Tie Route Option
- Overhead Northern Gen-Tie Route Option
- Transmission Pole (SCE)
- Transmission Pole

Work Areas

- Gen-Tie Work Area
- Construction Laydown Area
- Gen-Tie Access Roads

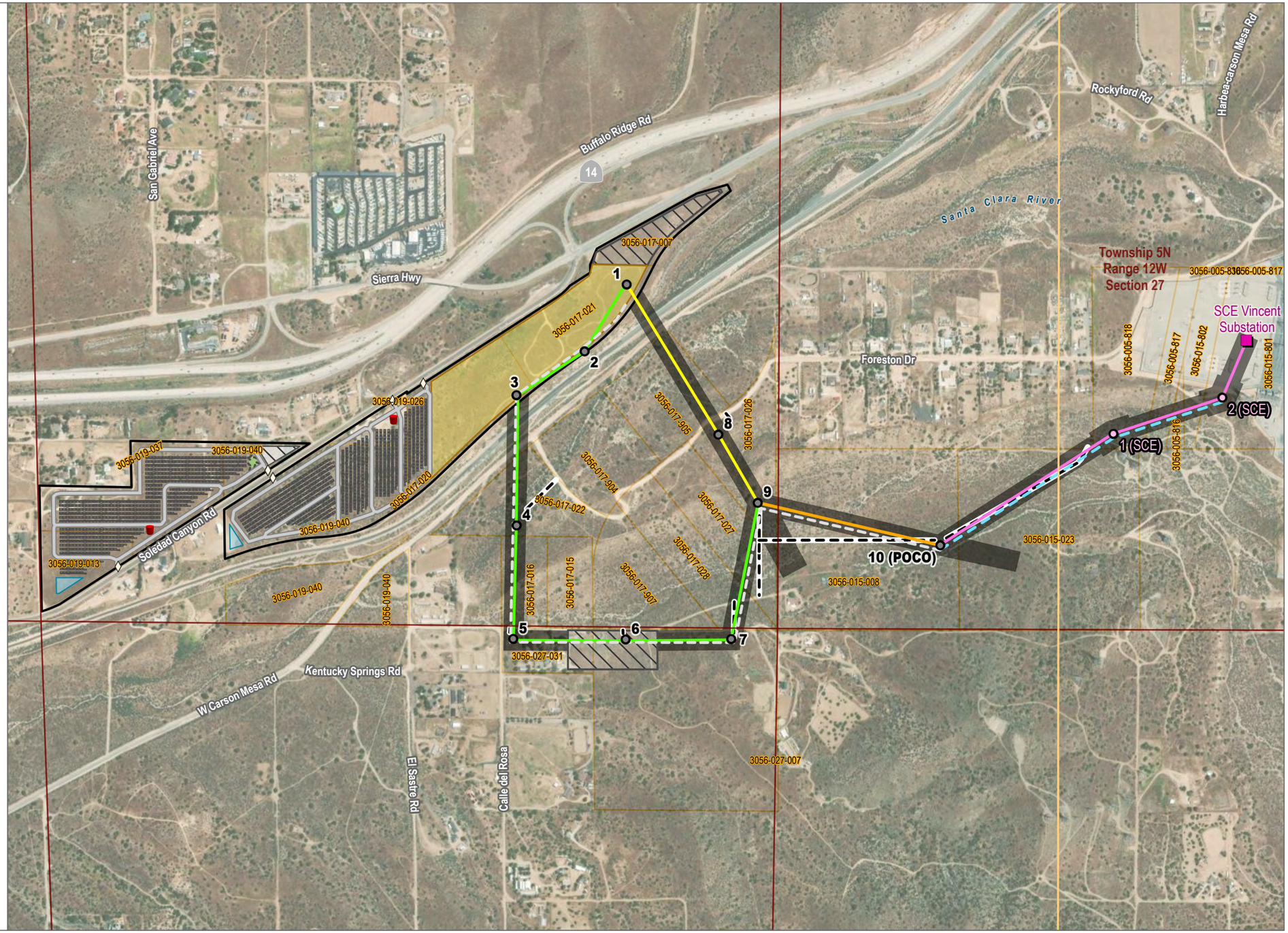

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FIGURE 1-3

Site Layout

Prairie Song Reliability Project

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FIGURE 1-4

Visual Appearance of the Site Prior to Construction

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FIGURE 1-5a

Visual Appearance of the Site After Construction (Northern Gen-Tie Route Option)

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FIGURE 1-5b

Visual Appearance of the Site After Construction (Southern Gen-Tie Route Option)

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2 Project Description

Prairie Song Reliability Project LLC, a Delaware limited liability company (Applicant), a subsidiary of Coval Infrastructure DevCo LLC, a Delaware limited liability company, proposes to construct, operate, and eventually repower or decommission the up to 1,150-megawatt (MW) Prairie Song Reliability Project (Project) located on up to approximately 107 acres in unincorporated Los Angeles County. The primary components of the Project include a containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, an on-site Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE)-owned and operated Vincent Substation.

Electrical energy will be transferred from the existing power grid to the Project for storage and from the Project to the power grid when additional electricity is needed. The Project will provide additional capacity to the electrical grid to assist with serving load during periods of peak demand by charging when demand is low and discharging when demand is high. This operating principle increases the integration of additional intermittent renewable energy, such as wind and solar, in California's energy mix and reduces the need to operate natural gas power plants. The Project will also serve as an additional local/regional capacity resource that will enhance grid reliability, particularly to the Los Angeles Basin local reliability area and may allow for the deferral or avoidance of regional transmission facilities.

The Project will be remotely operated and monitored year-round as well as supported by on-site O&M staff seven (7) days a week. The Project will be available to receive or deliver energy 24 hours a day and 365 days a year. During the operational life of the Project, qualified technicians will inspect the Project facilities and conduct necessary maintenance to ensure reliable and safe operational readiness.

2.1 Project Location

The Project will be located in unincorporated Los Angeles County (County), California south of State Route 14 approximately three (3) miles northeast of the unincorporated community of Acton. The Project is within the USGS 7.5-minute Acton and Pacifico Mountain Quadrangles, Township 5N, Range 12W, Sections 27, 28, 33 and 34. The BESS site is comprised of Assessor's Parcel Numbers (APNs) 3056-017-007, 3056-017-020, 3056-017-021, 3056-019-013, 3056-019-026, 3056-019-037, and 3056-019-040. Development of the BESS facility will occur on an area of land sandwiched between two (2) existing transportation corridors, the Antelope Valley Freeway (State Route 14) to the north and Los Angeles County Metropolitan Transportation Authority (LACMTA)-owned Southern Pacific Railroad lines and Carson Mesa Road to the south, that are approximately 1,200 feet apart.

The Project will utilize one (1) of two (2) potential gen-tie routes. Either route will extend south and east from the Project substation, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceed northeast to the Point of Interconnection (POI) at the Vincent Substation. The Northern Gen-Tie Route is approximately 1.1 miles long, and will be sited on APNs 3056-015-008, 3056-015-023, 3056-017-026, 3056-017-904, and 3056-017-905, 3056-005-816, 3056-005-817, 3056-005-818, 3056-015-801, and 3056-015-802. The Southern Gen-Tie Route is approximately 1.8 miles long, and will be sited on APNs 3056-015-008, 3056-015-023, 3056-017-016, 3056-017-022, 3056-017-026, 3056-017-027, 3056-017-028, 3056-027-007, 3056-027-031, 3056-005-816, 3056-005-817, 3056-005-818, 3056-015-801, and 3056-015-802. The Project will also include three (3) fiber optic telecommunications lines: one (1) will be installed aboveground on the gen-tie structures (along whichever gen-tie route is ultimately selected), and the other two (2)

will be installed underground within the Southern Gen-Tie Route corridor. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor regardless of which Gen-Tie Route corridor option is selected. The Project's interconnection facilities will be located within the SCE Vincent Substation. Land uses in the immediate vicinity of the Project include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, State Route 14, and railroad lines.

The nearest municipality to the Project site is the City of Palmdale, which is located approximately four (4) miles to the northeast. There are a few single-family residences adjacent to the BESS facility Site's northern and western boundaries as well as a few other single-family residences in the vicinity of the gen-tie line.

2.2 Project Objectives

The Project's principle Basic Objectives include the following:

- Construct and operate an up to 1,150MW BESS facility in Los Angeles County with an interconnection utilizing available system capacity at the existing SCE Vincent Substation to balance intermittent renewable generation and serve as an additional capacity resource that will enhance grid reliability.
- Provide new energy storage capacity to assist California electric utilities in meeting obligations under California's Renewable Portfolio Standard Program and Senate Bills 100 and 1020, which require renewable energy sources and zero-carbon resources to supply 60% of all retail sales of electricity to California end-use customers by December 31, 2030, 90% of all retail sales of electricity to California end-use customers by December 31, 2035, 95% of all retail sales of electricity to California end-use customers by December 31, 2040, and 100% of all retail sales of electricity to California end-use customers by December 31, 2045.
- Provide new energy storage capacity to assist the State of California in meeting its goal of reducing statewide annual greenhouse gas emissions from the electric sector to 25 million metric tons by 2035.
- Provide storage capacity to help balance electricity generation from renewable sources, such as wind and solar, with electricity demand by storing excess generation predominately from emissions free power sources and deliver it back to the grid when demand exceeds real-time generation supply.
- Offer energy storge to curtail dispatch and displace the need for additional fossil fuel based generating stations needed to serve peak demand periods when intermittent renewable sources may be inadequate or unavailable. The additional storage capacity may allow for the deferral or avoidance of regional transmission facilities.
- Provide energy storage of sufficient size, power, capacity, scale, and location to assist California utilities in meeting obligations under the California Public Utilities Commission's (CPUC's) Mid-Term Reliability Procurement and upcoming Reliability and Clean Power Procurement Program Requirements.
- Develop an electricity storage facility in close proximity to a utility grid-connected substation with existing capacity available for interconnection for charging and discharging and the ability to deliver capacity to the load to minimize environmental impacts.
- Secure a location to allow the stored energy to relieve grid congestion, and enhance electricity reliability, without requiring the construction of substantial new regional transmission infrastructure or network upgrades.
- Construct and operate a battery energy storage facility in Los Angeles County, resulting in economic benefits to the County, creating prevailing wage construction jobs, and facilitating local community benefits.

- Locate and gain site control of site large enough and well-suited to support development of the Project's 1,150MW and up to 9,200MWh battery energy storage.
- Develop an energy storage project that is in close proximity to existing electrical infrastructure and the Vincent Substation, to avoid and minimize potential impacts from long 500kV gen-tie lines.
- Locate a site to accommodate a gen-tie line of reasonable length to the POI and the ability to deliver power to the Los Angeles Basin local reliability area during peak demand.
- Locate near existing roadways and related infrastructure where available and feasible for construction and O&M access.

2.3 Project Components

The Project will include construction, O&M, and eventual decommissioning of an up to 1,150MW BESS. A 500kV gen-tie connecting the Project substation to the POI within the existing SCE Vincent Substation, will facilitate charging and discharging to the electrical grid.

2.3.1 General Facility Description, Design, and Operation

The BESS facility will include the following primary components (refer to Section 2.3.2, Transmission and Interconnection Description, Design, and Operation for a detailed description of the gen-tie line and interconnection components of the Project):

- Battery Energy Storage System (BESS) Enclosures
- Power Conversion Systems (PCS)
- Medium voltage (MV) Collection System
- Project Substation, Control Building, and Telecommunications Facilities
- Access Roads
- Laydown Yards
- Stormwater Detention Facilities
- Site Security and Fencing
- Fire Detection and Suppression System
- Operations and Maintenance Building
- Existing Distribution Line Reroute

Project components are described in the following subsections. Figure 2-1, Project Site Plan, shows the Project layout. The Project's site plan package is provided in Appendix 2A, and the Project's conceptual landscape plan is included as Appendix 2B. Table 2-1 summarizes the preliminary dimensions of major BESS facility components, and Table 2-2 summarizes the preliminary footprint/disturbance acreage associated with the BESS facility.

Table 2-1. Preliminary Dimensions of Major BESS Facility Components

Component	Quantity	Approximate Dimensions
BESS Enclosures	2,035*	20 ft × 8 ft × 9.5 ft (L × W × H)
PCS	517*	20 ft × 8 ft × 9.5 ft (L × W × H)

Table 2-1. Preliminary Dimensions of Major BESS Facility Components

Component	Quantity	Approximate Dimensions
MV Collection system	—	Buried in trenches up to 10 ft × 10 ft (W × D)
Project Substation Area	1	2,545 ft × 440 ft (L × W); seven (7) 150 ft (H) (lightning masts)
Control Building	1	27 ft W × 95 ft L × 10 ft H (to ceiling)
Access Roads	—	26 ft (W) internal radii 55 ft minimum
Fire Water Tanks	2	33 ft in Diameter × 16 ft H
Laydown Yards	3	Variable
Stormwater Detention Facilities	2	Variable
Security Wall	—	Minimum 8 ft H block wall topped with 1 ft of barbed/razor wire
Operations and Maintenance Building	2	20 ft × 60 ft × 15 ft (L × W × H)

Notes: BESS = battery energy storage system; PCS = power conversion system; MV = medium voltage.

* The number of BESS enclosures and PCS units will depend on the manufacturer selected. The total number of BESS enclosures and PCS units may increase or decrease in the final design. It is also possible that the BESS units ultimately procured may incorporate the PCS units within the BESS enclosures.

Table 2-2. Preliminary Footprint of BESS Facility

Component	Permanent Disturbance
BESS Yards	30.0 acres
Project Substation	23.1 acres
Access Roads	7.9 acres
Laydown Yards	1.0 acres
Stormwater Detention Facilities	4.1 acres
*Other**	*4.7 acres*
Total+	**70.8 acres**

Notes: BESS = battery energy storage system.

* Other areas include maximum grading limits. The analyses assume that all areas used for the BESS facility are permanently disturbed.

\+ The total permanent disturbance acreage is a conservative estimate, and final designs may require fewer acres. Underground components within the BESS facility will be located within the footprint of above ground disturbance areas.

2.3.1.1 Battery Energy Storage System

The energy storage facility will utilize a modular and containerized BESS. There are several battery cell technologies commercially available, with one of the most common presently being lithium iron phosphate (LFP) cells, or similar. LFP technology is considered one of the safest, most efficient, and commercially financeable energy storage technologies available on the market. The initial Project concept has been developed assuming an LFP technology. By the time the Project reaches the procurement stage, it is possible for other battery cell technology with proven safety and performance records to be suitable for the Project. Although the number and dimensions of the containers may change (as it does between LFP technology providers), the technology ultimately procured will result in potential environmental impacts substantially similar to, or less than, those analyzed based on this Project Description. The Sungrow Power Titan II has been selected for this project application as a representative BESS enclosure. Sungrow Power Titan II design and operation information is used in this application to set maximum potential impact envelopes, for site design and modeling analysis, and to set baseline safety standards. A final manufacturer for the BESS enclosures will be selected during the detailed design process post-certification. The

Project will provide defensible space by setting back all BESS enclosures at least 100 feet from the property boundary.

The BESS enclosures will be prefabricated off site and arrive at the site ready to be installed and commissioned. Each modular BESS enclosure will include battery packs on racks, a battery management system, fire detection systems, thermal management systems (either liquid or air cooled depending final selected technology), and ancillary power electronics within a specialized steel-framed, non-occupiable container. The BESS enclosures will not exceed 15 feet in height.

Over the life of the project the storage capacity of the battery cells will naturally degrade. The project will implement an augmentation strategy to maintain the contractually required capacity of the system. Augmentation will entail either a capacity maintenance approach of adding/replacing individual battery modules in the existing BESS yard or designing the BESS system to incorporate space for additional BESS enclosures for later augmentation.

2.3.1.2 Power Conversion System

A PCS is a packaged and integrated, or assembled, system consisting of a bi-directional inverter, MV transformers, protection equipment, direct current (DC) and alternating current (AC) circuit breakers, harmonic filters, equipment terminals, and a connection cabling system. A PCS functions to both convert between DC/AC and change the voltage level from the MV collection voltage to the working voltage of the BESS enclosures.

The PCS will convert electric energy from AC to DC when the energy is transferred from the grid to the battery, and from DC to AC when the energy is transferred from the battery to the grid. Each PCS will also include transformers that convert the AC side output of the inverter between low and medium AC voltage to increase the overall efficiency of the BESS. Inverters within the PCS units will be unattended systems designed to operate in all conditions. The inverters will be monitored and controlled remotely, and there will be on-site disconnects for use in case of an emergency or a situation requiring unscheduled maintenance.

PCS units will be installed on concrete foundations or steel piles and connected to multiple BESS enclosures with wiring and cables installed underground. All outside electrical equipment will be housed in the appropriate National Electrical Manufacturers Association-rated enclosures.

2.3.1.3 MV Collection System

The MV collection system will include multiple components that connect the PCS units to the Project substation including underground conductor circuits, switchboards, switchgear, and panels at 34.5kV. The conductors for the MV collection system will be installed underground during construction using trenching.

To connect the portion of the BESS yard north of Soledad Canyon Road to the Project substation, which is located south of Soledad Canyon Road, a portion of the MV collection system will need to be located underground within Soledad Canyon Road. A 26-foot-wide underground corridor will house the MV collection system as it traverses the road. The 26-foot-wide corridor within Soledad Canyon Road will also house the proposed water line that will serve the O&M buildings (see the discussion in Section 2.3.1.10 for details regarding the O&M water line). The MV collection and water line proposed within Soledad Canyon Road will be installed underground using trenching.

2.3.1.4 Project Substation

The Project substation will include six (6) main power transformers (MPTs). When the BESS facility is charging, power from the regional electric transmission grid will be stepped down from 500kV to 34.5kV and sent from the Project substation through the MV collection system and PCS units into the battery packs within the BESS enclosures. When the BESS facility is discharging, power from the battery packs within the BESS enclosures will be sent to the PCS units, stepped up to 34.5kV, and transported to the Project substation through the MV collection system before being stepped up to 500kV at the MPTs and delivered back to the regional electric transmission grid. A control building will be installed within the Project substation area and contain an energy management system, metering, and telecommunication equipment for communication with SCE/California Independent System Operator (CAISO) facilities and to support remote Project operations monitoring. The Project substation area will also include seven (7) static masts, up to 150 feet tall, for lightning protection.

2.3.1.5 BESS Facility Access Roads

The Project's roadway system will utilize existing roads wherever available and feasible and include new facility access roads and driveways, a perimeter road, and internal access roads. All new access roads, driveways, internal and perimeter roads will be bladed, compacted, and surfaced with asphalt. All internal roadways and private driveways will be constructed to meet access requirements for construction, O&M, and emergency response.

2.3.1.6 Laydown Yards

The Project will include up to three (3) laydown yards for equipment and material staging and storage during construction. These areas will also be used for worker parking during construction. The primary laydown yard will be located in the northernmost portion of the BESS site. The primary laydown yard will be bladed, compacted, and surfaced with aggregate, while an additional laydown yard to facilitate construction of the gen-tie line will be cleared of vegetation and surfaced with aggregate or other soil stabilizing materials. Landscape fabric may also be installed under the surface of all laydown yards to prevent vegetation growth, if required to comply with fire prevention standards. The O&M building and required number of parking spaces for O&M staff will be constructed within the primary laydown following construction of the BESS facility components.

The proposed Project's preliminary layout, earthwork volumes, and Project component dimensions assumed for environmental analyses in subsequent chapters are conservatively large to allow for design flexibility within the project footprint and Project schedule preservation.

2.3.1.7 Stormwater Detention Facilities

Regulatory standards require that volumes and flow rates of stormwater discharge after construction are not to exceed pre-development conditions. Stormwater generated on-site will flow to underground stormwater detention chambers located in the southwestern portions BESS facility site (Figure 2-1, Project Site Plan). Stormwater treatment and storage sizing will be designed to hold the anticipated runoff from a 100-year, 24-hour storm event in compliance with applicable regulations. After a rainfall event, stormwater will infiltrate into the subgrade underneath the stormwater chambers. If the design capacity of the stormwater chambers is exceeded, however, stormwater may be stored in available upstream areas such as catch basins, infiltration trenches, or drain as sheet flow from the surface.

2.3.1.8 Site Security

The BESS facility site will be enclosed with a minimum 8-foot-tall block wall topped with 1 foot of three-strand barbed wire or razor wire. The wall will be installed on the outside of the perimeter roads. The wall will be required to prevent unauthorized access and to comply with human health and safety regulations. Gates will be installed at various access points along the wall and equipped with locks and knox boxes to allow for authorized personnel (e.g., transmission service provider, O&M staff, emergency response) to access appropriate portions of the BESS facility site. The wall will serve a dual purpose for security and off-site noise reduction (see Section 3.7, Noise).

Lighting will only be in areas where it is required for safety, security, or operations. Controlled security lighting no more than 28 feet tall will be installed at the Project substation and around the BESS yards, in accordance with applicable requirements and regulations. Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around the substation area and points of ingress/egress. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties, compliant with applicable codes and regulations. Security cameras will be placed on site and monitored 24/7.

2.3.1.9 Fire Detection and Suppression System

Fire protection will include multiple fire detection systems on-site and within the individual BESS enclosures. Each BESS enclosure will have a fire rating in conformance with the California Fire Code 2022. In addition, each BESS enclosure will contain an onboard battery management system that monitors the appropriate state of individual battery cells and relays information 24/7 and an internal Fire Alarm Control Panel that will identify which units have incidents and will notify first responders. In the event of an anomaly, the system is designed to shut down and mitigate the hazard.

The Project's fire protection design will comply with California Fire Code 2022, Section 1207 Electrical Energy Storage Systems, which adopts the National Fire Protection Association's Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). BESS enclosures will be Underwriters Laboratories (UL) listed, tested, and certified to the most rigorous international safety standards. UL independently tests equipment for compliance with the latest fire safety code requirements, and the methods were developed to minimize fire risk and safety concerns about battery storage equipment raised by fire departments and building officials in the United States.

Faults, mechanical damage, or manufacturing defects in lithium-ion batteries can cause thermal runaway, which can lead to fires or other hazards. Should a thermal runaway event occur, the BESS enclosures are designed and constructed in such a way that fire will not propagate from one enclosure to a neighboring enclosure. The Project's BESS enclosures, as part of the testing and listing process, will be subjected to destructive testing including fire testing. The Project's BESS enclosures will include the following UL certifications:

- **UL 1642 –** Standard for Lithium Batteries (cell level certification).
- **UL 1973 –** Standard for Batteries for Use in Stationary Applications (module level certification).
- **UL 9540 –** Standard for Energy Storage Systems and Equipment (system level certification).
- **UL 9540A –** Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems.
- **IEC 62619 –** Standard for Battery Safety in Stationary Applications.

The BESS facility ingress/egress and circulation will be designed to comply with LA County's Draft fire regulations. Each portion of the BESS facility (the BESS yards north and south of Soledad Canyon Road.) will have primary and secondary access points. The BESS yard north of Soledad Canyon Road. will have a primary access point in the southwest corner of the site and a secondary access point in the northwest corner of the site, near the O&M buildings and laydown yard. The BESS yard south of Soledad Canyon Road. will have a secondary access point directly across from the secondary access point for the northern BESS yard and a primary access point that is approximately 1,030 feet east of the secondary access point. There will also be an access point for the Project Substation that is approximately 340 feet east of the BESS yard primary access point, in the approximate middle of the Project area that is south of Soledad Canyon Road. All access points will have Knox boxes and will connect to roads that are 26 feet wide (see Appendix 2A Fire Safety and Water Circulation Plan PSR-BE-201).

Water for fire defense will be provided via an on-site well that will serve two (2) 40,000-gallon water tanks. There will be a separate water tank and booster pump in each of the BESS yards. The water tanks will serve hydrants located throughout the BESS yards. Hydrants were specifically located to be no more than 300 feet apart throughout the BESS yards. The project commissioned a fire water supply assessment that concluded that the maximum amount of water necessary to fight a fire on the site would be 15,000 gallons (see Appendix 3.17A). The project will provide 40,000 gallons of water at each BESS yard.

The Los Angeles County Fire Department will review and comment on the facility fire protection and suppression plans.

2.3.1.10 Operations and Maintenance Building

O&M buildings will be constructed for the Project's anticipated 16 full-time operations staff and is planned to be in the easternmost portion of the BESS yard north of Soledad Canyon Road. The O&M buildings will include parking, outside equipment and laydown areas, basic offices, meeting rooms, washroom facilities and climate-controlled storage for certain equipment and materials. An existing groundwater well will provide water for washroom and a septic system will provide for sanitary facilities. The existing groundwater well is located south of Soledad Canyon Road on APN 3056-019-026. To serve the O&M buildings which are located north of Soledad Canyon Road, an underground water line will be constructed from the existing groundwater well to the O&M buildings as shown in Figure 2-1, Project Site Plan. A portion of the water line will be located within Soledad Canyon Road as shown in Figure 2-1, Project Site Plan. As discussed above in Section 2.3.1.3, the portion of the water line that crosses Soledad Canyon Road will be sited within the proposed 26-foot-wide corridor that will also house the MV collection system as it crosses the road. Like the MV collection system within the road, the water line will be installed using trenching. The O&M buildings will be powered via a distribution line from the Project substation.

2.3.1.11 Existing Distribution Line Reroute

There is currently an SCE overhead electrical distribution line that bisects the southern portion of the BESS facility site. The distribution line consists of wooden poles with a cross bar carrying the distribution lines. The Project plans to reroute this line around the BESS facility site using similar distribution poles and wires. The Project will alter the existing distribution line route from where it enters the property on the south side of the BESS facility site. The Project will install approximately nine (9) poles similar to the existing poles, outside of the BESS facility site wall, along the southern and western boundary of the BESS facility site south of Soledad Canyon Road until they connect with Soledad Canyon Road. At Soledad Canyon Road, the new distribution line will tie into the existing distribution

line at the western boundary of the southern BESS facility site (See Appendix 2A Distribution Line Reroute PSR-SE-103).

2.3.2 Transmission and Interconnection Description, Design, and Operation

The Project will be interconnected to the regional electrical transmission grid via an approximately 1.1-mile-long or 1.8-mile-long new single-circuit 500kV gen-tie line within an up-to 150-foot-wide corridor between the Project substation and the SCE Vincent Substation. The Applicant will construct and own the portion of the gen-tie line between the Project substation and the Point of Change of Ownership (POCO) transmission structure (see Figure 2-1, Project Site Plan, site layout Pole 10), and SCE will construct and own the remaining portion of the gen-tie from the POCO to the POI within the Vincent Substation. The Project's transmission and interconnection facilities will include the following components:

- 500kV Gen-Tie Line including Transmission Structures and Conductors
- Fiber Optic Telecommunications Utility Poles and Fiber Optic Lines
- Access Paths
- Temporary Work Areas
- Interconnection Facilities within Existing SCE Vincent Substation Footprint (SCE constructed and owned)

The proposed route was selected to minimize the number of existing utility crossings, cross existing utilities at the optimum locations, minimize the total gen-tie line length and number of transmission structures required, minimize the number of turning structures required, and enter the Vincent Substation as close as possible to the POI. The proposed transmission structures were sited to avoid potential impacts to environmental resources. Project components associated with transmission and interconnection facilities are described in the following subsections. Figure 2-2, Transmission Line Route, shows the gen-tie routes, scattered rural residences, scenic areas (scenic drives and the Los Angeles National Forest), and existing transmission lines within 1 mile of the proposed routes. There are no parks or recreational areas within 1 mile of the proposed routes. Table 2-3 summarizes the preliminary dimensions of major transmission components, and Table 2-4 summarizes the preliminary new ground disturbance area associated with construction of the transmission and interconnection facilities (Southern Gen-Tie scenario). Section 3.13, Visual Resources, includes photographic simulations of a representative above ground section of the gen-tie route prior to construction and after construction.

Table 2-3. Preliminary Dimensions of Major Transmission Components

Component	Quantity	Approximate Dimensions
500kV Gen-Tie Line	1	Applicant Owned: North: 3,500 ft long / South: 7,300 ft long
		SCE Owned: 2,800 ft long
Substation Bay Dead-End Transmission Structure	1	Applicant Owned: 170 ft tall
		SCE Owned: n/a
Angled Dead-End Transmission Structure	up to 7	Applicant Owned: 175 ft tall to 195 ft tall
		SCE Owned: n/a
Tangent Delta Transmission Structure	1	Applicant Owned: 155 ft tall (Northern Gen-Tie Route) to 180 ft tall (Southern Gen-Tie Route)

Table 2-3. Preliminary Dimensions of Major Transmission Components

Component	Quantity	Approximate Dimensions
		SCE Owned: n/a
Lattice Tower Transmission Structure	2	Applicant Owned: n/a
		SCE Owned: 234 ft tall to 243 ft tall
Conductors	1	Applicant Owned: North: 30,800 ft / South: 63,000 ft
		SCE Owned: 16,000 ft
Overhead Shield Wire	1	Applicant Owned: North: 3,600 ft / South: 7,300 ft
		SCE Owned: 2,900 ft
Fiber Optic Cables on Gen-Tie Structures	1	Applicant Owned: North: 3,600 ft / South: 7,300 ft
		SCE Owned: 2,900 ft
Fiber Optic Cables Underground	2	Applicant Owned: 12,000 ft
		SCE Owned: 5,700 ft
Transmission Structure Access Path	Varies	26 ft wide
Transmission Line Corridor	1	150 ft wide

Notes: kV = kilovolt; SCE = Southern California Edison; gen-tie = generation interconnection.

Table 2-4. Approximate New Ground Disturbance Area Associated with Transmission and Interconnection Facilities

Component	Permanent Disturbance	Temporary Disturbance
Applicant Portion		
Transmission Structure Pads	2.48 acres	—
Transmission Structure Access Path	1.14 acres	—
Laydown Area	—	4.23 acres
Tension and Pulling Sites (i.e., Gen-Tie Work Area)	—	19.4 acres
Applicant Total	**3.62 acres**	**~23.63 acres**
SCE Portion		
Transmission Structure Pad	0.3 acres	—
Transmission Structure Access Path	0.5 acres	—
Tension and Pulling Sites (i.e., Gen-Tie Work Area)	—	8.99 acres
SCE Total	**0.8 acres**	**8.99 acres**

Note: gen-tie = generation interconnection; SCE = Southern California Edison.

2.3.2.1 500kV Gen-Tie Line

The 500kV gen-tie line will originate at the Project substation within the BESS facility site and extend south and east, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, as close to perpendicular as possible, and then proceed northeast to the POI at the Vincent Substation. The Project proposes a Northern Gen-Tie Route and Southern Gen-Tie Route. The Applicant understands a crossing agreement with LACMTA will be required prior

to construction. LACMTA requires a crossing agreement application to include a 90% design package. This will be provided as the Project design progresses. The Project expects to submit the application in 2026.

The interconnecting 500kV transmission single-circuit configuration will be overhead. The gen-tie line will be constructed with either monopole tubular steel poles or steel lattice towers. Gen-tie structures will be at least 155 feet tall, with a maximum height of 243 feet. There will be a total of approximately 1 monopole or steel lattice tower structures. The total number of gen-tie structures will be determined by the final design of the gen-tie line. The Project transmission facilities will be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) where feasible. Transmission facilities will also be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012).

The POCO will be located on APN 3056-015-023 (see Pole 10 within Figure 2-1, Project Site Plan). The POCO is the point where the conductors of the Generation Tie-Line are attached to the Last Structure, which will be connected on the side of the last project owned structure (Last Structure) facing Vincent Substation. The project shall own and maintain the Last Structure, the conductors, insulators and jumper loops from such Last Structure to the Interconnection Customer's Large Generating Facility. SCE will own and maintain the Vincent Substation, as well as all towers, transmission lines, circuit breakers, disconnects, relay facilities and metering within the Vincent Substation, together with the line drop, in their entirety, from the Last Structure to Vincent Substation. SCE will own the insulators that are used to attach the project-owned conductors to the Last Structure.

The conductor from the site to the POCO is planned to be triple bundle 795 Drake or equivalent. The conductor from the POCO to the Vincent Substation will be double bundle 2156 Bluebird or equivalent.

Table 2-3 includes the approximate number and dimensions of the different types of transmission structures that will be used.

2.3.2.2 Transmission Structure Access Path

Where possible, the transmission structure access path will utilize existing access roads to minimize new ground disturbance. A transmission structure access path up to 26 feet wide will be located within portions of the transmission corridor outside of the BESS facility and Vincent Substation footprints and generally follow the centerline of the gen-tie.

2.3.2.3 Telecommunication Facilities

The facility will be designed with a comprehensive Supervisory Control and Data Acquisition (SCADA) System to allow remote monitoring of facility operation and/or remote control of critical components. The fiber optic or other cabling required for the monitoring system typically will be installed in buried conduit within the access road or planned trenching leading to a SCADA system cabinet at the Project substation. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers.

The Project's SCADA system will interconnect to an external fiber optic network or fixed wireless service at the Project substation and will require installation of buried fiber optic cables underground or fixed wireless antennas. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers, so no additional disturbance associated

with telecommunications is anticipated. As such, the Project will not require any substantial construction efforts regarding telecommunications facilities and structures. No relocation of existing telecommunication structures will occur.

Telecommunications equipment will be installed between the control building at the Project substation and the Vincent Substation to facilitate communication with SCE/CAISO facilities. To achieve communication requirements with the Vincent Substation, the project will involve the following:

- Install optical ground wire on the Generation Tie-Line to provide one (1) of three (3) telecommunication paths required for the line protection scheme, the remote terminal units. A minimum of eight (8) strands within the optical ground wire shall be provided for SCE's exclusive use into Vincent Substation.
- Install appropriate single-mode fiber optic cable from the Project Site to a point near the POCO to the Vincent Substation to provide the second telecommunication path required for the line protection scheme and the RAS. A minimum of eight (8) strands within the single-mode fiber optic cable shall be provided for SCE's exclusive use. The telecommunication path shall meet the Applicable Reliability Standards criteria for diversity.
- Install appropriate single mode fiber optic cables from the Project Site to a point designated by SCE near the Vincent Substation to provide a third telecommunication path required for the Generation Tie-Line protection scheme. A minimum of eight (8) strands within the single mode fiber optic cable shall be provided for SCE's exclusive use. The telecommunication path shall meet the Applicable Reliability Standards criteria for diversity.
- Own, operate and maintain all three (3) telecommunication paths (including optical ground wire, any fiber-optic cables, and appurtenant facilities) up to the POCO.

In addition to the telecommunications equipment installed by the Project, SCE will install the following equipment:

- Lightwave, channel, and associated equipment (including terminal equipment), supporting protection and the remote terminal unit requirements at the Project Site and Vincent Substation for the interconnection of the Project. Notwithstanding that certain telecommunication equipment, including the telecommunications terminal equipment, will be located on the Interconnection Customer's side of the POCO, SCE shall own, operate and maintain such telecommunication equipment as part of the SCE's Interconnection Facilities.
- Install appropriate length of fiber optic cable, including conduit and vaults, from the Vincent Substation 500kV switchrack to extend the fiber optic cable and conduit into the communication room at Vincent Substation. The 2021 Reassessment Study assumed the installation of approximately 250 feet of underground fiber optic cable and associated conduit, and one (1) 4' × 4' × 6' vault to extend the fiber optic cable into the communication room at Vincent Substation. The actual location and length of fiber optic cable and conduit, and location and number of vaults, will be determined during final engineering of SCE's Interconnection Facilities.
- Install appropriate length of fiber optic cable, including conduit and vaults, to extend the Project's second diverse telecommunications from the point designated by SCE near the SCE's Vincent Substation into the communication room at Vincent Substation. The 2021 Reassessment Study assumed the installation of approximately 250 feet of underground fiber optic cable and associated conduit, and one (1) vault to extend the Project's diverse telecommunications into the communication room at Vincent Substation. The actual location and length of fiber optic cable and conduit, and location and number of vaults, will be determined during final engineering of the SCE's Interconnection Facilities.

- Install appropriate length of fiber optic cable, including conduit and vaults, from the point designated by the SCE to extend the Project's third diverse fiber optic cable to into the communication room at Vincent Substation. The 2021 Reassessment Study assumed the installation of approximately 950 feet of underground fiber optic cable and associated conduit, and one (1) 4' × 4' × 6' vault to extend the fiber optic cable into the communication room at Vincent Substation. The actual location and length of fiber optic cable and conduit, and location and number of vaults, will be determined during final engineering of the Participating TO's Interconnection Facilities.

To meet these requirements, the Applicant and SCE will install one (1) of the three (3) fiber optic lines aboveground on the gen-tie structures. The two (2) other fiber optic lines will be installed underground within trenches anticipated to be up to 4 feet wide within the Southern Gen-Tie Route corridor and separated by at least 25 feet. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor regardless of which Gen-Tie Route corridor option is selected. Where the underground fiber optic line leaves the BESS facility site it will be installed via horizontal directional drilling underneath the railroad tracks. Horizontal directional drilling is a trenchless construction technique used to install underground utilities like pipelines and conduits without disturbing the surface. The Applicant understands a crossing agreement with LACMTA will be required prior to construction. LACMTA requires a crossing agreement application to include a 90% design package. This will be provided as the Project design progresses. The Project expects to submit the application in 2026.

2.3.2.4 Interconnection Facilities within Existing SCE Vincent Substation Footprint

To facilitate interconnection of the BESS facility to the electric transmission grid, SCE will need to install one (1) 500kV dead end structure, nine (9) 500kV coupling capacitor voltage transformers, three (3) 500kV line drops, three (3) line current relays, and one (1) 500kv line position which includes the following equipment: seven (7) 500kV circuit breakers, seven (7) 500kV disconnect switches, 84 insulators, and two (2) breaker failure backup relays. No additional network upgrades outside of the Vincent Substation are necessary to interconnect the project to the grid.

2.3.2.5 Transmission System Impact Studies

The Project will interconnect to SCE's transmission system within the CAISO planning area. CAISO identified two (2) potential Affected Systems from the QC12 Phase I Interconnection Study: California Department of Water Resources and Los Angeles Department of Water and Power.

The Applicant has contacted both potential affected systems and both have responded that the Project will not have any negative impact on their systems (see Confidential Appendix 2C).

The Applicant filed an Interconnection Request with CAISO in the Cluster 12 Interconnection Request window. CAISO, in cooperation with SCE, prepared the Phase I Interconnection Study (January 15, 2020), and Phase II Interconnection Study (November 20, 2020). The Applicant entered into a Large Generator Interconnection Agreement with CAISO and SCE on January 28, 2022. The Project's Phase I and II Interconnection Studies are included in Confidential Appendix 2C.

2.3.2.6 California Public Utilities Commission General Orders

Because SCE is an investor-owned electric utility, the SCE Improvements described above, are regulated by CPUC. CPUC General Orders (GO) cover regulatory requirements for investor-owned electrical utilities.

The Project will comply with applicable GOs, including GO 95 (Rules for Overhead Electric Line Construction) and GO 128 (Rules for Construction of Underground Electric Supply and Communications Systems).

2.3.2.7 Transmission System Design

One-line diagrams for the Project substation are included in Appendix 2A Single Line PSR-SE-001. The one-line diagrams include all equipment ratings including the bay arrangement of the circuit breakers, disconnect switches, buses, transformers, and other equipment that will be required for the Project interconnection at the Project site.

A one-line diagram for the Project's interconnection at the SCE Vincent Substation is included in Confidential Appendix 2C, specifically within Appendix A of the Large Generator Interconnection Agreement (Page 106 of 137).

Table 2-5 below, Transmission System Design/Safey and Nuisance Regulations, identifies transmission system design laws, regulations, ordinances, and standards; adopted local, regional, state, and federal land use plans; and leases and permits applicable to the Project.

Table 2-5. Transmission System Design/Safety and Nuisance Regulations

Item	Title
CPUC GO-95	Rules for Overhead Electric Line Construction
NESC	National Electrical Safety Code (NESC)
GO-128	Rules for Construction of Underground Electric Supply and Communication Systems
GO-131-D	Rules for Planning and Construction of Electric Generation Line and Substation Facilities in California
Decision 93-11-013	California Public Utilities Commission (CPUC) EMF Decision
CPUC GO-52	Construction and Operation of Power and Communication Lines for the Prevention or Mitigation of Inductive Interference
ASCE 48-19	Design of Steel Transmission Structures
ASCE 74	Guidelines for Electrical Transmission Line Structural Loading
ASCE 113	Substation Structure Design Guide
FAA 70/7460	Proposed Construction and/or Alteration of Objects that May Affect the Navigation Space
IEEE 81	Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System
IEEE 525	Guide for the Design and Installation of Cable Systems in Substations
IEEE 605	Guide for Bus Design in Air Insulated Substation
IEEE 691	Guide for Transmission Structure Foundation Design and Testing
IEEE 738	Standard for Calculating the Current-Temperature Relationship of Bare Overhead Conductors
IEEE 1127	Guide for the Design, Construction, and Operation of Electric power Substations for Community Acceptance and Environmental

Table 2-5. Transmission System Design/Safety and Nuisance Regulations

Item	Title
IEEE 1427	Guide for Recommended Electrical Clearances and Insulation Levels in Air Insulated Electrical Power Substations
IEEE 1863	Guide for Overhead AC Transmission Line Design
47 CFR 15.25, "Operating Requirements, Incidental Radiation	Prohibits operations of any device emitting incidental radiation that causes interference to communications; the regulation also requires mitigation for any device that causes interference
Title 14 CFR, Part 77, "Objects Affecting Navigable Airspace"	Describes the criteria used to determine whether a "Notice of Proposed Construction or Alteration" (FAA Form 7460-1) is required for potential obstruction hazards.
FAA Advisory Circular No. 70/7460-1M, "Obstruction Marking and Lighting"	Describes the FAA standards for marking and lighting of obstructions as identified by FAA Regulations Part 77

2.3.2.8 Transmission Line Safety and Nuisance

The electrical effects of high-voltage transmission lines fall into two (2) broad categories: corona effects and field effects. Corona is a luminous discharge due to ionization of the air surrounding a conductor around the surface of an energized conductor and associate hardware when the voltage gradient exceeds a certain critical value during certain conditions. Corona may result in radio and television reception interference, audible noise, light, and production of ozone. Corona is a function of the voltage of the line, the diameter of the conductor, and the condition of the conductor and hardware surface. Corona performance is predicted using empirical equations from high-voltage line measurements. The methodology has been validated for predicting corona-induced noise and interference. The electric field gradient is the rate at which the electric field changes and is directly related to the line voltage and the geometric configuration of the line. Field effects are the voltages and currents that may be induced in nearby conducting objects. A transmission line's inherent electric and magnetic fields cause these effects. Operating power lines produce electric and magnetic fields commonly referred to as an electromagnetic field (EMF). The EMF produced by the AC electrical power system in the U.S. has a frequency of 60 hertz, meaning that the intensity and orientation of the field changes 60 times per second. The electric field (EF) is expressed in V/m or kV/m, and magnitudes are often given in root-mean-square (rms) units. Magnetic field is generated by electrical currents. Transmission lines create time-varying magnetic fields measured in Gauss (G) or milligauss (mG). Electric fields are calculated using an imaging method, while magnetic fields are obtained by summing fields from currents in all conductors, assuming balanced three-phase currents

Corona from a transmission line may result in the production of audible noise (AN), radio influence voltage (RIV) and television interference.

The electric field gradient is greatest at the surface of the conductor. Large-diameter conductors have lower electric field gradients at the conductor surface and, hence, lower corona than smaller conductors, everything else being equal. Also, irregularities (such as nicks and scrapes on the conductor surface) or sharp edges on conductors and insulators hardware concentrate the electric field at these locations and, thus, increase corona at these spots. Similarly, contamination on the conductor surface such as dust or insects can cause irregularities that are a source for corona. Raindrops, snow, fog, and condensation are also sources of irregularities.

2.3.2.8.1 Audible Noise, Corona Losses, and EMF Model Results

EMFs, audible noise, and radio and television interference near power lines vary regarding the line design, line loading, distance from the line, and other factors. Electric fields, corona, audible noise, and radio and television interference depend on line voltage and not on the level of power flow. The calculations were made under maximum operating voltage. The line design includes triple-bundled 795 thousands of circular mils (kcmil) ACSR Drake conductors on monopole structures and double-bundled 2156 kcmil ACSR Bluebird conductors on SCE lattice towers. Table 2-6 shows the audible noise under fair weather, max audible noise under foul weather, and the Environmental Protection Agency's 55 day–night average sound level criteria.

Table 2-6. 500kV Audible Noise

Gen-Tie Design	Max Audible Noise at Edge of Right of Way (dBA)	Normal Audible Noise at Edge of Right of Way (dBA)	EPA 55 day-night sound level criteria (dBA)
SCE Owned Lattice Tower	55.1	30.1	48.5
Delta Monopole	51.0	26.0	
Deadend Monopole	49.6	24.6	

Source: Appendix 2D and 2E.
Notes: gen-tie = generation interconnection; dBA = A-weighted decibels; SCE = Southern California Edison.

Corona losses are estimated to range from .52 Watts/m -.913 Watts/m under fair weather conditions and 74.5 Watts/m – 130.5 Watts/m under foul weather conditions. One (1) study calculated radio interference induced by corona from a 500kV three-phase transmission line at approximately 45 decibels above 1 microvolt per meter (dB[1μV/m]3; henceforth referred to as dB) at approximately 88 feet (27 meters) away from the outermost phase of a transmission line (Tejada-Martinez et al. 2019). Measured radio interference was generally similar to calculated values particularly for conductors strung on towers horizontally but was found to be closer to 50 dBuV/m for conductors strung on towers in a vertical manner. Two (2) other studies of 500kV transmission lines at the same distance from center phase calculated radio interference at approximately 30 dB to generally below 60 dB, except for when subconductors were spaced closely together, depending on the geometric parameters (e.g., conductor size, conductor spacing) (El Dein 2013; Phaiboon et al. 2000). As discussed above, wet weather and other conditions (e.g., debris build up on conductors) can affect corona and therefore radio interference, with higher interference anticipated in wetter weather. The 500kV transmission lines would be engineered and installed so as to avoid harmful interference with radio or other transmissions.

The magnetic field is proportional to line loading (amperes), which varies as demand for electrical power varies and as generation from the generating facility is changed by the system operators to meet changes in demand. The magnetic field at the edge of the gen-tie right-of-way is expected to range from 99.09 mG to 171.29 mG. The electric field at the edge of the right-of-way is expected to range from 0.342 kilovolts/meter (kV/m) – 1.777 kV/m).

Overall, construction and operation of the Project, including the interconnection of the facility with SCE's transmission system, are not expected to result in increases in EMF levels, corona, radio interference, or audible noise and mitigation would not be required.

2.4 Construction

The following sections detail the approximate construction schedule and workforce, construction activities, estimated water use, and materials handling proposed by the Project.

2.4.1 Schedule and Workforce

The Project is anticipated to be built over an approximately 20-month period from the onset of site preparation activities through energization. Following energization, testing and commissioning will take place over 6 months. Initial mobilization and site preparation is anticipated to begin no later than March 2027 and testing and commissioning is anticipated to conclude no later than April 2029. The commercial operation date (COD) is expected shortly following the completion of testing and commissioning in June 2029. It is anticipated that construction crews will work 8 hours to 10 hours per day, with work occurring Monday through Friday. Overtime, night work, and weekend work will be used only as necessary to meet the Project schedule or complete time-sensitive or safety critical work. All work schedules will comply with applicable California labor laws and County regulations. Estimated durations of construction activities are presented in Table 2-7.

Table 2-7. Estimated Construction Activity Duration

Construction Activity	Estimated Duration	Estimated Timeframe
Demolition	2 weeks	3/1/2027 – 3/12/2027
Site Preparation	1.5 months	3/1/2027 – 4/15/2027
Substation Site Preparation	2 weeks	4/16/2027 – 4/30/2027
Civil Work and Grading	4 months	5/1/2027 – 8/31/2027
Substation Civil Work and Grading	1 month	9/1/2027 – 9/30/2027
Paving	1.5 months	8/15/2027 – 9/30/2027
Battery Enclosure/PCS Installation	12 months	10/1/2027 – 10/1/2028
Project Substation Installation	8 months	2/1/2028 – 10/1/2028
Gen-Tie Foundations and Structure Erection	4 months	2/1/2028 – 5/31/2028
Gen-Tie Line Stringing and Pulling	1 month	6/1/2028 – 7/1/2028
SCE Interconnection Facility Upgrades within Vincent Substation	6 months	4/1/2028 - 10/1/2028
Testing and Commissioning	6 months	10/2/2028-4/1/2029

Note: PCS = power conversion system.

2.4.2 Sequencing

During construction activities, multiple crews will be working on the site with various equipment and vehicles. The daily number of construction workers (consisting of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel) will range from approximately 50 to 250 workers, depending on the phase of construction. It is estimated that construction will require the vehicle trips and equipment listed in Table 2-8.

Table 2-8. BESS Project – Construction Equipment and Usage Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips[1]	Equipment Type	Quantity	Usage Hours
Demolition	10	4	6	Rubber tired dozer	1	10
				Concrete/Industrial Saws	1	10
				Tractors/Loaders/ Backhoes	2	10
Site Preparation	242	12	24	Tractors/Loaders/ Backhoes	2	10
				Excavator	2	10
				Rubber tired dozer	2	10
Substation Site Preparation	242	12	100	Tractors/Loaders/ Backhoes	1	10
				Excavator	1	10
				Rubber tired dozer	1	10
Grading	242	12	524	Graders	2	10
				Tractors/Loaders/ Backhoes	2	10
				Rollers	2	10
Substation Grading	242	12	486	Graders	1	10
				Tractors/Loaders/ Backhoes	1	10
				Rollers	1	10
Paving	16	0	0	Pavers	2	10
				Paving Equipment	2	10
				Rollers	2	10
Battery Enclosure/ PCS Installation	121	12	20	Air Compressors	1	10
				Cranes	1	10
				Forklift	1	10
				Tractors/Loaders/ Backhoes	1	10
Substation Installation	121	12	4	Aerial Lifts	1	10
				Air Compressors	1	10
				Bore/Drill Rigs	1	10
				Forklift	1	10
				Trenchers	1	10
Gen-Tie Foundation and Tower Erection	121	12	0	Air Compressors	1	10
				Cranes	1	10
				Forklifts	1	10
				Pumps	1	10
				Welders	1	10

Table 2-8. BESS Project – Construction Equipment and Usage Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips[1]	Equipment Type	Quantity	Usage Hours
Gen-Tie Stringing and Pulling	121	12	0	Aerial Lift	1	10
				Tractors/Loaders/ Backhoes	1	10
SCE Interconnection Facility Upgrades	121	12	0	Air Compressors	4	10
				Cranes	2	10
				Excavators	2	10
				Rough Terrain Forklifts	2	10
				Skid Steer Loaders	2	10
				Tractors/Loaders/ Backhoes	2	10
				Trencher	1	10
Testing and Commissioning	242	12	0	NA	NA	NA
Decommissioning	242	12	20	Concrete/Industrial Saws	2	10
				Cranes	2	10
				Rubber Tired Dozers	2	10
				Tractors/Loaders/ Backhoes	2	10

Notes: PCS = power conversion system; gen-tie = generation interconnection; SCE = Southern California Edison.

[1] The average daily haul truck trips for each phase consider phase durations from Table 2-7.

* The Project layout depicted in Figure 2-1, Project Site Plan, shows the "End of Life" configuration of the BESS, meaning it shows the equipment layout after all augmentation units are implemented. The numbers in this table conservatively assume that foundations and BESS equipment installation related to augmentation occurs during initial construction of the facility. Construction of foundations and BESS equipment installation for augmentation may occur during O&M periodically within the BESS facility footprint.

2.4.3 Site Preparation

Environmental clearance surveys will be performed at the Project site prior to commencement of construction activities. The limits of construction disturbance areas delineated in the final approved engineering design packages will be surveyed and staked. Initial ground disturbing activities in preparation for construction will include installation of erosion and sediment control measures prior to start of major earthwork activities. Rough grading and grubbing/vegetation removal will be performed where required to accommodate site drainage and allow construction equipment to access the site. Detention chambers and stormwater facilities will be created for hydrologic control. The construction contractor will be required to incorporate applicable best management practices (BMPs) including the guidelines provided in the California Stormwater Quality Association's Construction BMP Handbook (CASQA 2024), as well as a soil erosion and sedimentation control plan to reduce potential impacts related to construction of the proposed Project. Stabilized construction entrances and exits will be installed at driveways to reduce tracking of sediment onto adjacent public roadways.

Site preparation will be consistent with applicable BMPs and the Antelope Valley Air Quality Management District's Fugitive Dust Rules. Site preparation will involve the removal and proper disposal of existing debris that will unduly interfere with Project construction or the health and safety of on-site personnel. Dust-minimizing techniques will be employed, such as placement of wind control fencing, application of water, and application of dust suppressants. All applicable governmental requirements and BMPs will be incorporated into the construction activities for the Project site.

Vegetation on the site will be removed where necessary to ensure the BESS facility is free from combustible vegetation to allow for fire protection and defensible space. Where feasible, in compliance with fire protection requirements, vegetation root mass within appropriate portions of the BESS facility lease area on the outside of the perimeter and substation access roads will be left in place for soil stabilization. However, the environmental analyses in subsequent sections conservatively assume that all areas within the maximum anticipated grading limits of the BESS facility will be permanently disturbed.

2.4.4 Site Grading and Civil Work

Following site preparation activities, grading and civil work will commence. Construction activities during this phase will include excavation and grading of the Project site. Preliminary designs conservatively assume that grading will include up to approximately 175,410 cubic yards (cy) of cut and up to approximately 625,095 cy of fill, resulting in a net of 449,685 cy of fill. Blasting is not expected but may be required if large boulders are encountered during excavation and grading. Fill material requirements will be satisfied by offsite borrow pits or quarries.

Conventional grading will be performed throughout the Project site but minimized to the maximum extent feasible to reduce unnecessary soil movement. Land-leveling equipment, such as a smooth steel drum roller, will be used to even the ground surface and compact the upper layer of soil to a value recommended by a geotechnical engineer for structural support. Following major civil work within the BESS facility site, site access roads and driveways, the perimeter and substation access roads, and interior roadways to access the laydown areas and BESS yards will be graded, compacted, and surfaced with gravel or paving. Once the roadways have been constructed, the Project perimeter fence and access gates will be constructed.

2.4.5 Foundations and Underground Equipment Installation

Following completion of major site grading and civil work, equipment foundations and below grade equipment will be installed. A grounding grid and underground conduit will be installed below grade beneath the Project substation area and BESS components. Typical ground grids consist of direct-buried copper conductors with copper-clad ground rods arranged in a grid pattern. After installation of the grounding grid, the area will be backfilled, compacted, and leveled followed by application of an aggregate rock base. A containment area within the MPT foundations will be sized to hold the full volume of oil within the MPTs. The MPT foundations within the substation area are anticipated to be concrete slab foundations poured into excavations up to 7 feet deep. Foundations for the control building, static masts, other aboveground substation equipment, O&M buildings, BESS enclosures, PCS units, DC/DC converters, and BESS auxiliary transformers and panels are anticipated to be slab on grade, or pile foundations embedded up to 24 feet below ground level. Depending on soil conditions, the piles may be drilled or driven and set with a slurry. However, some of these Project components may be installed on concrete slab foundations depending on the geotechnical conditions at the final locations.

Additional underground work will include trenching for the placement of underground electrical and communications lines, including the MV collection system, AC and DC cables, and fire alarm cable. The wires will either be installed in conduit, cable-trays, or direct-buried, depending upon final design and application

2.4.6 BESS and Project Substation Equipment Installation

Where possible, major equipment will be delivered directly to its permanent location and offloaded directly into place with a crane or heavy equipment. Where staging or sequencing does not allow, equipment will be stored at one of the laydown areas near its permanent location and installed at a later date. Major aboveground equipment will be the MPTs and other Project substation components, control building, BESS enclosures, PCS units, DC/DC converters, BESS auxiliary transformers and panels, and material for the O&M buildings.

Electrical work will include installing cables, terminations, and splices. Electrical wiring will be installed underground, at-grade, and above ground, depending on the application and location. The wires will either be installed in conduit, cable-trays, or direct-buried, depending upon final design and application.

2.4.7 Gen-Tie Structure Erection

Environmental clearance surveys will be performed within the gen-tie corridor prior to commencement of construction activities. The gen-tie corridor boundaries, gen-tie centerline, telecommunications route centerlines, and transmission structure access path will be surveyed and flagged. Initial activities will include the installation of erosion and sediment control measures and materials, and preparation of the transmission structure and fiber optic utility pole work areas. The transmission structure access path may be bladed, compacted, and surfaced with gravel where necessary to facilitate transmission structure deliveries and construction equipment access. The surface of the access path will be at-grade to allow water to sheet flow across the gen-tie corridor, as it currently does. Overland travel and temporary construction activities associated with the gen-tie and telecommunications facilities may occur anywhere within the 150-foot-wide transmission corridor. Vegetation at the transmission and fiber optic utility pole work areas will be trimmed, mowed, or removed. At locations where gen-tie line structures and fiber optic utility poles will be installed, minor cuts may be required where the foundation will be installed.

Cast-in-place concrete foundations will be installed by placing reinforcing steel and a structure stub or anchor bolt cage into the foundation hole, positioning the stub, and encasing it in concrete. Each transmission structure foundation will be set on anchor bolts on top of the foundation with cranes. Holes will be excavated using a truck-mounted drill rig or standalone auger rig. Poles will be delivered on a flat-bed trailer and hoisted into place with a crane. The annular space between the poles and holes will be backfilled with concrete or soil. Excavated spoil material not used for backfilling will be spread around the structure work areas.

2.4.8 Gen-Tie Stringing and Pulling

For a conductor pulling location, the distance needed behind the dead-end structures should be equal to or greater than a 3:1 ratio (300 feet needed for a 100-foot-tall structure), or as recommended by the conductor manufacturer, to mitigate potential damage to the conductor during installation. The width of the pulling area is consistent with the 150-foot-wide Gen-Tie corridor. The pulling area will need to be relatively flat since trucks, trailers and various other small vehicles will need room to maneuver for placement of materials and equipment. The area will be cleared of any brush or obstacles, to facilitate unobstructed travels. For the wire end of a pull, there will be a minimum of two (2) 53-foot-long semi-trailers side by side, loaded with three (3) conductor reels each. One (1) trailer will be

feeding the conductor to a tensioner, as the other trailer will be utilized for replacement of empty reels, and then facilitate a continuation of pulling efforts. The tensioner will be approximately the size of a semi-trailer and is responsible for tensioning the conductor during installation. A heavy-duty forklift or a large size all-terrain crane will be needed to support placement/removal of reels to the wire trailers, due to size and weight. After conductor installation, a bulldozer will be used to secure the installed conductors during application of additional tensions for the sagging process. The pulling equipment utilized is comparable in size/quantity to equipment utilized to support the new conductor reels. Pulling equipment utilizes multiple reels of high-tension pulling cables, mounted to semi-trailers, to support the new conductor placement into position on the structures. Pulling sites are depicted as Gen-Tie Work areas in Figure 2-2, Transmission Line Route.

A helicopter may be used to complete gen-tie stringing and pulling where the gen-tie crosses the railroad. For this portion of the stringing and pulling work it is assumed that a MD600 helicopter would be used for up to three (3) 10-hour days consisting of 1 day for mobilization, 1 day for stringing and pulling, and 1 day for demobilization. For the purposes of project analysis, it is anticipated that the helicopter would facilitate pulling of conductors and shield wires from proposed transmission structures No. 1 to No. 9 if the Northern Gen-Tie Route is selected, and transmission structures No. 3 to No. 5 if the Southern Gen-Tie Route is selected (please see Figure 2-2, Transmission Line Route, for transmission structure numbering). Helicopter use would be supported by one (1) approximately 150-foot by 100-foot landing zone. Landing zones would primarily be used for staging materials, picking up and transporting electrical personnel and equipment, and refueling helicopters. The landing zone is anticipated to be located at the main laydown area but may need to shift to one (1) of the other two (2) laydown areas depending on the sequencing of construction.

2.4.9 SCE-Owned Gen-Tie Segment and Interconnection Facilities within Vincent Substation Footprint

SCE will construct the segment of the gen-tie between the POCO and the POI within the SCE Vincent Substation, and the fiber optic routes between the POCO and the SCE control building within the Vincent Substation footprint. The Applicant will bring the fiber optic cables to underground pull boxes at the POCO structure, and SCE will install the segment of the fiber optic cables between the POCO and control building in conduit placed in underground trenches. The trenches are anticipated to be up to 4 feet wide, and the trenches for the redundant routes will need to be at least 25 feet apart to meet SCE's diverse path requirements. It is anticipated that SCE will install the trenches within the access road to the angled dead-end structure outside the Vincent Substation fence line. However, SCE may install the cables within existing roadways or other pre-disturbed areas along the perimeter of the substation fence depending on final design and routing.

SCE will also construct the interconnection upgrades within the Vincent Substation footprint at the POI. These upgrades are described in Section 2.3.2.4 above.

2.4.10 Construction Water Use

Construction water is anticipated to be purchased from a local water purveyor and trucked to the site. During construction, an estimated 18 million gallons (approximately 55 acre-feet) of untreated water will be required for common construction-related purposes, including but not limited to dust suppression, soil compaction, and grading. Dust-control water may be used during ingress and egress of on-site construction vehicle equipment traffic and during the construction of the Project. A sanitary water supply line will not be required during construction because restroom facilities will be portable units, serviced by licensed providers, and water and sewage from the restroom

facilities will be stored in on-site tanks and serviced by trucks. Drinking water will be provided via portable water coolers.

2.4.11 Solid and Non-hazardous Waste

The Project will produce a small amount of solid waste from construction activities. This may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal and concrete, empty nonhazardous containers, and vegetation waste. This waste will be segregated, where practical, for recycling. Non-recyclable waste will be placed in covered dumpsters, located in project laydown areas, and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III (non-hazardous waste) landfill.

2.4.12 Hazardous Materials

The hazardous materials used for construction will be typical of most construction Projects of this type. Materials may include small quantities of gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, ethylene glycol, dust palliatives, herbicides, and welding materials/supplies. A hazardous materials business plan will be prepared prior to commencement of construction activities. The hazardous materials business plan will include a complete list of all materials used on site and information regarding how the materials will be transported and in what form they will be used. This information will be recorded to maintain safety and prevent possible environmental contamination or worker exposure. During Project construction, material safety data sheets for all applicable materials present at the site will be made readily available to on-site personnel.

2.4.13 Hazardous Waste

Small quantities of hazardous waste will most likely be generated over the course of construction. This waste may include waste paint, spent construction solvents, waste cleaners, waste oil, oily rags, waste batteries, and spent welding materials. Workers will be trained to properly identify and handle all hazardous materials. Hazardous waste will be either recycled or disposed of at a permitted and licensed treatment, recycling, or disposal facility in accordance with law. All hazardous waste shipped off site will be transported by a licensed hazardous waste hauler.

2.4.14 Commissioning

As part of Project construction activities, and after installation, equipment will be tested and commissioned. Commissioning work will be completed by qualified personnel, and in accordance with various codes, standards and specifications including IEEE, Institute of Electrical and Electronic Engineers, NEC National Electrical Code (NFPA 70), NETA International Electrical Testing Association, specific provisions of NFPA National Fire Protection Association, and the relevant OEM / manufacturers installation and commissioning manuals. Documentation necessary for commissioning will include (but is not limited to) complete sets of electrical plans, itemized equipment descriptions, control narratives, and other procedural requirement such as persons or entities to notify when equipment has become available for acceptance tests.

Commissioning will include testing of mechanical, electrical, fire protection, and other systems at substantial completion. Systems to be commissioned and tested include (but are not limited to) BESS enclosures, PCS units, auxiliar service transformers, MV collection system, DC cables, SCADA systems, power backup systems, and fire protection system. Performance testing will also be completed to ensure charge and discharge performance of the systems as designed and in accordance with the utility requirements. Full details of the commissioning activities

will be made available in a commissioning plan, prepared by the BESS supplier and construction contractor and reviewed by the Engineer of Record, as part of the construction documentation package.

2.5 Operations and Maintenance

Once constructed, the Project will be available to operate 7 days per week, 365 days per year. The facility will be remotely monitored and operated by an Owner contracted O&M provider, by means of a NERC-CIP compliant remote operations center. Project operations will be monitored remotely through the SCADA system and by the Project's anticipated full-time operations staff members. It is estimated that there will be four (4) full-time staff members for remote monitoring and 16 full-time operations staff members on site.

On-site maintenance will be required, which will include replacement of inverter power modules, filters, and miscellaneous electrical repairs on an as-needed basis. During operation of the Project substation, O&M staff will visit the substation periodically for switching and other operation activities. Light duty maintenance trucks will be utilized to perform routine maintenance, including but not limited to equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventative maintenance. Typically, one (1) major maintenance inspection will take place annually. Even when considering routine maintenance and augmentation activities, the project expects to provide no less than a 96% annual availability factor to the grid.

Batteries within utility-scale BESS facilities degrade with use over time, leading to a loss of capacity. To maintain the Project's capacity in compliance with interconnection requirements and commercial contracts, periodic augmentation by installing new batteries and related equipment within the Project site will occur to maintain the capacity over an approximate 40-year life. As batteries slowly lose their capacity to store energy, extra batteries will be installed at the beginning of the Project and at several intervals through the Project life, which is referred to as augmentation. Augmentation is expected to occur in order to maintain an annual lifetime capacity of 9,200MWh. If the project were to discharge for 8 hours daily and have an annual availability of 96% then the Project would have an annual capacity factor of approximately 32%. The Project's final augmentation strategy will be determined by market based contracting requirements. Augmentation may include constructing new foundations, installing BESS equipment on the foundations, and completing electrical work within the existing Project footprint. The preliminary site layout depicted on Figure 2-1, Project Site Plan, shows an "end of life" configuration, meaning it shows the equipment layout after all augmentation units are implemented. The construction sequencing and equipment usage assumptions in Tables 2-5 and 2-6 above, and environmental analyses in subsequent chapters, conservatively assume that all initial BESS equipment and augmentation BESS equipment are constructed at the same time.

2.5.1 Solid and Non-hazardous Waste

The Project will produce a small amount of waste associated with maintenance activities, which could include broken and rusted metal, defective or malfunctioning electrical materials, empty containers, and other miscellaneous solid waste, including typical refuse generated by workers. Most of these materials will be collected and delivered back to the manufacturer or to recyclers. Non-recyclable waste will be placed in covered dumpsters, located near the O&M buildings, and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill.

2.5.2 Hazardous Materials

Limited amounts of hazardous materials will be stored or used on the site during operations, including diesel fuel, gasoline, and motor oil for vehicles; refrigerant within the BESS enclosures; mineral oil to be sealed within the transformers; and lead-acid-based batteries for emergency backup. Appropriate spill containment and cleanup kits will be maintained during operation of the Project. A spill prevention control and countermeasures plan will be developed for site operations.

2.5.3 Hazardous Waste

Fuels and lubricants used in operations will be subject to the spill prevention control and countermeasures plan to be prepared for the proposed Project. Solid waste, if generated during operations, will be subject to the material disposal and solid waste management plan to be prepared for the proposed Project.

2.6 Decommissioning

In general, the BESS will be recycled at the expiration of the Project's life (estimated to be 40 years). Most parts of the proposed system are recyclable. Batteries include lithium, which degrades but can be recycled or repurposed. Steel, wood, and concrete from the decommissioned facilities will be recycled. Metal and scrap equipment and parts that do not have free-flowing oil may be sent for salvage. Materials 3 feet or more below the ground surface will be left in place.

Fuel, hydraulic fluids, and oils will be transferred directly to a tanker truck from the respective tanks and vessels. Storage tanks and vessels will be rinsed and transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as smaller container lubricants, paints, thinners, solvents, cleaners, batteries, and sealants, will be kept in a locked utility structure with integral secondary containment that meets Certified Unified Program Agencies and Resource Conservation and Recovery Act requirements for hazardous waste storage until removal for proper disposal and recycling. It is anticipated that all oils and batteries will be recycled at an appropriate facility. Site personnel involved in handling these materials will be trained to properly handle them. Containers used to store hazardous materials will be inspected regularly for any signs of failure or leakage. Additional procedures will be specified in a Hazardous Materials Business Plan closure plan submitted to the Certified Unified Program Agencies. Transportation of the removed hazardous materials will comply with regulations for transporting hazardous materials, including those set by the Department of Transportation, the U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Highway Patrol, and California State Fire Marshal. See Appendix F, Decommissioning Plan, for additional information.

2.7 Project Site Selection

The Project site and related facilities were selected taking into consideration engineering constraints, site geology, environmental impacts, water, waste and fuel constraints, and electric transmission constraints, among other factors. The Project location was selected, in part, due to it being large enough to support development of the Project, its close proximity to existing electrical infrastructure and the Vincent Substation, thereby minimizing the length of the proposed gen-tie line to the POI and ability to deliver power to the Los Angels Basin local reliability area during peak demand, and because it is located immediately adjacent to existing roadways for construction and O&M access.

The Project is uniquely suited to help California achieve its GHG reduction requirements and support LA Basin reliability requirements. The Vincent substation is located at a key point in the electrical grid, Service Path 26, which enables it to deliver energy from renewable resources outside of the LA Basin Resource Area to meet LA Basin Local Capacity Requirements (LCR), with tie lines into the Western and Eastern LA Basin. LCR refers to the minimum amount of local generation capacity needed within specific areas to meet reliability criteria, particularly in areas where transmission constraints limit the ability to import power and is a critical metric for understand energy needs which are necessary to meet future grid demand. The LA Basin LCR is increasing, primarily due to load growth. The 2024-2025 Transmission Plan shows that peak load in the SCE Main area is forecasted to grow from 25,265MW in 2026 to 27,929MW in 2034 (CAISO 2025a), representing a 9.5% increase over 8 years. The 2026 LCR Tech Study also shows that the local capacity needed in the LA Basin is expected to increase from 5,812MW in 2026 to 7,226MW in 2030, which is an approximate 20% increase in required capacity in 4 years. Compared with the 2025 LCR study, demand for the LA Basin is 429MW higher than last year's forecast and the forecasted LCR needs have increased by 1,689MW due to load forecast increase (CAISO 2025b). In addition, CAISO is projecting that there will be a total potential curtailment of 1,300 gigawatt hours of wind and solar from the SCE North area in 2034, absent storage availability (CAISO 2025a). Locating this important energy storage ~~e~~Project ~~at~~with efficient and environmentally sound access to the Vincent Substation provides the Project with the ability to help reduce wind and solar curtailment while also supporting the growing LCR needs in the LA Basin, allowing stored resources to be dispatched when needed.

The Project site was selected in furtherance of the Project Objectives detailed in Section 2.2 above. The site selection criteria are discussed in detail in Chapter 4, Alternatives.

2.8 References

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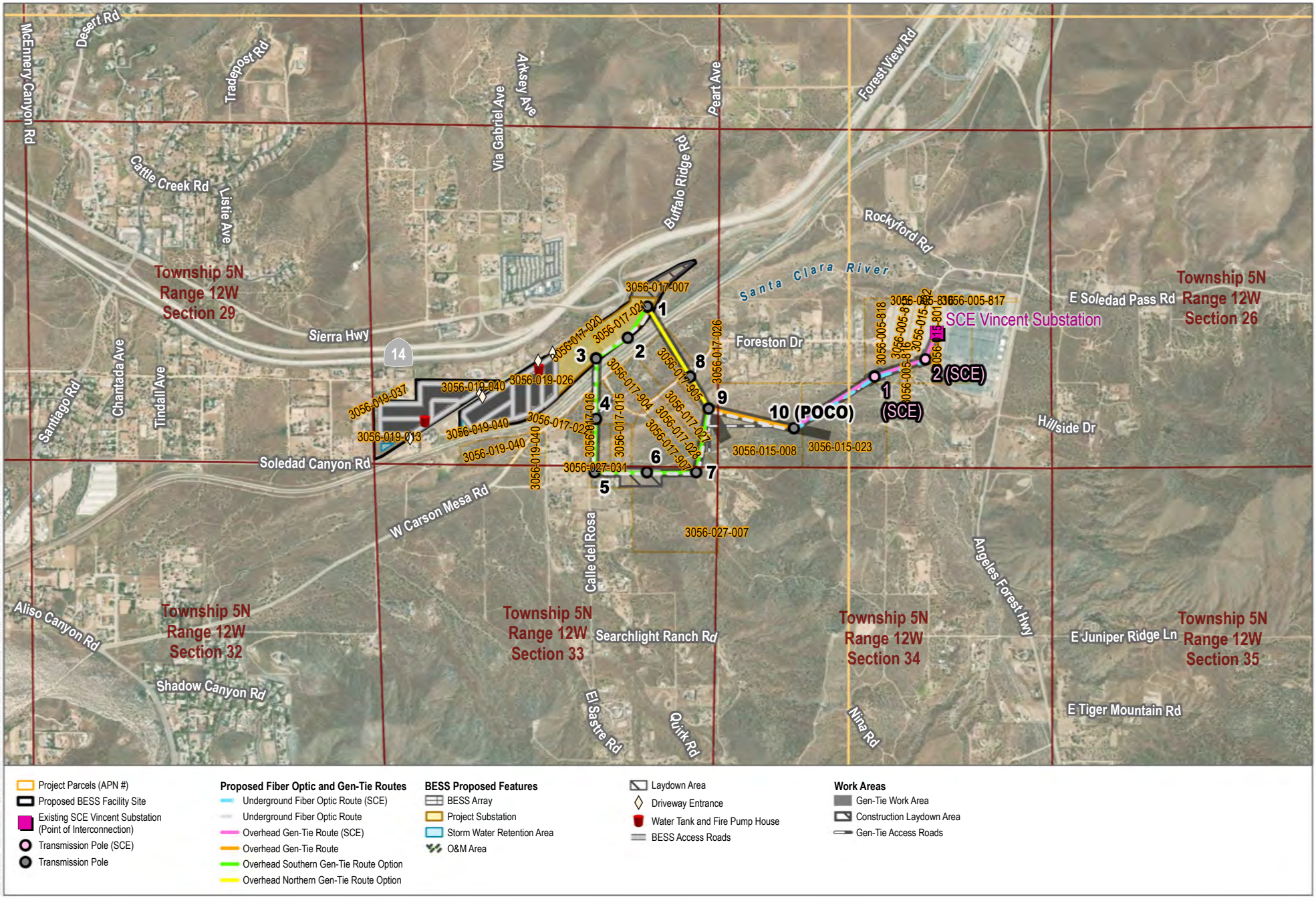

SOURCE: World Imagery; Los Angeles County
Acton & Pacifico Mountain Quadrangle

DUDEK

0 500 1,000 Feet

FIGURE 2-1

Project Site Plan

Prairie Song Reliability Project

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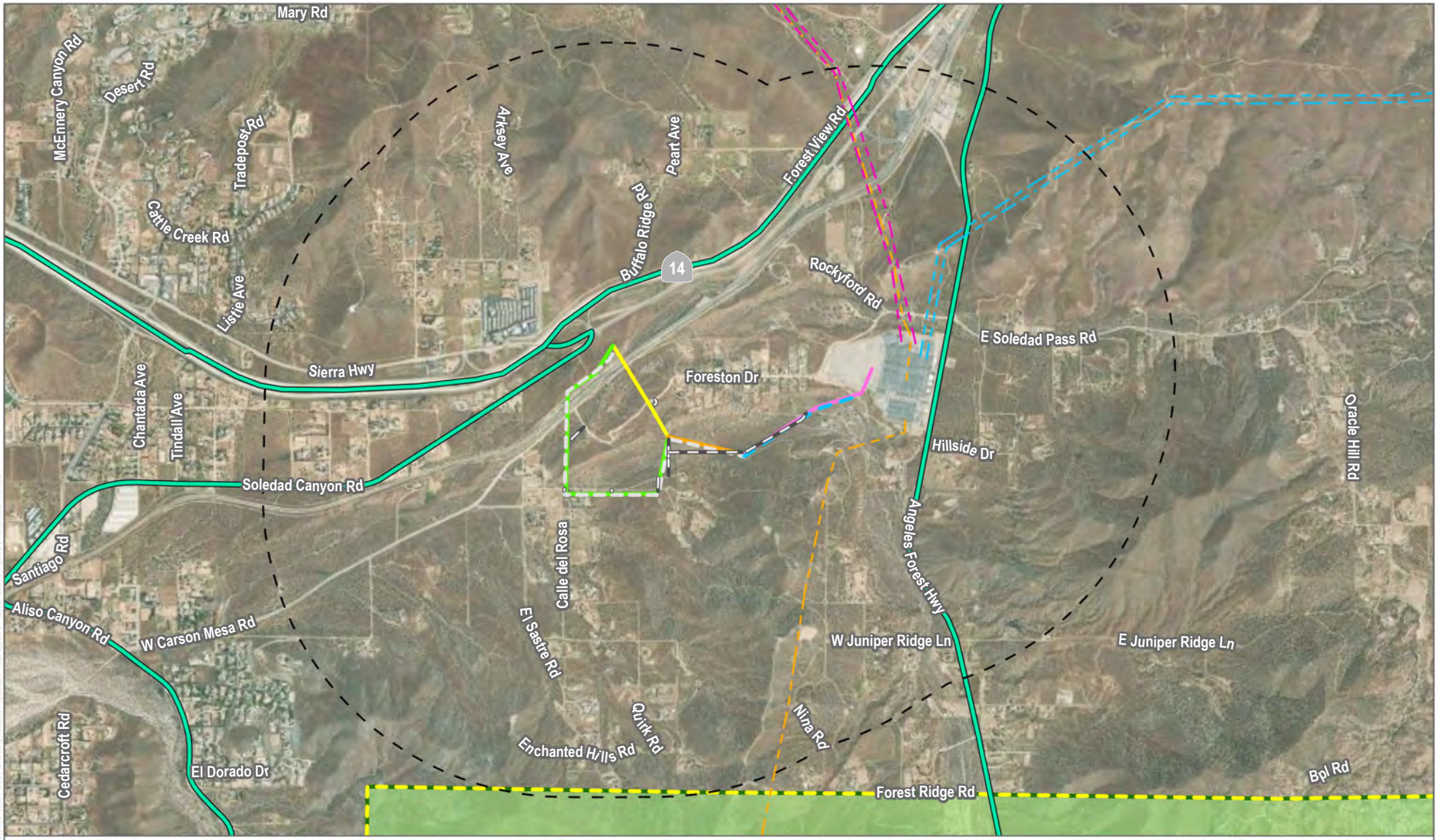

SOURCE: Los Angeles County; USFWS; CEC

DUDEK

0 1,000 2,000 Feet

FIGURE 2-2

Transmission Line Route

Prairie Song Reliability Project

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3 Environmental Analysis

3.1 Document Organization

This chapter contains 17 individual sections. The sections represent the standard environmental, public health and safety, and local impact assessment disciplines for which the California Energy Commission (CEC) Energy Facilities Siting Regulations (Title 20, California Code of Regulations, Section 1704, Appendix B) require information in both a traditional Application for Certification and an AB 205 Opt-In Application (CEC 2021). All sections use a standardized format containing the following headings and associated content (except for Worker Safety as explained therein):

- **Affected Environment** includes relevant background information about the Project's environmental, social, and regulatory settings.
- **Environmental Analysis** addresses the potential environmental consequences of the construction and operation of the Project. The sections begin with a list of the criteria used to determine whether environmental effects of the Project may qualify as potentially significant environmental impacts. Terms used to describe the Project throughout the document are defined below:
- **Project Site:** Land where components of the Project are located, including the BESS Facility, gen-tie and linear facilities corridors, and SCE Vincent Substation.
  - ***BESS Facility Site:*** The portion of the Project site containing components and activities described in Section 2.3.1.
  - ***Gen-tie Corridor:*** The portion of the Project containing components and activities described in Section 2.3.2.
  - ***Study Area:*** The Project site plus additional area as required by regulation, protocol or standard practice. The study area is specific to resource topics and is described in more detail within the *Affected Environment* section of each discipline.
- **Project Area:** The Project site and the immediately surrounding areas.
- **Cumulative Effects** discusses potential effects of the Project that are not themselves significant, but that may be cumulatively considerable when viewed in connection with the effects of past projects, other current projects, and reasonably foreseeable future projects.
- **Mitigation Measures** describes any mitigation measures recommended to avoid or minimize potentially significant effects to a level of less than significant.
- **Laws, Ordinances, Regulations, and Standards (LORS)** lists those LORS applicable to the Project for a given discipline and includes a demonstration that the Project, as designed, would comply with all applicable LORS.
- **Agencies and Agency Contacts** is a list of federal agencies with permitting authority over the Project, and, except those not expressly preempted by AB 205, the state and local regulatory agencies that would have such permitting authority, but for the exclusive purview of the CEC to license battery energy storage projects with a capacity of 200 megawatt-hours or more and transmission lines associated with battery energy storage projects pursuant to Assembly Bill 205. This section also contains a list of regulatory agency staff and their locations.
- **Permits and Permit Schedules** identifies applicable permits and their schedules.

3.2 Cumulative Projects

Cumulative impacts are defined in the CEQA Guidelines (Section 15355) as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact from several projects occurs from a "change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time." Consistent with CEQA Guidelines Section 15130(a), the discussion in this EIR focuses on the identification of any significant cumulative impacts and, where present, the extent to which the proposed Project would constitute a considerable contribution to the cumulative impact. CEQA Guidelines Section 15130(b) states, in pertinent part, the following:

> The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great of detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

Information pertaining to past, present, and reasonably foreseeable future projects were retrieved from publicly available information and websites, which are summarized in Table 3-1. An initial review of the websites was completed between October 2024 and December 2024. A follow-up secondary review of the websites was completed in May 2025 to verify the information obtained in 2024 remained valid and incorporated additional cumulative projects that have become known between October 2024 and May 2025.

Table 3-1. Cumulative Projects Summary

Agency/Interested Party	Webpage	Date Accessed
Los Angeles County Planning Department	https://planning.lacounty.gov/environmental-review/public-notice/ https://lacdrp.legistar.com/Legislation.aspx	10/23/2024; 5/13/2025
City of Palmdale Planning Department	https://www.cityofpalmdaleca.gov/277/Environmental-Documents	10/15/2024; 5/13/2025
Los Angeles County Public Works Department	https://www.arcgis.com/apps/dashboards/c41e288cd1cf4bf18b28404423c58735 https://dpw.lacounty.gov/gmed/lacroads/NewsCurrent.aspx https://pw.lacounty.gov/core-service-areas/water-resources/waterworks-districts/waterworks-districts-projects/	10/17/2024; 5/13/2025
Acton Town Council	https://actontowncouncil.org/	10/15/2024; 5/13/2025
Caltrans District 7	https://dot.ca.gov/caltrans-near-me/district-7/district-7-projects	10/15/2024; 5/13/2025

Table 3-1. Cumulative Projects Summary

Agency/Interested Party	Webpage	Date Accessed
Antelope Valley Air Quality Management District	https://www.avaqmd.ca.gov/governing-board	11/18/2024; 5/13/2025
South Coast Air Quality Management District	https://www.aqmd.gov/home/news-events/meeting-agendas-minutes	12/5/2024; 5/13/2025

To identify the projects to be analyzed in the evaluation of cumulative impacts, CEQA Guidelines Section 15130(b) requires that an EIR employ either:

- **The List Approach** – entails listing past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside of the control of the agency; or
- **The Projection Approach** – uses a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

The approach and geographic scope of the cumulative impact evaluation vary depending on the environmental topic area being analyzed. The individual cumulative impacts discussion in the section addressing each environmental topic presents impacts and mitigation measures for the proposed project. Each impact begins with a summary of the approach and the geographic area relevant to that environmental topic area. For most environmental topic areas, the list approach is used. The list of potentially relevant projects, a detailed methodology, and relevant planning documents are considered in each cumulative impact discussion.

Past projects include those land uses that have been previously developed and comprise the existing environment. Present projects include those projects recently approved or under construction. Probable future projects are those that are reasonably foreseeable, such as those for which an application is on file and in process with a local planning department. The cumulative projects listed in Table 3-2, Cumulative Projects, were compiled by reviewing the available public sources shown in Table 3-1 and determining which projects were within 6 miles of the project site. A total of 6 miles was selected to identify a boundary that is large enough to provide the context necessary for understanding cumulative impacts and compact enough to present a proper perspective. These projects are considered in the cumulative impact analysis as appropriate. Refer to Figure 3-1, Cumulative Projects, for the location of each project considered.

Table 3-2. Cumulative Projects

Map No.	Project Name	Project Location	Project Type	Project Status
Los Angeles County Planning Department				
LACPD-01	ATC Wireless Communication Facility - continued use and fence repairs	4718 Sierra Highway, Acton	Utility	Approved
LACPD-02	Shared Water Well	Carrolos and Dwight Lee Road, Acton	Utility	Under Review

Table 3-2. Cumulative Projects

Map No.	Project Name	Project Location	Project Type	Project Status
LACPD-03	Project No. 00-21-(5) Surface Mining Permit No. 201300002	BP & L Rd. (Forest Service Road 4N32), Acton	Surface Mining Permit	Approved
LACPD-04	PM071006 a. Tentative Parcel Map No. 071006	Northside of Sierra Highway, between Listie Avenue and San Gabriel Avenue, Acton	Residential	Under Review
LACPD-05	PRJ2021-004352-(5)	Southeast of the intersection of West Carson Mesa Road and Aliso Canyon Road, Acton	Land Alteration	Approved
LACPD-06	PRJ2024-001984-(5)	5541 Shannon Valley Road, Acton	Energy	Approved
LACPD-07	PRJ2024-001108-(5)	Sierra Highway and Crown Valley Road, Acton	Residential	Not Approved
City of Palmdale Planning Department				
PPD-01	Falcon Glen Project	North of Avenue S, City of Palmdale	Residential	Under Review
PPD-02	Quail Valley Project	South side of Avenue S, west of Tovey Avenue, City of Palmdale	Residential	Under Review
PPD-03	Palmdale Housing Opportunity Project/SCAG Palmdale Housing Project	East Avenue R-12 and 27th Street East, City of Palmdale	Residential	Under Review
Acton Town Council				
ATC-01	Fahnestock Ranch Proposed Development/Community Equestrian CTR	Sierra Highway and Crown Valley Rd	Community Center	Unknown
ATC-02	Signing and Striping Plan Sierra Highway at Santiago Road	Sierra Highway at Santiago Road	Road work; signing and striping	Unknown
ATC-03	Proposed Telecom - CUP	Sierra Highway and Red Rover Mine Rd	Utility	Unknown
ATC-04	Coffee Bean and Tea Leaf Proposed Development	Sierra Highway and Crown Valley Rd	Commercial	Unknown
ATC-05	North County Solid Waste Collection Services Project	Acton/Agua Dulce, Quartz Hill, Antelope Valley East and Antelope Valley West	Public Works	Unknown
ATC-06	Humidor Project	Sierra Highway and Mountain Springs Road	Utility	Approved
ATC-07	Acton Gas Station	Sierra Highway and Crown Valley Rd	Commercial	Unknown
ATC-08	Jethawanaya Buddhist Meditation Center	3963 Sierra Highway	Community Center	Unknown

Table 3-2. Cumulative Projects

Map No.	Project Name	Project Location	Project Type	Project Status
ATC-09	Los Angeles County Metropolitan Transportation Authority Antelope Valley Line Capacity and Service Improvements Program	Antelope Valley	Transportation	Unknown
ATC-10	Dollar General	Crown Valley Road and Smith Ave	Commercial	Unknown
ATC-11	Proposed Industrial Development	Smith Ave and Soledad Canyon Road	Industrial	Unknown
ATC-12	Proposed Car Dealership	Soledad Canyon Road	Commercial	Unknown
ATC-13	T-Mobile Tower - CUP Renewal/Tower Update	4361 Sierra Highway	Commercial	Unknown
Los Angeles County Public Works Department – Waterworks Districts Projects				
LACPW-A	Acton 3220 PZ Tank	El Dorado Dr, Acton	Infrastructure	Under Review
Los Angeles County Public Works Department – Road Projects				
LACPW-01	South Antelope Valley - 10th Street East, et al.	South Antelope Valley	Transportation	Completed
LACPW-02	Acton - Crown Valley Road Phase II	Crown Valley Road, Acton	Transportation	Completed
LACPW-03	South Antelope Valley - Sierra Highway from Pearblossom Highway to Avenue S	Sierra Highway and Pearblossom Highway	Transportation	Completed
LACPW-04	Acton - Crown Valley Road, et al.	Crown Valley Road	Transportation	Completed
LACPW-05	Acton - Santiago Road	Santiago Road	Transportation	Completed
LACPW-06	Agua Dulce-Acton- Sierra Hwy - 2100ft SO Quinn Dr to Avenue S	Sierra Highway	Transportation	Completed
LACPW-07	Acton - Red Rover Mine Road	Red Rover Mine Road	Transportation	Completed
LACPW-08	Lakeview - Lago Lindo Road, et al.	Lago Lindo Road	Transportation	Completed
LACPW-09	South Antelope Valley - Aliso Canyon Road - Soledad Canyon Road to Angeles Forest Highway	Aliso Canyon Road	Transportation	Development
LACPW-10	South Antelope Valley - 47th Street East from Pearblossom Highway to Mt. Emma Road	47th Street East from Pearblossom Highway to Mt. Emma Road	Transportation	Completed
LACPW-11	Acton - Sierra Highway from 1200 ft west of Crown	Sierra Highway	Transportation	Completed

Table 3-2. Cumulative Projects

Map No.	Project Name	Project Location	Project Type	Project Status
	Valley Road to 411 ft east of Mountain Springs Road			
LACPW-12	Acton - Aliso Canyon Road - Avenue Y-8 to Angeles Forest Highway	Aliso Canyon Road	Transportation	Development
LACPW-13	Acton - Aliso Canyon Road - Soledad Canyon Road to Avenue Y8	Aliso Canyon Road	Transportation	Completed
LACPW-14	Acton - Escondido Canyon Road - Syracuse Avenue to Agua Dulce Canyon Road	Escondido Canyon Road	Transportation	Development
LACPW-15	Acton - Sierra Highway and Santiago Road	Sierra Highway	Transportation	Development
LACPW-16	Acton – Wisconsin St btw Sacramento Ave and Soledad Canyon Rd	Wisconsin St	Transportation	Development
Antelope Valley Air Quality Management District				
AVAQMD-01	North County Solid Waste Collection Services Project*	Acton/Agua Dulce, Quartz Hill, Antelope Valley East and Antelope Valley West	Public Works	Unknown
AVAQMD-02	Falcon Glen Project*	North of Avenue S, City of Palmdale	Residential	Under Review
AVAQMD-03	Self-Storage Building with Uncovered Boat Storage	2660 Pearblossom Hwy, Palmdale	Commercial	Unknown
AVAQMD-04	Self-Storage Facility	Southwest corner of Avenue S and 20th Street East, Palmdale	Commercial	Unknown
AVAQMD-05	Quail Valley Project*	South side of Avenue S, west of Tovey Avenue, Palmdale	Residential	Under Review
AVAQMD-06	Ritter Ranch	Northeast corner of Avenue S and Westland Drive, Palmdale	Residential	Unknown
AVAQMD-07	Maverick Gas Station	Northwest corner of West Avenue S and SR-14, Palmdale	Commercial	Unknown
AVAQMD-08	Two-story Multifamily Residential Building	27th Street East and East Avenue R-12, Palmdale	Residential	Unknown
South Coast Air Quality Management District				
SCAQMD-01	California High Speed Rail System Palmdale to Burbank Project Section	Palmdale to Burbank (SR-14)	Transportation	Unknown

* = The North County Solid Waste Collection Services Project, Falcon Glen Project, and Quail Valley Project listed under the Antelope Valley Air Quality Management District subheading are duplicates as they are previously listed and accounted for in the table.

3.3 References

CEC (California Energy Commission). July 2021. California Code of Regulations, Title 20. Public Utilities and Energy, Division 2. State Energy Resources Conservation and Development Commission. https://www.energy.ca.gov/sites/default/files/2021-07/Title%2020%20Updated%20July%2023%2C%202021.pdf.

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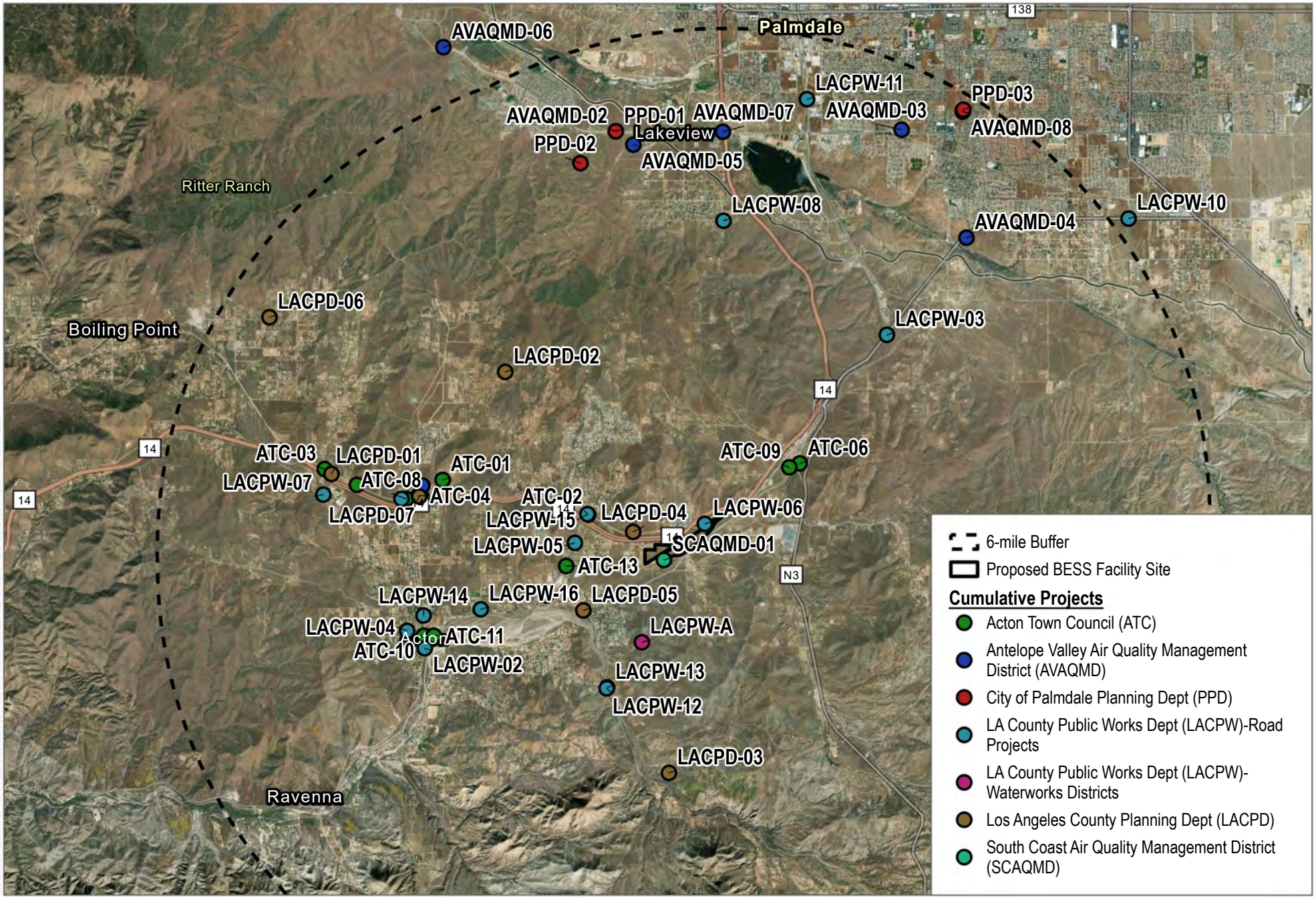

SOURCE: Acton Town Council; Antelope Valley Air Quality Management District; City of Palmdale; Los Angeles County; South Coast Air Quality Management District

DUDEK

0 4,000 8,000 Feet

FIGURE 3-1

Cumulative Projects

Prairie Song Reliability Project

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3.1 Air Quality

This section describes existing conditions related to air quality, identifies associated regulatory requirements, evaluates potential Prairie Song Reliability Project (Project) and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the Project. The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This analysis uses the significance thresholds in the California Environmental Quality Act (CEQA) Guidelines Appendix G (14 CCR 15000 et seq.) and the emissions-based significance thresholds recommended by the Antelope Valley Air Quality Management District (AVAQMD) and other applicable thresholds of significance.

- Section 3.1.1 describes the air quality environment that might be affected by the Project;
- Section 3.1.2 provides additional setting information regarding regional and local air quality;
- Section 3.1.3 provides the thresholds for significance and includes an environmental analysis of Project construction and operation (including maintenance) impacts on air quality;
- Section 3.1.4 lists the proposed mitigation measures;
- Section 3.1.5 discusses the applicable laws, ordinances, regulations, and standards (LORS);
- Section 3.1.6 lists the agencies involved and agency contacts;
- Section 3.1.7 discusses permits and permit schedules; and
- Section 3.1.8 lists reference materials used in preparing this section.

The environmental setting and impact evaluation in this section is based in part on the following Project-specific technical analysis:

- Appendix 3.1A – Air Quality and Greenhouse Gas Emissions Modeling and Calculations (provided via Kiteworks)
- Appendix 3.1B – Ambient Air Quality Analyses Files (provided via Kiteworks)
- Appendix 3.1C – Representative Tier 4 Emergency Generator Specifications Sheets

Potential emissions of toxic air contaminants (TACs) and the associated public health impacts are addressed in Section 3.9, Public Health, and are not discussed herein.

A summary of the air quality evaluation is provided in the table below.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
1) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
2) 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?	☐	☒	☐	☐
3) Would the Project expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
4) Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐
5) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.1.1 Environmental Setting

3.1.1.1 Meteorological and Topographical Conditions

Air Quality

The metropolitan portions of Los Angeles County (the County) are generally within the South Coast Air Basin, and the desert portions of the County lie within the Mojave Desert Air Basin (MDAB). The Project area is located within the MDAB and subject to AVAQMD rules and regulations.[1] Additionally, the Project area as a whole is subject to the California Ambient Air Quality Standards (CAAQS) adopted by the California Air Resources Board (CARB) and the National Ambient Air Quality Standards (NAAQS) adopted by the U.S. Environmental Protection Agency (EPA).

Air pollutants are emitted by a variety of sources, including off-road equipment, mobile sources (vehicles), area sources (hearths [fireplaces], consumer product use, architectural coatings, and landscape maintenance equipment), energy sources (natural gas), and stationary sources (generators or other stationary equipment). Some air pollutants need to be examined at the local level, and others are predominantly an issue at the regional level. For instance, ozone (O_3) is formed in the atmosphere in the presence of sunlight by a series of chemical reactions involving oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) (also termed reactive organic gases [ROGs]). Because these reactions are broad scale in effects, O_3 is typically analyzed at the regional level (i.e., in the MDAB) rather than the local level. On the other hand, air pollutants such as coarse particulate matter (particulate

[1] AVAQMD has jurisdiction over the northern, desert portion of Los Angeles County and covers a western portion of the MDAB. This region includes the incorporated cities of Lancaster and Palmdale, Air Force Plant 42, and the southern portion of Edwards Air Force Base. The Kern County-Los Angeles County boundary forms the northern boundary of the AVAQMD; the San Bernardino-Los Angeles County boundary forms the eastern boundary of the AVAQMD.

matter with an aerodynamic diameter less than or equal to 10 microns, or PM_{10}), fine particulate matter (particulate matter with an aerodynamic diameter less than or equal to 2.5 microns, or $PM_{2.5}$), and carbon monoxide (CO) are a potential concern in the immediate vicinity of the pollutant source because the pollutants are emitted directly by or are formed close to the source. Therefore, the study area for emissions of PM_{10}, $PM_{2.5}$, and CO is the local area near the source, such as in the vicinity of the Project site, and the study area for regional pollutants such as NO_x and VOCs is the entire MDAB.

Air quality is a function of the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

Most of the MDAB is commonly referred to as the "High Desert" because elevations range from approximately 2,000 to 5,000 feet above mean sea level. The MDAB is generally above the regional inversion layer and experiences relatively good dispersion conditions. The MDAB is separated from Southern California coastal regions and Central California valley regions by mountains extending up to 10,000 feet above mean sea level. As a result, the Mojave Desert is removed from the cooling effects of the Pacific Ocean and is characterized by extreme temperatures. The MDAB consists of an assemblage of mountain ranges interspersed with valleys that often contain dry lakes. Lower-elevation mountains scattered throughout the basin are generally 1,000 feet to 4,000 feet high. Mountain passes form channels for air masses flowing from the west and southwest, and the prevailing winds from the west and southwest are caused by the proximity of the MDAB to coastal and central regions and the blocking effect of the Sierra Nevada to the north.

This MDAB region is characterized by hot, dry summers and cool winters, with little precipitation. During the summer, the MDAB is generally influenced by a Pacific subtropical high-pressure cell that resides off the coast of California. This high-pressure cell prevents cloud formation and engenders daytime solar heating. The MDAB is rarely influenced by the cold air masses that move south from Canada and Alaska, as these frontal systems diffuse by the time they reach the MDAB. Most moisture arrives in frequent warm, moist, unstable air masses from the south. The MDAB is classified as a dry–hot desert climate, with portions classified as dry–very hot desert, to indicate at least 3 months have maximum average temperatures over 100.4°F. In Palmdale, which is proximate to the Project site, the annual average precipitation is 7.4 inches (AVAQMD 2016).

Greenhouse Gases

Climate change refers to any significant change in measures of climate—such as temperature, precipitation, or wind patterns—lasting for an extended period (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching the Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2024a).

The greenhouse effect is the trapping and buildup of heat in the atmosphere near the Earth's surface (troposphere). The greenhouse effect traps heat in the troposphere through a threefold process, as follows: short-wave radiation emitted by the sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and greenhouse gases (GHGs) in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's

temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. However, recent climate changes, in particular the warming observed over the past century, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of warming since the mid-twentieth century and are the most significant driver of observed climate change (EPA 2024a; IPCC 2013). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013).

3.1.1.2 Pollutants and Effects

3.1.1.2.1 Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The national and California standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), CO, sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. These pollutants, as well as TACs, are discussed in the following paragraphs.[2]

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly NO_x and VOCs. The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere ozone layer (stratospheric O_3) and at the Earth's surface in the troposphere (ground-level O_3).[3] The O_3 that the EPA and the CARB regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

2 The following descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2024b) and the California Air Resources Board's "Glossary of Air Pollutant Terms" (CARB 2024a) and CARB's "Common Air Pollutants" (CARB 2024b).

3 The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2020). Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in, thereby causing shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies on the effects of O_3 on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2024c).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016).

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function and growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their faster breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher levels of exposure compared to children with lower exposure levels. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2024d).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbons, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can

become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the blood's ability to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, older people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2024e).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary-source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older people and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2024f).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide, based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2024g).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function and growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2024g).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs. Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the main sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry-cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere and can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$.

3.1.1.2.2 Non-Criteria Pollutants and Valley Fever

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., a coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "valley fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils.

California Labor Code Section 6709 defines "highly endemic" areas for valley fever as those areas where the annual incidence rate is greater than 20 cases per 100,000 persons per year. Los Angeles County is not considered a highly endemic region for valley fever; the latest report from the California Department of Public Health indicated the County has 14.5 cases per 100,000 people (CDPH 2024). Although cases are reported County-wide, most cases have occurred in northern areas, with an approximately ninefold higher rate of cases in Antelope Valley compared to other areas of the County (County of Los Angeles 2017). In contrast, in 2022 the statewide annual incident rate was 19.1 per 100,000 people. The California counties considered highly endemic for valley fever include Kern (264.9

per 100,000), Kings (111.0 per 100,000), Tulare (65.7 per 100,000), San Luis Obispo (51.5 per 100,000), Fresno (44.3 per 100,000), Madera (32.4 per 100,000), and Ventura (28.3 per 100,000), which accounted for 50.5% of the reported cases in 2022 (CDPH 2024).

3.1.1.2.3 Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the state's primary GHG emission reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also CEQA Guidelines Section 15364.5). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[4]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic (i.e., caused by human activity) GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. CH_4 is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers; manure management; industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants); vehicle emissions, and using N_2O as a propellant (e.g., rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric O_3-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to O_3-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.

[4] The descriptions of GHGs are summarized from the IPCC Fourth Assessment Report (2007), CARB's "Glossary of Terms Used in GHG Inventories" (CARB 2025a), and EPA's "Basics of Climate Change" (EPA 2024a).

- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the O_3-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, and the magnesium industry, and is used as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O_3.

Hydrochlorofluorocarbons. HCFCs are a large group of compounds whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but includes one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential (GWP). Diesel particulate matter emissions are a major source of black carbon and are TACs that have been regulated and controlled in California for several decades to protect public health.

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3 due to chemical reactions that may be enhanced by climate change results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of PM in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

3.1.1.2.4 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance

produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2024a). The Intergovernmental Panel on Climate Change (IPCC) developed the GWP concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of CO_2 equivalent (CO_2e).

The current version of the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.29, assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Project.

3.1.1.2.5 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 IPCC Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and many of the changes observed since the 1950s are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, rising sea levels, and ocean acidification (IPCC 2014).

In California, climate change impacts have the potential to affect sea level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Global surface temperature in the first two decades of the twenty-first century (2001–2020) was 0.99°C (0.84°C to 1.10°C) higher than 1850–1900 (IPCC 2023). Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years (IPCC 2023). Scientific modeling predicts that continued emissions of GHGs at or above current rates will induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities, principally through emissions of GHGs, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020 (IPCC 2023).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The California Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed including an increase in annual average air temperature, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2022).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers, and snowpack—on which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply. Impacts of climate on physical systems have been observed such as high variability of snow-water content

(i.e., amount of water stored in snowpack), decrease in spring snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and decrease in dissolved oxygen in coastal waters (OEHHA 2022).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (in 2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments' need for information to support action in their communities, the Fourth Assessment includes reports for nine regions of the state. Key highlights for the Los Angeles region (LA region), where the Project site is located, include the following (CNRA 2018:6):

- Continued future warming over the LA region. Across the region, average maximum temperatures are projected to increase around 4–5 degrees F by the mid-century, and 5–8 degrees F by the late-century.
- Extreme temperatures are also expected to increase. The hottest day of the year may be up to 10 degrees F warmer for many locations across the LA region by the late-century under RCP8.5.[5] The number of extremely hot days is also expected to increase across the region.
- Despite small changes in average precipitation, dry and wet extremes are both expected to increase. By the late 21st century, the wettest day of the year is expected to increase across most of the LA region, with some locations experiencing 25–30% increases under RCP8.5. Increased frequency and severity of atmospheric river events are also projected to occur for this region.
- Sea levels are projected to continue to rise in the future, but there is a large range based on emissions scenario and uncertainty in feedbacks in the climate system. Roughly 1–2 feet of sea level rise is projected by the mid-century, and the most extreme projections lead to 8–10 feet of sea level rise by the end of the century.
- Projections indicate that wildfire may increase over southern California, but there remains uncertainty in quantifying future changes of burned area over the LA region.

[5] Representative Concentration Pathway (RCP) 8.5 is a greenhouse gas emissions scenario used in future projections that represents a "business-as-usual" scenario where CO_2 emissions continue to rise throughout the twenty-first century (van Vuuren et al. 2011). Data and detailed projections are available online at https://cal-adapt.org/.

3.1.1.3 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, older adults, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as "sensitive receptors." Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). AVAQMD identifies residences, daycare centers, playgrounds, and medical facilities as sensitive receptors for the purposes of identifying air quality impacts (AVAQMD 2016).

The closest sensitive receptors to the Project site are residences located immediately adjacent to the west (along Malinta Avenue), north (along Tortuga Street and Soledad Canyon Road), and south (across Soledad Canyon Road) of the BESS facility Project site boundary. Single-family residences are also located close to the gen-tie alignments. The nearest school is the Meadowlark Elementary School, approximately 2 miles to the west of the proposed BESS facility.

3.1.2 Regional and Local Air Quality

3.1.2.1 Los Angeles County Portion of Mojave Desert Air Basin – Attainment Designation

Pursuant to the 1990 federal Clean Air Act Amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on the CAAQS rather than the NAAQS. Table 3.1-1 depicts the current attainment status of the Project area with respect to the NAAQS and CAAQS.

Table 3.1-1. Los Angeles County Portion of Mojave Desert Air Basin – Attainment Classification

Pollutant	Designation/Classification[a]	
	Federal Standards	State Standards
O_3 – 1 hour	No federal standard	Nonattainment
O_3 – 8 hours	Severe nonattainment	Nonattainment
NO_2	Unclassifiable/attainment	Attainment
CO	Unclassifiable/attainment	Attainment
SO_2	Unclassifiable/attainment	Attainment

Table 3.1-1. Los Angeles County Portion of Mojave Desert Air Basin – Attainment Classification

Pollutant	Designation/Classification[a]	
	Federal Standards	State Standards
PM_{10}	Unclassifiable	**Nonattainment**
$PM_{2.5}$	Unclassifiable/attainment	Attainment
Lead	Unclassifiable/attainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified
Sulfates	No federal standard	Attainment
Visibility-reducing particles	No federal standard	Unclassified
Vinyl chloride	No federal standard	No designation

Sources: CARB 2023 (state); EPA 2025a (federal).
Notes: O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
[a] Designations/classifications in **bold** type indicate nonattainment.
Definitions: attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

In summary, the Project site is located in an area of the MDAB that is designated as a nonattainment area for federal and state O_3 standards and the state PM_{10} standard, and unclassifiable/attainment for all other criteria air pollutants (CARB 2023; EPA 2025a).

Despite the current nonattainment status for O_3 and PM_{10}, air quality in the MDAB has generally improved since the inception of air pollutant monitoring. This improvement is mainly a result of lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by AVAQMD and nearby air districts including the Mojave Desert Air Quality Management District and the South Coast Air Quality Management District (SCAQMD), as well as CARB and EPA. This general trend toward cleaner air within the state, including the MDAB, has occurred in spite of continued population growth. **Error! Reference source not found.**

3.1.2.2 Air Quality Monitoring Data

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. AVAQMD monitors local ambient air quality in the Project area. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2021 to 2023 are presented in Table 3.1-2. The Lancaster Division Street monitoring station, located at 43301 Division Street, Lancaster, California, is the nearest air quality monitoring station to the Project site, and is located approximately 4.8 miles north of the Project site. However, monitoring at this station discontinued after 2022 and monitoring has since shifted to the Lancaster Fairgrounds monitoring station, located at 2551 West Avenue H, Lancaster, California, approximately 8.5 miles north of the Project site. The Downtown Los Angeles monitoring station, located at 1630 North Main Street, Los Angeles, California, is the nearest air quality monitoring station to the Project site that monitors SO_2, and is located approximately 30 miles south of the Project site. The combined data available from these stations are considered representative of the air quality experienced in the Project vicinity. The number of days exceeding the ambient air quality standards is also shown in Table 3.1-2.

Table 3.1-2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2021	2022	2023	2021	2022	2023
Ozone (O_3) – Lancaster Division Street and Lancaster Fairgrounds Monitoring Stations									
Maximum 1-hour concentration	ppm	California	0.09	0.086	0.098	0.112	0	3	1
Maximum 8-hour concentration	ppm	California	0.070	0.080	0.083	0.089	4	36	6
		National	0.070	0.079	0.082	0.088	3	33	6
Nitrogen Dioxide (NO_2) – Lancaster Division Street and Lancaster Fairgrounds Monitoring Stations									
Maximum 1-hour concentration	ppm	California	0.18	0.046	0.043	0.034	0	0	0
		National	0.100	0.046	0.043	0.034	0	0	0
Annual concentration	ppm	California	0.030	0.008	0.008	0.003	—	—	—
		National	0.053	0.008	0.008	0.003	—	—	—
Carbon Monoxide (CO) – Lancaster Division Street and Lancaster Fairgrounds Monitoring Stations									
Maximum 1-hour concentration	ppm	California	20	1.4	ND	ND	0	ND	ND
		National	35	1.4	ND	ND	0	ND	ND
Maximum 8-hour concentration	ppm	California	9.0	1.1	ND	ND	0	ND	ND
		National	9	1.1	ND	ND	0	ND	ND
Sulfur Dioxide (SO_2) – Downtown Los Angeles Monitoring Station									
Maximum 1-hour concentration	ppm	National	0.075	0.002	0.007	0.008	0	0	0
Maximum 24-hour concentration	ppm	State	0.04	ND	ND	ND	ND	ND	ND
	ppm	National	0.140	0.001	0.001	0.002	0	0	0
Annual concentration	ppm	National	0.030	0.0004	0.0003	0.0002	—	—	—
Coarse Particulate Matter (PM_{10})[a] – Lancaster Division Street and Lancaster Fairgrounds Monitoring Stations									
Maximum 24-hour concentration	µg/m³	California	50	ND	ND	118.3	ND (ND)	ND (ND)	7.1 (7)
		National	150	411.2	76.2	121.1	1.0 (0)	0.0 (0)	0.0 (0)
Annual concentration	µg/m³	California	20	ND	ND	17.3	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a] – Lancaster Division Street and Lancaster Fairgrounds Monitoring Stations									
Maximum 24-hour concentration	µg/m³	National	35	35.7	15.1	12.4	1.0 (1)	0.0 (0)	0.0 (0)

Table 3.1-2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2021	2022	2023	2021	2022	2023
Annual concentration	µg/m³	California	12	8.1	ND	3.4	—	—	—
		National	9.0	8.1	7.5	3.3	—	—	—

Sources: CARB 2025b; EPA 2025b.
Notes: ppm = parts per million by volume; — = not available; µg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value.
The Lancaster Division Street monitoring station is located at 43301 Division Street, Lancaster, California 93535.
The Lancaster Fairgrounds monitoring station is located at 2551 West Avenue H, Lancaster, California 93536.
The Downtown Los Angeles monitoring station is located at 1630 North Main Street, Los Angeles, California 91002.
Data taken from CARB represent the highest concentrations experienced over a given year.
Exceedances of national and California standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. There is no national standard for 1-hour O_3 or annual PM_{10}, nor is there a California 24-hour standard for $PM_{2.5}$.
[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations will have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

3.1.3 Impact Analysis

3.1.3.1 Significance Criteria and Methodology

3.1.3.1.1 Thresholds of Significance

Air Quality

The State of California has developed guidelines to address the significance of air quality impacts based on CEQA Guidelines Appendix G (14 CCR 15000 et seq.), which provides guidance that a project would have a significant environmental impact if it would:

A. Conflict with or obstruct implementation of the applicable air quality plan.
B. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
C. Expose sensitive receptors to substantial pollutant concentrations.
D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

CEQA Guidelines Appendix G indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the project would have a significant impact on air quality. As outlined in the AVAQMD CEQA Air and Federal Conformity Guidelines (CEQA Air Guidelines) (AVAQMD 2016), a project would result in a significant environmental impact if it:

1. Would generate total emissions (direct and indirect) in excess of the established significance thresholds (presented in Table 3.1-3).
2. Would generate a violation of any ambient air quality standard when added to the local background.

3. Does not conform with the applicable attainment or maintenance plan.[6]
4. Would expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a hazard index (non-cancerous) greater than or equal to 1.

Residences, schools, daycare centers, playgrounds, and medical facilities are considered sensitive receptor land uses. Notably, Threshold 4 above is evaluated in Section 3.9, Public Health.

The AVAQMD CEQA Air Guidelines sets forth quantitative emission significance thresholds for criteria air pollutants below which a project would not have a significant impact on ambient air quality (AVAQMD 2016). Project-related air quality emissions estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3.1-3 are exceeded. The emission-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly. AVAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of Project emissions.

Table 3.1-3. Antelope Valley Air Quality Management District Daily Air Quality Significance Thresholds

Pollutant	Daily Threshold (Pounds per Day)
VOC	137
NO_x	137
CO	548
SO_x	137
PM_{10}	82
$PM_{2.5}$	65
Hydrogen sulfide[a]	54
Lead[a]	3

Source: AVAQMD 2016.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
[a] The Project includes typical equipment and on-road vehicles, which result in negligible (if any) emissions of hydrogen sulfide and lead. Therefore, these pollutants are not discussed in this analysis.

Regarding localized CO, although AVAQMD does not have screening levels for intersection traffic that could result in potential CO hotspots, several other air districts have established these levels, which are described below to provide context of the magnitude of hourly volumes that could result in significant localized CO:

- SCAQMD conducted CO modeling for its 2003 Air Quality Management Plan (SCAQMD 2003) for the four worst-case intersections in the South Coast Air Basin. At the time the 2003 Air Quality Management Plan was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard and Veteran Avenue. Accordingly, CO concentrations

[6] A project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold (AVAQMD 2016).

at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least more than 100,000 vehicles per day.

- The Bay Area Air District, formerly the Bay Area Air Quality Management District, determined that projects would result in a less than significant impact to localized CO concentrations if (1) project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour, or (2) project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway) (BAAD 2023).

Based on the Project's proximity to the South Coast Air Basin, the SCAQMD screening criterion of 100,000 vehicles per day has been applied to this Project as a metric to evaluate CO hotspots.

The potential for the Project to result in other emissions, specifically an odor impact (CEQA Guidelines Appendix G, Air Quality Threshold 4), is based on the Project's land-use types and anticipated construction activity and the potential for the Project to create an odor nuisance.

Greenhouse Gas Emissions

The significance criteria used to evaluate the Project's GHG emissions impacts is based on the recommendations provided in CEQA Guidelines Appendix G. For the purposes of this GHG emissions analysis, a project would have a significant environmental impact if it would (14 CCR 15000 et seq.):

A. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
B. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The Appendix G thresholds for GHGs do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). Additional guidance regarding assessment of GHGs is discussed below.

CEQA Guidelines

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (14 CCR 15064.4[a]). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (14 CCR 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, the CEQA Guidelines do not indicate an amount of GHG emissions that constitutes a significant impact on the environment. Instead, the CEQA Guidelines specify that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

The extent to which a project increases or decreases GHG emissions in the existing environmental setting should be estimated in accordance with Section 15064.4, Determining the Significance of Impacts from Greenhouse Gas Emissions, of the CEQA Guidelines. The CEQA Guidelines indicate that when calculating GHG emissions resulting from a project, lead agencies shall make a good-faith effort based on scientific and factual data (Section 15064.4[a]), and lead agencies have discretion to select the model or methodology deemed most appropriate for enabling decision makers to intelligently assess the project's incremental contribution to climate change (Section 15064.4[c]).

The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emissions threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. CNRA also acknowledged that a lead agency may consider compliance with regulations or requirements implementing Assembly Bill (AB) 32 in determining the significance of a project's GHG emissions (CNRA 2009).

Governor's Office of Planning and Research Advisory

The Governor's Office of Planning and Research technical advisory titled "CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review," states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant (OPR 2008). CNRA adopted the CEQA Guidelines amendments discussed above in December 2009, and they became effective in March 2010.

Approach to Determining Significance

Although AVAQMD has adopted a numerical threshold of significance for GHG emissions within the region, the Project's impacts related to GHG emissions rely on compliance with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. The compliance evaluation is the sole basis for determining the significance of the Project's GHG-related impacts on the environment.

Nevertheless, and in accordance with Section 15064.4 of the CEQA Guidelines, GHG emissions resulting from construction and operation of the Project were quantitatively estimated. The GHG emissions associated with implementation of the Project were estimated using industry standard and accepted software tools, techniques, and emissions factors, as described for construction and operation under Section 3.1.3. Estimation of emissions is for informational purposes only, for comparison with existing environmental conditions. The significance of the Project's GHG impacts is based on the Project's compliance with local and statewide GHG reduction regulations and requirements. At the local level, guidance on reduction strategies for GHG emissions has been provided through the County of Los Angeles 2045 Climate Action Plan (2045 CAP), and at the state level, through the CARB Scoping Plans.

The Los Angeles County 2045 CAP was adopted in June 2024. The 2045 CAP builds on previous climate action work from the Unincorporated Los Angeles County Community Climate Action Plan 2020 (2020 CCAP), adopted in October 2015 as a subcomponent of the Air Quality Element of the Los Angeles County General Plan (County of Los Angeles 2015). The 2045 CAP is an update to the 2020 CCAP, and it sets new GHG emissions reduction targets beyond the 2020 timeframe that are consistent with state goals, including AB 32, Senate Bill (SB) 32, and Executive Order (EO) B-30-15 (County of Los Angeles 2024). The 2045 CAP includes 25 measures to reduce GHG emissions within the unincorporated portion of Los Angeles County. Those measures are grouped into five strategy areas: Energy Supply; Transportation; Building Energy and Water; Waste; and Agriculture, Forestry and Other Land Use. The 2045 CAP constitutes a qualified GHG emissions reduction plan under CEQA.

Statewide, the Scoping Plan (approved by CARB in 2008 and updated in 2014, 2017, and 2022) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[7] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others.

The Project's potential to conflict with the 2045 CAP and state plans adopted by CARB are used to evaluate the significance of the Project's potential GHG emissions.

[7] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

3.1.3.1.2 Approach and Methodology

Construction Emissions

Emissions from the construction phase of Project components were estimated using CalEEMod Version 2022.1.1.29.[8] Per preliminary Project details, it is conservatively assumed that construction of the Project will begin in March 2027 and will last approximately 20 months, followed by a 6-month testing and commissioning phase, ending in April 2029. The Project is assumed to have a 40-year lifespan, and at the end of operation in 2069 it will be decommissioned. However, the EMFAC and OFFROAD models in CalEEMod only have emission factors through 2050. As such, the year 2050 was assumed for estimating emissions from the 12-month decommissioning phase. Detailed scheduling assumptions with overlapping phases are provided in Appendix 3.1A, Air Quality and Greenhouse Gas Emissions Modeling and Calculations. The analysis contained herein is based on the following schedule assumptions:

- Demolition – 2 weeks
- Site Preparation – 1.5 months
- Substation Site Preparation – 2 weeks
- Grading – 4 months
- Substation Site Grading – 1 month
- Paving – 1.5 months
- Battery/Container Installation – 12 months
- Substation Installation – 8 months
- Gen-Tie Foundation and Tower Erection – 4 months
- Gen-Tie Stringing and Pulling – 1 month
- SCE Interconnection Facility Upgrades – 6 months
- Commissioning – 6 months
- Decommissioning – 12 months

The construction schedule has been developed based on available information provided by the Project applicant, typical construction practices, and CalEEMod default assumptions. Construction phasing is intended to represent a schedule of anticipated activities for use in estimating potential Project-generated construction emissions. Table 3.1-4 provides the construction equipment mix and vehicle trips assumed for estimating Project-generated construction emissions. Additional details regarding construction assumptions are provided in the modeling output in Appendix 3.1A.

[8] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform to calculate construction and operational emissions from land use development projects. The model was developed for the California Air Pollution Control Officers Association in collaboration with multiple air districts across the state. Numerous lead agencies in the state, including AVAQMD, use CalEEMod to estimate GHG emissions in accordance with CEQA Guidelines Section 15064.4(a)(1).

Table 3.1-4. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips				Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Average Daily On-Site Truck Trips	Equipment Type	Quantity	Usage Hours
Demolition	10	4	6	0	Rubber-tired dozers	1	10
					Concrete/ industrial saws	1	10
					Tractors/loaders/ backhoes	2	10
Site Preparation	242	12	24	44	Tractors/loaders/ backhoes	2	10
					Excavator	2	10
					Rubber-tired dozer	2	10
Substation Site Preparation	242	12	100	44	Tractors/loaders/ backhoes	1	10
					Excavator	1	10
					Rubber-tired dozer	1	10
Grading	242	12	524	44	Graders	2	10
					Tractors/loaders/ backhoes	2	10
					Rollers	2	10
Substation Grading	242	12	486	44	Graders	1	10
					Tractors/loaders/ backhoes	1	10
					Rollers	1	10
Paving	16	4	0	0	Pavers	2	10
					Paving equipment	2	10
					Rollers	2	10
Battery/ Container Installation	242	12	20	44	Air compressors	1	10
					Cranes	1	10
					Forklift	1	10
					Tractors/loaders/ backhoes	1	10
Substation Installation	121	12	4	44	Aerial lifts	1	10
					Air compressors	1	10
					Bore/drill rigs	1	10
					Forklifts	1	10
					Trenchers	1	10
Gen-Tie Foundation and Tower Erection	121	12	0	44	Air compressors	1	10
					Cranes	1	10
					Forklifts	1	10
					Pumps	1	10

Table 3.1-4. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips				Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Average Daily On-Site Truck Trips	Equipment Type	Quantity	Usage Hours
					Welders	1	10
Gen-Tie Stringing and Pulling	121	12	0	44	Aerial lift	1	10
					Tractors/loaders/ backhoes	1	10
SCE Interconnection Facility Upgrades	121	12	0	44	Air compressors	4	10
					Cranes	2	10
					Excavators	2	10
					Rough-terrain forklifts	2	10
					Skid-steer loaders	2	10
					Tractors/loaders/ backhoes	2	10
					Trenchers	1	10
Commissioning	242	12	0	44	N/A	N/A	N/A
Decommissioning	242	12	20	44	Concrete/ industrial saws	2	10
					Cranes	2	10
					Rubber-tired dozers	2	10
					Tractors/loaders/ backhoes	2	10

Note: N/A = not applicable.

The equipment mix assumptions were based on CalEEMod default assumptions based on proposed land use and is meant to represent a reasonably conservative estimate of construction activity. For the analysis, it is generally assumed that heavy construction equipment will be operating at the site for approximately 10 hours per day, 5 days per week. The number of worker trips, vendor truck trips, haul truck trips, and on-site truck trips were provided by the applicant. Default assumptions provided in CalEEMod were used to determine the vendor truck trip one-way distance of 10.2 miles. In the Battery/Container Installation phase and the Decommissioning phase, the haul truck trip one-way distance was assumed to be 81 miles, which is the approximate distance from the Project site to the Port of Long Beach. All other worker and haul truck trips were conservatively assumed to have a 75-mile one-way distance. On-site truck trips were assumed to have a 0.25-mile one-way distance (SJVAPCD 2018).

Based on Project-specific information, 449,685 cubic yards of net material import is expected from the construction of the Project during the Grading and Substation Grading phases. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions.

During the Commissioning phase, eight (8) 1,006-horsepower (hp) diesel generators will be used to power the facility. The commissioning generators will operate 8 hours per day for up to 60 days during the approximately

6-month Commissioning phase. Current CARB and EPA Tier 2 engine standards were assumed. For additional details, see Appendix 3.1A.

A helicopter may be used in the Gen-Tie Stringing and Pulling phase where the gen-tie crosses the railroad. For this portion of the stringing and pulling work it is assumed that a MD600 helicopter will be used for up to 3 10-hour days consisting of 1 day for mobilization, 1 day for stringing and pulling, and 1 day for demobilization. Helicopter emission factors from the Guidance on the Determination of Helicopter Emissions (FOCA 2015) were used in a spreadsheet model, assuming an 808 hp MD 600N helicopter will be representative for the Project per input from the applicant. For additional details, see Appendix 3.1A.

Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), haul trucks, and worker vehicles, helicopters during Gen-Tie Stringing and Pulling, and diesel generators during Commissioning will result in emissions of VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement will also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of AVAQMD's Rule 1113 (Architectural Coatings). For additional details see Appendix 3.1A.

Operation

Operation of the proposed Project will generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, energy sources, mobile sources, off-road sources, and stationary sources, which are discussed below. Emissions from these sources were estimated based on CalEEMod default assumptions for operations of the proposed Project land uses. It was assumed that the Project will be operational following the completion of construction, which will occur in 2029.

Area Sources

The area source category calculates direct sources of air pollutant emissions located at the Project site, including consumer product use, architectural coatings, and landscape maintenance equipment. CalEEMod defaults were used to estimate emissions from area sources during operation of the Project.

Consumer products are various solvents used in non-industrial applications that emit VOCs during their product use, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Consumer product VOC emissions are estimated in CalEEMod based on the floor area of buildings and on the default factor of pounds of VOC per building square foot per day. The CalEEMod default utilization rates and emission factors were assumed.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such paints and primers using during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of nonresidential surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emission factor is based on the VOC content of the surface coatings, and AVAQMD's Rule 1113 (Architectural Coatings) governs the VOC content for interior and exterior coatings. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the nonresidential surface area for painting equals 2.0 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2022).

Landscape maintenance includes fuel combustion emissions from equipment such as lawnmowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers, as well as air compressors, generators, and pumps. The emissions associated with landscape equipment use were estimated using CalEEMod. The emission factors are multiplied by the number of summer days that represent the number of operational days.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use will contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site. The Project does not include the use of natural gas during operation. Therefore, no emissions associated with energy sources were quantified for the air quality analysis.

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. GHG emissions associated with the electricity usage associated with the O&M buildings and lighting for the parking lot were calculated by CalEEMod using default parameters. The estimated annual electricity consumption associated with the Project was estimated at 668,427,520 kilowatt-hours per year, with the majority (approximately 668,378,000 kilowatt-hours per year) related to round-trip efficiency and transmission losses.

The CalEEMod default energy intensity factor (CO_2, CH_4, and N_2O mass emissions per kilowatt-hour) for SCE was applied, which is based on the projected value for SCE's energy mix in 2029 (CAPCOA 2022). As explained in Section 3.1.5.2.2, SB 100 and SB 1020 call for further development of renewable energy, with targets of 52% by December 31, 2027; 60% by December 31, 2030; 90% by December 31, 2035; 95% by December 31, 2040; and 100% by December 31, 2045. As such, GHG emissions associated with Project electricity demand will continue to decrease over time.

Mobile Sources

Following the completion of construction activities, the Project will generate criteria pollutant emissions from mobile sources (vehicular traffic) as a result of the periodic maintenance of the Project. The Project was assumed to require 16 employees visiting the BESS facility 5 days a week for maintenance. On Saturday and Sunday there will be four (4) employees visiting the BESS facility.

CalEEMod was used to estimate emissions from proposed vehicular sources (refer to Appendix 3.1A). CalEEMod default data, including temperature, trip characteristics, variable start information, and emissions factors, were conservatively used for the model inputs. The estimated trip lengths and trip modes were based on information provided by the applicant. Project-related traffic was assumed to include a mixture of vehicles in accordance with the associated use, as modeled in CalEEMod, which is based on the CARB EMFAC2021 model. Emission factors representing the vehicle mix and emissions for 2029 were used to estimate emissions associated with vehicular sources.

Off-Road Sources

During irregular maintenance, the Project may require the movement or replacement of battery enclosures every 2 to 3 years over the lifetime of the Project. As such, the use of one (1) crane and one (1) forklift were assumed to assist the lifting and movement of the BESS containers. CalEEMod was used to estimate criteria air pollutant emissions of the crane and forklift assuming 1 hour of operation on 1 day every year.

Stationary Sources

The Project will include installation of three emergency diesel generators (one [1] rated at 323 hp and two [2] rated at 744 hp) for emergency safety systems during a power outage and fire support. A spreadsheet model was used to estimate emissions of the generators, assuming 2 hours per day and 50 hours per year, pursuant to CARB's Air Toxic Control Measure for Stationary Compression Ignition Engines (17 CCR 93115), at 100% load for maintenance and testing. Current CARB and EPA Tier 4 engine standards were assumed. See Appendix 3.1C, Representative Tier 4 Emergency Generator Specifications Sheets, for details of the generator specifications.

Water and Wastewater

Water consumption estimates for the O&M buildings for indoor water use were based on CalEEMod default values. Outdoor water use was assumed to be 1,540,000 gallons per year based on the landscaping plan prepared for the Project. Electricity use for water supply is based on the electric pump rating, pump flow rate, electricity intensity factors from CalEEMod for the County.

Solid Waste

The Project will generate solid waste from the on-site employees and therefore will result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste.

Refrigerants

Refrigerants are substances used in equipment for air conditioning and refrigeration. Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains) and an operational refrigerant leak rate, and each refrigerant has a GWP that is specific to that refrigerant.

During operations and maintenance, one of the sources of GHG emissions could potentially be fugitive SF_6 gas emissions from equipment installed at the proposed collector substation. SF_6 has a GWP of 24,300 using CO_2 at a reference value of 1 (IPCC 2024). The substation will include seven breakers that will contain SF_6 gas. It is estimated that the Project will maintain a total of 1,160 pounds of SF_6 gas at the substation. Although leakage is unlikely, for the purposes of the Project's emissions inventory it was assumed that the breakers will have a maximum annual leak rate of 0.5% in accordance with the Institute of Electrical and Electronics Engineers C37.122-2021, Standard for High-Voltage Gas-Insulated Substations Rated Above 52 kV (IEEE 2018). Emissions from SF_6 gas are included as part of refrigerant source emissions.

In addition, during operations and maintenance, one of the sources of GHG emissions could potentially be fugitive emissions from batteries containing difluoromethane (R-32) gas. R-32 has a GWP of 771 using CO_2 at a reference value of 1 (IPCC 2024). Using the representative BESS enclosure for analysis, the BESS yards will include 2,035

Power Titan II batteries that will contain R-32 gas. It is estimated that the Project will maintain a total of 16,151 pounds of R-32 gas. Although leakage is unlikely, for the purposes of the Project's emissions inventory it was conservatively assumed that the batteries will have a maximum annual leak rate of 0.5%. Emissions from R-32 gas are included as part of refrigerant source emissions. For additional details see Appendix 3.1A.

Ambient Air Quality Analyses

To evaluate the potential for localized criteria air pollutant emissions from Project construction or operations to exceed respective NAAQS and/or CAAQS, ambient air quality analyses (AAQA) were performed using a dispersion model. Air dispersion models calculate the atmospheric transport and fate of pollutants from the emission source. The models calculate the ground-level concentration (GLC) of selected pollutants at specific downwind points, such as residential receptors. The transformation (fate) of an airborne pollutant, its movement with the prevailing winds (transport), its crosswind and vertical movement due to atmospheric turbulence (dispersion), and its removal due to dry and wet deposition are influenced by the pollutant's physical and chemical properties and by meteorological and environmental conditions. Factors such as distance from the source to the receptor, meteorological conditions, intervening land use and terrain, pollutant release characteristics, and background pollutant concentrations affect the predicted air concentration of an air pollutant. Air dispersion models have the capability to take all of these factors into consideration when calculating downwind GLCs of pollutants. The dispersion modeling for the Project was performed using the American Meteorological Society/EPA Regulatory Model (AERMOD), which is the model AVAQMD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain.

Because AVAQMD has not published guidance to conduct an AAQA, the San Joaquin Valley Air Pollution Control District's District Policy APR 1925 – Policy for District Rule 2201 AAQA Modeling (SJVAPCD 2024) was followed. For both Project construction and operations, a Level 1 analysis was performed using AERMOD for each averaging period where the maximum concentration for each source and receptor combination was generated to produce worst-case concentrations for each directly emitted criteria pollutant of concern (CO, NO_2, PM_{10}, $PM_{2.5}$, and SO_2), without respect to time of occurrence.

In the Level 1 analysis, all criteria pollutants were modeled together, with a normalized (i.e., unit) emission rate of 1 gram per second for each source. The use of a normalized emission rate enabled the modeling run outputs to be used for multiple pollutant analyses. For construction, as the maximum daily emissions for some pollutants were generated by on-site equipment and trucks and maximum daily emissions for other pollutants by generator usage during commissioning, and these phases will not overlap, separate source groups were specified in AERMOD for these sources. On-site equipment and vehicles were modeled as line volume sources, whereas the generators used during commissioning were modeled as point sources. Notably, the trip length for on-road vehicles were reduced to 0.25 miles to account for localized emissions only. For operations, the unit emission rates for the testing and maintenance of the three (3) emergency generators were normalized across the generator point sources. The Level 1 procedure is described as follows:

- For Step 1 of the AAQA analysis, the maximum background concentration for the monitoring stations closest to the Project site for each pollutant and averaging period combination (i.e., 1-hour, 3-hour, 8-hour, 24-hour, and PERIOD) was added to the corresponding maximum GLC (Project impact). The sum of these values was then compared to the corresponding CAAQS and NAAQS. If the Project impact did not cause an exceedance of an ambient air quality standard (AAQS), then the analysis was complete for that source/

receptor/pollutant combination because no exceedance of an AAQS will occur. If the Project impact caused an exceedance of an AAQS, then the analysis proceeded to Step 2.

- Step 2 was similar to Step 1 with one major difference: If the background concentration plus GLC exceeds an AAQS, including instances where the background concentration alone exceeds an AAQS, the maximum GLC of each pollutant and averaging period combination will be compared to its corresponding significant impact level (SIL) as established by the EPA, where a value exceeding the SIL is considered an indicator that the GLC represents a substantial contribution to an exceedance of an AAQS. If the maximum GLC did not exceed the corresponding SIL, then the analysis was complete for that source/receptor/pollutant combination because the emissions will not be considered to contribute to an exceedance of an AAQS, and no further action was required.

Pollutants that are not screened out using a Level 1 AAQA (either in Step 1 or Step 2, as described above) proceed to a refined Level 2 AAQA. A Level 2 AAQA analysis is similar to a Level 1 analysis, with several differences. Unlike a Level 1 analysis, pollutants in a Level 2 analysis are not modeled together. Instead, each pollutant is modeled separately in AERMOD using its estimated emission rates rather than normalized emission rates. For a Level 2 analysis, additional refinements are required for NO_2 and $PM_{2.5}$, which are detailed in the Santa Barbara County Air Pollution Control District's Modeling Guidelines for Air Quality Impact Assessments (SBCAPCD 2025a), as follows:

- For NO_2 modeling, the Tier 2 Ambient Ratio Method Version 2 (ARM2) to predict NO_2/NO_x conversion ratios was used. In addition, to meet the 1-hour NO_2 NAAQS, the background concentration is based on the 3-year average of the annual 98th percentile, which is summed with the 8th Highest High (98th percentile) of the maximum daily 1-hour NO_2 from the Project and compared to the 1-hour NAAQS.
- For $PM_{2.5}$ modeling, to meet the 24-hour NAAQS for $PM_{2.5}$, the background concentration is based on the 3-year average of the annual 98th percentile, which is summed with the Project's 8th Highest High (98th percentile) of the 24-hour results averaged over 5 years (assuming a 5-year meteorological data set is used) and compared to the 24-hour NAAQS.

As with the Level 1 AAQA, if the background concentration plus GLC exceeds an AAQS, the maximum GLC of each pollutant will then be compared to its corresponding SIL.

The Level 1 and Level 2 AAQA principal parameters of this modeling are presented in Table 3.1-5.

Table 3.1-5. AERMOD Principal Parameters – AAQA

Parameter	Details
Dispersion Model	The air dispersion model used was AERMOD Version 24142, with the Lakes Environmental Software implementation/user interface, AERMOD View, Version 13.0.0.
Meteorological Data	The latest 5-year meteorological data (2016–2020) for the Palmdale Station (KPMD) were obtained from CARB and used in the analysis as the most representative data set based on proximity and wind direction. The input data was also conservative, based on a test run that compared maximum concentrations using the Palmdale Station to the concentrations using meteorological data from the Santa Clarita Station (the other station in general proximity to the Project site).
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. Based on the land use procedure from 4.4.1 of the OEHHA Guidance Manual, the rural dispersion was appropriate for the Project site (OEHHA 2015).

Table 3.1-5. AERMOD Principal Parameters – AAQA

Parameter	Details
Terrain Characteristics and Elevation Data	Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the U.S. Geological Survey's National Elevation Dataset format with an approximately 1 arc-second resolution.
Emission Sources and Release Parameters	The following release parameters were input based on the best information available at the time of analysis. **Construction** ▪ Off-road equipment and vehicles were modeled as a line of adjacent volume sources across the Project site with a release height of 5 meters, a plume height of 10 meters, and plume width of 10 meters (SCAQMD 2008). ▪ The 8 1,006 hp diesel generators were modeled as point sources with a vertical stack height of 3.7 meters, inside stack diameter of 0.2 meters, gas exhaust temperature of 764 Kelvin, and gas exhaust velocity of 57.8 meters per second (SBCAPCD 2025b). **Operations** ▪ The diesel generators were modeled as point sources with release parameters based on the specification sheets and default diesel-fired internal combustion stack parameters (SBCAPCD 2025b), if generator-specific information was not available. The 323 hp generator was modeled with a vertical stack height of 3.0 meters, inside stack diameter of 0.13 meters, gas exhaust temperature of 780 Kelvin, and gas exhaust velocity of 63.9 meters per second. Each 744 hp generator was modeled with a vertical stack height of 3.7 meters, inside stack diameter of 0.2 meters, gas exhaust temperature of 719.82 Kelvin, and gas exhaust velocity of 14.05 meters per second.
Receptors	For both construction and operations, a telescoping grid of receptors was generated with the following spacing to evaluate potential air pollutant impacts within a 6-mile radius of the Project: ▪ 25-meter spacing on the facility boundary; ▪ 25-meter spacing from the facility boundary out to 100 meters; ▪ 50-meter spacing from 100 meters to 250 meters; ▪ 100-meter spacing from 250 meters to 500 meters; ▪ 250-meter spacing from 500 meters to 1,000 meters; ▪ 500-meter spacing from 1,000 meters to 2,000 meters; and ▪ 1,500-meter spacing from 2,000 meters to 8,000 meters.

Sources: OEHHA 2015; SBCAPCD 2025b; SCAQMD 2008.
Notes: AERMOD = American Meteorological Society/EPA Regulatory Model; AAQA = Ambient Air Quality Analysis; CARB = California Air Resources Board; OEHHA = Office of Environmental Health Hazard Assessment; hp = horsepower.
See Appendix 3.1B for model outputs and parameters.

3.1.3.2 CEQA Appendix G Assessment Criteria

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

Less than Significant with Mitigation. AVAQMD develops and administers air quality plans to outline air pollution control programs for attaining all CAAQS and NAAQS. Currently, the most recent approved AVAQMD air quality plan

is the AVAQMD Federal 70 ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area) (AVAQMD 2023; AVAQMD Ozone Attainment Plan). The AVAQMD Ozone Attainment Plan was developed to address the attainment of the 2015 8-hour O_3 NAAQS (70 parts per billion [ppb]). The AVAQMD Ozone Attainment Plan provides actions, strategies, and steps needed to reduce air pollutant emissions and meet the O_3 standard by 2033.

The purpose of a consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it will interfere with the region's ability to comply with federal and state air quality standards. A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable AVAQMD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Zoning changes, specific plans, general plan amendments, and similar land use plan changes that do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled (VMT) are also deemed to comply with the applicable air quality plan (AVAQMD 2016).

AVAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the Southern California Association of Governments (SCAG) for its 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy, also known as Connect SoCal 2024 (SCAG 2024). This document, which is based on general plans for cities and counties within SCAG's jurisdiction, is used by AVAQMD to develop the air quality plan emissions inventory (AVAQMD 2023).[9] Connect SoCal and the associated Regional Growth Forecast are generally consistent with the local plans; therefore, the AVAQMD air quality plan is generally consistent with local government plans.

The Project will be required to comply with all applicable AVAQMD rules and regulations, including, but not limited to Rules 401 (Visibile Emissions), 402 (Nuisance), and 403 (Fugitive Dust). The Project will not require a General Plan amendment or zoning designation change within the Project area. Additionally, because the Project does not include new commercial space or residences, no increases to population or housing are anticipated as part of the Project. The Project will result in a small increase in employment in the Project area (16 employees). However, this increase in employees represents a negligible increase in employment compared to the SCAG forecast for the unincorporated portion of Los Angeles County, which estimates an increase in employment of 57,500 jobs between 2019 and 2050. As such, because the proposed Project is not anticipated to result in growth that will conflict with projections, it will not conflict with or exceed the assumptions in AVAQMD's air quality management and attainment plans.

Furthermore, as discussed below, construction of the Project will generate criteria air pollutant emissions that will have the potential to exceed AVAQMD mass-emission thresholds, and the Project's localized emissions will have the potential to exceed the applicable NAAQS thresholds prior to mitigation. Therefore, the Project will potentially increase the frequency or severity of a violation in the federal or state ambient air quality standard. The impact will be potentially significant.

[9] Information necessary to produce the emissions inventory for the MDAB is obtained from AVAQMD and other governmental agencies, including CARB, California Department of Transportation (Caltrans), and SCAG. Each of these agencies is responsible for collecting data (e.g., industry growth factors, socioeconomic projections, travel activity levels, emission factors, emission speciation profile, and emissions) and developing methodologies (e.g., model and demographic forecast improvements) required to generate a comprehensive emissions inventory. SCAG incorporates these data into its Travel Demand Model for estimating/ projecting vehicle miles traveled and driving speeds.

However, after implementation of **Mitigation Measure (MM) AQ-1 through MM-AQ-3** (refer to Section 3.1.4 for all air quality mitigation measures), the Project will not exceed the AVAQMD mass-emission thresholds during construction or operations, and the Project's localized emissions will not exceed the applicable NAAQS thresholds. As such, the Project will not have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality standard, and the Project will not conflict with or obstruct implementation of the applicable air quality plan with implementation of mitigation. The health effects of criteria air pollutants are discussed further in Section 3.1.3.2.2. The impact will be **less than significant with mitigation**.

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

Less than Significant with Mitigation. Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and AVAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions will have a cumulatively significant impact on air quality.

Construction and Decommissioning Emissions

Construction of the Project will result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, commissioning generators, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, worker vehicles, and helicopter). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Construction of the Project will generate criteria air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, commissioning generators, helicopter emissions, architectural coatings, and asphalt pavement application. Construction of the Project will also result in GHG emissions primarily associated with use of off-road construction equipment, on-road truck and worker vehicle trips, commissioning generators, and helicopter emissions.

Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Internal combustion engines used by construction equipment, haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles will result in emissions of VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement will also produce VOC emissions.

As discussed in Section 3.1.3.1.2, Approach and Methodology, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized in Table 3.1-6. Detailed construction model outputs are presented in Appendix 3.1A.

Table 3.1-6. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
2027 (Construction)	6.62	127.55	127.90	0.92	69.51	17.43
2028 (Construction)	22.27	91.46	268.68	0.17	36.54	9.45
2029 (Construction)	1.75	4.37	71.24	<0.01	12.94	3.04
2069 (Decommissioning)	2.71	18.92	54.02	0.11	14.88	3.82
Winter						
2027 (Construction)	6.11	50.99	94.60	0.12	38.17	9.15
2028 (Construction)	38.54	519.35	419.49	0.66	44.46	23.20
2029 (Construction)	1.64	4.85	45.26	<0.01	12.94	3.04
2069 (Decommissioning)	2.69	19.21	42.59	0.11	14.88	3.82
Maximum Daily Emissions	**38.54**	**519.35**	**419.49**	**0.92**	**69.51**	**23.20**
AVAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**No**	**No**

Source: Appendix 3.1A.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; AVAQMD= Antelope Valley Air Quality Management District; <0.01 = value is less than 0.005.

As depicted in Table 3.1-6, emissions resulting from the Project construction will exceed criteria pollutant thresholds established by AVAQMD for NO_x emissions. This impact will be **potentially significant** without mitigation.

Mitigation measures **MM-AQ-1 through MM-AQ-3** will be implemented to reduce Project-generated construction emissions. **MM-AQ-1** (Construction Equipment Emission Minimization) requires the use of 50 hp or greater equipment to have Tier 4 Final compliant engines, which are the cleanest engines currently available. **MM-AQ-2** (Commissioning Generators Emission Minimization) also requires all diesel generators used during commissioning to be Tier 4 Final. Finally, **MM-AQ-3** (Construction Dust Control Plan) specifies fugitive dust controls including, but not limited to, watering exposed areas, the application of chemical dust suppressants, watering active demolition sites, and limiting vehicle speeds on unpaved roads.

The effectiveness of **MM-AQ-1 through MM-AQ-3** is quantified in the mitigated emissions estimate in Table 3.1-7. Detailed construction model outputs are presented in Appendix 3.1A.

Table 3.1-7. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
2027 (Construction)	5.33	114.25	129.79	0.92	53.35	15.31
2028 (Construction)	20.16	71.27	280.04	0.17	35.72	8.71
2029 (Construction)	1.75	4.37	71.24	<0.01	12.94	3.04

Table 3.1-7. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2069 (Decommissioning)	1.39	11.63	70.89	0.11	14.65	3.63
Winter						
2027 (Construction)	2.75	18.88	94.56	0.12	21.07	6.31
2028 (Construction)	20.26	88.58	428.51	0.66	30.33	9.14
2029 (Construction)	1.64	4.85	45.26	<0.01	12.94	3.04
2069 (Decommissioning)	1.37	11.91	59.46	0.11	14.65	3.63
Maximum Daily Emissions	**20.26**	**114.25**	**428.51**	**0.92**	**53.35**	**15.31**
AVAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix 3.1A.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; AVAQMD = Antelope Valley Air Quality Management District; <0.01 = value is less than 0.005.

After implementation of **MM-AQ-1 through MM-AQ-3**, regional construction emissions will not exceed the applicable AVAQMD thresholds of significance for any criteria pollutant. Therefore, with the incorporation of mitigation, short-term impacts associated with a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment will be **less than significant with mitigation**.

Construction Ambient Air Quality Analysis

Modeled on-site emission rates for criteria pollutants were determined for construction of the Project. Notably, O_3 is a photochemical oxidation product of NO_x and VOC emissions that is not evaluated in a source impact AAQA because it is not quantifiably present in combustion exhaust gases (i.e., not directly emitted). Fugitive dust was included in the construction AAQA. Table 3.1-8 summarizes the results of the Level 1 AAQA for unmitigated construction, which is fully detailed in Appendix 3.1B. Background ambient air quality data and AERMOD outputs are also contained in Appendix 3.1B.

Table 3.1-8. Level 1 Construction Ambient Air Quality Assessment Results – Unmitigated

Step 1 – Ambient Air Quality Standard Basis[a]				
		AAQS	Maximum Concentration: Project + Background Levels	
Impact Parameter	Applicable Standard	µg/m³	µg/m³	Exceed AAQS?
1-hour CO	State	22,900	2,380.40	No
	Federal	40,100	2,380.40	No
8-hour CO	State	10,300	1,478.09	No
	Federal	10,300	1,478.09	No
1-hour NO_2	State	339	1,152.06	**Yes (Step 2)**

Table 3.1-8. Level 1 Construction Ambient Air Quality Assessment Results – Unmitigated

Step 1 – Ambient Air Quality Standard Basis[a]				
		AAQS	Maximum Concentration: Project + Background Levels	
Impact Parameter	Applicable Standard	µg/m³	µg/m³	Exceed AAQS?
Annual NO_2	Federal	188	1,151.91	**Yes (Step 2)**
	State	57	50.24	No
	Federal	100	50.13	No
1-hour SO_2	State	655	21.62	No
	Federal	196	21.57	No
3-hour SO_2	Federal	1,300	20.93	No
24-Hour SO_2	State	105	6.28	No
	Federal	367	6.27	No
Annual SO_2	Federal	79	1.06	No
24-hour PM_{10}	State	50	147.04	**Yes (Step 2)**
	Federal	150	439.94	**Yes (Step 2)**
Annual PM_{10}	State	20	21.24	**Yes (Step 2)**
24-hour $PM_{2.5}$	Federal	35	45.28	**Yes (Step 2)**
Annual $PM_{2.5}$	State	12	9.41	No
	Federal	9	9.41	**Yes (Step 2)**

Step 2 – EPA SIL Basis[a]			
	Class II SILs	Maximum Project Contribution	
Impact Parameter	µg/m³	µg/m³	Exceed SIL?
1-hour NO_2	7.5	1,065.43	**Yes**
24-hour PM_{10}	5	28.74	**Yes**
Annual PM_{10}	1	3.94	**Yes**
24-hour $PM_{2.5}$	1.2	9.58	**Yes**
Annual $PM_{2.5}$	0.13	1.31	**Yes**

Source: Appendix 3.1B.
Notes: AAQS = Ambient Air Quality Standard; CO = carbon monoxide; EPA = U.S. Environmental Protection Agency; NO_2 = nitrogen dioxide; PM_{10} = particulate matter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; SIL = significant impact level; SO_2 = sulfur dioxide.
[a] Step 1: the AAQS basis compares the background concentrations plus Project contribution to the state and federal AAQS to determine if there will be an exceedance of the respective standard. For 24-hour PM_{10} and 24-hour $PM_{2.5}$, background concentrations already exceed the applicable AAQS, so Step 2—the SIL basis—compares the Project contributions to levels determined by the EPA to cause or contribute to ambient air quality exceedances and impacts.

Steps 1 and 2 of the Level 1 AAQA show that unmitigated criteria pollutant emissions from construction of the Project will potentially contribute to a violation for the 1-hour NO_2 CAAQS and NAAQS, 24-hour PM_{10} CAAQS and NAAQS, annual PM_{10} CAAQS, 24-hour $PM_{2.5}$ NAAQS, and annual $PM_{2.5}$ NAAQS. This impact will be **potentially significant** without mitigation.

As discussed above, **MM-AQ-1 through MM-AQ-3** will be required to reduce construction criteria air pollutant emissions of exhaust and fugitive dust to the extent feasible. Table 3.1-9 summarizes the results of the Level 1 AAQA for the mitigated construction scenario. Complete details of the AAQA are included in Appendix 3.1B.

Table 3.1-9. Level 1 Construction Ambient Air Quality Assessment Results – Mitigated

Step 1 – Ambient Air Quality Standard Basis[a]				
		AAQS	Maximum Concentration: Project + Background Levels	
Impact Parameter	Applicable Standard	µg/m³	µg/m³	Exceed AAQS?
1-hour CO	State	22,900	2,380.40	No
	Federal	40,100	2,380.40	No
8-hour CO	State	10,300	1,478.09	No
	Federal	10,300	1,478.09	No
1-hour NO_2	State	339	207.19	No
	Federal	188	207.04	**Yes (Step 2)**
Annual NO_2	State	57	19.16	No
	Federal	100	19.06	No
1-hour SO_2	State	655	21.62	No
	Federal	196	21.57	No
3-hour SO_2	Federal	1,300	20.93	No
24-Hour SO_2	State	105	6.28	No
	Federal	367	6.27	No
Annual SO_2	Federal	79	1.06	No
24-hour PM_{10}	State	50	122.82	**Yes (Step 2)**
	Federal	150	415.72	**Yes (Step 2)**
Annual PM_{10}	State	20	17.92	No
24-hour $PM_{2.5}$	Federal	35	37.76	**Yes (Step 2)**
Annual $PM_{2.5}$	State	12	8.38	No
	Federal	9	8.38	No

Step 2 – EPA SIL Basis[a]			
	Class II SILs	Maximum Project Contribution	
Impact Parameter	µg/m³	µg/m³	Exceed SIL?
1-hour NO_2	7.5	120.56	**Yes**
24-hour PM_{10}	5	4.52	No
24-hour $PM_{2.5}$	1.2	2.06	**Yes**

Source: Appendix 3.1B.
Notes: AAQS = Ambient Air Quality Standard; CO = carbon monoxide; EPA = U.S. Environmental Protection Agency; NO_2 = nitrogen dioxide; PM_{10} = particulate matter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; SIL = significant impact level; SO_2 = sulfur dioxide.
Emissions accounted for implementation of **MM-AQ-1 through MM-AQ-3**.

[a] Step 1: the AAQS basis compares the background concentrations plus Project contribution to the state and federal AAQS to determine if there will be an exceedance of the respective standard. For 24-hour PM_{10} and 24-hour $PM_{2.5}$, background

concentrations already exceed the applicable AAQS, so Step 2—the SIL basis—compares the Project contributions to levels determined by the EPA to cause or contribute to ambient air quality exceedances and impacts.

Steps 1 and 2 of the Level 1 AAQA show that mitigated criteria pollutant emissions from construction of the Project will potentially contribute to a violation of the 1-hour NO2 NAAQS and 24-hour $PM_{2.5}$ NAAQS. Since the mitigated emissions still exceed the NAAQS using the Level 1 AAQA, these pollutants were individually evaluated in the refined Level 2 AAQA, as described in Section 3.1.3.1.2. Results of the Level 2 AAQA are summarized in Table 3.1-10.

Table 3.1-10. Level 2 Construction Ambient Air Quality Assessment Results – Mitigated

Step 1 – Ambient Air Quality Standard Basis[a]				
		AAQS	Maximum Concentration: Project + Background Levels	
Impact Parameter	Applicable Standard	µg/m³	µg/m³	Exceed AAQS?
1-hour NO_2	Federal	188	94.22	No
24-hour $PM_{2.5}$	Federal	35	14.76	No

Source: Appendix 3.1B.
Notes: AAQS = Ambient Air Quality Standard; NO_2 = nitrogen dioxide; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; SIL = significant impact level.
Emissions accounted for implementation of **MM-AQ-1 through MM-AQ-3**.
[a] Step 1: the AAQS basis compares the background concentrations plus Project contribution to the state and federal AAQS to determine if there will be an exceedance of the respective standard. As both pollutants passed this step, there was no need to continue to Step 2.

As shown in Table 3.1-10, after implementation of **MM-AQ-1 through MM-AQ-3**, localized construction emissions will not exceed the applicable NAAQS thresholds for NO_2 or $PM_{2.5}$. Therefore, impacts will be **less than significant with mitigation.**

Operational Emissions

Operation of the Project will generate criteria pollutant emissions from area sources (consumer products, architectural coatings, landscaping equipment), mobile sources (vehicular traffic), off-road equipment (diesel-fueled forklift and crane), and stationary sources (diesel-fueled emergency generators). The Project does not include the use of natural gas during operation; therefore, no emissions associated with energy sources were quantified for the air quality analysis. Table 3.1-11 summarizes the unmitigated maximum daily operational emissions associated with the Project. Detailed operational model outputs are presented in Appendix 3.1A.

Table 3.1-11. Estimated Potential Maximum Daily Operational Criteria Air Pollutant Emissions – Unmitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
Mobile	0.17	0.17	1.94	<0.01	0.41	0.11
Area	0.17	0.00	0.38	<0.01	<0.01	<0.01
Energy	0.00	0.00	0.00	0.00	0.00	0.00

Table 3.1-11. Estimated Potential Maximum Daily Operational Criteria Air Pollutant Emissions – Unmitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Off-Road Equipment	0.40	3.35	4.05	0.01	0.14	0.13
Stationary	1.12	2.40	20.76	0.04	0.08	0.08
Total Daily Summer Emissions	**1.86**	**5.92**	**27.13**	**0.05**	**0.63**	**0.31**
Winter						
Mobile	0.15	0.18	1.48	<0.01	0.41	0.11
Area	0.11	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road Equipment	0.40	3.35	4.05	0.01	0.14	0.13
Stationary	1.12	2.40	20.76	0.04	0.08	0.08
Total Daily Winter Emissions	**1.78**	**5.93**	**26.28**	**0.05**	**0.63**	**0.31**
Maximum Daily Emissions	**1.86**	**5.93**	**27.13**	**0.05**	**0.63**	**0.31**
AVAQMD Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix 3.1A.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; AVAQMD = Antelope Valley Air Quality Management District; <0.01 = value is less than 0.005.

As shown in Table 3.1-11, the Project will not exceed the numerical thresholds of significance established by AVAQMD during operations. This impact will be **less than significant**.

Operational Ambient Air Quality Analysis

Modeled on-site emission rates for criteria pollutants were determined for operation of the Project, specifically the routine testing and maintenance of the diesel emergency generators. Table 3.1-12 summarizes the results of the Level 1 AAQA for unmitigated operations. The complete AAQA, background ambient air quality data, and AERMOD outputs are provided in Appendix 3.1B.

Table 3.1-12. Level 1 Operational Ambient Air Quality Assessment Results – Unmitigated

Step 1 – Ambient Air Quality Standard Basis[a]				
		AAQS	Maximum Concentration: Project + Background Levels	
Impact Parameter	Applicable Standard	µg/m³	µg/m³	Exceed AAQS?
1-hour CO	State	22,900	1,745.25	No
	Federal	40,100	1,745.25	No
8-hour CO	State	10,300	1,384.81	No
	Federal	10,300	1,384.81	No
1-hour NO_2	State	339	99.69	No

Table 3.1-12. Level 1 Operational Ambient Air Quality Assessment Results – Unmitigated

Step 1 – Ambient Air Quality Standard Basis[a]				
		AAQS	Maximum Concentration: Project + Background Levels	
Impact Parameter	Applicable Standard	µg/m³	µg/m³	Exceed AAQS?
	Federal	188	99.53	No
Annual NO_2	State	57	16.93	No
	Federal	100	16.82	No
1-hour SO_2	State	655	20.44	No
	Federal	196	20.39	No
3-hour SO_2	Federal	1,300	20.27	No
24-Hour SO_2	State	105	6.18	No
	Federal	367	6.17	No
Annual SO_2	Federal	79	1.05	No
24-hour PM_{10}	State	50	118.59	**Yes (Step 2)**
	Federal	150	411.49	**Yes (Step 2)**
Annual PM_{10}	State	20	17.36	No
24-hour $PM_{2.5}$	Federal	35	35.99	**Yes (Step 2)**
Annual $PM_{2.5}$	State	12	8.16	No
	Federal	9	8.16	No
Step 2 – EPA SIL Basis[a]				
		Class II SILs	Maximum Project Contribution	
Impact Parameter		µg/m³	µg/m³	Exceed SIL?
24-hour PM_{10}		5	4.41	No
24-hour $PM_{2.5}$		1.2	4.41	No

Source: Appendix 3.1B.
Notes: AAQS = Ambient Air Quality Standard; CO = carbon monoxide; EPA = U.S. Environmental Protection Agency; NO_2 = nitrogen dioxide; PM_{10} = particulate matter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; SIL = significant impact level; SO_2 = sulfur dioxide.
[a] Step 1: the AAQS basis compares the background concentrations plus Project contribution to the state and federal AAQS to determine if there will be an exceedance of the respective standard. For 24-hour PM_{10} and 24-hour $PM_{2.5}$, background concentrations already exceed the applicable AAQS, so Step 2—the SIL basis—compares the Project contributions to levels determined by the EPA to cause or contribute to ambient air quality exceedances and impacts.

Steps 1 and 2 of the Level 1 AAQA show that localized operational emissions associated with the periodic routine testing and maintenance of the emergency diesel generators will not exceed the applicable AAQS thresholds for any criteria air pollutants. Therefore, impacts will be **less than significant.**

3.1.3.2.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant with Mitigation. The potential impact of Project-generated air pollutant emissions to sensitive receptors has been considered. As described in Section 3.1.1.3, Sensitive Receptors, the closest sensitive receptors to the Project site are residences located immediately adjacent to the west (along Malinta Avenue), north (along

Tortuga Street and Soledad Canyon Road), and south (across Soledad Canyon Road) of the BESS facility Project site boundary. Single-family residences are also located close to the gen-tie alignments.

Carbon Monoxide Hotspots

Mobile source impacts occur on two scales of motion. Regionally, Project-related travel will add to regional trip generation and increase VMT within the local airshed and the MDAB. Locally, Project-generated traffic will be added to the roadway system near the Project site. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-Project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. However, because of continued improvement in vehicular emissions at a rate faster than the rate of increased vehicle numbers and/or congestion, the potential for CO hotspots in the MDAB is steadily decreasing.

The AVAQMD thresholds of significance for local CO emissions are the 1-hour and 8-hour CAAQS of 20 ppm and 9 ppm, respectively. By definition, these represent levels that are protective of public health. As noted previously, the MDAB is currently designated attainment for both state and national CO ambient air quality standards, and the Project area typically experiences low background CO concentrations.

As described in Section 3.1.3.1.1, Thresholds of Significance, CO concentrations at congested intersections are not anticipated to exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic will be at least over 100,000 vehicles per day at a given intersection. During construction, the peak day of construction for the Project will generate approximately 798 daily trips. All construction-related traffic will be temporary and short term and will cease upon completion of the Project. Accordingly, it is not anticipated that the Project will result in a new congested intersection or that it will substantially exacerbate conditions at existing congested intersections. Additionally, the proposed Project will not result in an increase of intersection volumes to more than 100,000 vehicles per day at any given intersection in the Project area. Therefore, a CO hotspot is not anticipated to occur, and potential Project-generated impacts associated with CO hotspots during construction will be **less than significant**.

During operations, the Project is anticipated to require an average of 16 employees per day, resulting in 32 one-way trips per day. Implementation of the Project will result in a minimal regional increase in vehicle trips and VMT. Accordingly, it is not anticipated that the Project will result in a new congested intersection or that it will substantially exacerbate conditions at existing congested intersections. Additionally, the proposed Project will not result in an increase of intersection volumes to more than 100,000 vehicles per day at any given intersection in the Project area. Therefore, a CO hotspot is not anticipated to occur, and potential Project-generated impacts associated with CO hotspots during operation will be **less than significant**.

Fugitive Dust and Valley Fever

In order to reduce fugitive dust from the Project and minimize adverse air quality impacts, the Project will employ measures that address dust in accordance with AVAQMD Rules 401, 402, and 403, which limit the amount of fugitive dust generated during construction. Specifically, Rule 403 includes requirements for a Dust Control Plan, signage, and fencing, as well as surface watering and stabilization with chemicals, gravel, and asphaltic pavement to minimize visible fugitive dust from vehicular travel, earthwork, and wind erosion. **MM-AQ-3** (Construction Dust Control Plan) goes beyond requirements of AVAQMD Rules 401, 402, and 403 and will be implemented to reduce fugitive dust generated by the Project during construction. As such, potential sensitive receptor exposure to fugitive dust emissions and will be reduced to a **less than significant level with mitigation**.

Regarding Valley Fever, compliance with AVAQMD Rules 401 and 403 is also consistent with California Department of Public Health recommendations for the implementation of dust control measures, including regular application of water during soil-disturbance activities to reduce exposure to valley fever by minimizing the potential that the fungal spores become airborne (CDPH 2013). Further, while requirements listed in AVAQMD Rules 401 and 403 are not specifically directed at valley fever impacts, these dust control strategies will further reduce the generation of potential for fugitive dust, thereby minimizing the potential for fungal spores to become airborne and the potential for sensitive receptors to be exposed to valley fever spores. In addition, regulations designed to minimize exposure to valley fever hazards are included in Title 8 of the California Code of Regulations and will be complied with during the Project's construction phase (California Department of Industrial Relations 2022). However, as discussed in Section 3.1.1.2.2, Non-Criteria Pollutants and Valley Fever, Los Angeles County is not considered a highly endemic region for valley fever and, even if spores are present at the site, construction activities may not result in increased incidence of valley fever. Propagation of valley fever is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. Valley fever spores can be released when filaments are disturbed by earthmoving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to valley fever does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000). Based on the preceding, the Project will not result in a significant impact attributable to valley fever exposure based on its geographic location and compliance with the applicable AVAQMD fugitive dust regulatory standards listed above, which will serve to minimize the release of and exposure to fungal spores. Therefore, impacts associated with valley fever exposure for sensitive receptors will be **less than significant**.

Health Effects of Criteria Air Pollutants

Construction of the Project will generate criteria air pollutant emissions that will have the potential to exceed AVAQMD mass-emission thresholds during construction, and the Project's localized emissions will have the potential to exceed the applicable NAAQS thresholds prior to mitigation. Therefore, the Project will potentially result in a significant contribution to local or regional concentrations of nonattainment pollutants and will potentially result in a significant contribution to the adverse health impacts associated with those pollutants. The impact will be **potentially significant** prior to mitigation. However, with incorporation of **MM-AQ-1 through MM-AQ-3**, the Project will not exceed the AVAQMD mass-emission thresholds during construction or operations, and the Project's localized emissions will not exceed the applicable NAAQS thresholds.

The MDAB is designated as nonattainment for O_3 for the NAAQS and CAAQS. Thus, existing O_3 levels in the MDAB are at unhealthy levels during certain periods. The health effects associated with O_3 generally relate to reduced lung function. Because the Project will not involve construction or operational activities that will result in O_3 precursor emissions (VOC or NO_x) that will exceed the AVAQMD thresholds with incorporation of mitigation, the Project is not anticipated to substantially contribute to regional O_3 concentrations and associated health impacts. Furthermore, during operations, the AVAQMD thresholds for VOC and NO_x will not be exceeded.

In addition to O_3, NO_x emissions contribute to potential exceedances of the NAAQS and CAAQS for NO_2 (because NO_2 is a constituent of NO_x). Exposure to NO_2 can cause lung irritation, bronchitis, and pneumonia, and can lower resistance to respiratory infections. As depicted in Table 3.1-7, Project construction will not exceed the AVAQMD thresholds for NO_x with incorporation of mitigation, and as depicted in Table 3.1-11, Project operations will not exceed the AVAQMD thresholds for NO_x. Furthermore, as shown in Table 3.1-10 and Table 3.1-12, localized mitigated construction and unmitigated operational emissions will not exceed the applicable NAAQS thresholds for NO_2. Thus, construction and operation of the Project are not expected to exceed the NO_2 standards or contribute to associated health effects.

CO tends to be a localized impact associated with congested intersections. CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. CO hotspots were discussed previously as a less-than-significant impact. Thus, the Project's CO emissions will not contribute to the health effects associated with this pollutant.

The MDAB is designated as nonattainment for PM_{10} under the CAAQS. Health effects associated with PM_{10} and $PM_{2.5}$ include premature death and hospitalization, primarily for worsening of respiratory disease. As shown in Tables 3.1-6 and 3.1-11, the Project will not generate emissions of PM_{10} or $PM_{2.5}$ that will exceed AVAQMD's regional thresholds during construction or operation. In addition, as shown in Table 3.1-10 and Table 3.1-12, the Project's localized mitigated construction and unmitigated operational emissions will not exceed the applicable NAAQS thresholds for PM_{10} or $PM_{2.5}$. Furthermore, the Project will apply all required dust mitigation under AVAQMD Rule 403 and **MM-AQ-3**. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the Project will not result in a significant contribution to local or regional concentrations of nonattainment pollutants and not potentially result in a significant contribution to the adverse health impacts associated with those pollutants with incorporation of mitigation. Therefore, the impact will be **less than significant with mitigation.**

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

Less than Significant. Based on available information, the Project is not anticipated to result in other emissions that have not been addressed in Sections 3.1.3.2.1 through 3.1.3.2.3. As such, this analysis focuses on the potential for the Project to generate odors.

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among members of the public and generate citizen complaints.

Odors will be generated from vehicles and/or equipment exhaust emissions during construction of the Project. Odors produced during construction will be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and asphalt pavement application. Such odors are temporary and for the types of construction activities anticipated for Project components will generally occur at magnitudes that will not affect substantial numbers of people. Odors are strongest near the source and will quickly dissipate. Therefore, impacts associated with odors during construction will be considered less than significant.

Land uses most commonly associated with odor complaints generally include agricultural uses (livestock and farming), wastewater treatment plants, food-processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The Project does not include uses that will be substantive sources of objectionable odors. The Project will also be required to comply with AVAQMD Rule 402 (Nuisance). Rule 402 provides that "[a] person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property" (AVAQMD 2002). Based on

the preceding, the potential impacts from the Project creating objectionable odors affecting a substantial number of people will be **less than significant**.

3.1.3.2.5 Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or 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. As described in Section 3.1.3.2.2, the Project's potential to conflict with applicable plans, policies, or regulations adopted by CARB and other state and local agencies for the purpose of reducing GHG emissions is used to evaluate the significance of the Project's GHG emissions.

Project Potential to Conflict with County of Los Angeles 2045 CAP

A qualitative analysis describing the Project's potential to conflict with the most applicable strategies set forth in the 2045 CAP is summarized in Table 3.1-13.

Table 3.1-13. Project Potential to Conflict with the 2045 CAP

2045 CAP Strategies	Project Potential to Conflict
Energy Supply	***No Conflict.*** The Project is a battery energy storage facility that will balance intermittent renewable generation and serve as an additional capacity resource that will enhance grid reliability, thereby increasing energy resilience in the region. In addition, the Project will provide new energy storage capacity to assist California electric utilities in meeting obligations under California's RPS Program and SB 100 and SB 1020, as well as assist the State of California in meeting its goals of decarbonizing the electricity sector and reducing statewide annual GHG emissions. The Project will not conflict with the County's ability to implement this strategy.
Transportation	***No Conflict.*** The increase in traffic during Project construction will be temporary in nature and will cease at the conclusion of construction activities. During operation, the Project will require 16 routine permanent staff on weekdays and will not generate a net increase of 110 daily vehicle trips. As such, the Project will comply with the County's Transportation Demand Management Ordinance and Transportation Impact Guidelines. The Project will not conflict with the County's ability to implement this strategy.
Building Energy and Water	***No Conflict.*** The Project will be fully electric with no natural gas infrastructure or appliances. The Project will balance intermittent renewable generation and serve as an additional capacity resource that will enhance grid reliability and support demand management and peak shaving. The Project will comply with water conservation ordinance in place and CALGreen water conservation and efficiency measures. In addition, the Project will include water-efficient landscape design that is compliant with the Department of Water Resources (DWR) 2015 Model Water Efficient Landscape Ordinance (MWELO) and drought-tolerant and native plant species only. The Project will comply with all County codes and ordinances regarding building material carbon intensity and high-GWP refrigerants and other gases. The Project will not conflict with the County's ability to implement this strategy.
Agriculture, Forestry, and Other Land Use (AFOLU)	***No Conflict.*** The Project will have minimal landscaping. However, a conceptual landscape plan was developed for the Project to meet the

Table 3.1-13. Project Potential to Conflict with the 2045 CAP

2045 CAP Strategies	Project Potential to Conflict
	appropriate County of Los Angeles Planning and Zoning Standards Code for Electrical Distribution Substations. Planting design emphasizes drought-tolerant landscaping that is compliant with the Los Angeles County Water Efficiency Standards and the State of California MWELO. The Project will not conflict with the County's ability to implement this strategy.

Source: County of Los Angeles 2024.
Notes: CAP = Climate Action Plan; RPS = Renewables Portfolio Standard; SB = Senate Bill; GHG = greenhouse gas emissions; CALGreen = California Green Building Standards; GWP = global warming potential.

As shown in Table 3.1-13, the Project will not conflict with the core strategies in the 2045 CAP. In addition, the Project will assist Los Angeles County in meeting its long-term renewable energy and energy resilience goals by improving energy grid reliability and supporting the integration of additional intermittent renewable energy sources, such as wind and solar.

Project Potential to Conflict with State Reduction Targets and CARB's Scoping Plan

The California State Legislature passed AB 32 to provide initial direction to limit California's GHG emissions to 1990 levels by 2020 and initiate the state's long-range climate objectives. Since the passage of AB 32, the state has adopted GHG emissions reduction targets for future years beyond the initial 2020 horizon year. CARB is required to develop a Scoping Plan, which provides the framework for actions to achieve the state's GHG emission targets. Although the Scoping Plan is not directly applicable to specific projects, nor is it intended to be used as the sole basis for project-level evaluations, it is the official framework for the measures and regulations that will be implemented to reduce California's GHG emissions in alignment with the adopted targets. Therefore, a project will be found to not conflict with the statutes if it meets the Scoping Plan policies and will not impede attainment of the goals therein.

For the Project, the relevant GHG emissions reduction targets include those established by SB 32 and AB 1279, which require that GHG emissions be reduced to 40% below 1990 levels by 2030, and 85% below 1990 levels by 2045, respectively. In addition, AB 1279 requires that the state achieve net zero GHG emissions by no later than 2045 and achieve and maintain net negative GHG emissions thereafter. CARB's 2017 Scoping Plan update was the first to address the state's strategy for achieving the 2030 GHG reduction target set forth in SB 32 (CARB 2017), and the most recent CARB 2022 Scoping Plan update outlines the state's plan to reduce emissions and achieve carbon neutrality by 2045 in alignment with AB 1279 and assesses the progress made toward the 2030 SB 32 target (CARB 2022). As such, given that SB 32 and AB 1279 are the relevant GHG emission targets, the 2017 and 2022 Scoping Plan updates that outline the strategy to achieve those targets are the most applicable to the Project.

The 2017 Scoping Plan included measures to promote renewable energy and energy efficiency (including the mandates of SB 350),[10] measures to increase stringency of the low-carbon fuel standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutants plan, and measures to increase stringency of SB 375 targets.[11] The 2022 Scoping Plan builds on and accelerates

[10] SB 350 expanded the Renewables Portfolio Standard program by establishing a goal that 50% of the total electricity sold to retail customers in California per year be from renewable energy sources by December 31, 2030. In addition, SB 350 included 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.

[11] Pursuant to SB 375, CARB set per capita GHG emissions reduction targets from passenger vehicles for each of the state's 18 metropolitan planning organizations.

programs currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; and displacing fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022). Many of the measures and programs included in the Scoping Plan will result in the reduction of Project-related GHG emissions with no action required at the project level, including GHG emission reductions through increased energy efficiency and renewable energy production, reduction in carbon intensity of transportation fuels (low-carbon fuel standard), and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy).

Table 3.1-14 evaluates the Project's potential to conflict with the 2017 Scoping Plan recommended actions.

Table 3.1-14. Project Potential to Conflict with 2017 Scoping Plan

Recommended Action Summary	Lead Agencies	Potential to Conflict
Implement SB 350 by 2030 ▪ Increase Renewables Portfolio Standard ▪ Establish annual targets for statewide energy efficiency ▪ Reduce GHG emissions in the electricity sector	CPUC, CEC, CARB	**No Conflict**. This action is directed towards policymakers and will not be directly applicable to the Project. Nonetheless, the Project will improve energy grid reliability and support the integration of additional intermittent renewable energy sources, such as wind and solar, reducing the need to operate natural gas power plants.
Implement Mobile Source Strategy (Cleaner Technology and Fuels) ▪ Increase zero emission and plug-in hybrid electric vehicles ▪ Increase GHG stringency on light-duty vehicles beyond Advanced Clean Cars ▪ Medium- and heavy-duty GHG Phase 2 ▪ Innovative Clean Transit ▪ Last Mile Delivery ▪ Further reduce VMT through SB 375 and regional Sustainable Communities Strategy	CARB, CalSTA, SGC, CalTrans, CEC, OPR, local agencies	**No Conflict**. These actions are part of the CARB Mobile Source Strategy that pertains to vehicle fleet standards. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets)	CARB	**No Conflict**. This action is directed toward policymakers and will not be directly applicable to the Project.
Adjust performance measures used to select and design transportation facilities by 2019	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	**No Conflict**. The action is directed toward CARB and Caltrans and the Project will not impede implementation.
Develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy-duty, road user, parking pricing, transit discounts) by 2019	CalSTA, Caltrans, CTC, OPR/SGC, CARB	**No Conflict**. This action is directed towards policymakers and will not be directly applicable to the Project.
Implement California Sustainable Freight Action Plan	CalSTA, CalEPA, CNRA, CARB, CalTrans, CEC, GoBiz	**No Conflict.** This measure will apply to all trucks accessing the Project sites, including existing trucks or new trucks that are part of the statewide goods

Table 3.1-14. Project Potential to Conflict with 2017 Scoping Plan

Recommended Action Summary	Lead Agencies	Potential to Conflict
		movement sector. Thus, the Project will not obstruct or interfere with agency efforts to improve freight system efficiency but rather will comply with all applicable standards.
Adopt a Low Carbon Fuel Standard with a carbon intensity reduction of 18%	CARB	**No Conflict.** This measure, which was increased to 20% reduction in carbon intensity by 2030 (see 2022 Scoping Plan), applies to all fuel purchased and used by the Project in the state. Thus, the Project will not obstruct or interfere with agency efforts to implement a Low Carbon Fuel Standard but rather will comply with all applicable standards.
Implement the Short-Lived Climate Pollutant Strategy by 2030	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**No Conflict.** The Project will be required to comply with the Short-Lived Climate Pollutant Strategy to the extent it is applicable.
Develop regulations and programs to support organic waste landfill reduction goals in the Short-Lived Climate Pollutant Strategy and SB 1383 by 2019	CARB, CalRecycle, CDFA, SWRCB, local air districts	**No Conflict**. This action is not within the purview of this Project.
Implement the post-2020 Cap-and-Trade Program with declining annual caps	CARB	**No Conflict.** The Project is not subject to the California Cap-and-Trade Program.
Develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink by 2018	CNRA and departments within, CDFA, CalEPA, CARB	**No Conflict.** This action is not within the purview of this Project.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	**No Conflict.** This action is not within the purview of this Project.
Implement Forest Carbon Plan	CNRA, CAL FIRE, CalEPA and departments within	**No Conflict.** This action is not within the purview of this Project.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	**No Conflict.** This action is not within the purview of this Project.

Source: CARB 2017.
Notes: SB = Senate Bill; GHG = greenhouse gas; CPUC = California Public Utilities Commission; CEC = California Energy Commission; CARB = California Air Resources Board; VMT = vehicle miles traveled; CalSTA = California State Transportation Agency; SGC = Strategic Growth Council; CalTrans = California Department of Transportation; OPR = Governor's Office of Planning and Research; GoBiz = Governor's Office of Business and Economic Development; IBank = California Infrastructure Economic Development Bank; DOF = Department of Finance; CTC = California Transportation Commission; CalEPA = California Environmental Protection Agency; CNRA = California Natural Resources Agency; CalRecycle = California Department of Resources Recycling and Recovery; CDFA = California Department of Food and Agriculture; SWRCB = State Water Resources Control Board; CAL FIRE = California Department of Forestry and Fire Protection.

Table 3.1-15 evaluates the Project's potential to conflict with the measures from the 2022 Scoping Plan that are relevant and applicable to the Project.

Table 3.1-15. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
GHG Emissions Reductions Relative to the SB 32 Target	40% below 1990 levels by 2030	**No Conflict.** While the SB 32 GHG emissions reduction target is not an action that is analyzed independently, it is included in Table 2-1 of the 2022 Scoping Plan for reference. The Project will not obstruct or interfere with agency efforts to meet the SB 32 reduction goal. Specifically, the Project will allow for increased energy storage from intermittent renewable energy sources, thereby increasing grid reliability and increasing the opportunity for renewable energy development.
Smart Growth/VMT	VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045	**No Conflict.** The Project will not obstruct or interfere with agency efforts to meet this regional VMT reduction goal, including through implementation of SB 375.
Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs)	100% of LDV sales are ZEV by 2035	**No Conflict.** As this action pertains to LDV sales within California, the Project will not obstruct or interfere with its implementation.
Truck ZEVs	100% of medium-duty vehicle (MDV)/ heavy-duty vehicle (HDV) sales are ZEV by 2040	**No Conflict.** As this action pertains to MDV and HDV sales within California, the Project will not obstruct or interfere with its implementation.
Electricity Generation	▪ Sector GHG target of 38 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) in 2030 and 30 $MMTCO_2e$ in 2035 ▪ Retail sales load coverage ▪ 20 gigawatts (GW) of offshore wind by 2045 ▪ Meet increased demand for electrification without new fossil gas-fired resources	**No Conflict**. As this action pertains to the statewide procurement of renewable energy, the Project will not obstruct or interfere with its implementation. Rather, the Project will support increased usage of renewable electricity by allowing for a more reliable local electric grid and reducing reliance on natural gas power plants.
New Residential and Commercial Buildings	All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030	**No Conflict.** The Project will not obstruct or interfere with CARB's efforts to meet the all-electric appliance and heat pump goals. The Project's appliances and heating, ventilation, and air conditioning (HVAC) system will be electrically powered.
Construction Equipment	25% of energy demand electrified by 2030 and 75% electrified by 2045	**No Conflict.** As this action pertains to the electrification of off-road equipment across California, the Project will not obstruct or interfere with its implementation. Instead, construction

Table 3.1-15. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
		equipment used at the Project site will conform to state standards.
Low Carbon Fuels for Transportation	Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen	**No Conflict**. The Project will not obstruct or interfere with CARB's efforts to increase the provision of low carbon fuels for transportation. The development and use of biofuels in trucks and automobiles will occur at the state and regional level. Any equipment at the Project site using biofuels will conform to state standards.
Low Carbon Fuels for Buildings and Industry	▪ In 2030s biomethane blended in pipeline ▪ Renewable hydrogen blended in fossil gas pipeline at 7% energy (~20% by volume), ramping up between 2030 and 2040 ▪ In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	**No Conflict.** The Project will not obstruct or interfere with CARB's efforts to increase the provision of low carbon fuels for use in buildings and industry. The blending of biomethane and use of renewable hydrogen in existing natural gas pipelines will happen at the scale of the utility provider and without action required by the Project.
High GWP Potential Emissions	Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions	**No Conflict.** The Project will not obstruct or interfere with agency efforts to introduce low GWP refrigerants. The State has established a prohibition on the sale or distribution of bulk HFCs identified as having a high GWP through SB 1206. All refrigerants used at the Project site will conform to state standards.

Source: CARB 2022.
Notes: GHG = greenhouse gas; SB = Senate Bill; VMT = vehicle miles traveled; CARB = California Air Resources Board; GWP = global warming potential; HFC = hydrofluorocarbon.

As shown in Tables 3.1-14 and 3.1-15, the Project will not conflict with the applicable strategies and measures in the 2017 Scoping Plan and 2022 Scoping Plan, respectively. In addition, the Project will not impede the state and authoritative lead agencies from implementing incentives or regulations to achieve the Scoping Plan goals.

Estimated GHG Emissions

Project-generated GHG emissions are presented for informational purposes and are not used in determining the significance of potential GHG-related impacts.

Construction and Decommissioning Emissions

Both construction and decommissioning of the Project will result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road trucks, and worker vehicles. Helicopter usage will also result in GHG emissions during construction. The total construction GHG emissions were calculated, amortized over 40 years, and added to the operational emissions. For conservative purposes, GHG emissions associated with decommissioning have also been amortized and have been added to the operational emissions. Table 3.1-16 presents construction GHG emissions for the Project and decommissioning emission sources.

Table 3.1-16. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons				
2027 (Construction)	7,868.43	0.06	1.05	7.79	8,189.17
2028 (Construction)	5,450.09	0.19	0.21	4.64	5,520.79
2029 (Construction)	366.21	<0.01	0.01	0.53	371.06
2069[a] (Decommissioning)	2,531.69	0.04	0.08	0.14	2,557.47
				Total[b]	**16,638.48**
				Annualized emissions over 40 years (metric tons per year)	*415.96*

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerants; CO_2e = carbon dioxide equivalent; <0.01 = value is less than 0.005.

[a] 2050 emission factors were used to represent the decommissioning phase of the Project in CalEEMod.

[b] Total may not sum precisely due to rounding.

See Appendix 3.1A for complete results. As shown in Table 3.1-16, the estimated total GHG emissions during construction and decommissioning of the Project will be approximately 16,638 MT CO_2e. Estimated Project-generated construction and decommissioning emissions amortized over 40 years will be approximately 416 MT CO_2e per year.

Operational Emissions

CalEEMod was used to estimate potential Project-generated operational GHG emissions from area, energy (electricity), mobile, and off-road sources. Emissions from each category are discussed in the following text with respect to the Project. For additional details, see Section 3.1.3.1.2 for a discussion of operational emission calculation methodology and assumptions. Operational year 2029 was assumed as the first year of operation. Table 3.1-17 presents the GHG emissions of the Project during operation.

Table 3.1-17. Estimated Annual Operational GHG Emissions

Emissions Source	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Mobile	54.31	<0.01	<0.01	0.08	55.16
Area	0.13	<0.01	<0.01	0.00	0.13
Energy	104,965.40	10.01	1.21	0.00	105,576.95
Water	1.70	0.02	0.00	0.00	2.29
Waste	0.27	0.03	0.00	0.00	0.93
Refrigerants[a]	0.00	0.00	0.00	46.89	46.89
Offroad Equipment	0.52	<0.01	<0.01	0.00	0.52
Stationary	47.23	<0.01	<0.01	0.00	47.39
				Total	**105,730.26**
				Amortized construction and decommissioning emissions	*415.96*
				Total with amortized construction emissions	**106,146.23**

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerants; CO_2e = carbon dioxide equivalent; <0.01 = value is less than 0.005.
See Appendix 3.1A for complete results.

[a] Refrigerants include SF_6 and R-32 gas emissions.

As shown in Table 3.1-17, the estimated total GHG emissions during operation of the Project will be approximately 106,146 MT CO_2e per year, including amortized construction and decommissioning emissions.

GHG emissions emitted by the Project are primarily a result of energy consumption associated with round-trip efficiency and transmission losses when operating the BESS facility. As SCE, the energy provider for the Project, moves toward meeting the state's Renewables Portfolio Standard goals of 100% renewable energy by 2045 as established in SB 100, GHG emissions from the Project will be reduced. Additionally, the Project will assist SCE and the state in meeting RPS goals by supporting the use of intermittent renewable energy sources, such as solar and wind. Therefore, the Project's emissions associated with electricity will become net zero over time as SCE's electricity generation sources shift toward renewables, and the Project will assist the state and local utility in meeting its renewable energy goals outlined in SB 100.

Conclusion

The Project will not conflict with the core strategies of the 2045 CAP. In addition, the Project will not conflict with the applicable goals and strategies of CARB's 2017 and 2022 Scoping Plans. Furthermore, the Project will not impede the state and authoritative lead agencies from implementing incentives or regulations to achieve the 2017 Scoping Plan and 2022 Scoping Plan goals**.** As stated in the CARB 2022 Scoping Plan, energy storage is a "crucial pillar" in decarbonizing the electricity sector and to the state's GHG emission reduction goals.

Based on these considerations, the Project will neither generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, nor will it conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions; therefore, the Project will result in a **less than significant impact.**

3.1.4 Mitigation Measures

To reduce the potential emissions of criteria air pollutants as a result of construction and operation of the Project, the applicant shall implement the following mitigation measures:

MM-AQ-1 Construction Equipment Emission Minimization. Prior to the commencement of construction activities for the Project, the applicant or its designee shall require its construction contractor to demonstrate that all 50-horsepower or greater diesel-powered off-road equipment is powered with California Air Resources Board–certified Tier 4 Final or better engines, if available or Tier 3, where Tier 4 engines are not available.

In the event of changed circumstances (e.g., changes in the availability of specific types of construction equipment), the construction contractor may submit a request to the California Energy Commission (CEC) Compliance Project Manager (CPM) to apply an equivalent method of achieving Project-generated construction emissions that fall below the mass daily thresholds established by the Antelope Valley Air Quality Management District (AVAQMD). Documentation using industry-standard emission estimation methodologies shall be furnished to the CEC demonstrating that estimated Project-generated construction emissions will not exceed the applicable AVAQMD thresholds with the alternate construction method(s). If the documentation demonstrates that Project-generated construction emissions will remain below the applicable AVAQMD thresholds, then the CPM may approve the alternate construction method(s). Required construction equipment fleet and methodologies approved by the CPM shall be included in the contract specifications for the construction contractor.

MM-AQ-2 Commissioning Generators Emission Minimization. Prior to the commencement of construction activities for the Project, the applicant or its designee shall require its construction contractor to demonstrate that all diesel generators used during commissioning of the Project are powered with California Air Resources Board–certified Tier 4 Final or better engines, if available or Tier 3, where Tier 4 engines are not available.

In the event of changed circumstances (e.g., changes in the availability of specific types of construction equipment), the construction contractor may submit a request to the California Energy Commission Compliance Project Manager to apply an equivalent method of achieving Project-generated construction emissions.

MM-AQ-3 Construction Dust Control Plan. Prior to the issuance of grading permits, the Project applicant or its designee shall develop and implement a dust control plan to reduce Project-generated dust during construction and ensure compliance with all applicable Antelope Valley Air Quality Management District rules and regulations, including, but not limited to, Rules 401 (Visible Emissions), 402 (Nuisance), and 403 (Fugitive Dust). The dust control plan shall include the following control strategies at a minimum:

A. Water shall be used on the exposed areas at least three times daily.
B. Dust suppressants shall be applied on all unpaved roads within the Project construction footprint.
C. Water shall be used on the active demolition sites at least two times daily.
D. A 15 mph speed limit on unpaved surfaces shall be enforced.
E. All main roadways shall be constructed and paved as early as possible in the construction process.
F. Building pads shall be finalized as soon as possible following site preparation and grading activities.
G. Grading areas shall be stabilized as quickly as possible.
H. Chemical stabilizer shall be applied, a gravel pad shall be installed, or the last 100 feet of internal travel path within the construction site shall be paved prior to public road entry, as well as for all haul roads.
I. Wheel washers shall be installed adjacent to the apron for tire inspection and washing prior to vehicle entry on public roads.
J. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or a similar method within 30 minutes of occurrence.
K. Sufficient perimeter erosion control shall be provided to prevent washout of silty material onto public roads.
L. Unpaved construction site egress points shall be graveled to prevent track-out.
M. Construction access points shall be wet-washed at the end of the workday if any vehicle travel on unpaved surfaces has occurred.
N. Transported material in haul trucks shall be watered or treated.
O. All soil disturbance and travel on unpaved surfaces shall be suspended if winds (instantaneous gusts) exceed 25 mph.

P. On-site stockpiles of excavated material shall be covered.

Q. Haul truck staging areas shall be provided for loading and unloading of soil and materials and shall be located away from sensitive receptors at the farthest feasible distance.

R. Construction traffic control plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections to the extent feasible. Construction traffic control plans shall be finalized and approved prior to issuance of grading permits.

3.1.5 Laws, Ordinances, Regulations, and Statutes

Table 3.1-18 presents the laws, ordinances, regulations, and standards (LORS) pertaining to the Project.

Table 3.1-18. LORS Applicable to Air Quality

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	Clean Air Act and Regulations	Establishes national ambient air quality standards (NAAQS) for criteria air pollutants	**Yes.** To evaluate the potential for localized criteria air pollutant emissions from Project construction or operations to exceed respective NAAQS, ambient air quality analyses (AAQAs) were performed. The Project will not exceed the NAAQS.	Section 3.1.3.1.2 Section 3.1.5.1.1
State	Clean Air Act	Establishes state ambient air quality standards (CAAQS) for criteria air pollutants	**Yes.** To evaluate the potential for localized criteria air pollutant emissions from Project construction or operations to exceed respective CAAQS, AAQAs were performed. The Project will not exceed the CAAQS.	Section 3.1.3.1.2 Section 3.1.5.2.1
State	State Climate Change Targets LORS	Establishes statewide goals to reduce greenhouse gas (GHG) emissions to address climate change	**Yes.** The Project's potential to conflict with state climate change targets, including the 2017 and 2022 California Air Resources Board (CARB) Scoping Plans, was assessed qualitatively. The Project would not conflict with the key strategies and measures of these plans.	Section 3.1.3.2.5 Section 3.1.5.2.2
State	Building Energy LORS	Establishes building standards for all occupancies	**Yes.** The Project would comply with all Title 24 mandatory requirements.	Section 3.1.3.2.5 Section 3.1.5.2.2

Table 3.1-18. LORS Applicable to Air Quality

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		throughout the state		
State	Renewable Energy and Energy Procurement LORS	Establishes statewide goals and frameworks for transitioning to renewable energy resources and zero-carbon resources	**Yes.** The Project will support increased usage of renewable electricity by allowing for a more reliable local electric grid, support the integration of additional intermittent renewable energy sources, such as wind and solar, and reduce the need to operate natural gas power plants.	Section 3.1.3.2.5 Section 3.1.5.2.2
State	Mobile Sources LORS	Establishes statewide goals and requirements for reducing GHG emissions from vehicles	**Yes.** The Project would create minimal trips during operation, and emissions associated with the Project's mobile sources were quantified. The Project would not obstruct or interfere with the implementation of mobile source regulations for the purpose of reducing GHG emissions.	Section 3.1.3.2.5 Section 3.1.5.2.2
State	Solid Waste LORS	Establishes goals and requirements for reducing solid waste	**Yes.** Emissions associated with the Project's solid waste consumption were quantified. The Project would not obstruct or interfere with the implementation of solid waste source regulations for the purpose of reducing GHG emissions.	Section 3.1.3.2.5 Section 3.1.5.2.2
State	Water LORS	Establishes goals and requirements for reducing water	**Yes.** Emissions associated with the Project's water consumption were quantified. The Project would not obstruct or interfere with the implementation of water source regulations for the purpose of reducing GHG emissions.	Section 3.1.3.2.5 Section 3.1.5.2.2
Local	Antelope Valley Air Quality Management District Rules and	Regulates air pollutant emissions throughout the in the Los Angeles	**Yes**. The Project would be required to comply with all applicable AVAQMD rules and regulations.	Section 3.1.3.2.1 Section 3.1.3.2.2

Table 3.1-18. LORS Applicable to Air Quality

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
	Air Quality Management Plans	County portion of the MDAB		Section 3.1.3.2.3 Section 3.1.3.2.4 Section 3.1.5.3.1
Local	County of Los Angeles Climate Action Plan	Establishes new GHG emissions reduction targets for unincorporated Los Angeles County that are consistent with state goals	**Yes.** The Project's potential to conflict with County's CAP was assessed qualitatively. The Project would not conflict with the key strategies and measures of the CAP.	Section 3.1.3.2.5 Section 3.1.5.3.2

Notes: LORS = laws, ordinances, regulations, and standards; MDAB = Mojave Desert Air Basin; AVAQMD = Antelope Valley Air Quality Management District; CAP = climate action plan.

3.1.5.1 Federal LORS

3.1.5.1.1 The Federal Clean Air Act: Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the NAAQS within mandated time frames. The NAAQS and CAAQS are presented in Table 3.1-19.

Table 3.1-19. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
O_3	1 hour	0.09 ppm (180 µg/m³)	—	Same as primary standard[f]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	

Table 3.1-19. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as primary standard
	Annual arithmetic mean	20 µg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 µg/m³	Same as primary standard
	Annual arithmetic mean	12 µg/m³	9.0 µg/m³	15.0 µg/m³
Lead[j, k]	30-day average	1.5 µg/m³	—	—
	Calendar quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as primary standard
	Rolling 3-month average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24- hours	25 µg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2024i.

Notes: O_3 = ozone; ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; mg/m³ = milligrams per cubic meter; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, 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 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°Celsius (°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.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of 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.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour 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 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On February 7, 2024, the national annual $PM_{2.5}$ primary standard was lowered from 12.0 mg/m³ to 9.0 mg/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 PM_{10} standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs 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.

[k] 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 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

3.1.5.1.2 The Federal Clean Air Act: New Source Review

The EPA has also adopted technology-based standards that limit the emissions of criteria pollutants from new or modified facilities in specific source categories. These standards are referred to as New Source Performance Standards and are found in Title 40 of the Code of Federal Regulations, Part 60. The applicability of these standards depends on the equipment size or rating; material or fuel process rate; and/or the date of construction, modification, or reconstruction. In the event that emergency backup generators are required for Project facilities, the Project's diesel-powered emergency generators will be subject to Subpart IIII, which establishes emission and operational limits of criteria pollutants for new stationary compression ignition engines. To comply with the requirements of Subpart IIII, the Project's diesel-fired emergency generators will be operated and maintained as per the manufacturer specifications and will be certified to comply with Tier 4 Final emission rates.

To evaluate the potential for localized criteria air pollutant emissions from Project construction or operations to exceed respective NAAQS, AAQAs were performed. The Project will not exceed the NAAQS.

3.1.5.2 State LORS

3.1.5.2.1 Criteria Air Pollutants

The California Clean Air Act was adopted in 1988 and establishes the state's air quality goals, planning mechanisms, regulatory strategies, and standards of progress. Under the California Clean Air Act, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB is responsible for ensuring implementation of the California Clean Air Act, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products. Pursuant to the authority granted to it, CARB has

established CAAQS, which are generally more restrictive than the NAAQSs. The CAAQS are presented in Section 3.1.5.1.1 in Table 3.1-19.

To evaluate the potential for localized criteria air pollutant emissions from Project construction or operations to exceed respective CAAQS, AAQAs were performed. The Project will not exceed the CAAQS.

3.1.5.2.2 Greenhouse Gas Emissions

State Climate Change Targets

The state has taken a number of actions to address climate change. These include executive orders, legislation, and CARB plans and requirements.

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, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

AB 32. In furtherance of the goals established in EO S-3-05, the legislature enacted AB 32 (Núñez and Pavley). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions to 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

SB 32. SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction target, make changes to CARB's membership, increase 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 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030.

AB 1279. The legislature enacted AB 1279, the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85% below 1990 levels. AB 1279 establishes an overall policy to achieve net zero GHG emissions as soon as possible, but no later than 2045, recognizing the need to implement CO_2 removal and carbon capture, utilization, and storage technologies; the legislature also established a specific target of 85% below 1990 levels by 2045 for anthropogenic GHG emissions. Therefore, the net zero target does not directly apply to development projects, but the 2045 target of 85% below 1990 levels represents the reductions required to contribute to accomplishing the state's overall net zero policy.

CARB's Climate Change Scoping Plan. One specific requirement of AB 32 was for CARB to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The Climate Change Scoping Plan: A Framework for Change (Scoping Plan) included a mix of recommended strategies to meet the 2020 statewide GHG emissions limit and initiate the transformations needed to achieve the state's long-range climate objectives (CARB 2008).

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations, and for communities to reduce GHG emissions by approximately 15% from then levels (2008)

by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals. The First Update concluded that California is on track to meet the 2020 target but recommended that a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. CARB recalculated the state's 1990 emissions level, using more recent GWPs identified by IPCC, from 427 MMT CO_2e to 431 MMT CO_2e (CARB 2014).

In December 2017, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Scoping Plan) for public review and comment (CARB 2017). The 2017 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target as established by SB 32 and define the state's climate change priorities to 2030 and beyond.

CARB adopted the 2022 Scoping Plan Update in December 2022, which outlines the state's plan to reach carbon neutrality by 2045 or earlier, while also assessing the progress the state is making toward reducing GHG emissions by at least 40% below 1990 levels by 2030, as is required by SB 32 and laid out in the Second Update. The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing use of chemicals and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen (CARB 2022).

The 2022 Scoping Plan also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and that to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon.

SB 605 and SB 1383. SB 605 (2014) required CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state, and SB 1383 (2016) required CARB to approve and implement that strategy by January 1, 2018. The Short-Lived Climate Pollutants Reduction Strategy was approved by CARB in March 2017 and lays out a range of options to reduce short-lived climate pollutant emissions in California, including regulations, incentives, and other market-supporting activities. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon) and provides direction for reductions from dairy and livestock operations and landfills.

The Project's potential to conflict with state climate change targets, including the 2017 and 2022 CARB Scoping Plans, was assessed qualitatively in Section 3.1.3.2.5. The Project would not conflict with the key strategies and measures of these plans.

Building Energy

Title 24, CCR Part 6. Title 24 of the California Code of Regulations (CCR) was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established building energy efficiency standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The Building Standards Commission and CEC review these energy efficiency standards every few years and revise them if necessary (California Public Resources Code Section 25402[b][1]). The regulations receive input from members of industry and the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code Section 25402[d]) and cost effectiveness (California Public Resources Code Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2022 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2023. The 2022 Title 24 standards improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

Title 24, CCR Part 11. In addition to CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen 2022 standards, which are the current standards, became effective January 1, 2023.

The Project would comply with all Title 24 mandatory requirements.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (2002) established the Renewables Portfolio Standard program, which requires an annual increase in renewable generation by the utilities.

SB 1368. SB 1368 (September 2006) required CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission.

SB X1-2. SB X1-2 expanded the Renewables Portfolio Standard by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020. 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 (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.

SB 350. SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the Renewables Portfolio Standard by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity

and natural gas final end uses (e.g., 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) increased the standards set forth in SB 350, establishing that the following percentages of the total electricity sold to retail customers in California per year be secured from qualifying renewable energy sources: 44% by December 31, 2024; 52% by December 31, 2027; and 60% by December 31, 2030. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources not increase the carbon emissions elsewhere in the western grid and that the goal not be achieved through resource shuffling.

SB 1020. SB 1020 (September 2022) revises the standards from SB 100, requiring that the following percentage of retail sales of electricity to California end-use customers come from eligible renewable energy resources and zero-carbon resources: 90% by December 31, 2035; 95% by December 31, 2040; and 100% by December 31, 2045.

The Project will support increased usage of renewable electricity by allowing for a more reliable local electric grid, support the integration of additional intermittent renewable energy sources, such as wind and solar, and reduce the need to operate natural gas power plants.

Mobile Sources

State Vehicle Standards (AB 1493 and EO B-16-12). AB 1493 (July 2002) was enacted in response to the transportation sector accounting for more than half of California's CO_2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles primarily used for noncommercial personal transportation in the state. AB 1493 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. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emission vehicles (ZEVs). It ordered CARB, CEC, the California Public Utilities Commission, and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050.

In March 2022, EPA reinstated California's authority under the federal Clean Air Act to implement its own GHG emission standards and ZEV sales mandate. EPA's action concludes its reconsideration of the SAFE-1 by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

EO S-1-07. Issued on January 18, 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The initial target of the Low Carbon Fuel Standard was to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The Low Carbon Fuel Standard was subsequently amended in 2018 to require a 20% reduction in carbon intensity by 2030. This new requirement aligns with California's overall 2030 target, set by SB 32, of reducing climate changing emissions to 40% below 1990 levels by 2030. CARB has adopted implementing regulations for both the 10% and 20% carbon intensity reduction targets.

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. SB 375 requires the state's 18 regional metropolitan planning organizations to prepare a Sustainable Communities Strategy as part of their Regional Transportation Plan that will achieve the GHG-reduction targets set by CARB. If a Sustainable Communities Strategy is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target will be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to California Government Code Section 65080(b)(2)(K), a Sustainable Communities Strategy does not regulate the use of land; supersede the land use authority of cities and counties; or require that a city's or county's land use policies and regulations, including those in a General Plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

Advanced Clean Cars Program. The Advanced Clean Cars program (January 2012) is an emissions control program for model years 2015–2025. 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 the sale of clean cars (fuel efficient/electric), and provide the fuels for clean cars. To reduce GHG emissions, CARB, in conjunction with EPA and the National Highway Traffic Safety Administration, adopted new GHG standards for model year 2017–2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The ZEV program will act 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 in the 2018–2025 model years.

The Advanced Clean Cars II program establishes the next set of low-emissions vehicle and ZEV requirements for model years after 2025, to contribute to meeting federal ambient air quality O_3 standards and California's carbon neutrality standards (CARB 2024j). The Advanced Clean Cars II rulemaking package also considers technological feasibility, equity, and environmental, economic, and consumer impacts.

Advanced Clean Trucks Regulation. The purpose of the Advanced Clean Trucks Regulation (June 2020) is to accelerate the market for ZEVs in the medium- and heavy-duty truck sector and to reduce emissions of NO_x, $PM_{2.5}$, TACs, GHGs, and other criteria pollutants generated from on-road mobile sources (CARB 2024k). Requiring medium- and heavy-duty vehicles to transition to zero-emission technology will reduce health risks to people living in and visiting California and is needed to help California meet established near- and long-term air quality and climate mitigation targets.

EO N-79-20. EO N-79-20 (September 2020) requires CARB to develop (1) passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the state, with a target of 100% of in-state sales by 2035; (2) medium- and heavy-duty vehicle regulations requiring increasing volumes of new zero-emission trucks and buses sold and operated in the state, with the target of 100% of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZEVs by 2035; and (3) strategies, in coordination with other state agencies, EPA, and local air districts, to achieve 100% zero emissions from off-road vehicles and equipment operations in the state by 2035.

EO B-16-12. EO B-16-12 (2012) directs state entities under the governor's direction and control to support and facilitate development and distribution of ZEVs. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050.

The Project would create minimal trips during operation, and emissions associated with the Project's mobile sources were quantified in Section 3.1.3.2.5. The Project would not obstruct or interfere with the implementation of mobile source regulations for the purpose of reducing GHG emissions.

Solid Waste

AB 939, AB 341, AB 1826, and SB 1383. In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code Section 40000 et seq.), was passed because of the increase in waste stream and decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction in waste disposal in which jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by 2000.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020 and annually thereafter. CalRecycle identified five priority strategies that will assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2015).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) required businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units.

SB 1383 (Chapter 395, Statutes of 2016) establishes targets to achieve a 50% reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75% reduction by 2025. SB 1383 granted CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and established an additional target that not less than 20% of currently disposed edible food is recovered for human consumption by 2025 (CalRecycle 2020).

Emissions associated with the Project's solid waste consumption were quantified in Section 3.1.3.2.5. The Project would not obstruct or interfere with the implementation of solid waste source regulations for the purpose of reducing GHG emissions.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increased the requirements for landscape water use efficiency and broadened its applicability to include new development projects with smaller landscape areas.

Emissions associated with the Project's water consumption were quantified in Section 3.1.3.2.5. The Project would not obstruct or interfere with the implementation of water source regulations for the purpose of reducing GHG emissions.

3.1.5.3 Local LORS

3.1.5.3.1 Criteria Air Pollutants

AVAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the Los Angeles County portion of the MDAB, where the Project is located. AVAQMD operates monitoring stations in the MDAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. AVAQMD's air quality management plans include control measures and strategies to be implemented to attain the CAAQS and NAAQS in the MDAB. AVAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment. AVAQMD's most recent air quality plan is the Federal 70 ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area) (O_3 Attainment Plan) (AVAQMD 2023).

Applicable Rules. Emissions that will result from mobile, area, and stationary sources during construction and operation of the Project are subject to the rules and regulations of AVAQMD. AVAQMD rules applicable to the Project may include, but are not limited to, the following:

- **Rule 201 – Permit to Construct.** This rule requires that a person not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization.
- **Rule 203 – Permit to Operate.** This rule requires that a person not operate or use any equipment, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit to operate.
- **Rule 219 – Equipment Not Requiring a Permit:** The rule identifies equipment exempt from permit requirements of District Rules 201 and 203. District permit required for internal combustion engines with manufacturer's maximum continuous rating greater than or equal to 50 brake horsepower.
- **Rule 401 – Visible Emissions:** This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402 – Nuisance:** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** Rule 403 includes requirements for a Dust Control Plan, signage, and fencing, as well as surface watering and stabilization with chemicals, gravel, and asphaltic pavement to minimize visible fugitive dust from vehicular travel, earthwork, and wind erosion.
- **Rule 404 – Particulate Matter - Concentration.** The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission concentration limit.
- **Rule 431.2 – Sulfur Content of Liquid Fuels.** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose both of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers,

and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the AVAQMD. The rule also affects diesel fuel supplied for mobile source applications.

- **Rule 442 – Usage of Solvents:** The purpose of this rule is to reduce VOC emissions from VOC-containing materials or equipment that is not subject to limits of any rule found in District Regulation XI – Source Specific Standards.
- **Rule 900 – Federal New Source Performance Standards (NSPS).** This rule adopts by reference the rules, standards, criteria and requirements of Part 60, Chapter 1, Title 40, Code of Federal Regulations, which apply to all new sources of air contaminants or modifications to existing sources for identified category types subject to NSPS.
- **Rule 1000 – National Emission Standards for Hazardous Air Pollutants (NESHAPs).** This rule adopts by reference the NESHAP provisions of Part 61, Chapter 1, Title 40, Code of Federal Regulations.
- **Rule 1110.2 – Emissions from Stationary, Non-Road and Portable Internal Combustion Engines.** The purpose of this rule is to limit emissions of NO_x, VOCs, and CO from internal combustion engines over 50 brake horsepower.
- **Rule 1113 – Architectural Coatings.** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

The Project would be required to comply with all applicable AVAQMD rules and regulations.

3.1.5.3.2 Greenhouse Gas Emissions

2045 Los Angeles County Climate Action Plan

The 2045 CAP was adopted in April 2024 and builds on previous climate action work from the 2020 CCAP, adopted in October 2015 as a subcomponent of the Air Quality Element of the Los Angeles County General Plan (County of Los Angeles 2015). The 2045 CAP is an update to the 2020 CCAP, and it sets new GHG emissions reduction targets beyond the 2020 timeframe that are consistent with state goals, including AB 32, SB 32, and EO B-30-15 (County of Los Angeles 2024). The 2045 CAP includes 25 measures to reduce GHG emissions within the unincorporated portion of Los Angeles County. The 2045 CAP includes the following strategies to reduce GHG emissions:

- **Strategy 1**: Decarbonize the Energy Supply
- **Strategy 2**: Increase Densities and Diversity of Land Uses Near Transit
- **Strategy 3**: Reduce Single-Occupancy Vehicle Trips
- **Strategy 4**: Institutionalize Low-Carbon Transportation
- **Strategy 5:** Decarbonize Buildings
- **Strategy 6**: Improve Efficiency of Existing Building Energy Use
- **Strategy 7**: Conserve Water
- **Strategy 8**: Minimize Waste and Recover Energy and Materials from the Waste Stream
- **Strategy 9**: Conserve and Connect Wildlands and Working Lands
- **Strategy 10**: Sequester Carbon and Implement Sustainable Agriculture

The Project's potential to conflict with County's CAP was assessed qualitatively in Section 3.1.3.2.5. The Project would not conflict with the key strategies and measures of the CAP.

3.1.6 Agency Jurisdiction and Contacts

Table 3.1-20 contains contact information for agencies related to air quality.

Table 3.1-20. Permits and Agency Contacts

Issue/ Approval	Agency	Contact	Applicability
Public exposure to air pollutants	Antelope Valley Air Quality Management District	Taylor Morais, Air Quality Engineer Antelope Valley Air Quality Management District tmorais@avaqmd.ca.gov (661) 723-8070, ext. 24	Authority to Construct/ Permit to Operate for emergency generators

3.1.7 Permit Requirements and Schedules

Pursuant to Assembly Bill 205 Subsection 25545.1(b)(1), CEC retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local air quality management district. The applicant and CEC will collaborate with AVAQMD on review of this Opt-In Application to ensure compliance with AVAQMD rules and regulations. AVAQMD will provide an authority to construct (ATC), which will contain proposed permit conditions for the Project stationary sources that AVAQMD would impose but for CEC's in-lieu authority over the Project. These AVAQMD conditions will be reflected in CEC's Final Decision.

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3.2 Biological Resources

This section describes the potential effects the construction, operation, and decommissioning activities associated with the Prairie Song Reliability Project (Project) may have on biological resources at and in the vicinity of the Study Area. The Project will consist of an up to 1,150-megawatt (MW), approximately 9,200-megawatt hour (MWh) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

The biological resources described in this section have been compiled from a literature review of databases, maps, general plans, biological reconnaissance, as well as focused species/resource surveys. The evaluation of biological resources includes the following elements:

- Section 3.2.1 describes the existing environment that could be affected, including a regional overview, wetlands, habitats, species, vegetation, and biological survey results.
- Section 3.2.2 identifies potential environmental impacts that may result from Project construction, operation, maintenance, and decommissioning.
- Section 3.2.3 discusses the potential for cumulative effects.
- Section 3.2.4 describes project design and mitigation measures that will be implemented to avoid or minimize potentially significant impacts.
- Section 3.2.5 presents laws, ordinances, regulations, and standards (LORS) applicable to Biological Resources.
- Section 3.2.6 identifies regulatory agency contacts.
- Section 3.2.7 describes permits required for the Project related to Biological Resources.
- Section 3.2.8 provides references used to develop this section.

Biologist's credentials, as well as occurrence record data used for the preparation of this section is located in the following appendices:

- Appendix 3.2A – Resumes of Applicant's Biologists
- Appendix 3.2B – Potential to Occur Tables
- Appendix 3.2C – CNDDB Forms
- Appendix 3.2D – Completed 1602 Lake and Streambed Alteration Agreement Application Form
- Appendix 3.2E – Completed Waste Discharge Requirements Application Form
- Appendix 3.2F – Nitrogen Deposition Model

A summary of the biological resources evaluation is provided in the table below.

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
1	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as endangered, threatened, candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by CDFW or USFWS?	☐	☒	☐	☐
2	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?	☐	☒	☐	☐
3	Have a substantial adverse effect on federal or state protected WOTUS [waters of the United States] (including wetlands) as defined by Sections 404 and 401 of the 1972 Amendments to the Federal Water Pollution Control Act, commonly known as the Clean Water Act, or the Porter-Cologne Act, either through direct removal, filling, hydrological alteration, or other means?	☐	☒	☐	☐
4	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory native wildlife corridors or impede the use of wildlife nursery sites?	☐	☐	☒	☐
5	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
6	Conflict with the provisions of an adopted Habitat Conservation Plan, NCCP [natural community conservation plan], or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Notes: CDFW = California Department of Fish and Wildlife; USFWS = U.S. Fish and Wildlife Service;

3.2.1 Affected Environment

The Project is in unincorporated Los Angeles County (County), California south of State Route 14 (SR 14) approximately 3 miles northeast of the unincorporated community of Acton. The Project is within the USGS 7.5-minute Acton and Pacifico Mountain Quadrangles, Township 5N, Range 12W, Sections 27, 28, 33 and 34. The BESS site is comprised of Assessor Parcel Numbers (APNs) 3056-017-007, 3056-017-020, 3056-017-021, 3056-019-013, 3056-019-026, 3056-019-037, and 3056-019-040. Development of the BESS facility will occur on an area of land situated between two (2) existing transportation corridors, the Antelope Valley Freeway (SR 14) to the north and Southern Pacific Railroad lines and Carson Mesa Road to the south, that are approximately 1,200 feet apart.

The Project site (approximately 107.29 acres) refers to the area that will be physically affected by construction activities associated with the Project, including the location of permanent structures (including both gen-tie options) as well as staging and other temporary disturbance areas described in Section 2, Project Description. For the purposes of the biological surveys, the Study Area (approximately 531 acres) encompasses the Project site parcels and a 100-foot buffer. The Study Area for focused species surveys was expanded per protocol and where necessary to capture nearby resources. Focused survey methods are described below in Section 3.2.1.5, Biological Surveys.

3.2.1.1 Regional Overview

The Study Area is in the western San Gabriel Mountains, in the Transverse Ranges Geomorphic Province (CGS 2002). The Transverse Ranges are an east-west trending series of steep mountains and valleys (CGS 2002). The Study Area is located at the conjunction of Soledad Canyon and Kentucky Springs Canyon (USGS 2022), and at the boundary of the Western Transverse Ranges ecological subregion and Mojave Desert ecological region (Jepson Flora Project 2025). Elevations in the Study Area range from approximately 2,700 feet above mean sea level along the southwestern side to 3,500 feet above mean sea level along the northern hillsides (Google Earth 2025).

The Study Area has an arid climate with the site being located on the northern side of the San Gabriel Mountains and bordering the Antelope Valley. August is the average warmest month with an average high of 93 degrees Fahrenheit (˚F) and December is the coolest month on average with a low of 36 ˚F. Rainfall occurs primarily between November and April, with the maximum average precipitation occurring in February. The mean annual rainfall for the area is approximately 9 inches of rain per year (LACPW 2023).

3.2.1.2 Regional Wetlands and Protected Areas

The National Wetlands Inventory (NWI) and National Hydrography Dataset (NHD) were reviewed to identify wetland or hydrologic features in the Study Area (USFWS 2025a, USGS 2025). Figure 3.2-1, Hydrologic Features, depicts the mapped wetland and hydrologic features in the Study Area. These resources are further described below.

Protected areas within 10 miles of the Study Area were determined through a review of the California Protected Area Database (CPAD) and California Conservation Easement Database (CCED) mapping tools (GreenInfo Network 2025). These resources are further described below.

3.2.1.2.1 Hydrologic Features

The Study Area is in the Santa Clara subbasin (HUC 18070102), Headwaters Santa Clara River watershed (HUC 1807010201), and primarily Kentucky Springs Canyon – Santa Clara River subwatershed, with the western most area of the Project overlapping into the Arrastre Canyon – Santa Clara River subwatershed. The Santa Clara River is the primary natural surface water feature in the vicinity of the Study Area. The Santa Clara River is the largest natural river remaining in Southern California, and travels through two (2) counties, Los Angeles and Ventura (Kennedy/Jenks Consultants 2014). The northern portion in Los Angeles County is largely classified as an intermittent stream/river and only contains flowing water during certain times of the year (USGS 2023; Kennedy/Jenks Consultants 2014)). The intermittent stream channel traverses the southern end of the Study Area within parcels 3056-019-040, 3056-017-907, 3056-017-028, 3056-017-027, 3056-015-008, and 3056-015-023, as shown in Figure 3.2-1, Hydrologic Features. Several other smaller, unnamed ephemeral washes from Soledad Canyon and Kentucky Springs Canyon drain across the northern and southern portions of the Study Area, respectively.

3.2.1.2.2 Protected Areas

CPAD is a database that includes lands that are owned and protected for open space purposed by over 1,000 public agencies or non-profit organizations. CPAD includes national, state, or regional parks, forests, preserves and wildlife areas. It also includes large and small urban parks; land trust preserves and special district open space lands (GreenInfo Network 2025).

A review of the CPAD and CCED confirmed that there are several protected areas or conservation easements within a 10-mile radius of the Study Area (GreenInfo Network 2025). Project activities will not generate any potential ground impacts to any conservation easements or protected areas. Parcel APNs: 3056-017-905, 3056-017-904, 3056-017-906, 3056-017-907 are managed by the Mountains Recreation and Conservation Authority and are deed restricted for open space use. The Northern Gen-tie option would obtain an aerial easement and span these parcels, but would not generate any impacts on the ground, except for the use of an existing roadway. In addition, as shown in Figure 3.2-2, Protected Areas, the CPAD data shows project parcel APN 3056-019-040 as a protected area; however, this is a data error. The project applicant owns this parcel and there are no conservation easements or protected areas stipulated in the deed. Figure 3.2-2, Protected Areas, depicts protected areas identified within a 10-mile radius of the Study Area. A list of the CPAD and CCED identified areas that occur within the 10-mile buffer of the project is provided below.

California Protected Areas Database

The Mountains Recreation and Conservation Authority's Cold Creek Valley Preserve is within one of the parcels where the northern gen-tie route option occurs (GreenInfo Network 2025). The following are the lands that are owned and protected for open space within 10 miles of the Study Area (GreenInfo Network 2025).

- Antelope Valley Union High School District
  - Highland High School Park
  - Knight High School Park
  - Palmdale High School Park
- California State Lands Commission
  - California State Lands Commission
- Desert and Mountain Conservation Authority
  - Joshua Ranch
  - Littlerock Creek Irrigation District
  - Little Rock Wash
  - Littlerock Creek Irrigation District Open Space
- Los Angeles, County of
  - Acton Park
  - Acton Wash Wildlife Sanctuary
  - Everett Martin Park
  - Jackie Robinson Park
  - Juniper Hills Park
  - Mattie M. Primmer Park

  - Vasquez Rocks Natural Area and Nature Center
- Mountains Recreation and Conservation Authority
  - Bird's Nest
  - Bobcat Canyon
  - Cold Creek Valley Preserve
  - Red Rover Mine TaxDef
  - Ritter Ranch
  - SCC Plum Canyon
  - Stickleback Ranch
  - Unnamed site - Mountains Recreation and Conservation Authority
- Palmdale, City of
  - American Indian Little League Site
  - 70th Street East and North of Avenue R
  - A.C. Warnack Nature Park
  - Anaverde Hills Park
  - Avenue S and Dorer Street
  - Demonstration Garden
  - Desert Sands Park
  - Domenic Massari Park
  - Dr. Robert C. St. Clair Parkway
  - Foothill Park
  - Joe Davies Heritage Airpark
  - Joshua Hills Park
  - Legacy Commons
  - Manzanita Heights
  - Marie Kerr Park
  - Melville J. Courson Park
  - Palmdale Oasis Park
  - Palmdale Park
  - Palmdale Youth Pony League Fields
  - Palmenthol History Park
  - Pelona Vista Park
  - Poncitlan Square
  - Rancho Vista Neighborhood Park
  - Sam Yellen Community Park
  - Sam Yellen Community Park - Undeveloped
  - Tejon Equestrian Park
  - William J. McAdam Park

- Santa Clarita Watershed Recreation and Conservation Authority
  - Rio Dulce Open Space
- Santa Clarita, City of
  - Agua Dulce Canyon Parkland
- The Nature Conservancy
  - Arrastre Canyon
- U.S. Bureau of Land Management
  - BLM Lands
- U.S. Forest Service
  - Angeles National Forest

California Conservation Easement Database

The CCED is a database that defines boundaries of easements and deed-base restrictions on private lands. These lands may be actively farmed, grazed, forested, or held as nature preserves and typically have no public access (GreenInfo Network 2024). No lands with easements and deed-base restrictions are found within 10 miles of the Study Area.

3.2.1.3 Sensitive Habitat Types and Critical Habitat

Sensitive habitat types within a 10-mile radius of the Study Area are shown on Figure 3.2-3, Sensitive Habitat Types and critical habitats on Figure 3.2-4, Critical Habitat. Descriptions of the sensitive and critical habitats identified are described below.

3.2.1.3.1 Sensitive Habitat Types

The California Department of Fish and Wildlife (CDFW) defines sensitive habitats as plant communities that have limited distributions, high wildlife value, include sensitive species, or are particularly vulnerable to disturbance. CDFW ranks sensitive communities as “threatened” or “very threatened” (CDFW 2018) and keeps records of their occurrences in the California Natural Diversity Database (CDFW 2025a). Currently, CDFW publishes the California Sensitive Natural Communities List online (CDFW 2025b). Vegetation rarity ranking is based on a rank calculated developed by NatureServe (2025). Vegetation maps were taken from the CDFW Vegetation Classification Reports and Maps (CDFW 2025). CDFW’s Vegetation Program considers vegetation alliances with state (S) ranks of S1 through S3 as sensitive vegetative habitats. CDFW considers species or natural communities with one of the following NatureServe rankings as sensitive: Global (G)/State (S); Presumed Extinct (X); Possibly Extinct (G/S H); Critically Imperiled (G/S 1); Imperiled (G/S 2); Vulnerable (G/S 3). The California Environmental Quality Act (CEQA) requires that potential impacts to sensitive natural communities be evaluated. The following six (6) sensitive natural communities occur within 10 miles of the Study Area (Figure 3.2-3, Sensitive Habitat Types): Mojave Riparian Forest, Southern California Threespine Stickleback Stream, Southern Cottonwood Willow Riparian Forest, Southern Riparian Scrub, Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub. None of these identified six (6) sensitive natural communities occur on the project site or are crossed by the gen-tie line routes.

3.2.1.3.2 Critical Habitat

Critical habitats are designated areas occupied by the species at the time it was listed that contain the physical or biological features that are essential to the conservation of endangered and threatened species. In designated critical habitat, U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) consider the following requirements of the species:

"Space for individual and population growth, and for normal behavior; nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing offspring; and, generally, any habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of this species" (USFWS 2025b).

No designated critical habitats occur within the Study Area but three (3) units of critical habitat for arroyo toad (*Anaxyrus californicus*) were identified within 10 miles of the Study Area, as shown in Figure 3.2-4, Critical Habitat (USFWS 2025c). Unit 6c is located approximately 4 miles southwest of the Study Area and is associated with the Santa Clara River. Unit 7 is located approximately 9 miles to the south and is associated with Big Tujunga Creek. Unit 21 is located approximately 5 miles to the east and is associated with Little Rock Creek. Arroyo toad is not expected to occur in the Study Area because the Study Area lacks suitable habitat (low-gradient intermittent streams with sandy, gravelly soils) for the species.

3.2.1.4 Regional Sensitive or Special-Status Species

Endangered, rare, or threatened species, as defined in CEQA Guideline 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status species" in this report and include (1) endangered, threatened, and candidate species recognized in the context of the California Endangered Species Act (CESA) and the federal Endangered Species Act (FESA) (CDFW 2025d); (2) plant species with a California Rare Plant Rank (CNPS 2025a) (lists 1 through 4; see Appendix 3.2B for rank definitions); (3) California Species of Special Concern (SSC) and Watch List species, as designated by CDFW (CDFW 2025e); (4) mammals and birds that are Fully Protected species, as described in California Fish and Game Code Sections 4700 and 3511; and (5) Birds of Conservation Concern as designated by USFWS (2021).

Appendix 3.2B provides a list of special-status species with records within the two (2) USGS 7.5-minute topographic quadrangles (Acton and Pacifico Mountain) and the surrounding 10 quadrangles Study Area during the literature review (CDFW 2025a, CNPS 2025a, and USFWS 2025d). This appendix includes the status designation for each species, habitat types that may support these species in the regional vicinity, a determination of potential for these species to occur within the Study Area, and a rationale for the occurrence determination. Figure 3.2-5, Sensitive or Special-Status Species Records depicts the special-status plant and wildlife species known to occur within a 10-mile radius of the Project area.

3.2.1.4.1 Sensitive and Special-Status Species Assessment

Dudek biologists evaluated the regional special-status plant and wildlife species against observed conditions on the Study Area to determine the potential for each species to occur. Habitat requirements, occurrence determinations, and rationale for occurrence determination are included in Appendix 3.2B. The potential for each special-status species to occur was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site are unsuitable. The species has a moderate probability of being found on the site.
- **High.** All the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found onsite.
- **Present.** Species was observed on site or within the Study Area.

3.2.1.5 Biological Surveys

Surveys for the BESS and Northern Gen-Tie option portions of the Study Area were conducted in 2023. In 2024 surveys were conducted on the additional parcels for the Southern Gen-Tie option. Dudek conducted comprehensive surveys for sensitive plants for the BESS and Northern Gen-Tie option portions of the Study Area in the spring of 2023 following an above average wet season. Dudek conducted surveys for Crotch's bumble bee (*Bombus crotchii*) in the summer of 2024 on the BESS and Northern Gen-Tie option portions of the Study Area. Dudek is currently conducting supplemental rare plant surveys and Crotch's bumble bee surveys in 2025 for parcels associated with the Southern Gen-Tie option of the Study Area. Table 3.2-1 lists the dates, conditions, and focus for each survey.

Table 3.2-1. Schedule of Surveys

Date	Focus	Biologists	Time	Survey Conditions
1/6/2023	▪ Vegetation Mapping ▪ Jurisdictional Delineation	MM, ES	7:30 AM–2:55 PM	38°F–52°F; 0–10% cloud cover; 1–8 mph wind
1/11/2023	▪ Vegetation Mapping ▪ Jurisdictional Delineation	MM, ES	Not recorded	Not recorded
1/12/2023	▪ Vegetation Mapping ▪ Jurisdictional Delineation	MM, ES	Not recorded	Not recorded
4/28/2023	▪ Rare Plants	VG, TP	6:40 AM–3:04 PM	60°F–80°F; 0% cloud cover; 0–2 mph wind
4/28/2023	▪ Rare Plants	TP	6:40 AM–2:46 PM	57°F–94°F; 0% cloud cover; 0–2 mph wind

Table 3.2-1. Schedule of Surveys

Date	Focus	Biologists	Time	Survey Conditions
5/1/2023	▪ Rare Plants	CB, DM, SN, JR	7:30 AM–3:25 PM	48°F–61°F; 60%–90% cloud cover; 3–5 mph wind
5/2/2023	▪ Rare Plants	DM, VG, SN, JR	7:30 AM–3:25 PM	48°F–70°F; 60%–90% cloud cover; 3–5 mph wind
6/12/2024	▪ Crotch's Bumble Bee	CA, AC, SL, KN	9:30 AM–10:17 AM	74°F–80°F; 0% cloud cover; 0–4 mph wind
6/22/2023-7/7/2023	▪ Protected Tree Mapping	AC, ST, AP	Not recorded	Not recorded
7/1/2024	▪ Crotch's Bumble Bee	LB, JE, DS	7:41 AM–1:34 PM	73°F–90°F; 0% cloud cover; 0–8 mph wind
7/1/2024	▪ Crotch's Bumble Bee	JE	7:02 AM–9:07 AM	70°F–81°F; 1–7 mph wind
7/24/2024	▪ Crotch's Bumble Bee	LB	7:27 AM–10:54 AM	80°F–95°F; 0%–50% cloud cover; 0–1 mph wind
7/25/2024	▪ Crotch's Bumble Bee	LB	7:18 AM–11:01 AM	80°F–95°F; 0% cloud cover; 0–2 mph wind
11/18/2024	▪ Vegetation Mapping ▪ Jurisdictional Delineation	ES, ZP	8:50 AM-12:56 PM	49°F–56°F; 0% cloud cover; 5–16 mph wind
11/19/2024	▪ Vegetation Mapping ▪ Jurisdictional Delineation	TP, RS	9:30 AM–3:35 PM	53°F–54°F; 0% cloud cover; 1–7 mph wind
2/26/2025	▪ Raptor Nest Survey	TP. RS	8:28 AM-3:30 PM	63°F–78°F; 0% cloud cover; 2–15 mph wind
5/21/2025	▪ Crotch's Bumble Bee	CA, ES	8:21 AM–1:08 PM	59°F–71°F; 0% cloud cover; 0–1 mph wind
Supplemental surveys to be conducted in 2025	▪ Crotch's Bumble Bee ▪ Rare Plants	TBD	TBD	TBD

Notes:
Biologists: AC=Aida Castro, AP=Ana Pfleeger, CA=Callie Amoaku, LB=Luz Badillo, CB= Chelsea Bowers-Doerning, AC=Anna Cassidy, JE=Joshua Elson, VG=Valerie Goodwin, SL=Sony Leming, DM=Dilip Mahto, MM=Max Murray, KN=Kimberly Narel, SN=Sandra Nash, TP=Tracy Park, ZP=Zarina Pringle, JR=Jacob Rogers, ES=Eilleen Salas, DS=Dahlia Serrato, RS=Ryan Stanley, ST=Sarah Tian
Survey Conditions: °F=degrees Fahrenheit; mph=miles per hour

Vegetation Community and Land Cover Mapping

Vegetation communities and land uses within the Study Area were mapped in the field using the Environmental Systems Research Institute (Esri) Collector, a mobile data collection application, on a digital aerial-based background (Esri 2025). Following completion of the fieldwork, all vegetation linework was finalized using Esri ArcGIS software and GIS coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover type within the study area was determined. Vegetation communities within the study area were mapped using CDFW's List of Vegetation Alliances and Associations (or California Natural Community List) (CDFW 2025e), which is based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009) and A Manual of California Vegetation, Online Edition (CNPS 2025b), where feasible, with modifications made to accommodate the lack of

conformity of the observed communities (e.g., developed/disturbed land cover types) using Oberbauer et al. (2008) and Jones and Stokes (1993). Vegetation communities were classified based on site factors, descriptions, distribution, and characteristic species present within an area. Each natural community was mapped to the association level, where feasible. Special-status vegetation communities are those communities identified as high priority for inventory in the California Natural Communities List (CDFW 2025b).

Rare Plant Surveys

The rare plant surveys were guided by the CNPS Botanical Survey Guidelines (CNPS 2001) and CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Sensitive Natural Communities (CDFW 2018). The biologists walked transects in suitable habitat, spaced approximately 5 meters to 10 meters apart based on the density of vegetative cover, throughout the Study Area. Digital mobile maps and 200-scale topographic plots of vegetation polygons were utilized to navigate the survey area. Plant species encountered during the field surveys were identified to subspecies or variety, if applicable, to determine sensitivity status. When rare plants were encountered, field personnel recorded data points demarcating the edge of polygon surrounding the population and assessed population numbers using a GPS with sub-meter accuracy.

Crotch's Bumble Bee Surveys

The surveys for Crotch's bumble bee (*Bombus crotchii*) were conducted in accordance with the CDFW survey guidance (CDFW 2023a). The survey passes were led by Callie Amoaku, who holds a Memorandum of Understanding (MOU) and Scientific Collecting Permit (SCP) to capture Crotch's bumble bee. Dudek conducted three (3) protocol level surveys for Crotch's bumble bee spaced in June and July 2024 (June 11, July 1 and July 17). The surveys were conducted by qualified biologists with experience in surveying for Crotch's bumble bee. Surveys occurred after sunrise and 3 hours before sunset and were not conducted during wet conditions (e.g., foggy, raining, or drizzling) or windy conditions (i.e., sustained winds greater than 8 mph). The surveys were conducted during optimal conditions when there were sunny to partly sunny skies that were greater than 60° Fahrenheit. Suitable habitat within the Study Area was visually surveyed for 1 person-hour per 3 acres of potential habitat. Biologists walked wandering transects through these resources with a goal of observing bumble bees in passing and observing bumble bee nest sites associated with small mammal burrow or other appropriate soil cavities.

Raptor Nest Surveys

Surveys for nesting raptors (i.e., eagles, hawks, kites, falcons, and owls) were conducted in early 2025. Dudek biologists conducted a 1-day survey for the Study Area and a 500-foot buffer, with a focus on areas with larger trees and shrubs, residential areas with large ornamental trees, and transmission towers that have potential to support raptor nests.

Aquatic Resources Delineation

Prior to conducting the jurisdictional delineation, USFWS National Wetland Inventory data (USFWS 2024a) was reviewed to determine if the Study Area contained any features mapped by the USFWS. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the Study Area supported hydrophytic vegetation and potential wetlands. Jurisdictional boundaries were mapped in the field using ESRI Collector on a mobile device with submeter accuracy. Remote sensing was not used for the delineation.

U.S. Army Corps of Engineers – Potential Waters of the U.S.

The U.S. Army Corps of Engineers (USACE) wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on aerial maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths.

Regional Water Quality Control Board – Potential Waters of the U.S. and Waters of the State

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

California Department of Fish and Wildlife – Streams

Potential CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

Protected Tree Census

The portions of the Study Area east of the railroad tracks, south of Foreston Drive and the Southern California Edison (SCE) Vincent Substation, and east of the SCE substation are within a County of Los Angeles Significant Ecological Area (SEA) (County of Los Angeles 2025), as shown in Figure 3.2-6, Los Angeles County Significant Ecological Area. The County's SEA Ordinance includes 60 tree species to be protected, including all sizes of California juniper (*Juniperus californica*) (Los Angeles County Planning 2020). Dudek biologists mapped the California juniper within the SEA portions of the Study Area. Field personnel recorded data points and circumference for each individual plant using a mobile device with sub-meter accuracy. An evaluation of existing health for each California juniper was conducted.

3.2.1.6 Nitrogen Deposition Model

A nitrogen deposition analysis was performed to assess the proposed Project's potential operational impact on biological resources within 6 miles of the Study Area. During operation, there will be periodic emissions of oxides of nitrogen (NO_x), from the testing and maintenance of three (3) emergency diesel generators (one [1] rated at 323 horsepower [hp] and two [2] rated at 744 hp). These emissions will result in nitrogen deposition around the Project site. To determine the potential impacts during operation, the American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model (AERMOD) Version 24142 was used to model the concentration of nitrogen

around the Project site using wet and dry deposition algorithms. The generators would meet the U.S. Environmental Protection Agency (EPA) Tier 4 standards based on the equipment specification sheets and were each assumed to operate up to 50 hours per year for testing and maintenance. Ammonia (NH_3) is a product of combustion with equipment having selective catalytic reduction (SCR) equipment. As the generators would be equipped with SCR, emissions of NH_3 were estimated and added to the NO_x emissions for total nitrogen emissions. Principal parameters of this modeling are presented in Table 3.2-2.

Table 3.2-2. AERMOD Principal Parameters – Nitrogen Deposition

Parameter	Details
Dispersion Model	The air dispersion model used was AERMOD Version 24142, with the Lakes Environmental Software implementation/user interface, AERMOD View, Version 13.0.0.
Meteorological Data	The latest 5-year meteorological data (2016-2020) for the Palmdale Station (KPMD) were obtained from CARB and used in the analysis as the most representative data set based on proximity and wind direction. The input data was also conservative, based on a test run that compared maximum concentrations using the Palmdale Station to the concentrations using the Santa Clarita Station (the other station in general proximity to the Project) meteorological data.
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. Based on the land use procedure from 4.4.1 of the OEHHA Guidance Manual, the rural dispersion was appropriate for the Project site (OEHHA 2015).
Terrain Characteristics and Elevation Data	Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the U.S. Geological Survey's National Elevation Dataset format with an approximately 1 arc-second resolution.
Emission Sources and Release Parameters	The diesel generators were modeled as point sources with release parameters based on the specification sheets and default diesel-fired internal combustion stack parameters (SBCAPCD 2025), if generator specific information was not available. The 323 hp generator was modeled with a vertical stack height of 3.0 meters, inside stack diameter of 0.13 meters, gas exhaust temperature of 780 Kelvin, and gas exhaust velocity of 63.9 meters per second. Each 744 hp generator was modeled with a vertical stack height of 3.7 meters, inside stack diameter of 0.2 meters, gas exhaust temperature of 719.82 Kelvin, and gas exhaust velocity of 14.05 meters per second.
Receptors	A telescoping grid of receptors was generated with the following spacing to evaluate potential nitrogen deposition impacts within a 6-mile radius of the Project: ▪ 25-meter spacing on the facility boundary ▪ 25-meter spacing from the facility boundary out to 100 meters ▪ 50-meter spacing from 100 meters to 250 meters ▪ 100-meter spacing from 250 meters to 500 meters ▪ 250-meter spacing from 500 meters to 1,000 meters ▪ 500-meter spacing from 1,000 meters to 2,000 meters ▪ 1,500-meter spacing from 2,000 meters to 8,000 meters
Gas Deposition	The vegetation in the region is primarily grassland and shrubland. These vegetation categories are classified as "Land Use Category" of "3 – Rangeland" in AERMOD.
NOx to NO_2 Conversion	A 100% conversion of NO_x and NH_3 into atmospherically derived nitrogen (Tier 1).
Gas and Particle Deposition	Nitric acid was assumed for the gas deposition parameters as it has a strong affinity for impacts to soils and vegetation. The default deposition velocity and parameters

Table 3.2-2. AERMOD Principal Parameters – Nitrogen Deposition

Parameter	Details
	(pollutant reactivity factor and seasons) were assumed. The following gas deposition parameters were assumed: ▪ Pollutant Diffusivity in Air: 0.1628 cm^2/s ▪ Pollutant Diffusivity in Water: 2.98E-05 cm^2/s ▪ Cuticular Resistance: 100,000 s/cm ▪ Henry's Law Constant: 8E-08 $Pa\text{-}m^3/mol$

Source: OEHHA 2015; SBCAPCD 2025.
Notes: AERMOD = American Meteorological Society/EPA Regulatory Model; hp = horsepower. $Pa\text{-}m^3/mol$ = pascal-meters cubed per mole; NH_3 = ammonia; NOx = oxides of nitrogen; s/cm = seconds per centimeter.
See Appendix 3.2F for additional information.

The AERMOD model calculates atmospheric deposition of nitrogen by calculating the wet and dry fluxes of total nitrogen. This deposition is accomplished by using a resistance model for the dry deposition part, and by assigning particle phase washout coefficients for the wet removal process from rainout. As discussed above, depositional parameters for nitric acid are input into the model to calculate the deposition of nitrogen. AERMOD sums the results of the wet and dry nitrogen deposition to produce annual deposition rates in units of grams per square meter (g/m^2) for the entire 5-year meteorological period modeled, which are converted to kilograms per hectare per year (kg/ha/yr) for comparison to critical loads of nitrogen for biological resources within 6 miles of the Study Area. As discussed in detail below, the testing and maintenance operation of the Project's emergency backup generators will not lead to nitrogen deposition levels that exceed recognized thresholds and will thus result in less than significant impacts to natural vegetation communities and special status species.

3.2.1.7 Vegetation Communities and Land Cover Types

All plant species encountered during the field reconnaissance surveys and jurisdictional delineations were identified and recorded. Latin and common names for plant species with a California Rare Plant Rank (formerly California Native Plant Society List) follow the California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2025a). For plant species without a California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2025) and common names follow the California Natural Community list (CDFW 2025e) or the U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Plants Database (NRCS 2025). A list of plant species observed in the Study Area during initial surveys is presented in Appendix 3.2B.

A total of six (6) vegetation communities are considered sensitive by CDFW. The vegetation communities and land cover locations are summarized in Table 3.2-3 and illustrated in Figure 3.2-7, Vegetation Communities and Land Cover.

Table 3.2-3. Vegetation Communities and Land Covers in the Study Area

Alliance	Association	CDFW Sensitive[1]	Ranking[2]	Acres
Native Communities				
Cheesebush – sweetbush scrub	*Ambrosia salsola - Larrea tridentata*	No	G4/S4	0.82
	Ambrosia salsola Association	No	G4/S4	3.99
Fiddleneck - phacelia fields	*Amsinckia menziesii - Erodium* spp.	No	G5/S5	2.25

Table 3.2-3. Vegetation Communities and Land Covers in the Study Area

Alliance	Association	CDFW Sensitive[1]	Ranking[2]	Acres
California sagebrush – (purple sage) scrub	*Artemisia californica - Eriogonum fasciculatum*	No	G4/S4	15.40
Big sagebrush	*Artemisia tridentata - Ericameria nauseosa*	No	G5/S5	18.64
	Artemisia tridentata - Eriogonum fasciculatum	No	G5/S5	3.98
	Artemisia tridentata	No	G5/S5	0.58
	Artemisia tridentata ssp. *parishii*	Yes	G2/S2	8.58
Fourwing saltbush scrub	*Atriplex canescens*	No	G5/S4	94.03
Mormon tea scrub	*Ephedra viridis*	No	G4/S4	23.92
Rubber rabbitbrush scrub	*Ericameria nauseosa - Juniperus californica* / herb	No	G5/S5	20.06
	Ericameria nauseosa	No	G5/S5	8.87
California buckwheat scrub	*Eriogonum fasciculatum*	No	G5/S5	12.40
	Eriogonum fasciculatum var. *foliolosum - Juniperus californica*	Yes	G3/S3	5.24
California buckwheat – Parish's goldeneye scrub	*Eriogonum fasciculatum* rock outcrop	Yes	Unranked	4.28
California walnut groves	*Juglans californica / annual herbaceous*	Yes	G3/S3	0.89
California juniper woodland	*Juniperus californica / Adenostoma fasciculatum - Eriogonum fasciculatum*	Yes	Unranked	34.77
	Juniperus californica / herbaceous	Yes	Unranked	126.21
	Juniperus californica / Eriogonum fasciculatum - Artemisia californica	No	G5/S5	0.48
			Subtotal:	*385.39*
Naturalized (Non-Native)				
Avena spp. – Bromus spp.	*Avena barbata - Bromus hordeaceus*	No	GNA/SNA	3.28
Bromus rubens – Schismus (arabicus, barbatus)	*Bromus rubens* - mixed herbs	No	GNA/SNA	3.17
			Subtotal:	*6.45*
Land Cover Types				
Disturbed habitat	Not applicable	No	NA/NA	30.72
Urban/Developed	Not applicable	No	NA/NA	108.14
			Subtotal:	*138.86*
			Total:	**530.71**

Notes: Totals may not sum due to rounding.

1 CDFW has determined the community to be sensitive.

2 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, S = state). The numbers have the following meaning:
1 = critically imperiled

2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
NA = not applicable
GNA = global rank not applicable
SNA = state rank not applicable
Unranked= Associations that are considered sensitive, but have not been ranked

Native Vegetation Communities

Vegetation community descriptions are taken from A Manual of California Vegetation, Online Edition (CNPS 2025b).

Big Sagebrush

Big sagebrush (Artemisia tridentata Alliance) has big sagebrush (Artemisia tridentata) as dominant or co-dominant in the shrub canopy with Acton's encelia (Encelia actoni), Mormon tea (Ephedra viridis), and California buckwheat (Eriogonum fasciculatum). Shrub canopy is open to continuous and emergent trees may be present at low cover. The herbaceous layer is usually sparse to intermittent and grassy. Habitat where big sagebrush occurs includes plains, alluvial fans, bajadas, pediments, lowers slopes, valley bottoms, seasonal and perennial stream channels, and dry washes. Soils are well drained and consist of loam or sand. Three (3) associations of the alliance were mapped within the Study Area: Artemisia tridentata Association, Artemisia tridentata-Eriogonum fasciculatum Association, and Artemisia tridentata-Ericameria nauseosa Association. These associations were found in the BESS and Southern Gen-tie portions of the Study Area.

Fiddleneck–Phacelia Fields

Fiddleneck–phacelia fields (*Amsinckia* [*menziesii*, *tessellata*]–*Phacelia* spp. Herbaceous Alliance) has Menzies' fiddleneck (*Amsinckia menziesii*), bristly fiddleneck (*Amsinckia tessellate)* and/or *Phacelia* spp. or other *Amsinckia* sp. as seasonally co-dominant in the herbaceous layer. Additional local species present include California saltbush (*Atriplex californica*), *Avena* spp., great brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), red brome (*Bromus rubens*), purple owl's clover (*Castilleja exserta*), and *Erodium* spp. Emergent shrubs may be present at low cover. Fiddleneck–Phacelia fields can be found along upland slopes, broad valleys, ocean bluffs, grazed or recently burned hills, fallow fields. Soils are well drained and loamy, and they are often subject to high levels of disturbance. One (1) association of the alliance, *Amsinckia menziesii–Erodium* spp., was mapped in the BESS portion of the Study Area.

Fourwing Saltbush Scrub

Fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance) has fourwing saltbush (*Atriplex canescens*) as dominant or co-dominant in the shrub canopy with burrobush (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), spiny saltbush (*Atriplex confertifolia*), cattle spinach (*Atriplex polycarpa*), Mormon tea, hop sage (*Grayia spinosa*), and creosote bush (*Larrea tridentata*). Emergent trees may be present at low cover This alliance can be found along playas, old beach and shores, lake deposits, dissected alluvial fans, rolling hills or channel beds. Soils are carbonate rich, alkaline, sandy, or sandy clay loams. One (1) association, *Atriplex canescens*, was mapped in the gen-tie portion Study Area.

Mormon Tea Scrub

Mormon tea scrub (*Ephedra viridis* Shrubland Alliance) has Mormon tea as dominant or co-dominant in the shrub canopy with big sagebrush and rubber rabbitbrush (*Ericameria nauseosa*). Emergent trees may be present at low cover, including California juniper (*Juniperus californica*). This alliance can be found along ridges, hills, mountains, and channel beds. Soils are shallow derived from alluvium, granitic substrate, bedrock, colluvium. One (1) association, *Ephedra viridis*, was mapped primarily in the BESS portion of the Study Area.

Rubber Rabbitbrush Scrub

Rubber rabbitbrush scrub (*Ericameria nauseosa* Shrubland Alliance) has rubber rabbitbrush as dominant or co-dominant in the shrub canopy with big sagebrush, *Ephedra* spp., and California buckwheat (*Eriogonum fasciculatum*). Emergent trees may be present at low cover, including California juniper Rubber rabbitbrush can be found along all topographic settings, especially in disturbed settings. Soils are well-drained sands and gravels. Two (2) associations *Ericameria nauseosa* and *Ericameria nauseosa-Juniperus californica/*herb, were mapped within the BESS and gen-tie portions of the Study Area.

California Juniper Woodland

California juniper woodland has California juniper as dominant or co-dominant in the small tree canopy with single-leaf pinyon (*Pinus monophyla*) and blue oak (*Quercus douglasii*). Local shrubs may include big sagebrush *Ephedra* spp., chaparral yucca (*Hesperoyucca whipplei*), and scale broom (*Lepidospartum squamatum*). This alliance can be found along ridges, slopes, valleys, alluvial fans, and valley bottoms. Soils are porous, rocky, coarse, sandy, or silty, and are often very shallow. Three (3) associations, *Juniperus californica*, *Juniperus californica-Adenostoma fasciculatum-Eriogonum fasciculatum*, and *Juniperus californica-Ericameria linearifolia/*annual-perennial herb, were mapped within the BESS and gen-tie portions of the Study Area.

Naturalized (Non-Native) Vegetation Communities

Wild oats and Annual Brome Grasslands

Wild oats and annual brome grasslands (*Avena* spp.-*Bromus* spp. Herbaceous Semi-Natural Alliance) has slender oat (*Avena barbata*), common wild oat (*Avena fatua*), stiff brome (*Brachypodium distachyon*), greater quaking-grass (*Briza maxima*), great brome, soft brome (*Bromus hordeaceus*) and/or wall barley (*Hordeum murinum*) as dominant or co-dominant with other non-natives in the herbaceous layer. Emergent trees and shrubs may be present at low cover. Wild oats and annual brome grasslands can be found along all topographic settings in foothills, waste places, rangelands, and openings in woodlands. One (1) association, *Bromus hordeaceus-Amsinckia menziesii-Hordeum murinum*, was mapped adjacent to the Vincent Substation in the Study Area:

Disturbed and Developed Land Cover Types

Disturbed Habitat

Although not recognized by the Manual of California Vegetation, Online Edition (CNPS 2025b) or the Natural Communities List (CDFW 2025e), disturbed habitat is described in the Draft Vegetation Communities of San Diego County (Oberbauer et. al. 2008). Disturbed habitat is described as areas generally lacking vegetation due to high levels of existing or historical human disturbance and are no longer recognizable as a native or naturalized vegetation association. Areas mapped as disturbed habitat may include unpaved roads, trails, and graded areas

(Oberbauer et. al. 2008). Vegetation in these areas, if present at all, is usually sparse and dominated by non-native weedy herbaceous species (Oberbauer et. al. 2008). Areas mapped as disturbed habitat were found throughout the Study Area and were usually associated with developments or infrastructure.

Urban/Developed

Although not recognized by the Manual of California Vegetation (CNPS 2025b) or the Natural Communities List (CDFW 2025e), the urban/developed mapping unit (or developed land) is described in Draft Vegetation Communities of San Diego County (Oberbauer et. al. 2008). This mapping unit describes areas supporting human-made structures, including homes, yards, sidewalks, and other highly modified lands supporting structures associated with dwellings or other permanent structures. Vegetation in these areas, if present at all, is typically associated with ornamental landscaping that has been included in the development footprint (Oberbauer et. al. 2008). Most of the developed lands in the Study Area included the large, paved substation and roads.

3.2.1.8 Potential Jurisdictional Aquatic Resources

Approximately 6.52 acres of potential jurisdictional waters regulated by RWQCB and CDFW were found within the Study Area, as summarized in Table 3.2-4 and illustrated in Figure 3.2-1, Hydrologic Features. Impacts to these features will require permits from the RWQCB and CDFW before any Project activities take place. Based upon the current definition of waters of the U.S. per the Clean Water Act, no features were considered to be water of the U.S. under the jurisdiction of the U.S. Army Corp of Engineers due to the ephemeral-nature of each; however, an Approved Jurisdictional Determination will need to be sought from the agency to document this conclusion. No impacts to the Santa Clara River are proposed.

Table 3.2-4. Summary of Potential Jurisdictional Waters Within the Study Area

Jurisdiction	Study Area (acres)
RWQCB	
Features	
Non-Wetland Waters	6.23
Swales	0.29
RWQCB Total	**6.52**
CDFW	
Features	
Non-Wetland Waters	6.23
Swales	0.29
CDFW Total	**6.52**

Notes: RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

3.2.1.9 Sensitive and Special-Status Plant Species

Special-status plant surveys were conducted in 2023 to determine the presence or absence of plant species that are considered endangered, rare, or threatened under CEQA Guideline 15380 (14 CCR 15000 et seq.). A list of all special-status plant species known to occur in the vicinity of the Study Area (and the surrounding nine (9) topographic quadrangles) including their habitat requirements, potential to occur onsite, and survey observations, is provided in Appendix 3.2B). This appendix provides evaluations for each of the special-status species' occurrence

in the Study Area vicinity and their potential to occur based on known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period. Special-status plant species that have low potential or are not expected to occur are not further analyzed in this document because no direct, indirect, or cumulative impacts are expected based on the negative surveys and evaluation that these species do not have a moderate or high potential to occur onsite.

A total of 80 special-status and rare plants were identified from the literature review (CDFW 2025a, USFWS 2025d, and CNPS 2025a). Of these, the following 11 species were determined to have a moderate or high potential to occur due to suitable habitat being present and having recent records in the vicinity or region: California androsace (*Androsace elongata* ssp. *acuta*), Catalina mariposa lily (*Calochortus catalinae*), slender mariposa-lily (*Calochortus clavatus* var. *gracilis*), Plummer's mariposa-lily (*Calochortus plummerae*), Peirson's morning-glory (*Calystegia peirsonii*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*), green monardella (*Monardella viridis*), California spineflower (*Mucronea californica*), Robbins' nemacladus (*Nemacladus secundiflorus* var. *robbinsii*), and Lemmon's syntrichopappus (*Syntrichopappus lemmonii*). None of these species are listed under FESA or CESA.

Two (2) sensitive plant species, short-joint beavertail (*Opuntia basilaris* var. *brachyclada*) and golden linanthus (*Leptosiphon aureus*), were mapped during the focused special-status plant surveys in 2023 within the proposed gen-tie route portion of the Study Area, as shown in Figure 3.2-8, Sensitive or Special-Status Species Survey Results.

Short-Joint Beavertail

Short-joint beavertail has a California Rare Plant Ranks (CRPR) of 1B.2, which is defined as plants rare, threatened, or endangered in California and elsewhere, with 20-80% of occurrences threatened (CNPS 2025a). The species is a cactus that can be found in creosote bush scrub, chaparral, pinyon-juniper woodland, and Joshua tree woodland (CDFW 2025a). Short-joint beavertail was mapped within the proposed gen-tie alignment portion of the Study Area, as shown in Figure 3.2-8, Sensitive or Special-Status Species Survey Results.

Golden Linanthus

Golden linanthus has a CRPR of 4.2, which is defined as a plant with limited distribution and is moderately threatened in California (CNPS 2025a). The species can be found in chaparral, cismontane woodland, coastal prairie, valley and foothill grassland (CDFW 2025a). The species was mapped within the proposed gen-tie alignment portion of the Study Area, as shown in Figure 3.2-8, Sensitive or Special-Status Species Survey Results.

3.2.1.10 Sensitive and Special-Status Wildlife Species

A list of all special-status wildlife species known to occur in the vicinity of the Study Area (the two [2] USGS 7.5-inch quadrangles that the Study Area is in and the surrounding 10 quadrangles), including their habitat requirements, potential to occur in the Study Area, and survey observations, are provided in Appendix 3.2B. A total of 58 special-status wildlife species were identified from the literature and database review. One (1) special-status species was observed foraging in the BESS portion of the Study Area, loggerhead shrike (*Lanius ludovicianus*). The 51 special-status species with a low potential to occur (six [6] species) or species that are not expected to occur (45 species) are excluded from further discussion below, except for western burrowing owl (*Athene cunicularia hypugaea*) and American badger (*Taxidea taxus*). A discussion of western burrowing owl is provided below; however, since burrowing owl is not expected in the Study Area it is not further analyzed apart from the discussion in this section. The following six (6) special-status species had moderate to high potential to occur in the Study Area: Crotch’s

bumble bee (*Bombus crotchii*), California legless lizard (*Anniella* spp.), Blainville's horned lizard (*Phrynosoma blainvillii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Artemisiospiza belli belli*), and mountain lion (*Puma concolor*).

Crotch's Bumble Bee

Crotch's bumble bee is a candidate for listing as "Endangered" under CESA and is afforded the protection of CESA while the California Fish and Game Commission decides if listing the species is warranted. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California (The Xerces Society 2018). In California, the species inhabits open grassland and scrub habitats (The Xerces Society 2018). The size of Crotch's bumble bee colonies has not been well documented, but like most other species of bumble bees, the species primarily nests underground (The Xerces Society 2018). Bumble bees, including Crotch's bumble bee, are generalist foragers and have been reported visiting a wide variety of flowering plants. Since it has a very short tongue, Crotch's bumble bee is best suited to forage at open flowers with short corollas (The Xerces Society 2018). The plant families most associated with observations or collections of the species from California include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (The Xerces Society 2018). Nectar plants known to be visited by Crotch's bumble bee include the genera *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia* (Williams et al. 2014, Xerces Society et al. 2018), but it is assumed flowering plants in other genera could also support foraging by this species.

Crotch's bumble bee could use small mammal burrows within vegetation communities in the Study Area and forage on suitable plant species within those communities. Focused surveys for the species conducted in June and July 2024 were negative for the species.

California Legless Lizard

This description provides information for three (3) potential species of legless lizard that may be found in the Study Area: Northern California legless lizard (*Anniella pulchra*), Southern California legless lizard (*Anniella stebbinsi*), and California legless lizard (*Anniella* spp.). This is due to the current uncertainty of the taxonomy of the genus in the Study Area's region (Nafis 2025). All three are considered CDFW SSC. These species are most commonly found in coastal dunes and coastal scrub, but also oak woodland, Joshua tree woodland, and pinyon-juniper woodland (Hansen and Shedd 2025), and are generally found in moist, loose soil (CDFW 2025a). California legless lizard has moderate potential to occur in the Study Area beneath the larger California junipers due to the expected higher moisture content of the soil.

Blainville's Horned Lizard

Blainville's horned lizard is a CDFW SSC that occurs throughout most of California in locations west of the desert and Cascade-Sierran highlands, in elevations from sea level to around 2,438 meters (8,000 feet) AMSL (Hansen and Shedd 2025). Despite a wide-ranging distribution, the species seems to be restricted to localized populations because of its association with loose soils that have a high sand content (Jennings and Hayes 1994). The species is found in a wide variety of vegetation types with the requisite loose sandy soils, including California sagebrush scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest (Klauber 1939; Stebbins 1954). Up to 90% of the diet of Blainville's horned lizard consists of native harvester ants (*Pogonomyrmex* spp.) (Pianka and Parker 1975), and the species does not appear to eat non-native Argentine ants (*Linepithema humile*) (Jennings and Hayes 1994). The species has a moderate potential to occur in a variety of the vegetation communities in the Study Area.

Loggerhead Shrike

A single observation of loggerhead shrike was made in the Study Area, as shown in Figure 3.2-8, Sensitive or Special-Status Species Survey Results. The species is a CDFW SSC that occurs throughout the United States, Mexico, and portions of Canada and is widespread at the lower elevations in California (Humple 2008). Preferred habitats for the species are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or man-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Nest sites are chosen based more on the cover than the particular vegetation species and are usually constructed in a dense shrub or tree well below the crown and are well concealed (Yosef 1996). The species could use the California juniper in the Study Area for nesting and could forage throughout the Study Area.

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow is on the CDFW Watch List and occurs in sparse, mixed chaparral and coastal scrub habitats (CDFW 2025a). The species frequents relatively steep, often rocky hillsides with grass and forb patches and also grassy slopes without shrubs, if rock outcrops are present (CDFW 2025a). The species has a moderate potential to occur on the slopes of the gen-tie portion of the Study Area.

Bell's Sage Sparrow

Bell’s sage sparrow is on the CDFW Watch List and occupies semi-open habitats with evenly spaced shrubs that are 1 meters to 2 meters (3.3 feet to 6.6 feet) high (County of Riverside 2008). CDFW still recognizes *A. belli belli* but the subspecies has been reclassified as its own species Bell’s sparrow (*A. belli*), with the other subspecies *A. belli nevadensis* reclassified as sagebrush sparrow (*A. nevadensis*). For site selection, specific shrub species may be less important than overall vertical structure, habitat patchiness, and vegetation density (Wiens and Rotenberry 1981). At higher elevations in Southern California, Bell's sage sparrow often occurs in big sagebrush (County of Riverside 2008). Sage sparrows seek cover in fairly dense stands in chaparral and scrub habitats during the breeding season. Bell’s sage sparrow has a moderate potential to occur in the *Artemisia tridentata* dominant and codominant vegetation communities in the Study Area.

Mountain Lion

Mountain lions associated with Southern California and Central Coast populations are designated as a State candidate endangered species. On April 16, 2020, the California Fish and Game Commission voted to designate the Southern California and Central Coast mountain lions as a candidate for listing as an endangered species under the CESA. The vote triggered a 1-year review by CDFW to determine whether these mountain lion populations should be formally protected under CESA; however, the listing status of this species is still currently unresolved at the time of this report.

The California mountain lion occurs throughout much of California open space, occurring in or moving through nearly all but the most urbanized settings. This species inhabits a wide range of habitat types where prey items such as mule deer (*Odocoileus hemionus*) and bighorn sheep (*Ovis canadensis*) are present, from interior, arid rocky scrublands, to upper montane coniferous forest, to chaparral, coastal scrub, and woodland habits along the coastal plain.

According to the Mountain Lion Predicted Habitat dataset (CDFW 2025b), the proposed BESS portion of the Study Area consists primarily of high quality habitat and most of the proposed gen-tie route is within low quality habitat. However, CDFW's Mountain Lion Habitat Suitability dataset has most of the proposed BESS portion of the Study Area and gen-tie alignment as low suitable habitat (Dellinger et al. 2020; CDFW 2025b). As such, the species could occur throughout most of the Project area during home range movement, dispersal, and foraging. The potential to occur is based on habitat suitability: scrub vegetation, presence of mule deer, and proximity to high-quality habitat on large swaths of public lands to the east in the Angeles Nation Forest. However, females keep their young in dens located in rocky terrain or in dense vegetation that provide cover but avoid roads and stay at a distance from human disturbance four times greater (approximately 600 meters) than non-reproductive mountain lions (Center for Biological Diversity and the Mountain Lion Foundation 2019). The Study Area is located adjacent to residential neighborhoods, Sierra Highway, the Southern Pacific Railroad lines, Carson Mesa Road, and SR-14, all of which have associated human presence. As such, females of the species are not expected to establish natal dens in the Study Area.

Western Burrowing Owl

As of October 15, 2024, western burrowing owl (*Athene cunicularia hypugaea*) is being considered for listing under the California Endangered Species Act (CESA) and the species is provided with the protection of CESA. Primary habitat requisites for burrowing owl are the presence of burrows for roosting and nesting and vegetation structure that is relatively short and sparse (Center for Biological Diversity et al. 2024). The species was historically abundant throughout Southwestern California, including up to the 610-meter (2,001.31 feet) elevation contour in the Transverse Range, but have been extirpated from Ventura, western Los Angeles, and Orange counties and are near extirpation in San Diego County (Center for Biological Diversity et al. 2024). The petition to list the species does not include the Study Area in the breeding range of the species and does not include the Study Area in one (1) of the 16 burrowing owl regions in California (Center for Biological Diversity et al. 2024).

CDFW's range and predicted habitat for burrowing owl does not include the Study Area (CDFW 2025f). There are five (5) CNDDB records of the species within 10 miles that are in the Antelope Valley to the north of the Study Area, with the most recent being 2006 (CDFW 2025a). Citizen science-based databases have only five (5) records within 10 miles that are in the Antelope Valley to the north of the Study Area (eBird 2025; iNaturalist 2025).

The Study Area is dominated by shrub-dominant vegetation communities that have relatively high density. The Study Area elevation ranges from 2,700 feet to 3,500 feet above mean sea level, which is above the known historic occurrences of the species in the Transverse Ranges. California ground squirrel burrows are present but are sparse and none of the extensive surveys of the Study Area have identified burrowing owl or diagnostic sign (i.e., pellets, feathers, and extensive whitewash). Based upon the lack of suitable habitat; the Study Area being above the known elevation occurrence of the species in the region; the lack of observations of the species during extensive surveys; and the limited number of records of the species within 10 miles, burrowing owl is not expected in the Study Area and will not be further analyzed.

American Badger

American badger is a CDFW Species of Special Concern that is an uncommon, permanent resident found throughout most of the state, except in the northern North Coast (CDFW 2025f). Suitable habitat for the species is characterized by herbaceous, shrub, and open stages of most habitats with dry, friable soils (CDFW 2025f). American badger dig burrows in friable soil for dens and frequently reuse old burrows; although, some may dig a new den each night, especially in summer (CDFW 2025f). American badger is a highly specialized burrowing

mammal that primarily eats burrowing rats, mice, chipmunks, and especially ground squirrels and pocket gophers (CDFW 2025f).

There is one (1) CNDDB record of American badger within 20 miles of the Study Area from 1930 at Lake Los Angeles (CDFW 2025a). There is one (1) 2021 iNaturalist record of the species approximately 8.6 miles to the west near Agua Dulce (iNaturalist 2025). American badger has been determined to have a low potential to occur in the Study Area due to the presence of suitable habitat, but no individuals were observed and no diagnostic sign (i.e., burrows or digs with the species' conspicuous claw marks) were observed during the extensive surveys of the Study Area. As such, the species will not be further analyzed.

3.2.1.11 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 USC 703 et seq.), as amended (MBTA), prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so. In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA's "take" prohibition to apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. Unintentional or accidental take is not prohibited. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

3.2.1.12 Bald and Golden Eagle Act

Golden eagle is protected by the federal The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) and are a fully protected species in California (Fish and Game Code 3511). The species is an uncommon permanent resident and migrant throughout California, except the center of the Central Valley (CDFW 2025f). Golden eagle nest on cliffs of all heights and in large trees in open areas, with rugged, open habitats with canyons and escarpments used most frequently (CDFW 2025f). The species needs open terrain for hunting, including grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats (CDFW 2025f). Golden eagle eats mostly rabbits and rodents, but it also takes other mammals, birds, reptiles, and some carrion (CDFW 2025f).

There is one (1) CNDDB record of golden eagle nesting within 25 miles of the Study Area (CDFW 2025a). The record dates are from 1963, 1964, and 1965, and document the collection of eggs from the species for each of those years. The record location has a 1-mile accuracy and the location description was "Acton, in Aliso Canyon, off Soledad Canyon, in Angeles National Forest," which CDFW interpreted as being closer to the mouth of Aliso Canyon (CDFW 2025a). The center of the 1-mile circle is approximately 2 miles to the south-southwest of the Study Area in an area that is devoid of cliffs or open areas with large trees (Google Earth 2025).

No eagle or other raptor nests were identified within the Study Area and 500-foot buffer during the focused raptor nest surveys conducted in 2025. The Study Area and surrounding area do not contain the elements (i.e., cliffs or large trees in open areas) associated with nesting by golden eagle, so nesting by the species is not expected. Additionally, the species would not be expected to nest in areas where a variety of human activity occur since the adults of the species have been documented to flush from nest when those activities happen within 1,000 meters of the nest (Spaul and Heath 2017). The activities within the residential neighborhoods surrounding the Study Area and the Vincent Substation are expected to deter golden eagle from nesting within sight of these areas. Potential

nesting in the Angeles National Forest to the east of the site are not expected to be visible from the Study Area and activities during construction would not affect any potential nesting. The species could forage or migrate through the Study Area but the Project transmission facilities will be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (Avian Power Line Interaction Committee [APLIC] 2006) where feasible. Transmission facilities will also be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012).

3.2.1.13 Wildlife Corridors and Habitat Linkages

Wildlife movement corridors have been recognized by federal and state agencies as important habitats worthy of conservation. Wildlife corridors provide migration channels seasonally (i.e., between winter and summer habitats), and provide non-migrant wildlife with the opportunity to move within their home range for food, cover, reproduction, and refuge. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal.

The Study Area does not overlap with any South Coast Missing Linkages, California Essential Habitat Connectivity Areas or Natural Landscape Block or Natural Landscape Block (South Coast Wildlands 2008, CDFW 2014, 2017). Given that the existing vegetation is surrounded on three (3) sides by similar habitats, the Study Area likely provides habitat for local wildlife movement but is not recognized as an important regional wildlife corridor by any state agency or jurisdiction and is of limited linkage value on a landscape scale. Furthermore, although local wildlife may utilize the Study Area for movement, regional connectivity is highly limited by residential neighborhoods, Sierra Highway, the Southern Pacific Railroad lines, Carson Mesa Road, and SR-14 to the west. Thus, the Project is not expected to impose significant barriers to wildlife movement.

3.2.1.14 Los Angeles County Significant Ecological Area – Protected Trees

In the portions of the Study Area within the County's SEA, 1,159 California junipers were mapped, as shown in Figure 3.2-9, Protected Trees. Most of the California junipers mapped were located on slopes in the western and eastern portions of the SEA portion of the Study Area. The species is a shrub that is native to California and found only slightly beyond California borders (Calflora 2025). California juniper typically has several trunks and grows up to 13 feet (Jepson Flora Project 2025).

3.2.2 Environmental Analysis

Potential direct. indirect and cumulative impacts to biological resources were evaluated to determine the potential permanent and temporary effects of construction and operation of the proposed Project. Results from the field surveys, habitat evaluations and literature review were evaluated to address the potential for presence of sensitive biological resources within the Study Area were presented in the prior section.

Section 3.2.2, contained herein, identifies the biological resources that may be affected directly or indirectly and may have temporary or permanent impacts. These impact categories are defined as follows:

Direct. The CEQA defines direct impacts as those that result from the project and occur at the same time and place. Project related activities, such as alteration, disturbance or destruction of biological resources are considered a

direct impact. Direct impacts for this Project are those associated with the grading and development of the BESS facility site and both gen-tie routes.

Indirect. CEQA defines indirect impacts as impacts that are caused by the project but do not occur at the same time but rather at different but a reasonably foreseeable future time. Indirect impacts associated with the proposed Project include effects to biological or aquatic resources as a result of dust, noise, vibration, or potential erosion.

Permanent. All impacts that result in the irreversible removal of biological resources are considered permanent. Permanent impacts for the proposed Project include the conversion of land for the BESS facility site and associated access facilities.

Temporary. Temporary impacts are considered to have reversible effects on biological resources. Temporary impacts associated with the proposed Project include tension/pulling sites along the gen-tie right of way, and other work associated with temporary access along the gen-tie line.

3.2.2.1 Significance Criteria

Factors typically used to evaluate the significance of project-related impacts are set forth in Appendix G of the CEQA Guidelines. CEQA Guidelines Appendix G is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to determine whether a project requires an Environmental Impact Report, a Mitigated Negative Declaration, or a Negative Declaration.

As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects but does not provide a means of judging whether they are indeed significant in a given set of circumstances." The answers to the CEQA Guidelines Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Guidelines Appendix G are instructive. Potentially significant biological impacts resulting from the Project were assessed by the following criteria:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as endangered, threatened, candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on federal or state protected WOTUS [waters of the United States] (including wetlands) as defined by Sections 404 and 401 of the 1972 Amendments to the Federal Water Pollution Control Act, commonly known as the Clean Water Act, or the Porter-Cologne Act, either through direct removal, filling, hydrological interruptions, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory native wildlife corridors or impede the use of wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, NCCP [natural community conservation plan], or other approved local, regional, or state habitat conservation plan.

CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if the species is not on one of the official lists if, for example, it is likely to become endangered in the foreseeable future.

3.2.2.2 CEQA Appendix G Assessment Criteria

The following impact analysis includes both gen-tie options, so the potential direct permanent and temporary impact acreages presented are in the comprehensive analyses of both gen-tie routes are greater than the expected actual impact acreages associated with constructing only one (1) gen-tie.

3.2.2.2.1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as endangered, threatened, candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by CDFW or USFWS?

Direct Impacts

Permanent and temporary direct impacts to special-status plants and wildlife could occur from construction of the proposed Project.

Special-status Plants

Less than Significant with Mitigation. Two (2) special-status plant species, short-joint beavertail and golden linanthus, were mapped in the gen-tie route portion of the Study Area during surveys in 2023. None of the mapped individuals will be directly impacted by the Project. However, some of the individuals of both species are in close proximity to the Project construction limits. **MM-BIO-1**, Demarcation of Disturbance Limits, requires that the limits of construction be clearly marked to avoid impacting biological resources outside those limits. **MM-BIO-2**, Biological Monitoring, requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring the flagged limits are adhered to during construction. **MM-BIO-3**, Worker Education Awareness Program, requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and Study Area, and measures to avoid and minimize impacts to those resources. Project implementation of MM-BIO-1 through MM-BIO-3 will reduce potential impacts to less than significant. Impacts will be **less than significant with mitigation**.

Special-status Wildlife

Less than Significant with Mitigation. Six (6) special-status wildlife species have a moderate or high potential to occur: Crotch's bumble bee, California legless lizard, Blainville's horned lizard, Southern California rufous-crowned sparrow, Bell's sage sparrow, and mountain lion. One (1) special-status wildlife species (loggerhead shrike) has been observed in the Study Area.

Crotch's Bumble Bee

Protocol surveys for Crotch's bumble bee conducted in 2024 were negative for the species. However, bumble bees are opportunistic and highly mobile. The species typically nests underground, so nesting individuals could be highly vulnerable to injury and mortality during construction, which could crush nests and individuals, if present on site. Harm to or the loss of individuals during construction will be significant due to reducing the rare species' numbers

and will require mitigation. If Crotch's bumble bee is still a candidate for listing under CESA or has been listed under CESA at the time of the start of construction of the Project, the following mitigation measures would be implemented. If the species is determined to not warrant listing under CESA at the time of the start of construction of the Project, then no mitigation is necessary. **MM-BIO-4**, Crotch's Bumble Bee Minimization Measures, would require pre-construction surveys for Crotch's bumble bee nests, with buffers established around active nests until the nests are deemed inactive. **MM-BIO-5**, On-Site Preservation, would require the establishment of a conservation area that will preserve up to approximately 148 acres of native vegetation communities (the non-impacted acres of the parcels associated with the southern gen-tie route) within the Study Area parcels associated with the gen-tie routes, which will preserve habitat for the species should an ITP for the species be needed. **MM-BIO-6**, Habitat Mitigation and Monitoring Plan, would require the preparation of a restoration plan, its implementation, and a monitoring period to restore temporarily impacted areas and will include flora resources that the species could use in the conservation area. MM-BIO-1 requires that the limits of construction be clearly marked to avoid impacting biological resources outside those limits. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring the integrity of any buffers established for active nests. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources. If Crotch's bumble bee is still a candidate for listing under CESA or has been listed under CESA at the time of the start of construction, the Project's implementation of MM-BIO-2 through MM-BIO-6 will reduce potential direct impacts to **less than significant with mitigation**.

Special-Status Reptiles

Less than significant with mitigation. California legless lizard and Blainville's horned lizard are designated as CDFW Species of Special Concern. The loss of habitat for a special-status species is not considered as a substantial adverse effect, and therefore not considered a potentially significant impact, simply because there is an impact. That impact must also be shown to have a substantial adverse effect on the resource. In the case of an individual species, the effect of the habitat loss must be substantial and adverse relative to the range of the species (i.e., that the loss of habitat by a particular development activity will adversely affect the species as a whole, and not simply the effect that a development activity will have on a specific population). These species are vulnerable to mortality or injury during vegetation and ground disturbing activities associated with construction. It is highly unlikely that short-term construction activities could cause the greater population of these special-status species to drop below self-sustaining levels due to the relatively small area of construction activity and the short-term nature of the construction schedule. However, mortality or injury to individual species during the vegetation removal and grading portion of construction is a reasonable possibility, so direct permanent impacts are possible and would be significant. **MM-BIO-7,** Special-Status Wildlife Relocation Plan, requires the preparation of a plan that has a process of clearance surveys and relocation of special-status wildlife into non-impacted portions of the Study Area. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for relocating any special-status reptiles. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources. MM-BIO-5 requires the establishment of a conservation area that will preserve habitat for the species and where captured individuals would be relocated. MM-BIO-6 requires the preparation of a restoration plan, its implementation, and a monitoring period to restore temporarily impacted areas that the species could use in the conservation area. Project implementation of MM-BIO-2. MM-BIO-3, MM-BIO-5, MM-BIO-6, and MM-BIO-7 will reduce potential direct impacts to **less than significant with mitigation**.

Special-Status Birds and Protected Nesting Bird Species

Less than significant with mitigation Three (3) special-status bird species, loggerhead shrike, Southern California rufous-crowned sparrow, and Bell's sage sparrow, have suitable nesting habitat on the Project site. Additionally, numerous other common species protected under the MBTA and California Fish and Game Code (Sections 3503, 3503.5, and 3513) have suitable nesting habitat on site. Impacts to juvenile and adults of these species are not expected; however, nesting could be disrupted if construction occurs during the breeding season. Direct impacts to nesting birds could occur because of nest abandonment, reduced reproductive success, or other disruptions to nesting. Nests, eggs, and young could also be crushed or otherwise directly affected during vegetation clearing and grading. Impacts to special-status and protected nesting bird species could be potentially significant. **MM-BIO-8**, Nesting Bird Avoidance, will provide pre-construction surveys and buffer establishment for active nests. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring the integrity of any buffers established for active nests. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources. Project implementation of MM-BIO-2. MM-BIO-3, MM-BIO-5, MM-BIO-6, and MM-BIO-8 will reduce potential direct impacts to **less than significant with mitigation**.

Mountain Lion

Less than significant with mitigation Because California mountain lion is a candidate for state listing under CESA, Project impacts resulting in direct take of California mountain lion will require an ITP under CESA through coordination with CDFW; however, no natal dens have been detected during field efforts that have resulted in extensive cover of the Project site, and none are expected. Therefore, no direct take of California mountain lion is expected to occur because of the proposed Project.

Impacts will be **less than significant with mitigation**.

Indirect Impacts

Special-Status Plants

Less than Significant with Mitigation. Potential short-term or temporary indirect impacts to short-joint beavertail and golden linanthus located in the Study Area could result from construction activities and include impacts related to or resulting from the activities outside of the Project limits, generation of fugitive dust, increased human activity, and the introduction of pollutants from construction equipment. Excessive dust can decrease the vigor and productivity of plants through effects on light, penetration, photosynthesis, respiration, and transpiration; increased penetration of phytotoxic gaseous pollutants; and increased incidence of pests and diseases. Additionally, invasive plant species could be introduced by the Project during construction and through landscaping installation that could alter the habitat and compete with special-status plants. These indirect impacts could result in additional loss of special-status plants that could be significant. Water trucks are expected as part of Project construction, which will reduce fugitive dust. **MM-BIO-9**, Invasive Species Prevention Plan, requires the preparation and implementation of a plan that will avoid and minimize the introduction of non-native plant species that could compete for habitat space with plants that the species forages on by ensuring that vehicles and equipment used during construction are weed free. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring the Invasive Species Prevention Plan will be implemented. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources

that occur on the Project site and measures to avoid and minimize impacts to those resources, which will include a discussion on invasive plants. Project implementation of MM-BIO-2, MM-BIO-3, and MM-BIO-9 will reduce potential indirect impacts to less than significant. Impacts will be **less than significant with mitigation**.

Special-Status Wildlife

Construction

Less than Significant with Mitigation. During construction activities, indirect impacts to sensitive wildlife could include construction-related dust, soil erosion, and water runoff decreasing or permanently altering habitat suitability. Without construction-related minimization measures to control dust, erosion, and runoff, and without compliance with National Pollutant Discharge Elimination System (NPDES) requirements, indirect impacts to riparian resources and upland communities could occur. However, standard construction BMPs to control dust, erosion, and runoff, including straw bales and silt fencing, will be implemented through the General Permit for stormwater control during construction to minimize these adverse effects. Additionally, implementation of MM-BIO-2 through MM-BIO-9 to reduce indirect impacts to special-status wildlife species will also contribute to the reduction of indirect impacts to **less than significant with mitigation**.

Operation

Less than Significant. Once constructed, the Project will be available to operate 7 days per week, 365 days per year. The facility will be remotely monitored and operated by an Owner contracted O&M provider as well as 16 on-site staff. Onsite maintenance will be required, which will include replacement of inverter power modules, filters, and miscellaneous electrical repairs on an as-needed basis. During operation of the Project substation, O&M staff will service the substation periodically for switching and other operation activities. Light duty maintenance trucks will be utilized to perform routine maintenance, including but not limited to equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventative maintenance. Typically, one major maintenance inspection will take place annually. The Project transmission facilities will be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (Avian Power Line Interaction Committee [APLIC] 2006) where feasible. Transmission facilities will also be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012). Based upon the low volume of human activity and the proposed avian protecting Project design features, indirect impacts to wildlife during Project operation are expected to be **less than significant**.

The infrequent testing of the emergency backup generators onsite will introduce a new source of nitrogen deposition. The modeling showed that the highest nitrogen loading from such testing will be located just outside the northern boundary as shown in Appendix 3.2F. The nitrogen loading was estimated to 0.66. The potential for nitrogen deposition reduces significantly with distance from the source and the infrequent testing.

As previously discussed, the area consists primarily of vegetation communities that are classified as chaparral, coastal sage scrub, and North American desert woodland (juniper woodland) and the nitrogen loading from the project is below the critical load for those habitats, as shown in Table 3.2-5. As such, the nitrogen is well below any critical loads for other sensitive biological resources that are present or have the potential to occur, including short-joint beavertail, golden linanthus, Crotch's bumble bee, California legless lizard, Blainville's horned lizard, loggerhead shrike, Southern California rufous-crowned sparrow, Bell's sage sparrow, mountain lion, and jurisdictional waters. While there may be other biological species within 6 miles of the Study Area that are not listed

here, the annual nitrogen deposition is well below the maximum impact area indicated above and will not be above other species' critical nitrogen loads.

Table 3.2-5. Critical Nitrogen Loads for Biological Resources within 6 Miles of the Project Site

Biological Resource	Critical Nitrogen Loads (kg/ha/yr)
Chaparral	5-33
Coastal sage scrub	7.8-10
North American desert woodland	3-8.4

Source: Pardo et al 2011.
Note: kg/ha/yr = kilogram per hectare per year.

The quantity of nitrogen deposition from the Project emissions on vegetation will, in practice, be less than the model results because the assumptions modeled are inherently conservative (e.g., assuming the emergency backup generators are running at the same time). The nitrogen deposition will also be distributed incrementally throughout a year and not all nitrogen added to the soil during each deposition event will be available for plant use because of losses associated with soil processes. As a result, the testing of the Project's emergency backup generators will not lead to nitrogen deposition levels that exceed critical thresholds associated with significant impacts to natural vegetation communities and special status species in the vicinity of the Project site. Therefore, operations from the testing of the Project's emergency backup generators will result in less than significant impacts to natural vegetation communities and special status species within 6 miles of equipment operation.

Impacts will be **less than significant.**

3.2.2.2.2 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.?

Direct Impacts

Less than Significant with Mitigation. As currently designed, the proposed Project will result in approximately 107.29 acres (approximately 37.05 acres temporary and approximately 70.24 acres permanent; includes both gen-tie line options) of direct impacts to vegetation communities and land covers through the removal of vegetation and grading of land to construct the proposed Project. Temporary impacts will occur within areas proposed for construction laydown areas and within the gen-tie work areas that are outside of the transmission pole pads and access roads. The total acreage for project-related impacts to the mapped vegetation communities located within the development area are provided in Table 3.2-6.

Table 3.2-6. Potential Impacts to Vegetation Communities and Land Covers in the Study Area

Alliance	Association	CDFW Sensitive[1]	Ranking[2]	Potential Temporary Impacts (Gross Acreages)[3]	Potential Permanent Impacts (Gross Acreage)[3]
Native Communities					
Cheesebush – sweetbush scrub	*Ambrosia salsola - Larrea tridentata*	No	G4/S4	0.12	–
	Ambrosia salsola Association	No	G4/S4	1.46	–
Fiddleneck - phacelia fields	*Amsinckia menziesii - Erodium* spp.	No	G5/S5	–	2.08
California sagebrush – (purple sage) scrub	*Artemisia californica - Eriogonum fasciculatum*	No	G4/S4	1.09	–
Big sagebrush	*Artemisia tridentata - Ericameria nauseosa*	No	G5/S5	2.06	0.88
	Artemisia tridentata - Eriogonum fasciculatum	No	G5/S5	–	2.60
	Artemisia tridentata ssp. *parishii*	Yes	G2/S2	0.21	–
Fourwing saltbush scrub	*Atriplex canescens*	No	G5/S4	17.76	2.65
Mormon tea scrub	*Ephedra viridis*	No	G4/S4	–	17.85
Rubber rabbitbrush scrub	*Ericameria nauseosa - Juniperus californica* / herb	No	G5/S5	1.18	10.98
	Ericameria nauseosa	No	G5/S5	–	–
California buckwheat scrub	*Eriogonum fasciculatum*	No	G5/S5	–	4.75
	Eriogonum fasciculatum var. *foliolosum - Juniperus californica*	Yes	G3/S3	–	4.32
California buckwheat – Parish's goldeneye scrub	*Eriogonum fasciculatum* rock outcrop	Yes	Unranked	–	–
California walnut groves	*Juglans californica* / *annual herbaceous*	Yes	G3/S3	–	–
California juniper woodland	*Juniperus californica / Adenostoma fasciculatum - Eriogonum fasciculatum*	Yes	Unranked	0.39	11.21
	Juniperus californica / *herbaceous*	Yes	Unranked	1.11	7.55
	Juniperus californica / Eriogonum fasciculatum - Artemisia californica	No	G5/S5	–	–

Table 3.2-6. Potential Impacts to Vegetation Communities and Land Covers in the Study Area

Alliance	Association	CDFW Sensitive[1]	Ranking[2]	Potential Temporary Impacts (Gross Acreages)[3]	Potential Permanent Impacts (Gross Acreage)[3]
Naturalized (Non-Native)					
Avena spp. – *Bromus* spp.	*Avena barbata - Bromus hordeaceus*	No	GNA/SNA	–	–
Bromus rubens – *Schismus* (*arabicus*, *barbatus*)	*Bromus rubens* - mixed herbs	No	GNA/SNA	–	–
			Subtotals:	–	–
Land Cover Types					
Disturbed habitat	Not applicable	No	NA/NA	3.29	6.36
Urban/Developed	Not applicable	No	NA/NA	3.72	3.65
			Subtotals:	*7.01*	*10.02*
			Totals:	**32.41[3]**	**74.88[3]**

Notes: Totals may not sum due to rounding and inclusion of both gen-tie routes.

1 California Department of Fish and Wildlife (CDFW) has determined the community to be sensitive.

2 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, S = state). The numbers have the following meaning:
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
NA = not applicable
GNA = global rank not applicable
SNA = state rank not applicable
Unranked= Associations that are considered sensitive, but have not been ranked

3 Includes both gen-tie options.

Four (4) sensitive vegetation communities have approximately 24.79 acres of direct impacts (includes both gen-tie options): *Artemisia tridentata* ssp. *parishii* association, *Eriogonum fasciculatum* var. *foliolosum-Juniperus californica* association, *Juniperus californica/Adenostoma fasciculatum-Eriogonum fasciculatum* association, and *Juniperus californica/herbaceous* association. There are approximately 23.08 acres of permanent impacts and approximately 1.71 acres of temporary impacts to these communities. Potential impacts to the three (3) sensitive vegetation communities could be considered potentially significant. MM-BIO-5 requires the establishment of a conservation area that will preserve up to approximately 71.07 acres of sensitive vegetation communities of the Study Area parcels associated with the gen-tie routes. MM-BIO-6 requires the preparation of a restoration plan, its implementation, and a monitoring period to restore the approximately 1.71 acres of temporarily impacted sensitive vegetation communities in the gen-tie portion of the Study Area. MM-BIO-1 requires that the limits of construction be clearly marked to avoid impacting biological resources outside those limits. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring that Project construction does not extend beyond Project limits. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources, which will include a discussion about sensitive

vegetation communities. Project implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-5, and MM-BIO-6 will reduce potential direct impacts to less than significant. Impacts will be **less than significant with mitigation**.

Indirect Impacts

Less than Significant with Mitigation. Potential short-term or temporary indirect impacts to sensitive vegetation located in the Study Area could result from construction activities and include impacts related to or resulting from the activities outside of the Project limits, generation of fugitive dust, increased human activity, and the introduction of pollutants from construction equipment. Excessive dust can decrease the vigor and productivity of plants through effects on light, penetration, photosynthesis, respiration, and transpiration; increased penetration of phytotoxic gaseous pollutants; and increased incidence of pests and diseases. Additionally, invasive plant species could be introduced by the Project during construction and through landscaping installation that could alter the habitat and compete with native vegetation. These indirect impacts could result in additional loss of sensitive vegetation communities that could be potentially significant. Water trucks are expected as part of Project construction, which will reduce fugitive dust. MM-BIO-9 requires the preparation and implementation of a plan to avoid and minimize the introduction of non-native plant species that could compete for habitat space with native plants ensuring that vehicles and equipment used during construction are weed free. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring the Invasive Species Prevention Plan will be implemented. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources, which will include a discussion on invasive plants. Project implementation of MM-BIO-2, MM-BIO-3, and MM-BIO-9 will reduce potential indirect impacts to less than significant. Impacts will be **less than significant with mitigation**.

3.2.2.2.3 Would the project have a substantial adverse effect on federal or state protected WOTUS (including wetlands) as defined by Sections 404 and 401 of the 1972 Amendments to the Federal Water Pollution Control Act, commonly known as the Clean Water Act, or the Porter-Cologne Act, either through direct removal, filling, hydrological alteration, or other means?

Direct Impacts

Less than Significant with Mitigation. As currently designed, the proposed Project will result in approximately 0.23 acres (approximately 0.19 acres temporary and approximately 0.04 acres permanent; includes both gen-tie options) of direct impacts to potential jurisdictional waters through the removal of vegetation and grading of land to construct the proposed Project. Temporary impacts will occur within areas proposed for construction laydown areas and within the gen-tie work areas that are outside of the transmission pole pads and access roads. The total acreage for project-related impacts to potential jurisdictional waters located within the development area are provided in Table 3.2-7.

Table 3.2-7. Summary of Potential Impacts to Potential Jurisdictional Waters

Jurisdiction	Potential Temporary Impact (Gross Acreage)[1]	Potential Permanent Impact (Gross Acreage)[1]
RWQCB		
Features		
Non-Wetland Waters	0.18	0.04
Swales	0.02	0
RWQCB Total[2]	**0.19**	**0.04**
CDFW		
Features		
Non-Wetland Waters	0.18	0.04
Swales	0.02	0
CDFW Total[2]	**0.19**	**0.04**

Notes: RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.
1 Includes both gen-tie options.
2 Totals may not add up due to rounding.

MM-BIO-10, Jurisdictional Waters Compensation, will require the purchase of mitigation bank credits and/or turnkey projects with a mitigation bank at 3:1 for permanent impacts to jurisdictional waters, for a maximum of approximately 0.69 acres (dependent on which gen-tie option is used). MM-BIO-5 will preserve up to the remaining jurisdictional waters in the Study Area parcels associated with the gen-tie routes. MM-BIO-6 will require the preparation of a restoration plan, its implementation, and a monitoring period to restore the approximately 0.19 acres of temporarily impacted jurisdictional waters. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring that Project construction does not extend beyond Project limits. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources, which will include a discussion about jurisdictional waters. Project implementation of MM-BIO-2, MM-BIO-3, MM-BIO-5, MM-BIO-6, and MM-BIO-10 will reduce potential direct impacts to less than significant. Impacts will be **less than significant with mitigation**.

Indirect Impacts

Less than Significant. Potential temporary indirect impacts to the drainages in the Study Area and downstream waters could result from construction activities and will include potential impacts from the generation of fugitive dust and the potential introduction of chemical pollutants (including herbicides). Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration and transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect wetlands/ jurisdictional waters. The release of chemical pollutants can reduce the water quality downstream and degrade adjacent habitats. However, during construction, erosion-control measures will be implemented as part of the storm water pollution prevention plan (SWPPP) for the Project. Because the entirety of the Project development footprint will be graded at one time but construction will occur over time in phases, the erosion measures will be maintained until all graded areas are constructed/landscaped. Prior to the start of construction activities, the Contractor is required to file a Permit Registration Document with the State Water Resources Control Board in order to obtain coverage under the National Pollutant Discharge Elimination System

General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for earthwork that results in the disturbance of 1 acre or more of total land area. The required SWPPP will mandate the implementation of best management practices to reduce or eliminate construction-related pollutants in the runoff, including sediment, for all exposed soils. Therefore, temporary indirect impacts will be **less than significant** due to compliance with regulations.

3.2.2.2.4 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 native wildlife corridors or impede the use of wildlife nursery sites?

Less than Significant. Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The Study Area does not overlap with any California Essential Habitat Connectivity Areas or Natural Landscape (CDFW 2014, 2017). The Study Area is located adjacent to residential neighborhoods, Sierra Highway, the Southern Pacific Railroad lines, Carson Mesa Road, and SR-14, all of which have associated human presence. The Study Area does not support permanent or relatively permanent waters so fish movement is not expected. As such, no significant direct or indirect permanent impacts will occur on wildlife movement or use of native wildlife nursery sites associated with Project activities. Existing habitat linkages and wildlife corridor functions will remain intact while construction activities are conducted and following Project completion. Construction activities will not likely result in potential impacts to wildlife movement because no new structures that will impede wildlife movement are proposed.

During construction activities, temporary disturbance to local species may occur, but will not substantially degrade the quality or use of the vegetation communities in the vicinity. Some indirect impacts to localized wildlife movement could occur during construction activities due to construction-related noise. However, this impact will be temporary and will not be expected to significantly disrupt wildlife movement during and following construction activities.

During operation of the Project, the BESS and substation are located adjacent to residential neighborhoods, Sierra Highway, the Southern Pacific Railroad lines, Carson Mesa Road, and SR 14, so it is not expected to create a substantial new barrier between open natural lands to the east and west of the Study Area. The Project transmission facilities will be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012), so bird migration through the Study Area is expected to continue.

Therefore, direct and indirect impacts on wildlife corridors and migratory routes resulting from the proposed Project will be **less than significant**.

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

County of Los Angeles Significant Ecological Area

Less than Significant with Mitigation. The portions of the Study Area east of the railroad tracks, south of Foreston Drive and the Vincent Substation, and east of the substation are within a County of Los Angeles SEA (County of Los Angeles 2025), as shown in Figure 3.2-6, Los Angeles County Significant Ecological Area. The SEA Ordinance establishes the permitting, design standards, and review process for development within SEAs, balancing preservation of the County's natural biodiversity with private property rights. The gen-tie line portion of the Project has the potential to impact resources within the Santa Clara River SEA including special-status wildlife, special-status wildlife foraging habitat, sensitive vegetation communities, Water Resources (i.e., streams), and protected trees.

Special-Status Plants

Two (2) special-status plant species, short-joint beavertail and golden linanthus, were mapped in the gen-tie route portion of the Study Area during surveys in 2023. None of the mapped individuals will be directly impacted by the Project. However, some of the individuals of both species are in close proximity to the Project construction limits. MM-BIO-1, Demarcation of Disturbance Limits, requires that the limits of construction be clearly marked to avoid impacting biological resources outside those limits. MM-BIO-2, Biological Monitoring, requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring the flagged limits are adhered to during construction. MM-BIO-3, Worker Education Awareness Program, requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and Study Area, and measures to avoid and minimize impacts to those resources. MM-BIO-5 requires the establishment of a conservation area that will preserve up to approximately 148 acres of native vegetation communities within the Study Area parcels associated with the gen-tie routes, which will preserve individuals and habitat for the species. MM-BIO-6 requires the preparation of a restoration plan, its implementation, and a monitoring period to restore temporarily impacted areas and will include flora resources that the species could use. Project implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-5, and MM-BIO-6 will provide the mitigation for the Project to be compatible with SEA Resources.

Special-Status Wildlife

For all wildlife, MM-BIO-1 requires that the limits of construction be clearly marked to avoid impacting biological resources outside those limits. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring the integrity of any buffers established for active nests. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources. For Crotch's bumble bee, MM-BIO-4 requires pre-construction surveys for the Crotch's bumble nests, with buffers established around active nests until the nests are deemed inactive. For special-status reptiles MM-BIO-7 will provide a process of clearance surveys and relocation of special-status wildlife into non-impacted portions of the Study Area. For nesting birds, including loggerhead shrike, Southern California rufous-crowned sparrow, and Bell's sage sparrow, MM-BIO-8 requires pre-construction surveys and buffer establishment for active nests. Project implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, MM-BIO-7, and MM-BIO-8 will provide the mitigation for the Project to be compatible with SEA Resources.

The Project will impact habitat that supports or has the potential to support several special-status species that are candidates for listing under CESA or are CDFW Species of Special Concern: Crotch's bumble bee, California legless lizard, Blainville's horned lizard, loggerhead shrike, Southern California rufous-crowned sparrow, and mountain lion. Indirect impacts to these species will be from the substantial loss of foraging and breeding habitat, as shown in Table 3.2-8.

Table 3.2-8. Potential Impacts to Special-Status Wildlife Habitat

Species	SEA Resource Category[1]	SEA Preservation Ratio[1]	Potential Impacted Habitat (acres)[2]	Restored Temporarily Impacted Habitat (Gross acreage)[2, 3]	Conserved Habitat (Gross acreage)[2, 4, 5, 6]
Crotch's bumble bee	1	5:1	30.16	28.67	122.11
California legless lizard	2	4:1	3.59	2.67	11.69
Blainville's horned lizard	2	4:1	30.16	28.67	91.97
loggerhead shrike	2	4:1	30.16	28.67	91.97
mountain lion	1	5:1	33.44	28.67	138.55

Notes:

1 Los Angeles County Planning 2020.
2 Includes impacts from both gen-tie options.
3 Restoration for areas that are temporary impacts (MM-BIO-6).
4 Total impacts multiplied by the ratio and minus the restored habitat (MM-BIO-5).
5 Includes preservation for impacts from both gen-tie options.
6 Acreages are not additive. Conserved habitat needed is overlapping since the species share suitable habitat, so the 138.55 acres for mountain lion will cover all species..

MM-BIO-5 requires the establishment of a conservation area that will preserve up to approximately 148 acres of native vegetation communities within the Study Area parcels associated with the gen-tie routes, which will preserve individuals and habitat for the species. MM-BIO-6 requires the preparation of a restoration plan, its implementation, and a monitoring period to restore temporarily impacted areas and will include flora resources that the species could use. MM-BIO-1 requires that the limits of construction be clearly marked to avoid impacting biological resources outside those limits. MM-BIO-2 requires full-time monitoring during all vegetation removal and initial grading activities, and the Biological Monitor(s) will be responsible for ensuring that Project construction does not extend beyond Project limits. MM-BIO-3 requires that a program be developed that informs all construction personnel of the sensitive resources that occur on the Project site and measures to avoid and minimize impacts to those resources, which will include a discussion about sensitive vegetation communities. Project implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-5, and MM-BIO-6 will provide the mitigation for the Project to be compatible with SEA Resources.

Vegetation Communities

Table 3.2-9 summarizes the Project's potential direct impacts to vegetation communities and land covers in the Santa Clara River SEA. There will be approximately 4.12 acres of permanent impacts and approximately 32.25 acres of temporary impacts, which includes both gen-tie options. Potential direct impacts will occur due to removal of vegetation, alteration of soils from grading, and the development of the Project.

Table 3.2-9. Potential Impacts to Vegetation Communities and Land Covers in the Santa Clara River Significant Ecological Area Portion of the Study Area

Alliance	Association	SEA Category[1]	Ratio[1]	Potential Impacts (gross acreage)[2]	Preserved Habitat (gross acreage)[2]
Native Communities					
Cheesebush – sweetbush scrub	*Ambrosia salsola - Larrea tridentata*	4	2:1	0.12	0.24
	Ambrosia salsola Association	4	2:1	1.46	2.92
California sagebrush – (purple sage) scrub	*Artemisia californica - Eriogonum fasciculatum*	4	2:1	1.09	2.18
Big sagebrush	*Artemisia tridentata - Ericameria nauseosa*	4	2:1	2.52	5.04
	Artemisia tridentata ssp. *parishii*	4	2:1	0.21	0.42
Fourwing saltbush scrub	*Atriplex canescens*	4	2:1	19.74	39.48
Rubber rabbitbrush scrub	*Ericameria nauseosa - Juniperus californica* / herb	4	2:1	1.18	2.36
California juniper woodland	*Juniperus californica / Adenostoma fasciculatum - Eriogonum fasciculatum*	3	3:1	0.91	2.73
	Juniperus californica / herbaceous	3	3:1	1.50	4.50
			Total:	**28.74[3]**	**59.87**

Notes:
1 SEA Ordinance Implementation Guide (Los Angeles County Planning 2020).
2 Includes impacts from both gen-tie options.
3 Impacts also include 3.65 acres of Disturbed Habitat and 3.98 acres of Urban/Developed.

MM-BIO-5 requires the establishment of a conservation area that will preserve up to approximately 148 acres of native vegetation communities within the Study Area parcels associated with the gen-tie routes, which will preserve individuals and habitat for the species. MM-BIO-6 requires the preparation of a restoration plan, its implementation, and a monitoring period to restore the approximately 32 acres of temporarily impacted areas within the conservation area. Project implementation of MM-BIO-5 and MM-BIO-6 will provide the preservation needed for the Project to be compatible with SEA Resources.

Water Resources

The Project will have potential impacts to approximately 0.20 acres (approximately 0.01 permanent impacts and 0.19 acres temporary impacts) of SEA Water Resources (i.e., streams and swales), which includes both gen-tie options. Potential direct impacts will occur due to grading and the development of the Project. Water Resources are to be preserved at 5:1, resulting in the need for 1.00 acres of preservation. MM-BIO-5 requires the establishment of a conservation area that will preserve up to 0.97 acres of unimpacted Water Resources in the Study Area parcels associated with the gen-tie routes, which will preserve individuals and habitat for the species. MM-BIO-6 requires

the preparation of a restoration plan, its implementation, and a monitoring period to restore an additional approximately 0.19 acres of temporarily impacted Water Resources within the conservation area. Project implementation of MM-BIO-5 and MM-BIO-6 will provide the preservation needed for the Project to be compatible with SEA Resources.

Protected Trees

California juniper is a protected tree under the SEA Ordinance. The Project has the potential to directly impact 35 California juniper due to the construction of the gen-tie, which includes both options. The potentially impacted trees will be replaced at 2:1, up to 70 replacement California juniper MM-BIO-5 requires the establishment of a conservation area that will preserve up to 648 California juniper acres of Water Resources in the Study Area parcels associated with the gen-tie routes, which will preserve individuals and habitat for the species. MM-BIO-6 requires the preparation of a restoration plan, its implementation, and a monitoring period to restore temporarily impacted areas within the conservation area including areas mapped as California juniper woodland. Project implementation of MM-BIO-5 and MM-BIO-6 will provide the preservation needed for the Project to be compatible with SEA Resources.

Impacts will be **less than significant with mitigation**.

Significant Ecological Areas Statement of Findings

A ***Be highly compatible with the SEA Resources, including the preservation of natural open space areas and providing for the long-term maintenance of ecosystem functions.***

The Santa Clara River SEA (the "SCR SEA") covers approximately 45,496 acres and its overall boundaries extend upstream along several major tributary creeks and where contiguous drainage areas connect to the river basin through open habitat. On a regional basis, the SCR SEA contains biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution. native grassland, coast live oak riparian forest, southern willow scrub, bigcone spruce-canyon oak forest, southern sycamore-alder woodland, southern cottonwood-willow riparian woodland and forest, freshwater marsh, alluvial fan sage scrub, and vernal pool. (PCR 2000).

The portions of the Project within the SCR SEA consist of an approximately 1.1-mile-long or 1.8-mile-long new gen-tie line. There will be a maximum of approximately 11 monopole or steel lattice tower structures. The proposed transmission structures were sited to avoid potential impacts to environmental resources. Where possible, the transmission structure access path will utilize existing access roads to minimize new ground disturbance. Fiber optic or other cabling required for the monitoring system typically will be installed in buried conduit within the access road or planned trenching.

The gen-tie portion of the Project consists of steel lattice tower structures, access roads, and buried lines that create a small footprint (4.12 acres) within the SCR SEA following the completion of construction activities. MM-BIO-5 requires the establishment of a conservation area that will preserve up to approximately 162 acres of native vegetation communities within the Study Area parcels associated with the gen-tie routes, which will preserve individuals and habitat for the species. MM-BIO-6 requires the preparation of a restoration plan, its implementation, and a monitoring period to restore temporarily impacted areas and will include flora resources that the species could use.

B Avoid or minimize impacts to the SEA Resources and wildlife movement through one or more of the following:

1 Avoiding habitat fragmentation;

The monopole or steel lattice tower structures, access roads, and buried lines create a small footprint within the SCR SEA following the completion of construction activities, and with the restoration of the temporary impacted areas, the Project is not expected to fragment the habitats with the Study Area. Wildlife is expected to be able to pass through the Project post-construction, because the transmission lines are not a barrier to movement.

2 Minimizing edge effects; or

The gen-tie portion of the Project consists of steel lattice tower structures, access roads, and buried lines create a small footprint (approximately 4.12 acres) within the SCR SEA following the completion of construction activities. The approximately 32.25 acres of temporary impacts produced by the Project will be restored per MM-BIO-6 and MM-BIO-5 will conserve up to approximately 162 acres of natural habitat. During the operation of the Project, maintenance work on the gen-tie and associated infrastructure is expected to be infrequent, so indirect impacts to wildlife are expected to be low.

3 Siting development in the least sensitive location.

The Project has been sited to avoid impacts to special-status plants and only have temporary impacts to Water Resources, which will be restored per MM-BIO-6.

C Buffer important habitat areas from development by retaining sufficient natural vegetation cover and/or natural open spaces and integrating sensitive design features;

The gen-tie portion of the Project consists of steel lattice tower structures, access roads, and buried lines create a small footprint (approximately 4.12 acres) within the SCR SEA following the completion of construction activities. The approximately 32.25 acres of temporary impacts produced by the Project will be restored per MM-BIO-6 and MM-BIO-5 will conserve up to approximately 162 acres of natural habitat.

D Maintain the ecological and hydrological functions of water bodies, watercourses, and their tributaries;

The gen-tie portion of the Project will impact approximately 0.20 acres of ephemeral Water Resources within the SCR SEA. The approximately 0.19 acres of temporary impacts produced by the Project will be restored per MM-BIO-6 and MM-BIO-5 will conserve up to approximately 0.97 acres of Water Resources.

E Ensure that roads, access roads, driveways, and utilities do not conflict with Priority Biological Resources, habitat areas or migratory paths; and

The gen-tie portion of the Project consists of steel lattice tower structures, access roads, and buried lines create a small footprint (approximately 4.12 acres) within the SCR SEA following the completion of construction activities. The Project has potential impacts to Priority Biological Resources (SEA Resource Categories 1 through 3) in the form special-status plants and wildlife, water resources, and vegetation communities; however, all such impacts are mitigated in accordance with SEA ordinance and CEQA guidelines.

The Project transmission facilities will be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (Avian Power Line Interaction Committee [APLIC] 2006) where feasible. Transmission facilities will also be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012). Based upon the low volume of human activity and the proposed avian protecting Project design features, potential impacts to wildlife habitat and movement during Project operation are expected to be less than significant.

F Promote the resiliency of the SEA to the greatest extent possible. For purposes of this finding, SEA resiliency cannot be preserved when the proposed development may cause any of the following:

1 Significant unmitigated loss of contiguity or connectivity of the SEA;

The gen-tie portion of the Project consists of steel lattice tower structures, access roads, and buried lines create a small footprint (approximately 4.12 acres) within the SCR SEA following the completion of construction activities. The approximately 32.25 acres of temporary impacts produced by the Project will be restored per MM-BIO-6 and MM-BIO-5 will conserve up to approximately 162 acres of native vegetation communities within the SEA.

2 Significant unmitigated impact to a Priority Biological Resource;

The Project has potential impacts to Priority Biological Resources (SEA Resource Categories 1 through 3) in the form special-status plants and wildlife, water resources, and vegetation communities; however, all such potential impacts are mitigated in accordance with SEA ordinance and CEQA guidelines. A total of 10 preservation, avoidance, and minimization measures have been provided as a part of the Project (MM BIO-1 through BIO-10), including: conserving in perpetuity approximately 162 of on-site natural open space; requiring pre-construction surveys, planning, and biological monitoring during construction; measures protecting against invasive species establishment and spread; preparation of conservation management plans; nesting bird avoidance; and strategically locating development as close as possible to existing urban uses/infrastructure. These measures serve to preserve and limit potential impacts to Priority Biological Resources. As such, potential impacts to Priority Biological Resources will be reduced to less than significant.

3 Removal of habitat that is the only known location of a new or rediscovered species; or

No new or rediscovered species are present on the Project site. As such, the Project complies with this finding.

4 Other factors as identified by SEATAC.

Not applicable due to the CEC Opt-In process.

Impact 3.2-6 Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Study Area is not within any HCP, NCCP, or other approved local, regional, or state HCP (CDFW 2023b). Therefore, there are **no impacts** to HCP, NCCP, or other approved local, regional, or state HCP.

3.2.3 Cumulative Effects

Cumulative effects on biological resources because of past, present, and reasonably foreseeable future actions, in combination with the Project, can result from loss of habitat and habitat disturbance and degradation. A cumulative impact refers to a project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the facility (Public Resource Code [PRC] Section 21083; 14 CRR 15064(h), 16065(c), 15130, and 15355). Cumulative impacts from the Project are expected to be **less than significant**.

3.2.4 Mitigation Measures

The following section describes the measures that are intended to avoid and minimize potential adverse effects of the Project to biological resources.

3.2.4.1 Mitigation Measures for Construction and Decommissioning

The following section presents avoidance, minimization, and mitigation measures to avoid, minimize, or mitigate potentially significant impacts to all special-status plant and wildlife species and other sensitive biological or aquatic resources during the construction and operations phases of the proposed Project.

MM-BIO-1 Demarcation of Disturbance Limits. Prior to commencement of ground disturbing activities for each phase of Project construction, the construction limits shall be clearly demarcated (e.g., installation of flagging or temporary high visibility construction fence), as recommended by the CEC-approved Biological Monitor. All construction activities including equipment staging and maintenance shall be conducted within the marked disturbance limits to prevent inadvertent disturbance to sensitive vegetation communities outside the limits of work. The flagging shall be maintained throughout construction.

MM-BIO-2 Biological Monitoring. Prior to ground disturbing activities, the Applicant shall submit the qualifications of potential Biological Monitor(s) to the CEC for review and approval. The CEC-approved Biological Monitors will monitor construction activities and ensure compliance with all mitigation measures. The Biological Monitors shall be present on site during all vegetation removal and each day prior to the commencement of grading activities. The Biological Monitors shall be responsible for conducting a pre-construction clearance survey and any special-status species shall be relocated to areas of the Study Area that will not be impacted by the Project (see MM-BIO-5). Pre-construction clearance surveys shall be conducted prior to construction of each new phase of the development. The Biological Monitors shall monitor to ensure that wildlife does not become entrapped in excavation or trenching areas. Safeguards shall be implemented during daytime periods of non-activity and overnight, such as placing a platform over trenches, flush with the ground surface; installing escape ramps in trenches; or installing exclusionary fencing. Should relocation of any trapped wildlife be required, construction shall be halted until a Biological Monitor arrives on site and clears the work area (in compliance with all applicable permits and authorizations).

The Biological Monitors shall regularly inspect the Project site as needed after the completion of all grading activities. Monthly spot-check monitoring is anticipated to be required throughout the

construction of the Project for those areas that are graded but not yet developed/landscaped. During monthly visits, a Biological Monitor shall address the following: (1) the potential establishment of invasive species and require weed abatement (if necessary) in accordance with MM-BIO-10; (2) address the potential establishment of native vegetation/habitat to reduce the potential for impacts between phases of construction; and (3) identify deficiencies, if applicable, with any erosion control measures that have the potential to negatively impact biological resources.

Daily monitoring reports shall be prepared by the Biological Monitors that document the results of any surveys conducted, wildlife relocations, construction activities performed, compliance issues observed, corrective actions taken during the reporting period. The monitoring reports shall include photos as appropriate and be made available to the CEC at their request. Following the completion of the Project construction, a Construction Monitoring Report will be prepared by the Applicant to document compliance with the minimization measures and permit conditions for the Project.

MM-BIO-3 Worker Education Awareness Program (WEAP). Prior to the initiation of the initial ground disturbing activities, all personnel associated with those activities shall attend a worker education awareness program (program) prepared by a CEC-approved qualified biologist. In general, the program shall discuss any potentially occurring sensitive biological resources or species and habitat preference(s), occupied habitat in the area, life histories, as well as potential construction impacts, protection measures, and Project limits. Legal protections and regulations pertinent to the biological resources that may be present shall also be included in the program. A species and habitat fact sheet shall be developed prior to the training program and distributed at the training program to all contractors, employers and other personnel involved with the construction of the Project.

After the kickoff meeting, the Project Applicant shall notify the CEC-approved qualified biologist in advance if additional contractors are employed during the initial vegetation removal or initial grading activities. A sign-in sheet will be circulated for signatures to all personnel that attend the workers educational training to confirm that program materials were received and that they understand the information presented.

MM-BIO-4 Crotch's Bumble Bee Avoidance and Minimization Measures. If Crotch's bumble bee is still a candidate for listing under the California Endangered Species Act (CESA) or has been listed under CESA at the time of the start of construction of the Project, a pre-construction survey for Crotch's bumble bee shall be conducted within the construction footprint prior to the start of initial ground disturbing activities occurring during the Crotch's bumble bee nesting period (February 1 through October 31). If construction commences outside of that period (November 1 through January 31), surveys would not be warranted since the daughter queens (gynes) disperse following a nest's lifecycle and conducting surveys for dormant gynes would not be practical.

The pre-construction survey will be based on recommendations described in the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species," released by the California Department of Fish and Wildlife (CDFW) on June 6, 2023, or the most current at the time of construction. The pre-construction survey will be performed by a biologist with expertise in surveying for bumble bees and include at least three (3) survey passes that are not on sequential days or in the same week. The biologist shall watch the nest resources for up to five minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and

exit an active nest site with frequency, such that their presence will be apparent after five minutes of observation.

During the bumble bee active nesting season (April 1 through August 30), the CEC-approved Biological Monitors (MM-BIO2) shall continue to conduct daily sweeps of areas proposed for initial vegetation removal and ground disturbance.

If nest resources occupied by Crotch's bumble bee are detected within the construction area, no construction activities shall occur within 50 feet of the nest, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources will be avoided for the duration of the Crotch's bumble bee nesting period (February 1 through October 31). The CEC-approved Biological Monitors (MM-BIO2) shall ensure that the nest buffer is complied with during that period. Outside of the nesting season, it is assumed that no live individuals will be present within the nest as the gynes usually leave by September, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to proposed open space or other suitable areas beyond that have suitable hibernacula resources. Because construction will have occurred in the area outside of the occupied nesting resources, no suitable habitat will be present in the impact area, and it is assumed that new queens will disperse to habitat outside of the construction area.

If the nest resources cannot be avoided, as outlined in this measure, the project applicant will consult with CEC and CDFW regarding the need to obtain an Incidental Take Permit. In the event an Incidental Take Permit is needed, mitigation for direct impacts to Crotch bumble bee will be fulfilled through compensatory mitigation at a minimum 1:1 nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. The compensatory habitat mitigation would be accomplished by onsite preservation of suitable habitat.

MM-BIO-5 On-Site Preservation. The Applicant shall demonstrate recordation of a conservation easement, as defined by California Civil Code section 815.1, that permanently preserves up to approximately 188 acres of open space (up to approximately 148 acres of non-impacted vegetation communities, eight acres of land cover types, and approximately 32 acres of temporary impacted areas) within the Project boundaries for long-term conservation and management as a natural conservation area ("Conservation Area"). The Conservation Area will be located within portions of the Study Area within the Santa Clara River Significant Ecological Area. Table 3.2-10 summarizes the potential vegetation communities and land cover that could be preserved.

Table 3.2-10. Unimpacted Vegetation Communities and Land Cover Types in the Santa Clara River Significant Ecological Area Portion of the Study Area That Could Be Conserved

Alliance	Association	SEA Category[1]	Acres
Vegetation Communities			
Cheesebush – sweetbush scrub	*Ambrosia salsola - Larrea tridentata*	4	0.71
	Ambrosia salsola Association	4	1.14

Table 3.2-10. Unimpacted Vegetation Communities and Land Cover Types in the Santa Clara River Significant Ecological Area Portion of the Study Area That Could Be Conserved

Alliance	Association	SEA Category[1]	Acres
Big sagebrush	*Artemisia tridentata - Ericameria nauseosa*	4	7.03
	Artemisia tridentata - Eriogonum fasciculatum	4	0.06
	Artemisia tridentata ssp. *parishii*	4	0.27
Fourwing saltbush scrub	*Atriplex canescens*	4	65.37
Rubber rabbitbrush scrub	*Ericameria nauseosa - Juniperus californica* / herb	4	2.75
California juniper woodland	*Juniperus californica / Adenostoma fasciculatum - Eriogonum fasciculatum*	3	2.64
	Juniperus californica / herbaceous	3	68.16
		Vegetation Communities Subtotal:	*148.13*
Land Cover Types			
Disturbed Habitat	NA	NA	3.46
Urban Developed	NA	NA	4.45
		Land Cover Types Subtotal:	*7.91*
		Total:	**156.04**

Notes: NA=Not Applicable
[1] SEA Ordinance Implementation Guide (County Planning 2020).

A cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a Project-specific Property Analysis Record (PAR) to calculate the costs of in-perpetuity land management. The PAR will take into account all management activities required if an Incidental Take Permit for Crotch's bumble bee is needed for the Project.

The conservation easement holder shall be an entity which has as part of its mission the protection of the environment, including lands, plant species, and/or wildlife species, and can be expected by its organization and history to remain in existence for the foreseeable future. The California Department of Fish and Wildlife per Government Code Section 65967(c) shall review the entity. The entity that holds the endowment shall first meet the criteria outlined in Government Code section 65968(b).

Conservation Management Plan. As part of recording the conservation easement, a Conservation Management Plan (CMP) applicable to the conservation area will be prepared and submitted to the CEC for approval. The CMP shall identify the required resource management activities and the entities that shall be responsible for managing those activities in perpetuity. The CMP will set forth requirements that will be implemented by the entity that holds the conservation easement and/or manages and stewards the Conservation Area, and may include the following: (1) there shall be no grading or other construction activities within the Conservation Area, except for the proposed

habitat enhancement/restoration; (2) no fencing or other barriers to wildlife movement shall be installed; (3) commercial honeybee operations shall not be allowed to use the Conservation Area for storing their apiaries; (4) rodenticides shall be prohibited; (5) herbicides and pesticides shall be discouraged, and only those typically used for invasive plant management in California wildlands shall be allowed, per the California Invasive Plant Council & Pesticide Research Institute's Best Management Practices (BMPs) for Wildland Stewardship[1]; (6) at least one annual walk-through survey shall be conducted by a biologist to qualitatively monitor the general condition of on-site habitats and to check for any new introduction or expansion of invasive plant species; (13) collect and remove trash, repair vandalized signs, and rectify trespass impacts; and (14) provide annual reporting that document the conditions of the Conservation Area. Approved work will be outlined in the CMP and in the conservation easement, including monitoring and maintenance efforts or for other activities associated with preserve management, and prohibited activities shall be delineated.

MM-BIO-6 Habitat Mitigation and Monitoring Plan. Prior to ground disturbing activities, a qualified biologist shall be retained to prepare a Habitat Mitigation and Monitoring Plan (HMMP) detailing the specific approach for each type of habitat restoration and establishment area in the Conservation Area, and short-joint beavertail transplant location, and will outline detailed performance standards and monitoring requirements for each; following the monitoring and reporting methods and performance standards listed below. The HMMP shall be submitted to and approved by the CEC prior to the onset of Project-related ground-disturbing activities. The acreages allotted for on-site establishment apply to approximately 32 acres within the Conservation Area that includes 0.19 acres of ephemeral streams. A minimum of 70 California juniper will be planted. The HMMP shall set out measures for habitat restoration/enhancement implementation, including but not limited to:

- Identification of proposed plant materials
- Signage in the habitat restoration area
- Schedule for habitat restoration/enhancement work
- Use of pesticides and elimination of non-native vegetation
- Habitat monitoring and reporting
- Performance standards

MM-BIO-7 Special-Status Wildlife Relocation Plan. Prior to commencement of any ground disturbing activities or the pre-construction staging of equipment on the Project site, the Project Applicant shall contract with a CEC-approved biologist to develop a Preconstruction Wildlife Survey and Relocation Plan for terrestrial reptiles, including California legless lizard and Blainville's horned lizard. The Preconstruction Wildlife Survey and Relocation Plan shall be submitted to the CEC for review prior to any ground-disturbing activities within potentially occupied habitat.

[1] California Invasive Plant Council & Pesticide Research Institute. 2015. Best Management Practices (BMPs) for Wildland Stewardship. Accessed October 2023. https://cal-ipc.org/docs/bmps/dd9jwo1ml8vttq9527zjhek99qr/BMPHerbicide.pdf.

The Plan shall include, at a minimum, the following:

- Protocols for pre-construction surveys to flush out and/or move identified special status wildlife within the Project site, as feasible.
- Relocation to the portions of the Study Area outside of the Project construction limits and within the Conservation Area.
- The timing, frequency, and locations where surveys should be conducted.
- Surveys will be conducted 24 hours prior to construction activities and repeated the morning of the proposed activity.
- Surveys shall be conducted in all areas anticipated to be subject to vegetation clearing.
- The habitat and conditions in the proposed relocation site(s).
- The methods that will be used for trapping and relocating identified species.
- All equipment used in the effort will be cleaned and decontaminated to minimize the spread of herpetofaunal pathogens.[2]
- Any wildlife handling and relocation methodology from the CDFW-issued Streambed Alteration Agreement, if any, will be incorporated in the Preconstruction Survey and Relocation Plan.
- Protocols for documentation/recordation of the species and number of animals relocated.
- Relocations shall be logged and made available to the CEC, if requested.
- Protocols for notifying CDFW if identified species cannot be relocated.
- Attempts at relocation shall be logged and notification shall occur within 24 hours.
- The timing and frequency of reports documenting the results of the surveys.

MM-BIO-8 Nesting Bird Avoidance. Project construction shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act and California Fish and Game Code consistent with methods approved by the California Department of Fish and Wildlife to protect active bird/raptor nests. Vegetation removal shall occur during the non-breeding season for nesting birds and nesting raptors to avoid impacts to nesting birds and raptors.

For the remaining Project activities initiated during the breeding season for nesting birds and nesting raptors , a pre-construction survey shall be conducted by the Biological Monitor (MM-BIO-3) for nesting birds and/or raptors within three days prior to any work within 300 feet for suitable nesting habitat for non-raptors and within 500 feet for suitable nesting habitat for raptors. If the Biological Monitor does not find any active nests immediately adjacent to the impact areas, the Project activity shall be allowed to proceed.

If the Biological Monitors find an active nest adjacent to the construction area and determines that the nest may be indirectly impacted or breeding activities substantially disrupted, the Biological Monitors shall delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans, which will be included in the report(s) documenting the survey(s) that will be submitted to the CEC upon completion of the survey. The active nest shall be

[2] Julian et al. 2020. Minimizing the Spread of Herpetofaunal Pathogens in Aquatic Habitats by Decontaminating Construction Equipment. Herpetological Review, 2020, 51(3), 472–483. https://parcplace.org/wp-content/uploads/2020/11/Julian-2020-Decontamination-for-Herps-for-large-equipment.pdf.

protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by the Biological Monitor: (1) work limits shall be established within a buffer around any occupied nest (the buffer shall be 100–300 feet for nesting non-raptors and 300–500 feet for nesting raptors), unless otherwise determined by the Biological Monitors and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by the Biological Monitor. Encroachment into the buffer area around a known nest shall only be allowed if the Biological Monitor determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the Biological Monitor has determined that fledglings have left the nest, or the nest has failed.

MM-BIO-9 Invasive Species Prevention Plan. To prevent the spread of invasive plant species during construction and until the establishment of common landscaped areas associated with the Project, the following measures shall be implemented:

- The WEAP (see MM-BIO-3) will include invasive species prevention measures implemented by the Project.
- All mobile vehicles and construction equipment shall be washed prior to entering the Project site in an upland location where any seed material from invasive species will be contained and not carried onto the Project site. Logs of the washing will be submitted monthly to the CEC.
- Following the completion of grading activities, for those areas of the Project site that are graded but not yet developed/landscaped, the City-approved Biological Monitor shall conduct monthly spot checks to prevent the introduction or establishment of invasive plant species onto the graded areas (see MM BIO-2). If abundant invasive species are identified, the Biological Monitor shall inform the construction contractor about the infested area and recommend that the invasive species be removed. The recommendation will be included in the daily report.
- All vegetative material removed from the Project footprint shall be transported in a covered vehicle and will be disposed of at a certified disposal site.

MM-BIO-10 Jurisdictional Waters Compensation. Mitigation for up to approximately 1.56 acres of jurisdictional waters shall be implemented through off-site acquisition, such as mitigation bank credits, and/or turnkey projects with mitigation banks (as approved by the CEC) following the issuance of permits from the U.S. Army Corps of Engineers, and Los Angeles Regional Water Quality Control Board, as applicable, and those agencies approval of the mitigation bank, and prior to the issuance of the grading permit. A turnkey mitigation project (establishment of the riparian habitat) will be used should credits not be available at the time of the jurisdictional waters permitting.

3.2.4.2 Mitigation Measure for Site Restoration

Over the long term, once the Project facilities are no longer needed, the structures will be removed the Project area will be in accordance with the approved decommissioning plan. Because rehabilitation of the site is not expected to occur for approximately 40 years, a draft conceptual plan may be included as part of the Biological Resources Mitigation Implementation and Minimization Plan. This draft plan can then be updated at a later date (but no more than 1 year prior to closure). A formal rehabilitation plan for the Project facility closure will be developed by the Project owner and submitted to the CEC Compliance Manager at least 1 year prior to facility closure. The facility closure restoration plan will include the following sections and details:

- Goals and objectives of the restoration
- A description of methods employed to achieve the restoration goals and objectives
- Success criteria used to determine whether the restoration was successful
- A monitoring and maintenance program, including details on remedial measures
- A description of annual reporting
- A restoration implementation and monitoring timeline and schedule of planned activities.

3.2.5 Laws, Ordinances, Regulations, and Standards

The following subsections within Section 3.2.5 describe the laws, ordinances, regulations, and standards (LORS) that apply to potential impacts on biological resources in the Project area and list the agencies responsible for enforcing the regulations. A summary of the applicable federal, state, and local LORS is provided in Table 3.2-11.

Table 3.2-11. LORS Applicable to Biological Resources

LORS	Applicability	Conformity	Opt-In Application Reference
Federal			
Federal ESA (16 USC 1531 et seq.)	Designates and protects federally threatened and endangered plants and animals and their critical habitat. Applicants for projects that could results in adverse impacts on any federally listed species are required to consult with and mitigate potential impacts in consultation with USFWS.	**Yes**. Federally threatened and endangered plants and animals analyzed. Avoidance, minimization, and mitigation measures include preconstruction surveys, avoidance buffers, timing restrictions, and take authorization from the USFWS, if necessary.	Section 3.2.1.9 Section 3.2.1.10 Section 3.2.2.2.1 Section 3.2.5.1
MBTA (16 USC 703 to 711)	Protects all migratory birds, including nests and eggs	**Yes**. Pre-construction surveys and avoidance buffers for active nests will prevent impacts to nesting migratory birds.	Section 3.2.1.11 Section 3.2.2.2.1 Section 3.2.5.1
Bald and Golden Eagle Protection Act (16 USC 668)	Specifically protects bald and golden eagles from harm or trade in parts of these species	**Yes**. Pre-construction surveys and avoidance buffers will prevent take of eagles.	Section 3.2.1.12 Section 3.2.2.2.1 Section 3.2.5.1
State			
CESA (Fish and Game Code Section 2050 et seq.)	Species listed under this act cannot be “taken” or harmed, except under specific permit. Take in the context of CEQA means to hunt, pursue, kill, or capture as well as any other actions that may result in an adverse impact when attempting to take a listed species.	**Yes**. State threatened and endangered plants and animals analyzed. Avoidance, minimization, and mitigation measures include preconstruction surveys, avoidance buffers, timing restrictions, and take authorization from the CEC/CDFW if necessary.	Section 3.2.1.9 Section 3.2.1.10 Section 3.2.2.2.1 Section 3.2.5.2
Game Code Section 3511	Describes bird species, primarily raptors that are FP (Fully Protected). FP birds may not be taken or possessed, except under specific permit requirements.	**Yes.** No take of FP bird species is anticipated.	Section 3.2.1.10 Section 3.2.2.2.1 Section 3.2.3.2

Table 3.2-11. LORS Applicable to Biological Resources

LORS	Applicability	Conformity	Opt-In Application Reference
Fish and Game Code Section 3503	States that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.	**Yes**. Preconstruction surveys and avoidance buffers prevent impacts to nesting birds.	Section 3.2.1.10 Section 3.2.2.2.1 Section 3.2.5.2
Fish and Game Code Section 3503.5	It is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation made pursuant thereto.	**Yes.** Preconstruction surveys and avoidance buffers will prevent impacts to nesting raptors.	Section 3.2.1.10 Section 3.2.2.2.1 Section 3.2.5.2
Fish and Game Code Section 3513	It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.	**Yes.** Preconstruction surveys and avoidance buffers prevent impacts to migratory birds.	Section 3.2.1.11 Section 3.2.2.2.1 Section 3.2.5.2
Fish and Game Code Sections 351, 4700, 5050, and 5515	Lists bird, mammal, amphibian, reptile, and fish species that are FP in California	**Yes.** FP species discussed. No take of FP species anticipated.	Section 3.2.1.10 Section 3.2.2.2.1 Section 3.2.3.2
NPPA Fish and Game Code Sections 1900 et seq.	The Native Plant Protection Act (NPPA) lists threatened, endangered, and rare plants listed by the State.	**Yes.** No threatened, endangered, or rare plants anticipated to occur. Preconstruction surveys and avoidance buffers provide further protection.	Section 3.2.1.9 Section 3.2.2.2.1 Section 3.2.5.2
Fish and Wildlife Code Sections 1900 et seq.	Lists endangered or rare native plants of the State and establishes criteria for determining rarity or listing status.	**Yes.** No endangered or rare plants present. Preconstruction surveys and avoidance buffers prevent potential impacts to rare plant species.	Section 3.2.1.9 Section 3.2.2.2.1 Section 3.2.5.2

Table 3.2-11. LORS Applicable to Biological Resources

LORS	Applicability	Conformity	Opt-In Application Reference
Title 14 CCR, Sections 670.2 and 670.5	Lists animals designated as threatened or endangered in California	**Yes.** State threatened and endangered plants and animals analyzed. Avoidance, minimization, and mitigation measures include preconstruction surveys, avoidance buffers, timing restrictions, and take authorization from the CEC/CDFW.	Section 3.2.1.10 Section 3.2.2.2.1 Section 3.2.5.2
CFG Code Sections 1601-1607	Prohibits alteration of any stream, including intermittent and seasonal channels and many artificial channels without a permit from CDFW.	**Yes.** Permit from CEC/CDFW will be in hand prior to impacts to CDFW jurisdictional features.	Section 3.2.1.8 Section 3.2.2.2.3 Section 3.2.5.2
CEQA Public Resources Code (PRC) Sections2100, et seq. and CEQA Guidelines (14 C.C.R. 15000, et seq.)	CEQA requires that the effects of a project on environmental resources must be analyzed and assessed using criteria determined by the lead agency.	**Yes.** Environmental resources analyzed using CEQA and CEC criteria.	Section 3.2.2.2 Section 3.2.5.2
Warren Alquist Act Public Resources Code (PRC) 25000, et seq.	A CEQA-equivalent process implemented by the CEC.	**Yes.** Environmental resources analyzed using CEQA and CEC criteria.	Section 3.2.2.2 Section 3.2.5.2
California Assembly Bill 205	Emergency regulation expanding the CEC's siting authority for renewable energy projects. Allows certification in lieu of CDFW 2081 ITP or CFGC Section 1600 et seq. LSAA.	**Yes.** Take authorization, if necessary, and LSAA to be coordinated with CEC with input from CDFW.	Throughout the Opt-In Application
Local			
Los Angeles County 2035 General Plan	The Los Angeles County 2035 General Plan provides the policy framework for how and where the unincorporated County will grow through the year 2035, while recognizing and celebrating the County's wide diversity of cultures, abundant natural resources, and status as an international economic center.	**Yes.** The Project will mitigate impacts to biological resources, which will comply with the General Plan goals and policies related to open space.	Section 3.2.2.2 Section 3.2.5.3

Table 3.2-11. LORS Applicable to Biological Resources

LORS	Applicability	Conformity	Opt-In Application Reference
Ord. 2019-0072 § 2, 2019 Significant Ecological Areas	The SEA Program was originally established as a part of the 1980 County General Plan, to help conserve the genetic and physical diversity within Los Angeles County by designating biological resource areas capable of sustaining themselves into the future. The General Plan 2035 updated the SEA boundary map, goals and policies in 2015.	**Yes.** The Project's Gen-Tie Line will impact SEA Resource Categories 1 through 3 in the form special-status plants and wildlife, water resources, and vegetation communities; however, all such impacts are mitigated in accordance with the SEA ordinance and CEQA guidelines.	Section 3.2.1.13 Section 3.2.2.2.5 Section 3.2.5.3

3.2.5.1 Federal LORS

3.2.5.1.1 Federal ESA (16 United States Code [USC] 153 et seq.)

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and to provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. The FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under the FESA, it is unlawful to "take" any listed species, and "take" is defined as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

The FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

Federally threatened and endangered plants and animals are analyzed herein. Avoidance, minimization, and mitigation measures will include preconstruction surveys, avoidance buffers, timing restrictions, and take authorization from the USFWS if necessary.

3.2.5.1.2 Migratory Bird Treaty Act (16 USC 703 to 711)

The Migratory Bird Treaty Act (16 USC 703 et seq.), as amended (MBTA), prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so. In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA's "take" prohibition to apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. Unintentional or accidental take is not prohibited. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Project pre-construction surveys and avoidance buffers for active nests will prevent impacts to nesting migratory birds.

3.2.5.1.3 Bald and Golden Eagle Protection Act (16 USC 668)

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, includes their parts, nests, or eggs. The Act provides criminal penalties for person who "take, possess, sell, purchase, bater, offer to sell, transport, export or import, at any time or any manner, any bald eagle… [or any golden

eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, kill, wound, capture, trap, collect, molest or disturb."

Project pre-construction surveys and avoidance buffers will prevent take of eagles.

3.2.5.2 State LORS

3.2.5.2.1 California Endangered Species Act

CESA (California Fish and Game Code Sections 2050–2068) provides protection and prohibits take of plant, fish, and wildlife species listed by the State of California. Unlike the FESA, under the CESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to the FESA and is prohibited for both listed and candidate species. Incidental Take authorization may be obtained by a project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which also allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

State threatened and endangered plants and animals are analyzed herein. Avoidance, minimization, and mitigation measures include preconstruction surveys, avoidance buffers, timing restrictions, and Incidental Take authorization from the CEC/CDFW, if necessary.

3.2.5.2.2 Fish and Game Code

Sections 3500, 3511, and 3513

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Project pre-construction surveys and avoidance buffers for active nests will prevent impacts to nesting migratory birds.

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of CDFW to maintain viable populations of all native species. Toward that end, CDFW has designated certain vertebrate species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

FP species are discussed herein. No take of FP species is anticipated.

Section 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of a definable bed and banks and existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high-water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will 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. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to CDFW must include a complete, certified California Environmental Quality Act (CEQA) document. The CEC Stands in the shoes of CDFW in ensuring compliance with the substantive requirements of the Lake or Streambed Alteration Agreement program.

3.2.5.2.3 California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see Section 1900 *et seq.* of the California Fish and Game Code) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and to protect endangered and rare plants from take. The CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, the CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the CESA as threatened species but did not do so for rare plants. Thus, there are three (3) listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in the CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the Project proponent.

No threatened, endangered, or rare plants are anticipated to occur. Preconstruction surveys and avoidance buffers will provide further protection.

3.2.5.2.4 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). As of April 2019, the State Water Resources Control Board has narrowed its definition of a water of the state to include the following (SWRCB 2021):

1. Natural wetlands

2. Wetlands created by modification of a surface water of the state
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration
    b. Specifically identified in a water quality control plan as a wetland or other water of the state
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape
    d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

All waters of the United States are waters of the state. Wetlands, such as isolated seasonal wetlands, that are not generally considered waters of the United States are considered waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2021). If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

The Project is expected to be subject to Waste Discharge Requirements (WDRs) from RWQCB. Permits and mitigation plans required prior to construction will be the responsibility of the qualified biologist assigned by the Applicant.

As discussed in Section 3.15.2.3.1 within Section 3.15, Water Resources, the Project is unlikely to encounter shallow groundwater and dewatering is not expected to be required. However, should groundwater be encountered during construction, any dewatering activity that would discharge to the land surface would need to comply with the provisions of General WDRs and ensure compliance with the Basin Plan. If required, the applicant and/or its contractor will submit the following to the Los Angeles RWQCB: a Notice of Intent to comply with these General WDRs, a project map, a copy of the CEQA document, the requisite fee, a discharge monitoring plan, and any additional information requested by the Los Angeles RWQCB. Please refer to Section 3.15.2.3.1 for additional details.

Additionally, the project will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. For additional details regarding groundwater. Please refer to Section 3.15.2.3.2 within Section 3.15, Water Resources for additional details.

3.2.5.2.5 Plants and Animals of California Declared to be Endangered or Threatened (Title 14, CCR, Sections 670.2 and 670.5

These codes list plants and animals designated as threatened or endangered in California. State SSC is a category conferee by CDFW of those species that are indicators of regional habitat change or are considered potential future protected species. These species do not have any species legal status but are intended by CDFW for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

State threatened and endangered plants and animals are analyzed herein. Avoidance, minimization, and mitigation measures will include preconstruction surveys, avoidance buffers, timing restrictions, and take authorization from the CEC/CDFW, if necessary.

3.2.5.2.6 CEQA (PRC Sections 21000 et seq.)

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under the FESA, CESA, and other California Fish and Game Code provisions, and includes lists developed by other organizations, including, for example, the Audubon Watch List Species. Guidance documents prepared by other agencies, including the Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on the CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as California Rare Plant Rank 1 and 2 by the California Native Plant Society, and potentially some California Rare Plant Rank 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service."

Project environmental resources will be analyzed pursuant to CEQA.

3.2.5.2.7 Warren Alquist Act (PRC Sections 25000, et seq.)

The AFC process is a certified regulatory process pursuant to the Warren-Alquist Act and, therefore, fulfills the requirements of CEQA. CEQA is codified in the California PRC, Sections 21000, et seq. Guidelines for implementation of CEQA are codified in Title 14 of the California Code of Regulations (CRR), Sections 15000-15387.

Project environmental resources will be analyzed pursuant to CEQA.

3.2.5.2.8 California Energy Commission – Assembly Bill 205

Assembly Bill (AB) 205 is an emergency regulation expanding the CEC's siting authority for renewable energy projects constructed on or before June 30, 2029. AB 205 was signed into law on June 30, 2022, and allows renewable and energy storage projects to apply for direct state permits through the CEC. CEC certification opt-in statute (specifically 25545.1(b)(1)) says "the issuance of a certificate by the commission for a site and related facility pursuant to this chapter shall be in lieu of any permit, certificate, or similar document required by any state, local, or regional agency [except California Coastal Commission, San Francisco Bay Conservation and Development Commission, and State/Regional Water Quality Control Board] … for the use of the site and related facilities, and shall supersede any applicable statute, ordinance, or regulation of any state, local, or regional agency…."

The application for certification process is in lieu of CDFW's Incidental Take Permit and Lake and Streambed Alteration Agreement processes. However, applications for both of these permits will be submitted to the CEC for informational purposes. The CEC Certification will include conditions and mitigation consistent with the Commission's AB 205 authorities.

Project take authorization, if necessary, and a LSAA will be administered by the CEC in consultation with CDFW.

3.2.5.3 Local LORS

3.2.5.3.1 Los Angeles County General Plan

The General Plan includes guiding principles that inform the County's goals, policies, and implementation actions. The following goals and policies are relevant to the Project and applicable to biological resources (County of Los Angeles 2015):

Goal C/NR 1: Open space areas that meet the diverse needs of Los Angeles County.

> Policy C/NR 1.3: Support the acquisition of new available open space areas. Augment this strategy by leveraging County resources in concert with the compatible open space stewardship actions of other agencies, as feasible and appropriate.

Goal C/NR 2: Effective collaboration in open space resource preservation.

> Policy C/NR 2.2: Encourage the development of multi-benefit dedicated open spaces.
>
> Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as Significant Ecological Areas (SEAs).

The Project will mitigate impacts to biological resources, which will comply with the General Plan goals and policies related to open space.

3.2.5.3.2 County of Los Angeles Significant Ecological Areas

SEAs are officially designated areas within the County with irreplaceable biological resources. The SEA program objective is to conserve genetic and physical diversity within the County by designating biological resource areas that can sustain themselves into the future. The SEA also protects native trees and provides a list of the protected species and the size of the diameter of the trunk that triggers protection. The SEA Ordinance establishes the permitting, design standards, and review process for development within SEAs, balancing preservation of the County's natural biodiversity with private property rights. A discretionary SEA Conditional Use Permit application is required for development that cannot demonstrate compliance with Section 22.102.070 (Protected Tree Permit), or Sections 22.102.090 (SEA Development Standards) and 22.102.100 (Natural Open Space Preservation) of the County Code. County Planning has issued the SEA Ordinance Implementation Guide (County Planning 2020) to help proposed development comply with the ordinance.

SEA Resource Categories

The SEA Ordinance includes SEA Resource Categories 1 through 5. These categories are defined as follows (County Planning 2020):

- **Category 1:** FESA and CESA listed plant and wildlife species; CESA candidate species, CRPR 1A or B, 2A or B, and 3 (CNPS 2025a), critically imperiled natural communities (those that have a Global [G] and/or State [S] ranking of 1 (NatureServe 2025), and water resources
- **Category 2:** CDFW SSC and their occupied habitat, and imperiled natural communities (those that have are G2/S2) (NatureServe 2025)
- **Category 3:** Vulnerable natural communities that are G3/S3 (NatureServe 2025), sensitive local native resources, and oak woodlands
- **Category 4:** Apparently secure natural communities that are G4/S4 (NatureServe 2025), secure natural communities that are G5/S5 (NatureServe 2025), and CRPR 4 species
- **Category 5:** All other lands including those dominated by non-native vegetation, agricultural fields, hedges, early successional vegetation that has yet to form into a distinct natural community, cleared or disturbed areas, and non-native trees and shrubs.

Table 3.2-12 lists the recommended preservation ratios for impacts to SEA Resources Categories for projects that require a Conditional Use Permit.

Table 3.2-12. Recommended Preservation Ratios for SEA CUP

SEA Resources	Preservation Ratio
Category 1 ▪ State or federally listed species and their habitats ▪ California Rare Plant Ranks 1,2,3 ▪ Natural communities ranked G1/S1 ▪ Water resources (e.g., wetlands, streams, ponds, lakes, vernal pools, marshes) ▪ Beach and dune	5:1

Table 3.2-12. Recommended Preservation Ratios for SEA CUP

SEA Resources	Preservation Ratio
Category 2 ▪ Natural communities ranked G2/S2 ▪ Species of Special Concern and their habitats	4:1
Category 3 ▪ Natural communities ranked G3/S3 ▪ Oak woodland ▪ Sensitive local native resources ▪ Rock outcrops/rocklands	3:1
Category 4 ▪ Natural communities ranked G4/S4/G5/S5 ▪ California Rare Plant Rank 4 ▪ Non-native grasslands	2:1
Category 5 ▪ Wildlife linkage or corridor or open space buffer	1:1

Source: County Planning 2020.
Notes: SEA = Significant Ecological Area; G = Global; S = State.

The Project's Gen-Tie Line will potentially impact SEA Resource Categories 1 through 3 in the form special-status plants and wildlife, water resources, and vegetation communities; however, all such impacts are mitigated in accordance with the SEA ordinance and CEQA.

SEA Protected Trees

The SEA Ordinance includes 60 tree species to be protected in addition to already protected oak trees (County Planning 2020). The SEA Protected Tree List specifies the species of tree protected in each individual SEA and the size of the tree when regulations are applied. A Protected Tree Permit from the County shall be required for development that complies with Section 22.102.090 (SEA Development Standards) except for Subsection 22.102.090.B (SEA Protected Trees) of the County Code, and which includes any of the following impacts:

1. Pruning or trimming of branches of SEA Protected Trees in excess of 2 inches in diameter or 25% of live foliage for one or more trees;
2. Encroachments of up to 30% into an SEA Protected Tree's protected zone; any encroachment of more than 30% into the protected zone of a tree shall be considered as a tree removal
3. Removal of up to two SEA Protected Trees that are not designated as heritage trees (single trunk that measures 36 inches or more in diameter, or two trunks that collectively measure 54 inches or more in diameter)
4. Tree relocation poses significant risk to the health or survival rate of a tree. Any relocation of an SEA Protected Tree shall, therefore, be processed as a removal

California juniper is a protected tree under the SEA Ordinance. The Project will potentially impact 35 California juniper due to the construction of the gen-tie, however, all such impacts are mitigated in accordance with the SEA ordinance.

3.2.6 Permit and Permit Schedule

The Project is expected to require a Lake or Stream Alteration Agreement from CDFW and a WDR from RWQCB. Permits and mitigation plans required prior to construction will be the responsibility of the qualified biologist assigned by the Applicant. Lake or Streambed Alteration Agreement and WDR permit application packages are included herein as Appendices 3.2D and 3.2E.

3.2.7 Agency Contacts

The table below lists regulatory agency contacts for biological resources for this project.

Table 3.2-13. Summary of the Applicable Federal, State, and Local LORS

Natural Resource	Agency	Contact Information
State-listed Species	CDFW - Region 5, South Coast	(858) 467-4201 AskR5@wildlife.ca.gov
Federally-listed species	USFWS - Pacific Southwest Region, Ventura Field Office	(805) 644-1766 Chris dellith@fws.gov

Notes: CDFW = California Department of Fish and Wildlife; USFWS = U.S. Fish and Wildlife Service.

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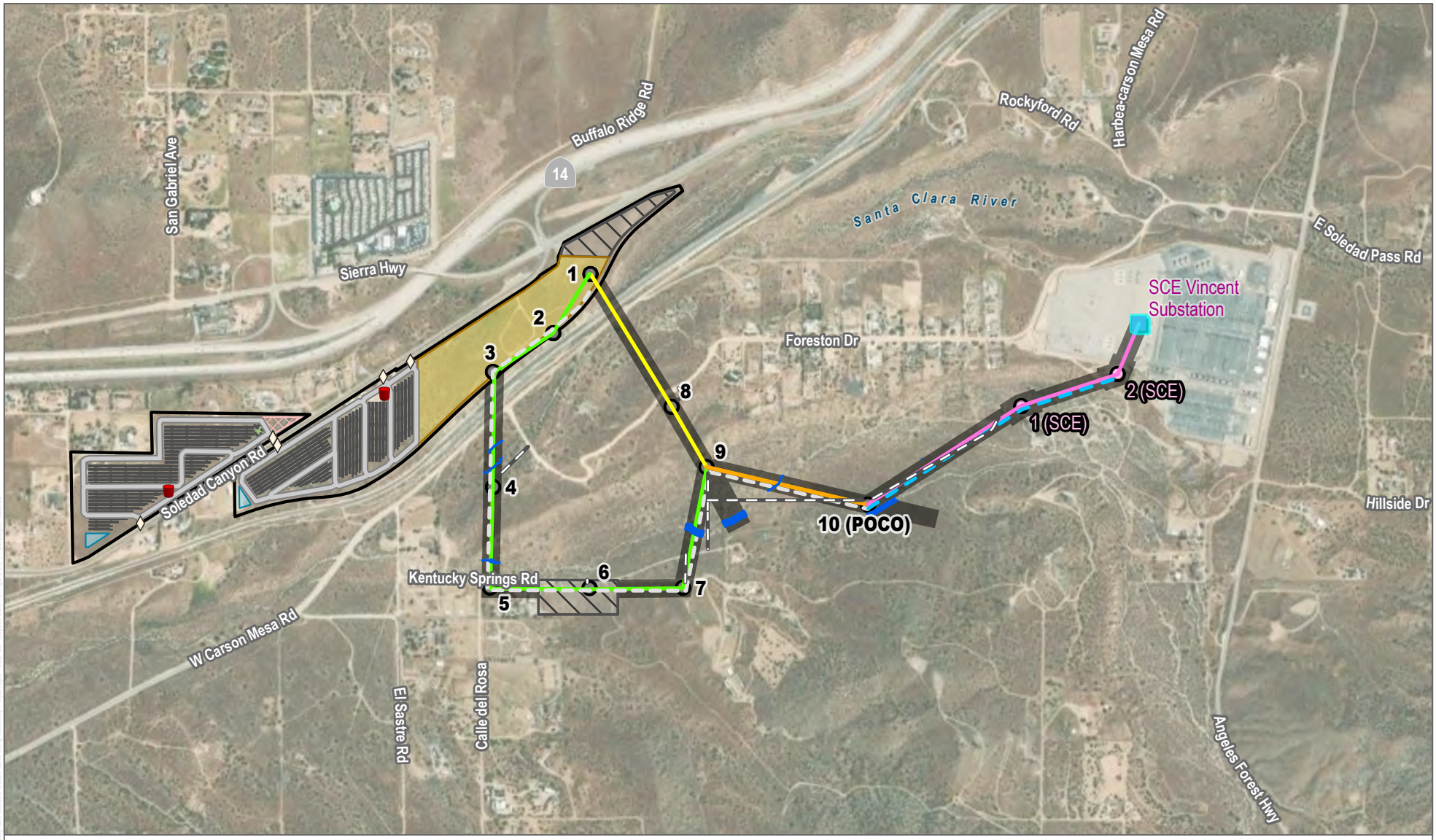

SOURCE: World Imagery

DUDEK

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FIGURE 3.2-1

Hydrologic Features

Prairie Song Reliability Project

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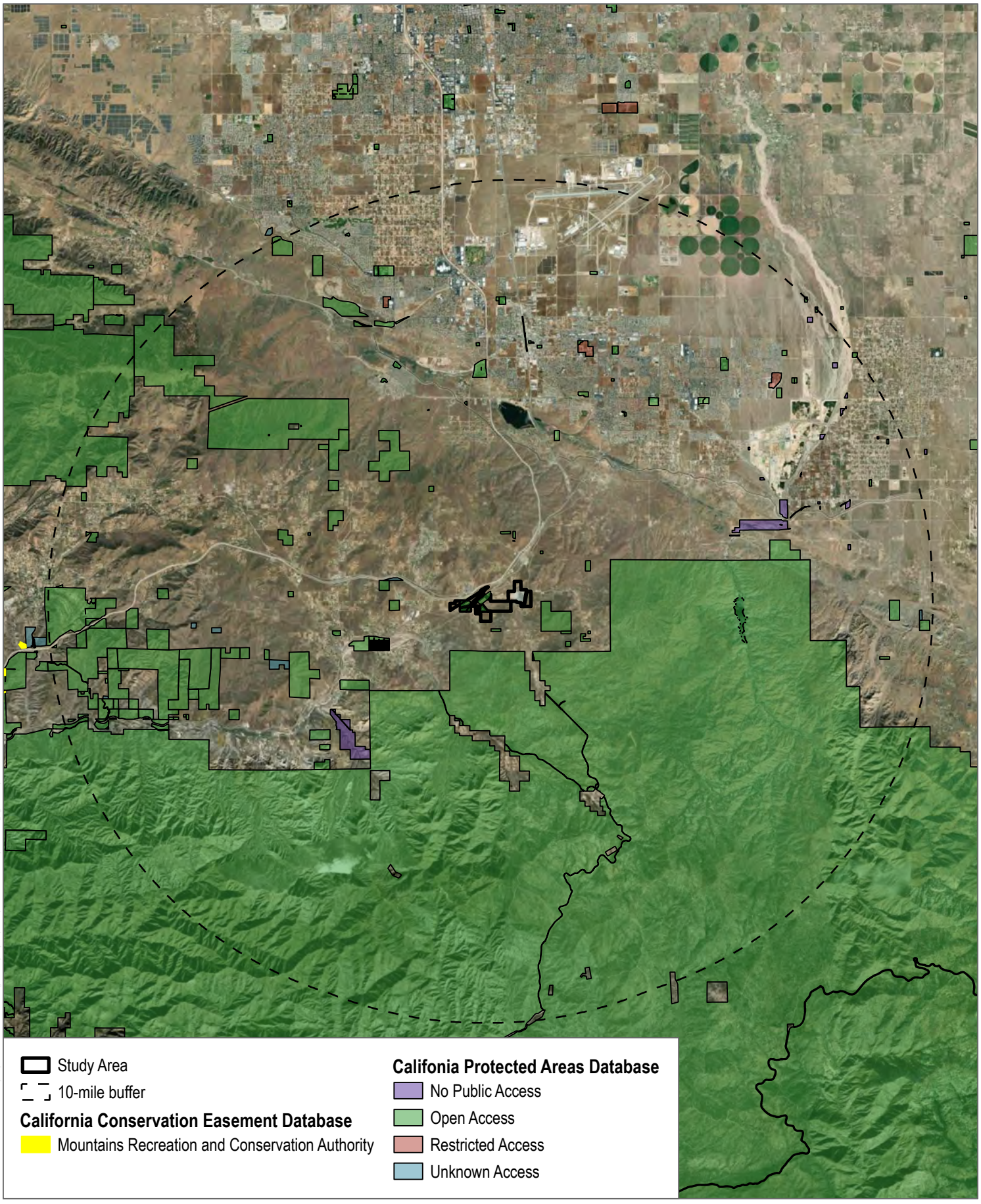

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FIGURE 3.2-2

Protected Areas

Prairie Song Reliability Project

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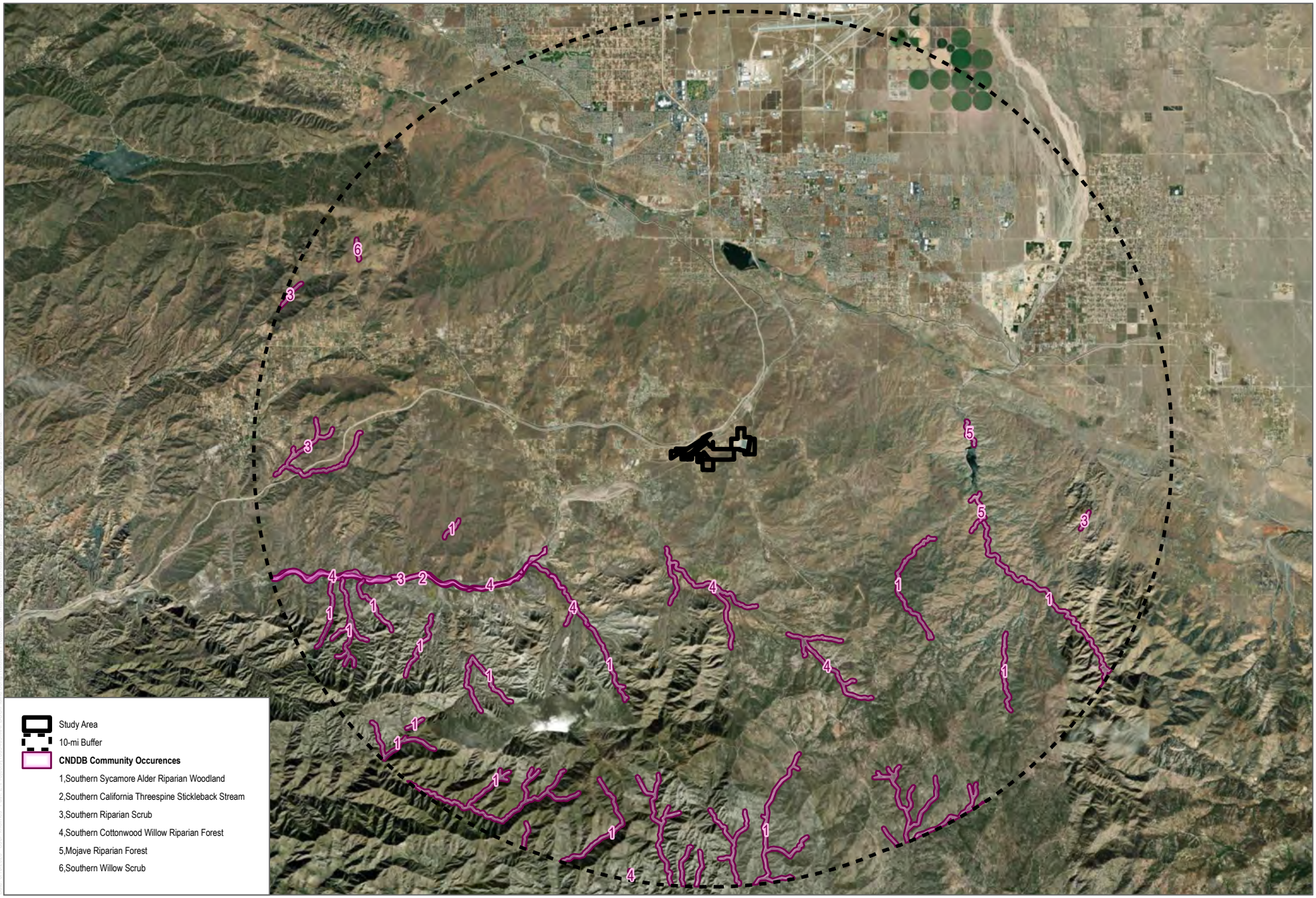

SOURCE: Bing Maps 2023; Open Street Map 2023; CA Dept. of Fish and Wildlife 2023

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FIGURE 3.2-3

Sensitive Habitat Types

Prairie Song Reliability Project

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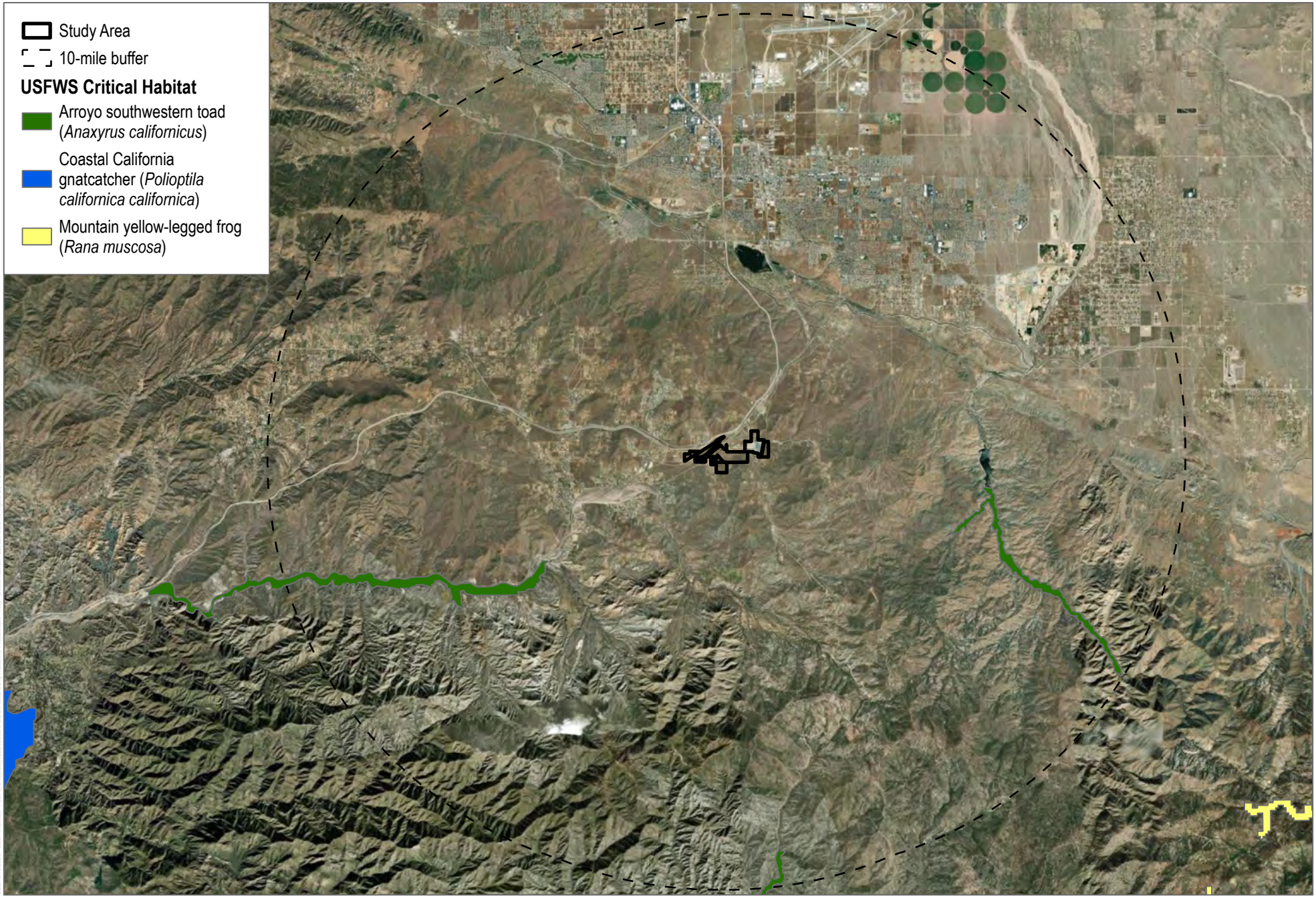

SOURCE: world Imagery; USFWS

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FIGURE 3.2-4

Critical Habitat

Prairie Song Reliability Project

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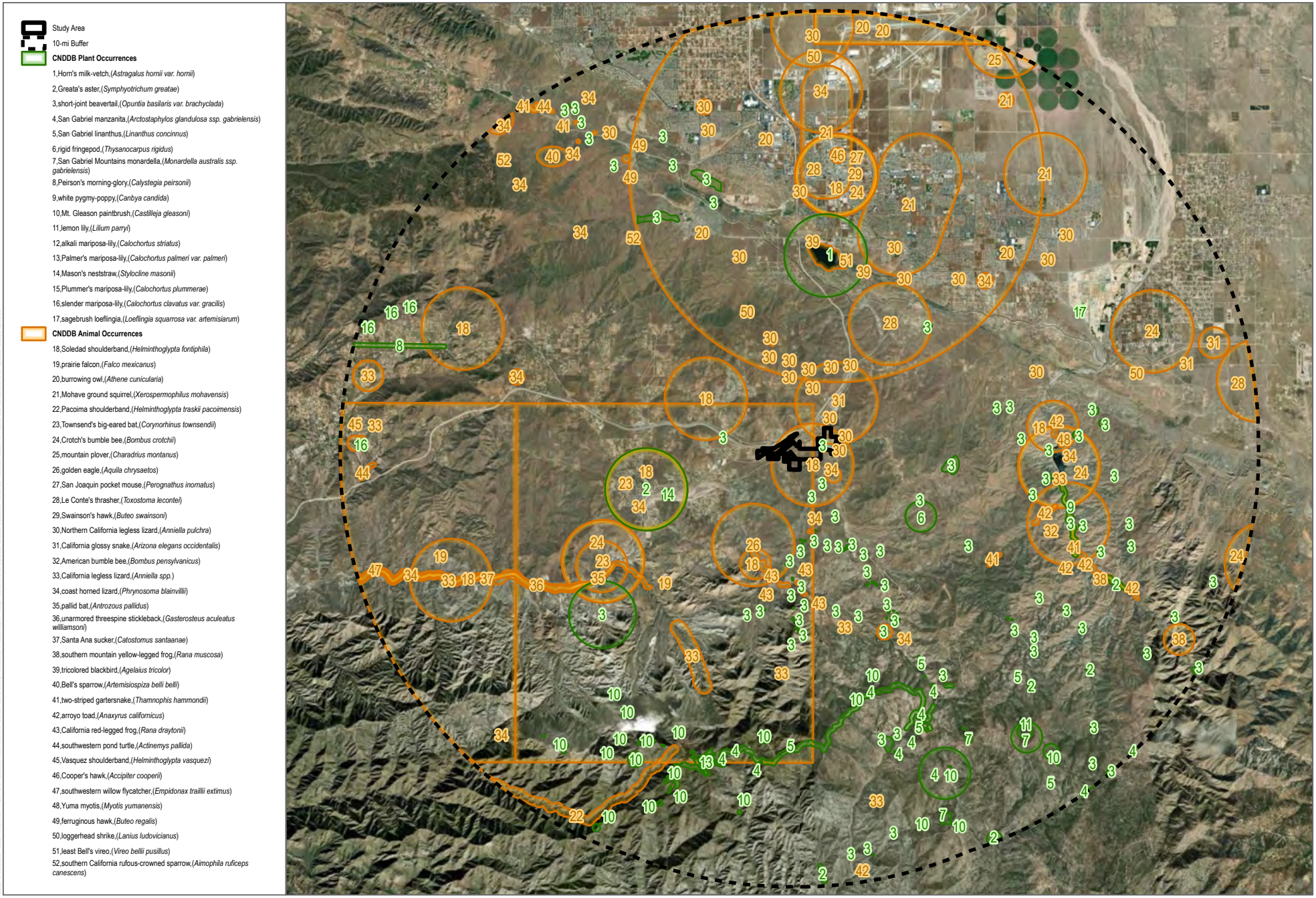

SOURCE: Bing Maps 2023; Open Street Map 2023; CA Dept. of Fish and Wildlife 2023

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FIGURE 3.2-5b

Sensitive or Special-Status Species Records

Prairie Song Reliability Project

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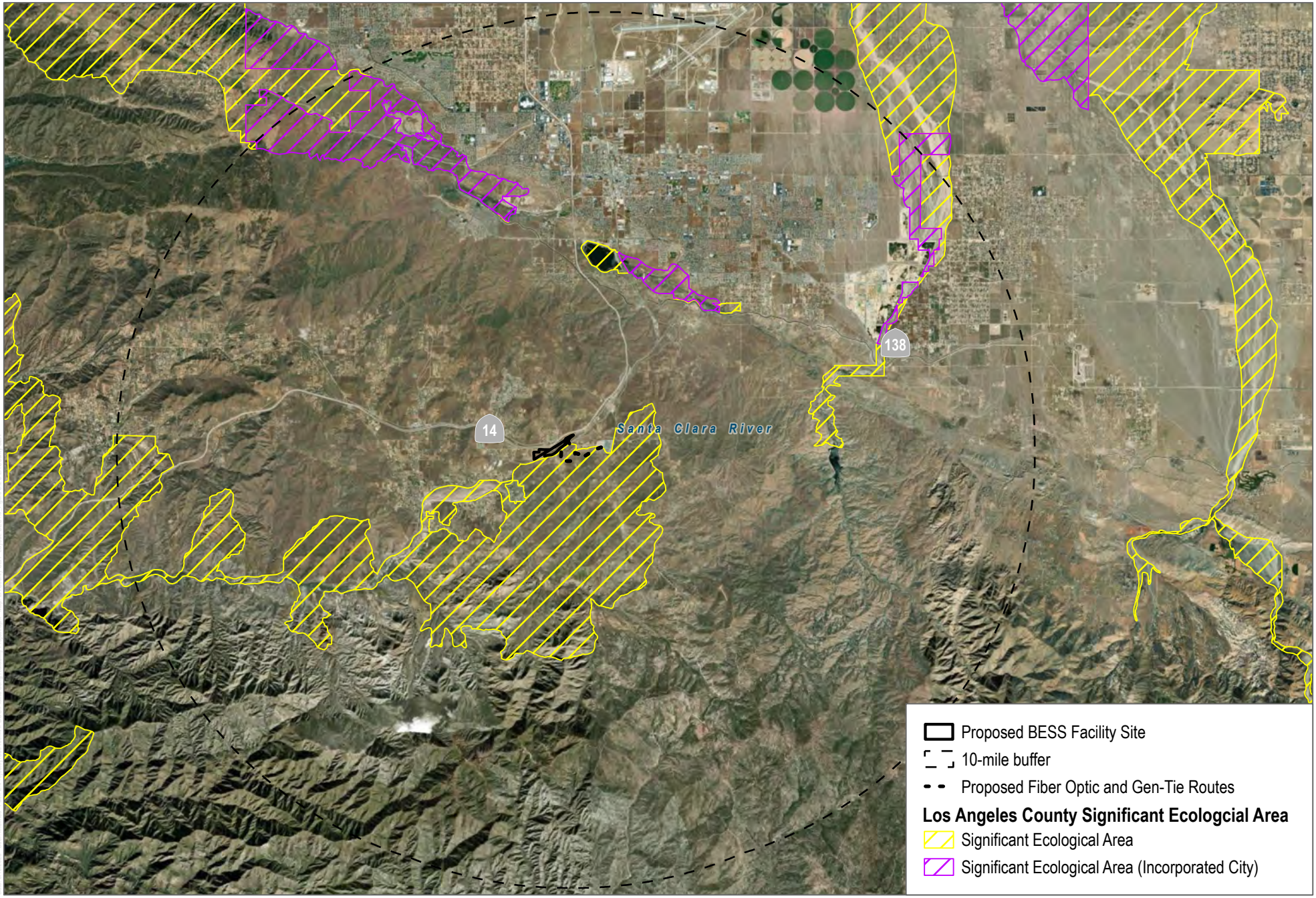

SOURCE: Los Angeles County; World Imagery

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FIGURE 3.2-6

Los Angeles County Significant Ecological Area

Prairie Song Reliability Project

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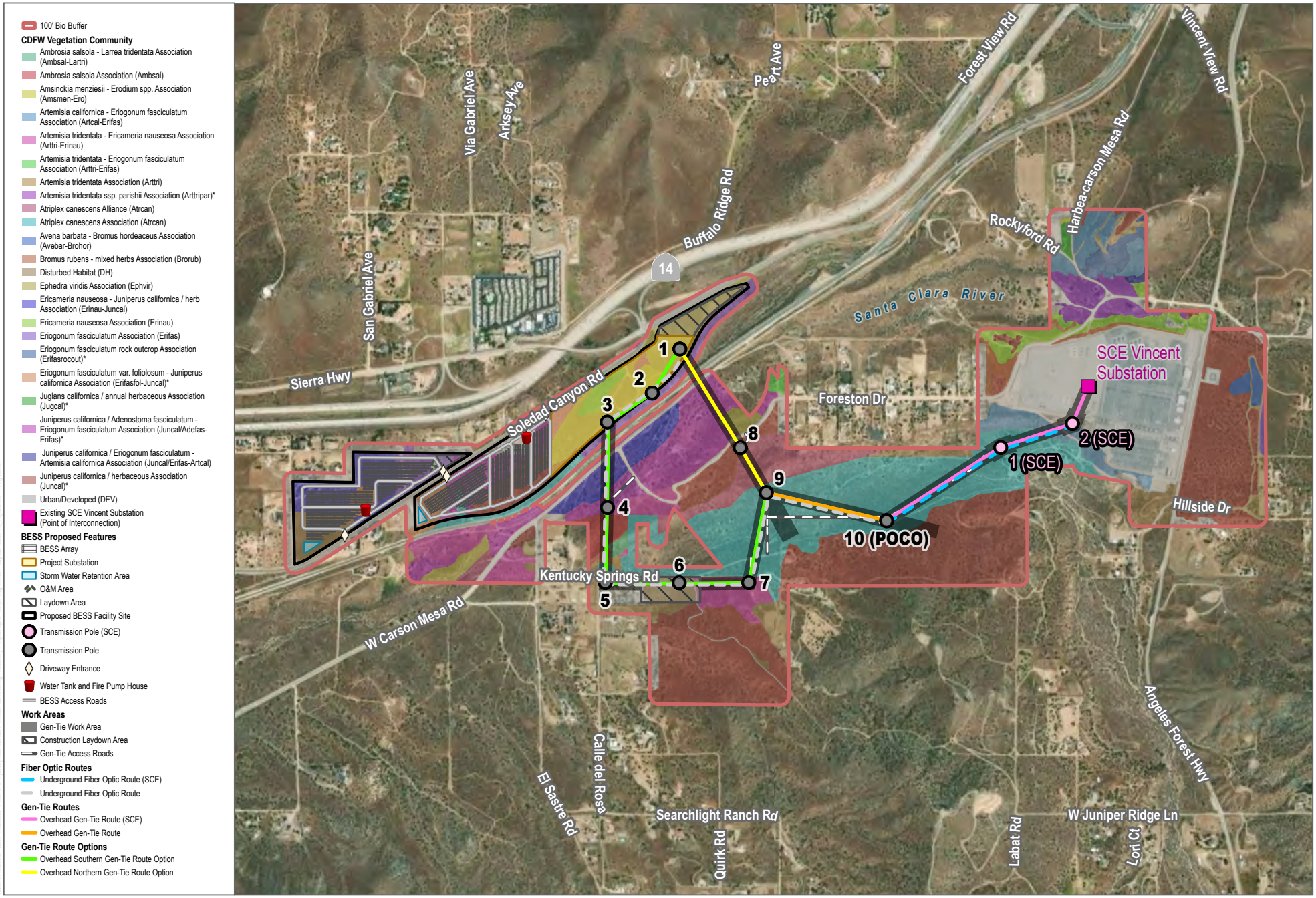

SOURCE: World Imagery

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FIGURE 3.2-7

Vegetation Communities and Land Cover

Prairie Song Reliability Project

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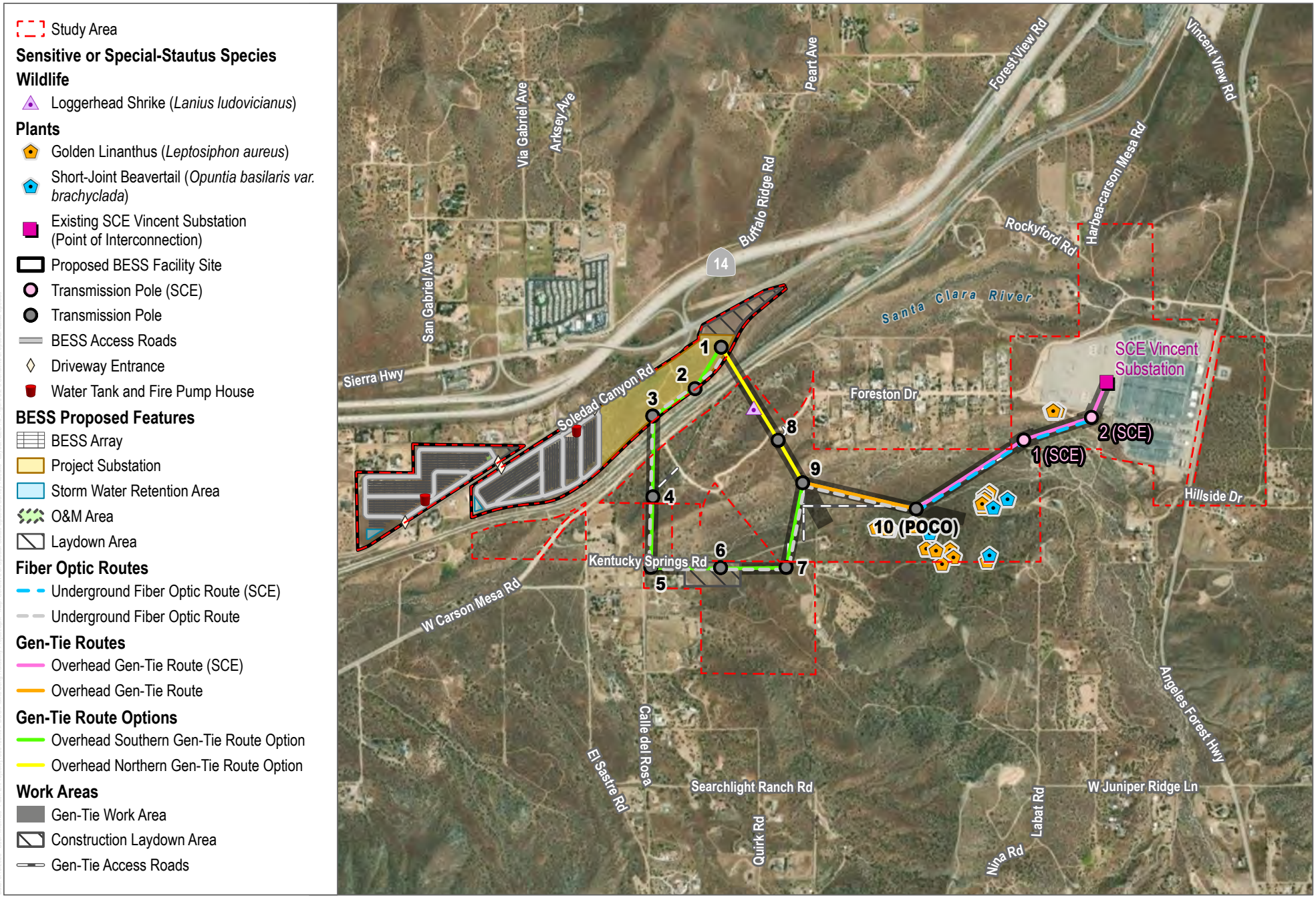

SOURCE: World Imagery

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FIGURE 3.2-8

Sensitive or Special-Status Species Survey Results

Prairie Song Reliability Project

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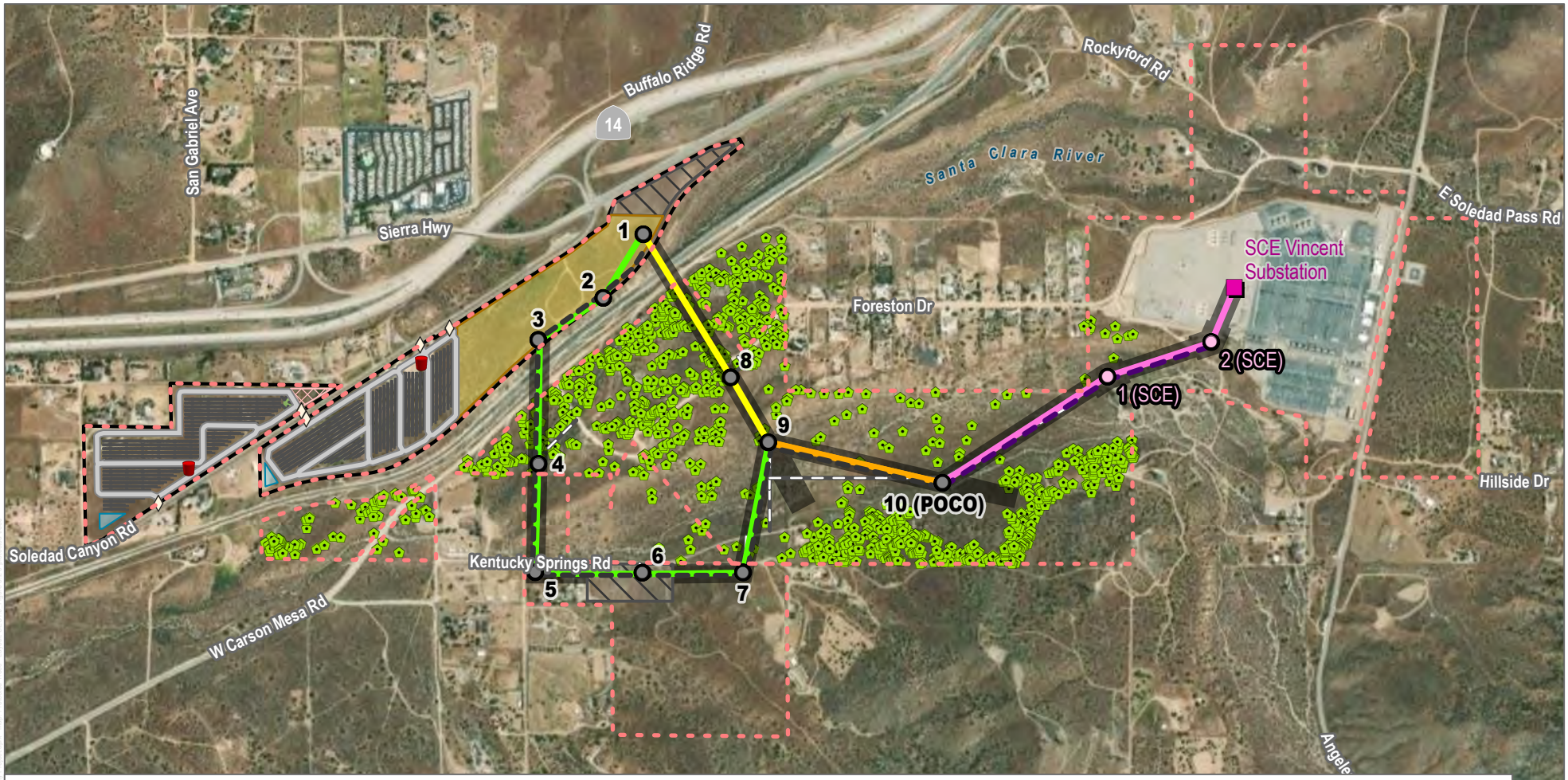

SOURCE: World Imagery

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FIGURE 3.2-9

Protected Trees

Prairie Song Reliability Project

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3.3 Cultural Resources

This section describes cultural resources, inclusive of archaeological, built environment, and tribal cultural resources, in and near the Prairie Song Reliability Project (project), and the potential effects the project may have on these resources. The project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This evaluation of cultural resources includes the following elements:

- Section 3.3.1 describes the area of potential impacts for cultural resources, environmental setting, including an overview of the cultural chronology, ethnographic setting, and historic setting;
- Section 3.3.2 presents the methodology and identification of cultural resources and the results of these efforts;
- Section 3.3.3 provides the thresholds for significance and includes potential impacts of project construction and operation (including maintenance) on cultural resources;
- Section 3.3.4 evaluates any potential cumulative impacts on cultural resources in the project vicinity;
- Section 3.3.5 lists the proposed mitigation measures;
- Section 3.3.6 discusses the applicable laws, ordinances, regulations, and standards (LORS);
- Section 3.3.7 lists the agencies involved and agency contacts;
- Section 3.3.8 discusses permits and permit schedules; and
- Section 3.3.9 lists reference materials used in preparing this section.

The following environmental setting and impact evaluation is based in part on the following project-specific technical documents, included as appendices to this Application:

1. Appendix 3.3A, Archaeological Resources Management Report, prepared by Dudek, April 2025
2. Appendix 3.3B, Built Environment Inventory and Evaluation Report, prepared by Dudek, March 2025

A summary of the cultural resources evaluation is provided in the table below.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
1) Cause a substantial adverse change in the significance of a historical resource pursuant to §15063.4?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15063.4 or disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐
3) 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. Listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in PRC section 5020.1(k)? B. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

3.3.1 Area of Potential Impacts for Cultural Resources and Environmental Setting

The project's area of potential impacts (API) for archaeological resources (archaeological study area), as represented by the area that may be subject to physical impacts, is approximately 139 acres. This includes the proposed BESS facility footprint as well as any access roads, laydown yards, and both gen-tie route corridor options with a 50-foot buffer. To note, new pedestrian archaeological surveys of the BESS facility footprint extended into publicly accessible areas beyond the site boundaries. The BESS facility footprint is surrounded by private property and beyond the established limits that could be affected by proposed project-related construction or operation (Figure 3.3-1, Area of Potential Impacts for Cultural Resources).

The project's API for built environment resources (built environment study area) encompasses the geographic area or areas within which the project may directly or indirectly cause a substantial adverse change in the significance of a known or unknown historical resource This includes the proposed BESS facility footprint as well as any access

roads, laydown yards, and both gen-tie route corridor options with a 0.5-mile buffer (Figure 3.3-1, Area of Potential Impacts for Cultural Resources).

For the purposes of providing management recommendations, the vertical underground extent of the API, as represented by the average depth of ground disturbance for the project, is assumed to be 10 feet below the existing ground surface. The maximum ground disturbance depth is assumed to be 25 feet to 55 feet below the existing ground disturbance for the gen-tie line structure foundations. The vertical above ground extent of the API is anticipated to be up to approximately 243 feet, which is the height of the tallest gen-tie line structure proposed for construction (gen-tie line structures will range from 155 feet tall to 243 feet tall).

The project is located in northern Los Angeles County within the foothills of the Sierra Pelona Mountains and at the edge of the Antelope Valley of the western Mojave Desert. The nearest municipality to the project is the City of Palmdale, which is located approximately 4 miles to the northeast. Land uses in the immediate vicinity of the project include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, SR-14, and railroad lines. The majority of the project is currently undeveloped with a small portion of the area under control being rural residential. The project site ranges in elevation from approximately 3,000 feet to 3,200 feet above mean sea level (amsl) and is generally hilly in nature, with greater elevations along the eastern portion of the project site. The region surrounding the project receives approximately 8.7 inches of precipitation annually. Average temperatures range from approximately 38°F to 97°F (WRCC 2025). Additionally, several seasonal drainages are located within and adjacent to project, with the Santa Clara River located directly to the north.

The project site sits within an ecotone characterized by a blend of desert scrub and mixed chaparral native plant communities. Common plant species within desert scrub environments include creosote (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), juniper (*Juniperus* spp.), and golden cholla (*Cylindropuntia echinocarpa*), while species typical of mixed chaparral include chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), scrub oak (*Quercus berberidifolia*) and yucca (*Yucca* spp. or *Hesperoyucca* sp.). Additionally, a wide array of fauna is known to exist within the foothills of the western Mojave Desert. Medium-sized mammals such as coyote (*Canis latrans*) and fox (*Urocyon cinereoargenteus*) are common. Smaller animals include blacktailed jackrabbit (*Lepus californicus*), cottontail rabbit (*Sylvilagus audubonii*), ground squirrel (*Spermophilus* sp.), and kangaroo rat (*Dipodomys* sp.), as there are many birds and migratory waterfowl present at lower elevations across cross the Antelope Valley (Earle et al. 1997; Pritchard-Parker et al. 1999; Rhode and Lancaster 1996).

3.3.1.1 Prehistoric Setting

Earle et al. (1997) and Loechl et al. (2002) have divided the prehistoric cultural chronology for the Mojave Desert into seven (7) cultural/temporal periods: Fluted Point Period, Lake Mojave Period, Pinto Period, Gypsum Period, Saratoga Springs Period, Post-Saratoga Springs/Late Period, and Contact/Ethnographic Period; the last includes the Euro-American historic record as well. Following Loechl et al. (2002) and Horne and McDougall (2005), Giambastiani et al. (2008) synthesized these periods with inferred paleoclimatic events over the past 12,000 years in the Mojave Desert. However, their scenario conflicts with the “standard” culture synthesis currently in use within the region, and there are minor aspects of that scheme that appear somewhat outdated in light of recent data from Edwards Airforce Base (Basgall and Overly 2004; Giambastiani and Basgall 2000; Rhode and Lancaster 1996), Fort Irwin (Basgall and Hall 1994a; Byrd et al. 1994), and Twentynine Palms (Basgall and Giambastiani 2000; Basgall et al. 2002; Basgall and Jurich 2006; Hall 2000).

While it is likely that long-term trends in prehistoric subsistence/settlement adaptations, and the timing of major changes in them, were largely similar across the Mojave Desert region, the many attempts to summarize them during the last 30 years of archaeological research have often produced differing results. In particular, the character of Late Pleistocene/early Holocene adaptations is still unclear and strongly debated, due in part to the persistence of long-standing notions of Paleoindian lifeways but due also to the continued scarcity of archaeological data from ancient sites in good, dateable contexts. The following summary of early prehistoric culture history, therefore, contains some assertions that are largely inferred and many that are highly debatable. Other important, more detailed syntheses can be found elsewhere (Basgall 1993, 2000; Giambastiani and Basgall 2000; Grayson 1993; Warren 1984; Warren and Crabtree 1986), and the interested reader is referred to those sources to become more familiar with the number of different and often better substantiated opinions about the nature of ancient human adaptations in the Mojave Desert.

3.3.1.1.1 Fluted Point Period (12,000–10,000 BP)

Typically, sites of this age have been identified based on the presence of fluted-base projectile points similar to the well-known Clovis forms typically associated with ancient cultures of the Great Plains. Termed “Western Clovis” (Tuohy 1974; Willig and Aikens 1988), “Black Rock Concave Base” (Clewlow 1968) or “Great Basin Concave-Base” (Pendleton 1979), many types of Clovis-like points have been found in various locations throughout the western Great Basin and in California. Lithic assemblages containing fluted points often contain crescents, gravers, scrapers, choppers, and “perforators” (Davis 1978). Fluted point sites occur in a variety of environments, indicating that inhabitants were likely generalized foragers rather than specialized big game hunters (Earle et al. 1997; Moratto 1984).

3.3.1.1.2 Lake Mojave Period (10,000–7000 BP)

In the western Great Basin, various stemmed projectile point forms have been fairly well dated to the early Holocene, roughly between 10,000 and 7500 BP. Generally subsumed under the broader appellation “Great Basin Stemmed,” these artifacts are elongate, lanceolate forms often with subtle, sloping shoulders, although many different regional styles exist. In the western Mojave Desert, typical stemmed points are Lake Mojave (unshouldered) and Silver Lake (slightly shouldered) forms, both of which are parts of lithic assemblages similar to those of the Fluted Point period.

Because of their tendency to occur along the shorelines of extinct lakes, stemmed point assemblages were once considered to represent a unique, lacustrine-based subsistence adaptation. The term “Western Pluvial Lakes Tradition” (WPLT), originally coined by Bedwell (1973), was applied to stemmed point sites found in ancient lakeshore contexts across the Great Basin. Lithic assemblages of the WPLT were found to be fairly comparable to Clovis materials, and in many cases points of both kinds occur together in the same sites (cf., Basgall and Hall 1991; Davis and Panlaqui 1978; Willig 1988, 1990). Flaked stone “crescents” (Amsden 1937; Tadlock 1966; Wardle 1913) were found primarily in such lakeshore assemblages, leading many archaeologists to draw associations between crescents and lacustrine environments. Support for the WPLT has faded in recent years; however, as more and more stemmed point sites have been discovered in locations away from extinct bodies of water, and the landform bias in early survey programs becomes increasingly clear. Bias in the differential preservation of ancient land surfaces along fossil washes and in the center of dry lake basins has also been recognized (Basgall and Hall 1991; Waters 1988, 1991).

3.3.1.1.3 Pinto Period (7000–4000 BP)

Archaeological assemblages dating to this period are typified by Pinto points, which are projectiles bearing weak shoulders and indented or split-stem bases. Associated flaked stone assemblages include leaf-shaped bifaces, formal unifaces, flake tools, and consistent quantities of core-cobble implements (Basgall 1993, 2000; Campbell and Campbell 1935; Hunt 1960; Rogers 1939). Lithic selection evidently favored fine-grained igneous stones, such as basalt and rhyolite, for points and bifaces (Glennan 1970, 1971; Norwood 1987). Milling stones are a major part of Pinto period assemblages, reflecting the importance of seed processing. The timing of the Pinto period coincides with Antevs' (1953) "Altithermal," an extended interval when climate was supposedly very hot and dry. Archaeologists once believed a scarcity of Pinto sites in the Mojave Desert signaled a near-total abandonment of the region due to the oppressive climate, but recent studies suggest that the middle Holocene in the Antelope Valley was punctuated by wetter episodes (Grayson 1993; Mehringer 1986) and that the effects of the Altithermal were variable in different parts of the desert. The Pinto Period is synonymous with the "Archaic" period throughout North America. During this time, Pinto Period artifacts tend to occur in aggregates at fewer locations having the appearance of being sedentary encampments. However, the relatively limited diversity of artifacts at these sites indicates they were serially occupied, perhaps during a particular season by the same families, leading to stockpiles of ground and battered stones. This seems to fit with the occurrence of Pinto Period projectile points at small, task specific sites indicating a greater reliance on logistical forays around a more stable encampment.

3.3.1.1.4 Gypsum Period (4000–1500 BP)

Diagnostic artifacts at Gypsum period sites include Gypsum contracting-stem projectile points, Elko eared and corner-notched points, and Humboldt basal-notched points. Lithic assemblages are typified by bifaces, scrapers, and a variety of other flake-based tools, but also contain mortars and pestles as evidence of expanded plant processing (including mesquite, pine nuts, yucca, and agave). Large villages or village complexes appear during Gypsum times, reflecting a transition from seasonal transhumance to year-round sedentary occupation within the Antelope Valley (Sutton 1988, 1996). The presence of marine shell artifacts at Gypsum period sites indicates economic ties between the Antelope Valley and the California coast (Warren 1984). Gardner (2007) analyzed data from a slew of sites in the western Mojave to assess the socioeconomic impact of the Medieval Climatic Anomaly and in so doing, suggested a revision in the terminus of the Gypsum period to about 2000 BP. Gardner (2007:241) based this revision on the early appearance of the bow and arrow within the Rose Spring Complex in conjunction with an increase in effective moisture at 2000 BP.

3.3.1.1.5 Saratoga Springs Period (1500–800 BP)

By at least 1500 BP (or 2000 BP using Gardner's [2007] chronological scheme), the aboriginal people of the Mojave Desert had replaced the atl atl (or spear-thrower) with the bow and arrow (Yohe 1992, 1998). This change brought about a shift toward the use of smaller projectile points, including various corner-notched and side-notched Saratoga Springs types and the corner-notched Rose Spring and Eastgate types. Anasazi ceramics also appear in the southern Mojave around 1200–1100 BP, coinciding with the westward spread of the Virgin Anasazi into southern Nevada. Influence from the cultures of the Colorado River eventually grew stronger than those from the east, allowing for an influx of buffware ceramics and other goods that persisted until the historic present. The intensification of plant use initiated during the Gypsum period continued in the Saratoga Springs period, as diet breadth was expanded to include a wide range of plant foods that required high cost/high return procurement and processing strategies. This is indicated by a general increase in milling equipment from Gypsum times through the Saratoga Springs period (see Gardner 2007:225–228).

3.3.1.1.6 Post-Saratoga Springs or Late Period (800–300 BP)

In the Antelope Valley, social and economic adaptations during this final prehistoric interval were largely an extension of patterns that developed during the Saratoga Springs period. Trade along the Mojave River continued to provide the people of eastern Antelope Valley with a variety of exotic goods and materials, although it appears that relationships with groups in coastal California eventually grew stronger than those with groups inhabiting the arid interior. Projectile points also shifted in form, with unnotched Cottonwood triangular and Desert side-notched points being even smaller than their predecessors. Mortars and pestles also appear in significant quantities, probably an indication of increased emphasis on high-cost/high-yield processing.

3.3.1.2 Ethnographic Setting

This last interval is defined as the period of contact between native desert people and Euro-American explorers and settlers. Kroeber (1925) argued that as many as six (6) different native groups were living in the western Mojave at the time of Euro-American contact, including the Chemehuevi, Serrano, Kawaiisu, Kitanemuk, Alliklik (Tataviam), and Vanyume, although it is likely that only the latter four (4) groups used lands within Antelope Valley on a regular basis. Blackburn and Bean (1978) later reinterpreted the political geography in the western Mojave Desert, dividing western Antelope Valley between the Tataviam (to the south) and the Kitanemuk (to the north). Sutton (1980:220) followed Blackburn and Bean, claimed that the late prehistoric population in the majority of Antelope Valley was "ancestral to the ethnographic Kitanemuk." He later hypothesized that the floor of the valley might have been abandoned a few decades prior to Spanish contact in 1772 (Sutton 1988; Warren 1984). Earle et al. (1997:8), however, feels this idea is probably "overdrawn," citing the diaries of Pedro Fages (1775) and Father Garcés (1776, as cited in Earle et al. 1997) that remarked on seeing and visiting native villages in what is now western Antelope Valley. The site of Apavuchiveat, probably located at Buckhorn Springs; it is likely affiliated with the Desert (Vanyume) Serrano. Another site at Willow Springs, west of Rosamond Dry Lake, was identified by contemporary Kitanemuk Serrano as an additional village location (Earle et al. 1997).

3.3.1.3 Post-Contact and Historic Period Setting

The County of Los Angeles was established on February 18, 1850, 1 of 27 counties established in the months prior to California acquiring official statehood in the United States 2 years after the Mexican American War. Settlement of the Los Angeles region continued in the early American Period. Many of the ranchos in the area now known as Los Angeles County remained intact after the United States took possession of California; however, a severe drought in the 1860s resulted in many of the ranchos being sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944: 3–6). Nonetheless, ranching retained its importance, and by the late 1860s, Los Angeles County was one of the top dairy production centers in the country (Dumke 1944: 14–15). In the 1870s, the county was divided into townships comprised of subdivided ranchos, and by 1876, the county reportedly had a population of 30,000 people (Dumke 1944: 7).

Within Los Angeles County, the unincorporated community of Acton was developed for mining in 1861 following the discovery of copper deposits in Soledad Canyon. In 1868, 7 years later, gold deposits were also discovered, prompting the establishment of three (3) mines for gold, copper, and silver: Red Rover Mine, Escondido Grande Mine, and the New York Mine. Following adoption of the federal Homestead Act of 1862, four (4) families established ranches in Acton, eventually allowing the focus of the economy to shift from mining to agriculture. In 1900, the Acton Oil Boom provided another source of employment and prompted population growth in the

community and the establishment of the Actonoma Oil Development Company in 1902 (Pitt 2024; Dumke 1944: 41–43; Sapphos 2024: 4.6–4.10).

The nearby community of Palmdale originated from two (2) small communities: Harold, located at the crossroads of the Southern Pacific Railroad (SPRR) tracks and present-day Barrel Springs Road, and Palmenthal, founded by approximately 50 families of Swiss and German descent who moved to California from Nebraska and Illinois. During this early time, population in the region grew due to several factors, including the gold rush, the possibility for ranching, and the completion of the SPRR line in 1876, which facilitated the transport of agricultural products and metals throughout the United States. Through this early period, however, the communities of both Acton and Palmdale developed slowly (City of Palmdale 2025; Palmdale 2045 2025; COLA 2017).

The completion of the Los Angeles Aqueduct facilitated development of ranching and agriculture in Palmdale. However, the aqueduct ran approximately 18 miles west of Acton, and as a result, development in the community was slower than nearby Palmdale, which had begun to develop civic infrastructure and published its first newspaper, the Palmdale Post, in 1915. In the 1920s, the Acton/Palmdale area saw the development of the present-day Sierra Highway, which linked Palmdale to Los Angeles and allowed for easier transport of agricultural products to market. In 1924, the Little Rock Dam and Harold Reservoir (present-day Lake Palmdale) were constructed to provide water to agriculture and the area's population (City of Palmdale 2025; Palmdale 2045 2025; COLA 2017).

Although the onset of the Great Depression in 1929 detrimentally impacted the county's overall economy, historic newspapers from the 1930s reported on the continued growth of Los Angeles County's horticultural and agricultural development. The 1932 Summer Olympic Games held in Los Angeles helped to boost the economy of the county with the influx of tourism (Pitt 2024). By the mid-1930s, Los Angeles County was one of the top oil producers in California, producing about 20% of the oil in the country. In addition, aviation and aerospace, already important industries in the county, accelerated by the onset of World War II in 1939 at which time Los Angeles County became one of the largest producers of wartime planes in the country (LAEPR 1934: 12; Pitt 2024; ARG 2008: 14–19).

After World War II's conclusion in 1945, a massive wave of migration and building boom occurred throughout California. In Los Angeles County, the rise in wartime employment in aircraft factories and shipyards during World War II, as well as statewide post-war immigration/emigration patterns, increased the county's population from 2,208,492 residents in 1930 to 4,151,687 residents by 1950 (Los Angeles Almanac 2020). Aerospace remained an important industry in the Palmdale area as the opening of aerospace facilities in the region transformed the local economy and became the Palmdale area's primary employer. The aerospace industry brought large numbers of new residents to the area, and corresponding residential development; by 1957, for example, the population of Palmdale was more than 12,000, a 412% increase from 1950 (City of Palmdale 2025; Palmdale 2045 2025; COLA 2017; LAT 1968: 126; Valley Times 1957: 3)

The postwar decades saw much of the county transformed from ranches and farms into residential subdivisions surrounding commercial and industrial centers. The county's agricultural success and Southern California's booming oil and aerospace industries were key factors in the county's growth in the twentieth century (Pitt 2024; Los Angeles Almanac 2020; Survey LA 2016: 2). In response to the rise in population, developers built tract homes, and multi-family residences on former agricultural properties in Los Angeles County throughout the 1940s and 1950s (Pitt 2024). This growth, however, was not universal throughout the county; aerial photographs of Acton and its environs from the 1920s through the 1960s show minimal growth (Survey LA 2021: 91–92; NETR 2024; City of Palmdale 2025; Palmdale 2045 2025; COLA 2017; LAT 1968: 126; Valley Times 1957: 3).

With the advent of the state and federal highway systems during the 1950s and 1960s, automobiles allowed travelers to take themselves to places that were only previously accessible by railroads. The highway system encouraged tourism that propelled the county's economy and spurred growth in the area. The construction of the Antelope Valley freeway, running through Acton to Palmdale, was initiated in 1963 and made these communities more accessible, prompting population growth and corresponding development (Caltrans 2011: 17–18; Survey LA 2021: 153).

The population of Los Angeles County reached 6,038,771 residents by 1960 and grew to 8,863,164 residents by 1990 as the county continued to expand during the last half of the twentieth century and into the twenty-first century (Los Angeles Almanac 2020). The first municipal building in Palmdale, Palmdale City Library, was constructed in 1977. Despite the growth of Palmdale and other parts of Los Angeles County, however, development in Acton remained slow from the 1960s through the 1990s, and the community retains its predominantly rural character (Sapphos 2024: 4.6–4.10; NETR 2024).

3.3.1.3.1 Southern California Edison

The Southern California Edison (SCE) Company is a subsidiary company of Edison International and is the largest electrical supply company in Southern California. Edison International was formed by the merger and acquisition of smaller electrical companies in 1886. At the time, Thomas Edison only allowed electrical utilities to use his patent if his name was used in the title of the company (EI 2023; SCE 2023).

As the population of the city of Los Angeles steadily increased during the late 1890s, the need for power grew. Several businessmen in Los Angeles formed the Westside Lighting Company, later known as the SCE, as a subsidiary of Edison International to address residents' needs. By 1897, Los Angeles adopted an undergrounding ordinance to reduce the overhead clutter of power infrastructure. To create underground lines throughout the city of Los Angeles, Westside Lighting used Thomas Edison's patented three-wire conduit technology. However, because of the use of Edison's patent, the company was required to change its name and chose the Edison Electric Company. By 1907, Edison Electric completed construction of the Kern River Hydro Powerhouse and began producing power to the Los Angeles Basin with a 75kV transmission line, the highest voltage in the nation at the time and the first line to be built on steel towers. In 1909, Edison Electric merged with several smaller electrical companies throughout the southern California region to form the SCE Company (EI 2023; SCE 2023).

In 1912, the Los Angeles Water Department extended its operations to include hydroelectric generation and local electricity distribution after the Los Angeles City Council voted to begin negotiations to purchase local electrical facilities. Between 1922 and 1937, SCE sold its hydroelectric facilities to the city. However, its loss of business was offset by the suburban growth of Los Angeles County. With more energy generation needed throughout the area, SCE created a transmission line with the capacity to retain 220kV by 1922. In 1926, SCE completed construction of the largest multiple-arch dam in the world at the time, the Florence Lake Dam. By 1929, construction began on the SCE's headquarters in downtown Los Angeles, completed in 1931. In 1939, the SCE received its share of power from the Hoover Dam after completing a 220kV transmission to the dam (EI 2023).

During the outbreak of World War II, SCE engineers helped design the electrical system for a plutonium extraction facility to develop nuclear weapons for the war. By 1946, the country established a standard for electricity that required a currently alternating at 60 cycles per second. To accommodate the new standard, SCE changed its 50-cycle system to a 60-cycle system, requiring a massive rewiring program taking nearly 3 years to complete (EI 2023).

By 1957, SCE completed construction of the 7.5MW nuclear power plant, the Santa Susana Experimental Nuclear Station, in the Santa Susanna Mountains. The company became the first investor in the country to generate electricity commercially from a nuclear reactor. During the 1960s, SCE continued to expand their facilities and in 1964 when they acquired the California Electric Power Company. By 1968, SCE completed construction of the 450MW San Onofre Nuclear Generation Station Unit 1, and between 1967 and 1970, they built the Pacific AC-DC (alternating current-direct current) Intertie, the first major high-voltage DC line in the country capable of transporting 8,000MW of power. In 1972, Units 2 and 3 of the San Onofre Nuclear Generation Stations were completed (EI 2023).

Throughout the 1970s and 1980s, SCE's research, development, and demonstration department researched cutting-edge power development. By 1978, they established the Wind Energy Research Center in Palm Springs, California, and the construction of a 10MW geothermal power plant in Brawley, California. In 1980, the SCE Chief Executive Officer William R. Gould, announced the company's initiative to develop 2,000 MW of alternative and renewable energy. Along with the department of energy and the Los Angeles Department of Water and Power, SCE developed a solar thermal plant in the Mojave Desert during the 1980s that began operating by 1996 (EI 2023).

The California energy crisis of the early 2000s saw the price of independent power rise. As a result, SCE purchased abandoned plants throughout Southern California to relieve power shortages. To alleviate power costs, SCE began construction of the first transmission line to only carry renewable power with the Tehachapi Renewable Transmission line in 2007. Likewise, in 2008, SCE launched their solar photovoltaic rooftop program to promote the addition of solar panels to buildings. Today SCE owns over 104,000 miles of circuits across its service territory (Tinsley-Becker and Chiang 2015: 13; SCE 2023; EI 2023).

3.3.2 Methods and Identification of Cultural Resources

Methods used for the identification of cultural resources consisted of a California Historical Resources Information System (CHRIS) records search of the project site and surrounding 1-mile radius at the South Central Coastal Information Center (SCCIC); archival research; correspondence with the Native American Heritage Commission (NAHC); informal tribal outreach; and an intensive-level pedestrian survey of the archaeological and built environment study areas. For the purposes of the CHRIS records search, the project site is defined as the BESS Facility Site, the Northern and Southern Gen-Tie Routes, and the SCE Vincent Substation to which the project components will connect.

3.3.2.1 Records Search

A CHRIS records search encompassing the project site and a 0.5-mile radius was performed by staff at the SCCIC on January 26 and 27, 2023. An update to this original records search to incorporate changes to the project footprint and to encompass a 1-mile radius was completed by Dudek archaeologist Brenda Rogers at the SCCIC on November 6, 2024. The SCCIC records search identified four (4) previously recorded cultural resources within the project site: P-19-002893 (abandoned Southern Pacific Railway segment), P-19-101014 (can isolate), P-19-186876 (SCE Eagle Rock-Pardee Transmission Line), and P-19-192581 (Antelope-Mesa 220 kV Transmission Line), and an additional resource, P-19-187713 (Angeles Forest Highway), located within the built environment study area (Table 3.3-1). An additional 26 previously recorded cultural resources were identified within a 1-mile radius of the project site. These include 13 historic-era refuse scatters, four (4) prehistoric isolates, two (2) lithic and groundstone scatters, two (2) historic-era isolates, one (1) built environment structure, one (1) prehistoric hearth feature, one (1) prehistoric bedrock milling feature, one (1) collapsed wooden structure with an associated

refuse scatter, and the Angeles National Forest. P-19-002893, P-19-101014, P-19-192581 and P-19-187713 are described in further detail below Table 3.3-1.

Table 3.3-1. Previously Recorded Cultural Resources Within 1 Mile of Project Site

Primary Number	Trinomial	Age	Type	Description	Eligibility for CRHR/NRHP
Intersects Project Site					
P-19-002893	CA-LAN-002893H	Historic	Site	Abandoned segment of the Southern Pacific Railroad	Found ineligible for NRHP through survey evaluation; Not evaluated for CRHR
P-19-101014	—	Historic	Isolate	Can isolate	Categorically Ineligible for CRHR/NRHP
P-19-186876	—	Historic	Engineering structure	SCE Eagle Rock-Pardee Transmission Line	Found ineligible for CRHR/NRHP through survey evaluation
P-19-192581	—	Historic	Engineering structure	Antelope-Mesa Transmission Line	Determined Ineligible for NRHP; Not evaluated for CRHR
Intersects Built Environment Study Area					
P-19-187713	—	Historic	Engineering Structure	Angeles Forest Highway	Recommended ineligible for CRHR/NRHP through survey evaluation

Notes: CRHR = California Register of Historic Resources; NRHP = National Register of Historic Places; SCE = Southern California Edison.

P-19-002893

P-19-002893 is characterized as an abandoned segment of the Southern Pacific Railroad grade through Soledad Canyon. This resource was first recorded in 2000 by SWCA Environmental Consultants and recommended ineligible for listing on the NRHP. At time of recordation, P-19-002893 consisted of imported stone, several railroad ties in secondary context, two (2) water culverts (one dated to 1937) and a cement signal stand. This resource was revisited in 2013 by HDR. HDR was able to revisit all previously identified components, however indicated that the original mapping by SWCA in 2000 appeared to be incorrect (Purcell 2000).

P-19-101014

P-19-101014 is characterized as an isolated can scatter consisting of a three-tab seam, church key opened, steel beer can, a crushed painted label oil can, and additional cans noted upslope adjacent to the SCE Vincent Substation. This resource was first recorded in 2011 by Pacific Legacy Inc. in support of the Tehachapi Renewable Transmission Project (Greenberg and Schrader 2011). Isolates are categorically ineligible for listing on the CRHR and do not meet the criteria to be considered significant or unique archaeological resources under CEQA.

P-19-192581

Big Creek No. 4; Antelope-Mesa 220kV Transmission Line (P-19-192581) is not addressed further in this report because the 2017 California Department of Parks and Recreation 523 (Series 1/95) form (DPR site form) for the transmission line authored by SCE Archaeologist Audry Williams states “the Antelope-Mesa portion of the line was

completely removed during the construction of Segment 7 of SCE's Tehachapi Renewal Transmission Project in 2014" (Williams 2017: 2). A corresponding map shows that the removed line ran through the study area (Williams 2017: 5).

P-19-186876

P-19-186876 has been recorded multiple times under several different names, summarized below:

2003 (Schmidt): *SCE Eagle Rock-Pardee Transmission Line Corridor.* The DPR stated that the recorded 18.2-mile segment of transmission line is a remnant of the third Big Creek Line that was reconstructed or modified in 1974. The documentation describes the line as having steel lattice transmission towers. This documentation does not include an evaluation for significance.

2006 (ECORP): *Vincent Lines.* The DPR identifies an approximately 13-mile segment of the Vincent Line with a date of construction of 1928. The DPR states that the recorded segment has H-Frame Vincent towers. This documentation does not include an evaluation for significance.

2010 (Tinsley-Becker): *SCE Antelope-Magunden No. 1 220kV Transmission Line.* The DPR states that the line was installed between 1949 and 1951 and connected to Big Creek Powerhouse No. 4. It describes the line's towers as utilitarian steel lattice towers and assigns the line a 6Z status code.

2011 (Stanton): *SCE Transmission Line Corridor.* This documentation was completed by archaeologists. It documents four (4) steel lattice transmission towers. It does not include a date of construction or an evaluation for significance.

2011 (Tinsley-Becker): *SCE Big Creek Hydroelectric System Company Vincent 200kV Transmission line.* This documentation is for a system consisting of six (6) lines constructed from 1925 to 1927 (Big Creek No. 3-Springville 200kV; Magunden-Springville No. 1 220kV; Antelope-Magunden No. 2; Antelope-Vincent 200kV; Antelope-Eagle Rock (idle)/Pardee-Vincent; and Eagle Rock-Pardee. A portion of the Eagle Rock-Pardee TL was previously recorded). This documentation found the system eligible under NRHP/CRHR A/1, B/2, and C/3 and assigned a status code of 2D2. It describes three (3) towers within the system: steel H-Frame Vincent Towers, Transposition Vincent Tower, and dead-end/anchor Vincent Tower.

3.3.2.2 Archival Research

Review of Historic Topographic Maps

Table 3.3-2 provides a summary of the historic topographic map review conducted for the BESS facility. This table has been modified from the *Phase I Environmental Site Assessment: Prairie Song Reliability Project* prepared by Dudek in 2024 (Smith and Huang 2024: 19–20).

Table 3.3-2. Summary of Historic Topographic Maps

Date	BESS Facility (APNs 3056-017-007, -020, 021; 3056-019-013, -026, -037, and -040)	Adjoining and Surrounding Properties
1900	The project site is depicted as vacant, undeveloped land. An east–west-trending	The adjoining and surrounding areas are depicted as vacant, undeveloped land. A northeast–southwest

Table 3.3-2. Summary of Historic Topographic Maps

Date	BESS Facility (APNs 3056-017-007, -020, 021; 3056-019-013, -026, -037, and -040)	Adjoining and Surrounding Properties
	light-duty road and a wide wash are depicted through the center of the site.	trending railroad is depicted to the north. A few light-duty roads are depicted throughout the adjoining and surrounding area.
1934	The light-duty road and wide wash are no longer depicted on the site. A tank and a well are depicted on the site. Narrow washes are depicted in the southwest and northwest portions of the site. Unimproved roads are depicted in the northwestern and northeastern portions of the site. A structure is depicted along the eastern border of the site.	Two wells and a patrol station are depicted north of the site. East–west trending Highway 6 and Soledad Canyon are depicted north of the project site. Additional roadways and narrow washes are depicted throughout the surrounding area.
1939	The site is depicted similarly to the 1934 topographic map.	The adjoining and surrounding areas are depicted similarly to the 1934 topographic map.
1940	The tank and the well are no longer depicted on the site. The narrow wash in the southwestern portion is no longer depicted on the site.	The two wells are no longer depicted north of the project site. Additional structures are depicted on the surrounding properties to the north.
1947	The structure along the eastern border is now depicted outside of the site boundary. The remaining site is depicted similarly to the 1940 topographic map.	A structure is depicted on the eastern-adjoining property. The remaining adjoining and surrounding areas are depicted similarly to the 1940 topographic map.
1948	The site is unmapped.	Most of the adjoining and surrounding properties are unmapped.
1959	The site is depicted similarly to the 1947 topographic map.	Kentucky Springs Canyon is depicted on the adjoining and surrounding property to the north. Additional roadways and structures are scattered throughout the surrounding area.
1974, 1978	The site is depicted similarly to the 1959 topographic map.	Highway 6 has been expanded to have several on-/ off-ramps connecting to the highway and is renamed Highway 14. A substation is now depicted northeast of the project site. Two structures are depicted on the southwestern adjoining property. Additional buildings and unimproved roads have appeared in the areas surrounding the project site.
1991, 1994	The site is depicted similarly to the 1974/1978 topographic map.	The adjoining and surrounding areas are depicted similarly to the 1974/1978 topographic map.
1995	A structure is depicted in the western portion of the site. A roadway is depicted along the western border of the site.	Additional structures and roads are depicted in the areas surrounding the project site.
2012	Structures are no longer depicted on the topographic map.	Structures and power transmission lines are no longer depicted on the topographic map.
2015	The site is depicted similarly to the 2012 topographic map.	Changes to road layouts are depicted in areas surrounding the site.
2018	The site is depicted similarly to the 2015 topographic map.	The adjoining and surrounding areas are depicted similarly to the 2015 topographic map.

Table 3.3-2. Summary of Historic Topographic Maps

Date	BESS Facility (APNs 3056-017-007, -020, 021; 3056-019-013, -026, -037, and -040)	Adjoining and Surrounding Properties
2022	The site is depicted similarly to the 2018 topographic map.	The adjoining and surrounding areas are depicted similarly to the 2018 topographic map.

Notes: BESS = battery energy storage system; APN = Assessor's Parcel Number.

Review of Aerial Photographs

Table 3.3-3 summarizes the review of the historic aerials photographs that cover the BESS facility (Smith et al. 2024: 17–18).

Table 3.3-3. Summary of Historic Aerial Photographs

Date	BESS Facility (APNs 3056-017-007, -020, 021; 3056-019-013, -026, -037, and -040)	Adjoining and Surrounding Properties
1928	The site appears largely undeveloped. An east–west-trending wide wash is observed in the northwest portion of the site. A narrow wash is observed in the southwestern corner of the site. Two roads are observed on the northern half of site. Vegetation that appears to be bushes and shrubs sparsely covers the entirety of the site.	Undeveloped land is observed on all adjoining and surrounding properties. A road and railroad are observed northwest of the site. A few narrow washes and dirt roads/trails are observed throughout the surrounding area. Vegetation that appears to be bushes and shrubs sparsely covers the adjoining and surrounding properties.
1940	The site appears similar to the 1928 aerial photograph.	The adjoining and surrounding areas appear similar to the 1928 aerial photograph.
1954	The site appears similar to the 1940 aerial photograph.	The adjoining and surrounding areas appear similar to the 1940 aerial photograph.
1968	A cleared area is observed in the western portion of the project site. A north–south-trending road is observed along a portion of the western border.	Rural residential/farming structures are observed on the western- and eastern-adjoining properties. Additional residential/farming structures are observed to the south. Additional roads appear throughout the adjoining and surrounding properties.
1974	The site appears similar to the 1968 aerial photograph.	The adjoining and surrounding areas appear similar to the 1968 aerial photograph.
1976	The site appears similar to the 1974 aerial photograph.	The adjoining and surrounding areas appear similar to the 1974 aerial photograph.
1983	A small, cleared area is observed along the eastern border of the site, associated with the eastern-adjoining structure. The site appears similar to the 1976 aerial photograph.	Additional residential/farming structures are observed adjoining the subject property to the northeast and west and also on the surrounding property to the south.
1989	A residential area is observed in the western portion of the site. A graded area associated with structures on the eastern adjoining property is observed along the eastern border.	The northeastern- and western-adjoining areas are further developed with additional structures and grading. The remaining adjoining and surrounding areas appear similar to the 1983 aerial photograph.

Table 3.3-3. Summary of Historic Aerial Photographs

Date	BESS Facility (APNs 3056-017-007, -020, 021; 3056-019-013, -026, -037, and -040)	Adjoining and Surrounding Properties
1994	A few additional roads are observed throughout the site.	Additional structures are observed on the western adjoining property. The remaining adjoining and surrounding areas appear similar to the 1989 aerial photograph.
2002	Additional structures are observed in the western portion of the site.	Additional development is observed on the eastern and western-adjoining properties. The remaining adjoining and surrounding areas appear similar to the 1994 aerial photograph.
2005	The site appears similar to the 2002 aerial photograph.	The adjoining and surrounding areas appear similar to the 2002 aerial photograph.
2009	Additional structures are observed in the western portion of the site. The remaining site appears similar to the 2005 aerial photograph.	The adjoining and surrounding areas appear similar to the 2005 aerial photograph.
2012	The site appears similar to the 2009 aerial photograph.	The adjoining and surrounding areas appear similar to the 2009 aerial photograph.
2016	The site appears similar to the 2012 aerial photograph.	The adjacent and surrounding areas appear similar to the 2012 aerial photograph.
2020	The site appears similar to the 2016 aerial photograph.	The adjacent and surrounding areas appear similar to the 2016 aerial photograph.
2023	The site appears similar to the 2020 aerial photograph.	The adjacent and surrounding areas appear similar to the 2020 aerial photograph

Notes: BESS = battery energy storage system; APN = Assessor's Parcel Number.

Review of Geomorphological Context

According to the U.S. Department of Agriculture Natural Resources Conservation Services, several soil types are mapped within the project site. Official USDA soil descriptions for the soil types identified within the project site are provided below (USDA 2025).

- Hanford coarse sandy loam, 2% to 9% slopes, is present within 27% of the project site. Hanford coarse sandy loams generally occur in settings with alluvial fans deriving from granite and are found in areas with elevations ranging from 2,390 feet to 4,200 feet amsl.
- Terrace escarpments are present within 24% of the project site and are characterized by their high percent of slope, which in general are not suitable for sustaining buried archaeological deposits.
- Hanford coarse sandy loam, 0% to 2% slopes, is present within 17% of the project site. Hanford coarse sandy loams generally occur in settings with alluvial fans deriving from granite and are found in areas with elevations ranging from 2,390 feet to 4,200 feet amsl.
- Greenfield sandy loam, 2% to 9% slopes, is present within 14% of the project site. Greenfield sandy loams generally occur in settings with alluvial fans and terraces deriving from granite and are found in areas with elevations ranging from 2,600 feet to 4,200 feet amsl.

- **Hanford sandy loam,** 2% to 9% slopes, is present within 17% of the project site. Hanford sandy loams generally occur in settings with alluvial fans deriving from granite and are found in areas with elevations ranging from 2,600 feet to 4,200 feet amsl.

The USDA's soil types mapped within the project site demonstrate that alluvial soils are present, which do have the potential to support the presence of buried archaeological resources. These soils are associated with the period of prehistoric human use, as well as represent ongoing processes of development that have potential to preserve cultural material in context, depending on area-specific topographical setting.

Additional Building Development and Historical Research

Background and property specific research was conducted at various state and local repositories. These resources included:

- **California Office of Historic Preservation's (OHP) Built Environment Resource Directory (BERD) –** The BERD is maintained by OHP and is an inventory of built environment cultural resources that are processed through OHP's office. Two resources were listed on the BERD. The Antelope-Mesa Transmission Line (P-19-192581) was listed with a status code of 6Y, meaning it was determined ineligible for the NRHP through Section 106 consensus. This line is no longer extant in the built environment study area. In addition, P-19-186876 (Map ID 4) is included in the BERD as Eagle Rock-Pardee Transmission Line with a status code of 2S (Individually determined eligible for NRHP by the Keeper) and a date of construction of 1925-1927.
- **Calisphere –** Calisphere provides access to 2,000 collections contributed by more than 300 cultural heritage organizations in California, including universities, libraries, archives, museums, and historical societies. A search of Calisphere identified a historic photograph of the SCE Vincent Substation and multiple photographs of the construction of the Lugo-Vincent No. 1 and No. 2 transmission lines.
- **Online Archive of California (OAC) –** The OAC provides free public access to detailed descriptions of primary resource collections maintained by more than 300 contributing institutions including libraries, special collections, archives, historical societies, and museums throughout California and collections maintained by the 10 University of California campuses. No information was found during a search of the OAC.
- **County of Los Angeles Acton Historic Resource Survey –** A historic resource survey for the community of Acton was conducted in 2024. The survey consisted of the preparation of a historic context statement, supported by a communitywide survey. None of the properties inventoried and evaluated for the project were identified in the survey.
- **County of Los Angeles Register of Landmarks and Historic Districts (County Register) –** The County Register the County of Los Angeles' County's official list designated landmarks and historic districts in the unincorporated areas of the county. None of the properties recorded as part of this project are included on the County Register.
- **Historic Aerials and Maps –** Aerial photographs and maps were consulted to document the development of the project site.
- **Historic Newspapers –** Online historic newspaper databases were consulted to document the development of the area and provide additional property-specific information.
- **ParcelQuest –** This online assessor data was reviewed to provide property specific information for the properties in the project site.

3.3.2.3 NAHC and Tribal Correspondence

Dudek requested a NAHC search of the Sacred Lands File (SLF) for the project site and a 0.5-mile radius on January 13, 2023, and for the project site and a 1-mile radius on December 30, 2024. The NAHC replied via email on January 27, 2023, and January 16, 2025, respectively, stating that the SLF search was completed with negative results. Along with the results of the SLF search, the NAHC provided a list of Native American tribes and individuals/organizations with traditional geographic associations that might have knowledge of cultural resources in the area. Informal tribal outreach letters were mailed on January 15 and 20, 2025, to all California Native American Tribal representatives included on the NAHC contact lists. These letters attempted to solicit additional information relating to Native American cultural resources that may be impacted by the project. Native American Tribal representatives were requested to define a general area where known resources intersect the project site. To date, Dudek has received three (3) responses to this information request. These responses are paraphrased below:

- Raylene Borrego of the Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians) responded on January 21, 2025. Ms. Borrego's response indicated that the project site is considered highly culturally sensitive to the Yuhaaviatam of San Manuel Nation (Yuhaaviatam), and that the Yuhaaviatam wish to engage with the CEC in Government-to-Government consultation pursuant to Assembly Bill (AB) 52.
- Jill McCormick of the Quechan Tribe of the Fort Yuma Reservation responded on January 28, 2025. Ms. McCormick indicated that the Quechan Tribe of the Fort Yuma Reservation does not wish to comment on the project.
- Eunice Ambriz of the Yuhaaviatam responded on January 29, 2025. In her email, Ms. Ambriz requested Dudek provide a project map set in aerial view. Dudek responded to Ms. Ambriz on February 10, 2025, with the requested map set.

Dudek conducted a virtual follow-up meeting with the Yuhaaviatam for purposes of informal information gathering and tribal outreach efforts. The meeting took place on February 13, 2025. In attendance was Kristin Tuotso (Yuhaaviatam Tribal Archaeologist), Eunice Ambriz (Yuhaaviatam Cultural Resources Technician) and Roshanne Bakhtiary (Dudek Archaeologist). During the meeting, Dudek provided a review of the project site and the project design and discussed Dudek's inventory efforts to date, including the results of the SCCIC records search and NAHC SLF search. After a review of all available project documents, both Ms. Tuotso and Ms. Ambriz expressed interest in the project requiring mitigation measures for the inadvertent discovery of Native American cultural resources and human remains. The Yuhaaviatam also indicated that they intend to proceed with Government-to-Government AB 52 consultation with the CEC for the project. No additional information was provided during this meeting to support the presence of specific, geographically defined tribal cultural resources that could be affected by project-related construction or operation.

This correspondence was conducted for informational purposes only and does not constitute formal Government-to-Government consultation. In compliance with AB 52, the CEC, as lead agency, is responsible for conducting Government-to-Government consultation with tribal entities.

3.3.2.4 Archaeological Field Survey and Results

Dudek archaeologists Jessica Colston, Phillip Sharp-Garcia, Shane McDonnell, Brenda Rogers, and Roshanne Bakhtiary conducted intensive-level archaeological resources pedestrian surveys of the archaeological study area in February 2023, November 2024, and February 2025. Each pedestrian survey employed standard archaeological

procedures and techniques consistent with the Secretary of the Interior's Standards and Guidelines for archaeology. When possible, 15-meter interval survey transects were conducted, oriented in north–south cardinal directions. Where visible, the ground surface was examined for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, features indicative of the current or former presence of structures or buildings (e.g., standing exterior walls, post holes, foundations), and historic artifacts (e.g., metal, glass, ceramics, building materials). Ground disturbances such as rodent/reptile burrows, cut banks, and drainages were also visually inspected for exposed subsurface materials. Evidence for buried archaeological deposits was opportunistically sought through inspection of natural or artificial erosion/excavation exposures and the spoils from rodent burrows. Areas of the project that contained a greater than 30% slope were not surveyed due to safety concerns and their general lack of suitability for containing archaeological resources. A Global Navigation Satellite System (GNSS) receiver with sub-meter accuracy along with an 11th Generation Apple iPad equipped with georeferenced PDF maps of the archaeological study area were used to verify the accuracy of the survey coverage and facilitate in-field recording.

A minimum density of three (3) or more artifacts in a 25-meter (82-foot) squared area constitute an archaeological site, as with the presence of any feature (i.e., concrete foundation). Any separation of 50 meters (164 feet) squared or more between artifacts was considered justification for delineation of a site boundary. A temporary site number was assigned to all newly identified archaeological resources that met the definition of an archaeological site. Isolated finds consisting of fewer than three (3) artifacts within a 25-meter squared area were recorded separately from sites, including the use of a different numbering scheme. Any previously recorded archaeological sites located within the archaeological study area were field checked and documented as appropriate. Additionally, a metal detector was used to perform cardinally oriented transects radiating out from the central portion of each site to determine the potential for buried deposits. Location-specific photographs were taken using an 11th Generation Apple iPad equipped with 8 mega-pixel (MP) resolution. All field notes, photographs, and records related to the current study are on file at Dudek's Mission Viejo, California office. All resources were recorded in their entirety on DPR site forms, using the Instructions for Recording Historical Resources (OHP 1995).

Ground surface visibility throughout the archaeological study area ranged from poor to excellent. Poor ground surface visibility (0% to 25%) was observed throughout approximately 30% of the archaeological study area due to dense vegetation, and in some instances, the presence of road base. Fair (25% to 50%) to good (50% to 75%) ground surface visibility was observed within seasonal drainages, on terraces, and adjacent to the SCE Vincent Substation and accounted for approximately 50% of the archaeological study area. Excellent (75% to 100%) ground surface visibility was observed within unpaved access roads, transmission tower corridors, and alluvial washes and accounted for the remainder of the archaeological study area (20%). Vegetation throughout the archaeological study area consisted of various species of invasive grasses, creosote (*Larrea tridentata*), juniper (*Juniperus* spp.), golden cholla (*Cylindropuntia echinocarpa*), chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), coyote brush (*Baccharis pilularis*), scrub oak (*Quercus berberidifolia*), sage (*Saliva* spp.) and yucca (*Yucca* spp. or *Hesperoyucca* sp.). Throughout the archaeological study area there was evidence of modern dumping, vehicle overland travel, and other disturbances associated with the construction and operation of the SCE Vincent Substation and various residential properties. During these intensive-level pedestrian survey efforts, crews re-visited two (2) previously recorded archaeological resources and recorded an additional 10 newly identified archaeological resources within the archaeological study area. Overall, 11 archaeological resources were identified that required formal evaluation for listing on the CRHR and for significance under CEQA and local regulations. DPR site forms were prepared for all resources and will be submitted to the SCCIC of the CHRIS at California State University, Fullerton. Results of these identification and evaluation efforts are summarized in Table 3.3-4.

Table 3.3-4. Results of Archaeological Significance Evaluations

Resource ID	Resource Description	Level of Effort for Evaluation	CRHR Eligibility Recommendation
Previously Recorded			
P-19-002893	Abandoned segment of the Southern Pacific Railroad	Outside archaeological study area	N/A
P-19-101014	Historic-era refuse scatter	Surface recordation	Not Eligible
Newly Recorded			
ABS-PK-S-01	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-PK-S-02	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-PK-S-03	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-JC-S-01	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-JC-S-02	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-JC-S-03	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-JC-S-04	Shallow depression containing historic refuse	Surface recordation	Not Eligible
ABS-JC-S-05	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-BR-S-01	Historic-era refuse scatter	Surface recordation	Not Eligible
ABS-RB-S-01	Historic-era refuse scatter	Surface recordation	Not Eligible

Notes: CRHR = California Register of Historic Resources; N/A = Not Applicable.

3.3.2.5 Built Environment Field Survey and Results

Dudek architectural historians Katie Ahmanson, MHC, and Clairre Cancilla, MSHP, who meet the Secretary of the Interior's Professional Qualifications Standards in architectural history, conducted an intensive level survey of the built environment study area on December 4 and 5, 2024, and on January 22, 2025. The survey entailed documenting the exteriors of each property within the built environment study area that were 45 years of age or older with notes and photographs from the public right-of-way, specifically noting character-defining features, spatial relationships, and observed alterations, and examining any historic landscape features on the properties. Overall, 38 properties over 45 years of age at the time of survey were recorded and evaluated for historical significance. Results of these identification and evaluation efforts are summarized in Table 3.3-5.

Table 3.3-5. Results of Built Environment Significance Evaluations

Map ID	Property Name	Address/APN	Year Built	CRHR Eligibility Recommendation
Previously Recorded				
4	Eagle Rock-Pardee & Antelope-Vincent No.1 Transmission Corridor (P-19-186876)	N/A	1925–1928	Not Eligible (portion within the built environment study area)
9	Angeles Forest Highway (P-19-187713)	N/A	1941	Not Eligible

Table 3.3-5. Results of Built Environment Significance Evaluations

Map ID	Property Name	Address/APN	Year Built	CRHR Eligibility Recommendation
Newly Recorded				
1	Vincent Substation	33301 Angeles Forest Highway (APN 3056-015-800)	1967	Not Eligible
2	Midway-Vincent No. 1 and No. 2	N/A	1968	Eligible
3	Lugo-Vincent No. 1 and No. 2	N/A	1969	Eligible
5	N/A	815 Kentucky Springs Road (APN 3056-015-008)	1979	Not Eligible
6	N/A	401 Rockyford Road (APN 3056-014-042)	1959	Not Eligible
7	N/A	790 Carson Mesa Road (APN 3056-014-036)	c. 1958	Not Eligible
8	N/A	33830 Angeles Forest (APN 3056-004-034)	1979	Not Eligible
10	N/A	33456 Angeles Forest (APN 3056-012-024)	1978	Not Eligible
11	N/A	624 East Soledad Pass (APN 3056-012-053)	1929	Not Eligible
12	N/A	33440 Angeles Forest Highway (APN 3056-012-008)	c. 1954	Not Eligible
13	N/A	33120 Hillside Drive (APN 3056-012-004)	1947	Not Eligible
14	N/A	33438 Angeles Forest Highway (APN 3056-012-023)	c. 1934	Not Eligible
15	N/A	33110 Hillside Drive (APN 3056-012-057)	1950	Not Eligible
16	N/A	33446 Angeles Forest Highway (APN 3056-012-006)	1940	Not Eligible
17	N/A	900 Searchlight Ranch Road (APN 3056-018-073)	c. 1954	Not Eligible
18	N/A	32410 El Sastre (APN 3056-026-036)	1979	Not Eligible
19	N/A	1110 Searchlight Ranch Road (APN 3056-026-018)	1967	Not Eligible
20	N/A	1124 Bulla Vista Road (APN 3056-027-067)	1969	Not Eligible
21	N/A	1125 Bulla Vista Road (APN 3056-027-037)	c. 1974	Not Eligible
22	N/A	32662 Calle Del Roja (APN 3056-027-035)	c. 1966	Not Eligible
23	N/A	Southern Pacific Railroad	1873 to 1876	Not Eligible
24	N/A	1547 Soledad Canyon Road (APN 3056-022-035)	1978	Not Eligible
25	N/A	33008 Joshua Avenue (APN 3056-022-032)	1978	Not Eligible
26	N/A	33017 Malinta Avenue (APN 3056-022-038)	1979	Not Eligible
27	N/A	1533 Sierra Highway (APN 3057-015-900)	1974	Not Eligible
28	N/A	1685 Sierra Highway (APN 3057-015-041)	c. 1956	Not Eligible
29	N/A	1687 Sierra Highway (APN 3057-015-042)	c. 1951	Not Eligible
30	N/A	33410 San Gabriel (APN 3057-015-043)	1980	Not Eligible
31	N/A	33511 San Gabriel Avenue (APN 3057-015-013)	1976	Not Eligible

Table 3.3-5. Results of Built Environment Significance Evaluations

Map ID	Property Name	Address/APN	Year Built	CRHR Eligibility Recommendation
32	N/A	33530 Arksey Avenue (APN 3057-024-001)	1976	Not Eligible
33	N/A	33525 Arksey Avenue (APN 3057-015-023)	1976	Not Eligible
34	N/A	33614 Arksey Avenue (APN 3057-016-010)	c. 1974	Not Eligible
35	N/A	33640 Arksey Avenue (APN 3057-016-009)	c. 1950	Not Eligible
36	N/A	658 Foreston Drive (APN 3056-006-017)	c. 1978	Not Eligible
37	N/A	557 Foreston Drive (APN 3056-005-049)	1978	Not Eligible
38	N/A	541 Foreston Drive (APN 3056-005-050)	1978	Not Eligible

Notes: APN = Assessor's Parcel Number; CRHR = California Register of Historic Resources; N/A = Not Applicable; c. = circa.

3.3.3 Impact Analysis

The following subsections discuss the potential direct and indirect impacts related to cultural resources from construction and operation and maintenance (O&M) of the project.

3.3.3.1 Methodology

CEQA and the CEQA Guidelines define a substantial adverse change in the significance of a historical resource as a significant effect on the environment. A substantial adverse change to archaeological, tribal cultural, or historical resources is defined to include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines Section 15064.5[b][1]). The significance of a historical resource is materially impaired when a project diminishes the characteristics that convey its historical significance and that justify its inclusion on a historic register. Proposed project activities were evaluated for their potential to result in a substantial adverse change to a significant cultural resource. See "Methods and Identification of Cultural Resources" in Section 3.3.2, above, for a discussion of how potential cultural resources were identified.

3.3.3.2 Impact Evaluation Criteria

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources could occur if the project would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to §15063.4.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15063.4 or disturb any human remains, including those interred outside of dedicated cemeteries.
- 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. Listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in PRC section 5020.1(k), or

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

CEQA defines a "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC §21083.3(g)).

CEQA Guidelines Section 15064.5 defines a historical resource as:

- A resource listed in, or determined to be eligible for listing in, the CRHR;
- A resource listed in a local register of historical resources.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…Generally, a resource shall be considered by the lead agency to be "historically significant." Generally, a resource is considered historically significant if it meets criteria for listing in the CRHR, including:
  1. Is associated with events that made a significant contribution to the broad patterns of California's history and cultural heritage.
  2. Is associated with the lives of people important in our past.
  3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values.
  4. Has yielded or may be likely to yield information important in prehistory or history; or A resource determined to be a historical resource by a project's lead agency.

CEQA Guidelines Section 15064.5 defines a "historical resource." If a cultural resource in question is an archaeological resource, CEQA Guidelines Section 15064.5[c][1]) requires that the lead agency first determine if the resource is a historical resource as defined in Section 15064.5(a). If the resource qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource. If the archaeological resource does not qualify as a historical resource but does qualify as a "unique archaeological

resource," then the archaeological resource is treated in accordance with Public Resources Code Section 21083.3 (see also CEQA Guidelines Section 15069.5[c][3]).

CEQA Guidelines Section 15064.5(b) defines a "substantial adverse change" to a historical resource as: "physical demolition, destruction, relocation or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of an historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR or in registers meeting the definitions in Public Resources Code 5020.1(k) or 5024.1(g).

3.3.3.3 CEQA Appendix G Assessment Criteria

3.3.3.3.1 Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §15063.4?

No Impact. The SCE Eagle-Rock Pardee & Antelope-Vincent No. 1 200kV Transmission Line Corridor (P-19-186876) was previously recorded and the corridor was found eligible for the National Register of Historic Places (NRHP) in 2012 as part of the SCE Big Creek Hydroelectric System Company Vincent 200kV Transmission Line. The portion of the resource within the built environment study area was upgraded to 500kV and towers have been replaced as part of SCE's Tehachapi Renewable Transmission Project, which was completed in 2016. This resulted in a loss of integrity and the portion of the resource in the built environment study area no longer contributes to the NRHP eligible resource. Therefore, the portion in the built environment study area is not considered a historical resource and the project would result in **No Impact** to this resource.

The Midway-Vincent No. 1 and No 2. 500kV Transmission Lines, constructed in 1968, were found eligible for the NRHP, CRHR, and the County Register under Criteria A/1/1 and C/3/3. Under Criterion A/1/1 Midway-Vincent No. 1 and No. 2 were SCE's first 500kV lines are associated with the Pacific Northwest-Pacific Southwest Intertie, a significant project in the power industry using the first high-voltage lines of 500kV constructed in the United States. This collaborative effort between Bonneville Power Administration (BPA), Portland General Electric, Pacific Gas and Electric (PG&E), SCE and other entities supplied power to California's rapidly growing southern region, whose population boomed in the decades following World War II and Midway-Vincent No. 1 and No. 2 represents an important interconnection within the overall Intertie. As an early SCE 500kV line associated with a major power project constructed within the period of significance. Under Criteria C/3/3 Midway-Vincent No. 1 and No. 2 were early SCE extra-high voltage 500kV transmission lines and represent a major technological and engineering innovation as part of the Pacific Northwest-Pacific Southwest Intertie. According to the SCE's Historic-Era Electrical Infrastructure Management Program, "the development of transmitting electricity is historically significant in the engineering achievements of transmitting energy at high voltages over long distance and the structures that were designed to support these lines" (Tinsley-Becker et al. 2017: 86–87). The resource retains integrity of location, design, materials, feeling and association. Integrity of workmanship is not an important aspect of this property type because it does not reflect the crafts of a particular culture or people. The Midway-Vincent No. 1 and No 2. 500kV Transmission Lines are considered historical resources.

The project would not result in a substantial adverse change to this resource because the project does not propose changes to any components that would alter the function, alignment, or transmission towers. Its integrity would be retained and it would continue to convey its significance under Criteria A/1/1 and C/3/3. Therefore, there would be **No Impact** to this resource.

The SCE 500kV Vincent-Lugo No. 1 and No. 2 Transmission Lines, constructed in 1969, are associated with the Pacific Northwest-Pacific Southwest Intertie, a significant project in the power industry using the first high-voltage lines of 500kV constructed in the United States. This collaborative effort between BPA, Portland General Electric, PG&E, SCE and other entities supplied power to California's rapidly growing southern region, whose population boomed in the decades following World War II and Midway-Vincent No. 1 and No. 2 represent an important interconnection within the overall Intertie. As an early SCE 500kV line associated with a major power project constructed within the period of significance, Midway-Vincent No. 1 and No. 2 meet NRHP Criterion A, CRHR Criterion 1 and County Register Criterion 1 because they have a direct association with this significant project. The lines also represent a major technological and engineering innovation as part of the Pacific Northwest-Pacific Southwest Intertie. According to the SCE's *Historic-Era Electrical Infrastructure Management Program*, "the development of transmitting electricity is historically significant in the engineering achievements of transmitting energy at high voltages over long distance and the structures that were designed to support these lines" (Tinsley-Becker and Chiang 2015: 86–87). Constructed within the period of significance for SCE extra-high voltage transmission lines, they are eligible under NRHP Criterion C, CRHR Criterion 3, and County Register Criterion 3. The resource retains integrity of location, design, materials, feeling and association. Integrity of workmanship is not an important aspect of for this property type because it does not reflect the crafts of a particular culture or people. The Midway-Vincent No. 1 and No 2. 500kV Transmission Lines are considered historical resources.

The project would not result in a substantial adverse change to this resource because the project does not propose changes to any components that would alter the function, alignment, or transmission towers. Its integrity would be retained and it would continue to convey its significance under Criteria A/1/1 and C/3/3. Therefore, there would be **No Impact** to this resource.

3.3.3.3.2 Would the project cause a substantial adverse change in the significance of an archaeological resource to §15063.4 or disturb human remains, including those interred outside of dedicated cemeteries?

Less with Significant with Mitigation. The project will not have any direct or indirect impacts on known significant archaeological resources. The SCCIC records search identified two (2) previously recorded archaeological resources that intersect with the project site (P-19-002893: Abandoned Southern Pacific Railway segment; and P-19-101014: Can isolate), and an additional 25 archaeological resources within the 1-mile search radius. A NAHC SLF search was also conducted for the project in 2023 and 2025, and results were negative for Native American cultural resources within 1 mile of the project site. Additionally, a review of historic topographic maps and aerial photographs indicate the project site has remained largely undeveloped throughout the twentieth and twenty-first centuries and the USDA's soil types mapped within the archaeological study area demonstrate that alluvial soils are present, which have the potential to support the presence of buried archaeological resources.

Several Dudek archaeologists conducted intensive-level archaeological resources pedestrian surveys of the archaeological study area in 2023, 2024, and 2025. During these survey efforts, crews revisited one previously recorded archaeological resource (P-19-101014) and recorded an additional 10 newly identified archaeological resources. P-19-002893 was identified as being outside of the archaeological study area and thus was not subject to evaluation efforts.

P-19-101014, ABS-PK-S-01, ABS-PK-S-02, ABS-PK-S-03, ABS-JC-S-01, ABS-JC-S-02, ABS-JC-S-03, ABS-JC-S-04, ABS-JC-S-05, ABS-BR-S-01, and ABS-RB-S-01 were evaluated as part of the current study. Dudek recommends that all 11

archaeological resources are not eligible for listing on the CRHR and do not meet the criteria to be considered significant or unique archaeological resources under CEQA.

Though the project will not have any direct or indirect impacts on known significant archaeological resources, there is potential for the project to impact previously unanticipated archaeological resources during initial project-related ground disturbance. MM-CUL-1 (Worker Environmental Awareness Program) requires the implementation of a Worker Environmental Awareness Program for construction crews prior to initiation of ground-disturbing activities for the project. MM-CUL-2 (Cultural Resources Management and Inadvertent Discovery Program) requires the preparation of a Cultural Resources Management and Inadvertent Discovery Plan, archaeological monitoring during initial ground-disturbing activities in native soils, and sets forth requirements for the treatment of inadvertently discovered archaeological resources until a qualified archaeologist can assess and evaluate the discovery pursuant to CEQA. Implementation of MM-CUL 1 and MM-CUL-2 will ensure that potential impacts to unknown archaeological resources are less than significant (See Section 3.3.5, Mitigation Measures, for the full text of these mitigation measures). The impact will be **less than significant with mitigation**.

No prehistoric or historic-era burials, including those interred outside of formal cemeteries, were identified within the project site as a result of the SCCIC records search, NAHC SLF search, archival research, and pedestrian survey. Overall, the likelihood of disturbing human remains is low. However, the possibility of encountering human remains within the project site exists.

The discovery of human remains would require handling in accordance with PRC 5097.98, which states that in the event that human remains are discovered during construction, construction activity shall be halted, and the area shall be protected until consultation and treatment can occur as prescribed by law. Therefore, adherence to state law and with the implementation of MM-CUL-3 (Treatment of Human Remains) will ensure that potential impacts would be less than significant (See Section 3.3.5, Mitigation Measures, for the full text of this mitigation measure). The impact will be **less than significant with mitigation**.

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

A. *Listed or* eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC section 5020.1(k) or

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

Less than Significant with Mitigation. The SCCIC records search results did not identify any previously recorded cultural resources of Native American origin within the project site, although eight were identified within the 1-mile search radius. A NAHC SLF search was also requested, and results were negative for Native American cultural resources within 1 mile of the project site. Additionally, an intensive-level archaeological resources pedestrian survey failed to identify any Native American cultural resources within the archaeological study area in 2023, 2024, and 2025.

In response to informal outreach efforts, the Yuhaaviatam (formerly San Manuel Band of Mission Indians) reached out via email indicating that the project site is considered highly culturally sensitive to the Yuhaaviatam and requested additional project information. A virtual meeting with the Yuhaaviatam was conducted on February 13, 2025. The purpose of this meeting was for informal information gathering and tribal outreach efforts. During the meeting, Dudek provided a review of the project site and the project design and discussed Dudek's inventory efforts to date, including the results of the SCCIC records search and NAHC SLF search. After a review of all available project documents, the Yuhaaviatam expressed interest in the project requiring mitigation measures for the inadvertent discovery of Native American cultural resources and human remains. The Yuhaaviatam also indicated that they intend to proceed with Government-to-Government AB 52 consultation with the CEC for the project. No additional information was provided during this meeting to support the presence of specific, geographically defined tribal cultural resources that could be affected by project-related construction or operation.

Overall, no previously recorded cultural resources of Native American origin listed on the CRHR or local register were identified within the archaeological study area as a result of the SCCIC records search or pedestrian survey. Additionally, no known tribal cultural resources have been identified through informal information gathering efforts conducted in support of the project. While the Applicant acknowledges that the landscape surrounding the project was traditionally used by indigenous peoples, no substantial evidence has been presented demonstrating that the project has the potential for affecting tribal cultural resources, as defined by California Public Resources Code, Section 21074(a).

Potential impacts (direct and indirect) to tribal cultural resources, as defined by CEQA, should be determined by the CEC based on Government-to-Government consultation or through other tribal engagement efforts. Though based on present information, the proposed project will not present impacts to known resources of Native American value or association, including potential tribal cultural resources.

However, given that there is evidence to indicate that cultural resources of Native American origin are located within 1 mile of the project site, and in consideration of the Yuhaaviatam indicating that the project site is considered culturally sensitive. Implementation of MM-CUL-1 through MM-CUL-3 would ensure that potential impacts to unknown tribal cultural resources are less than significant (See Section 3.3.5, Mitigation Measures, for the full text of these mitigation measures). The impact will be **less than significant with mitigation**.

3.3.4 Cumulative Effects

CEQA requires cumulative effects to be considered for projects that are proposed or pending, recently approved, under construction, or reasonably foreseeable. Cumulative effects on cultural resources evaluate whether impacts of the proposed project and related cumulative projects, when considered together, substantially diminish the number of cultural resources within the same or similar context or property type. As discussed in Section 3.0 Environmental Analysis, of this Application, there are 37 pending or approved related cumulative projects that have the potential to contribute to cumulative impacts to cultural resources.

Historical Resources – Cumulative

Less than Significant. Impacts to historical resources, if any, tend to be site specific. However, cumulative impacts could occur if the project and related projects cumulatively affect historical resources in the immediate vicinity, contribute to changes within the same historic district, or involve resources that are examples of the same property type as those on the project site. The project would not result in any cumulative impacts to historical resources because the project proposes no changes to any components that would alter the function, alignment, or

transmission towers. The remaining built environment resources are not considered historical resources under CEQA. The project site is not located within the boundaries of a historic district. Therefore, there would be no potential to contribute cumulative impacts to a historic district. Additionally, cumulative impacts to historical resources must consider whether a project substantially diminishes the number or significance of historical resources of the same property type, even if they are not otherwise on the related projects list. Historical resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the project and any impacts would be mitigated, as applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural and tribal cultural resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the project's contribution towards cumulative impacts would not be cumulatively considerable. Impacts would be **less than significant**.

Archaeological Resources – Cumulative

Less than Significant. As discussed above, there are no known significant archaeological resources pursuant to CEQA Guidelines Section 15064.5 present within the archaeological study area. Because all archaeological resources are unique and nonrenewable resources, projects that demolish or alter certain archaeological resources have the potential to erode a general cultural landscape to which the archaeological resources belong. Therefore, implementation of the proposed project could result in a cumulatively significant effect on archaeological resources when combined with other cumulative development in the area due to the loss of identified or unknown archaeological resources through the physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance of a resource would be materially impaired. However, development under the proposed project is required to implement MM-CUL-1 and MM-CUL-2, which would reduce project-related impacts to a less than significant level within the project site. Because there are no known significant archaeological resources within the project site, the mitigation is for inadvertent discoveries. The project-specific mitigation combined with the mandatory evaluation of potential impacts to other nearby cumulative projects would ensure that there would be no cumulatively considerable impacts on significant archaeological resources. Impacts would be **less than significant**.

As discussed above, there are no known human remains, including those interred outside of dedicated cemeteries, present within the archaeological study area. Because human remains are unique and nonrenewable resources, projects that demolish, destroy, alter or move human remains have the potential to erode a general cultural landscape to which the human remains belong. Therefore, cumulative development within the area would have the potential to result in a cumulative impact associated with the loss of yet unidentified human remains through the physical demolition, destruction, relocation, or alteration of a remains or their immediate surroundings. However, human remains are generally site-specific, and the proposed project's potential impacts to human remains would be reduced to less than significant with implementation of project-specific MM-CUL-3. All cumulative projects would similarly be required to comply with State Health and Safety Code Section 7050.5, PRC Sections 5097.94 and 5097.98, and all other applicable laws. Based on the degree of protection afforded by MM-CUL-3 for potential project-specific impacts to human remains, the proposed project would not contribute to cumulatively considerable impacts related to disturb any human remains, including those interred outside of dedicated cemeteries. Impacts would be **less than significant**.

Tribal Cultural Resources – Cumulative

Less than Significant. Potential impacts (direct and indirect) to tribal cultural resources, as defined by CEQA, should be determined by the CEC based on Government-to-Government consultation or through other tribal engagement

efforts. Though based on present information, the proposed project will not present impacts to known resources of Native American value or association, including potential tribal cultural resources. Because all tribal cultural resources are unique and nonrenewable resources, projects that demolish or alter certain tribal cultural resources have the potential to erode a general cultural landscape to which the tribal cultural resources belong. Therefore, implementation of the proposed project could result in a cumulatively significant effect on tribal cultural resources when combined with other cumulative development in the area due to the loss of identified or unknown tribal cultural resources through the physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance of a resource would be materially impaired. However, development under the proposed project is required to implement MM-CUL-1, MM-CUL-2, and MM-CUL-3, which would reduce project-related impacts to less than significant within the project site. Because there are no known tribal cultural resources within project site, the mitigation is for inadvertent discoveries. The project-specific mitigation combined with the mandatory evaluation of potential impacts to other nearby cumulative projects would ensure that there would be no cumulatively considerable impacts to significant tribal cultural resources. Therefore, cumulative impacts would be **less than significant**.

3.3.5 Mitigation Measures

Compliance with Mitigation Measures **MM-CUL-1**, **MM-CUL-2, and MM-CUL-3** outlined below, would reduce potential impacts to previously unanticipated cultural resources and human remains during project implementation. To the extent feasible, these measures are also inclusive of tribal cultural resources considerations.

MM-CUL-1 Worker's Environmental Awareness Program. Prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. This may occur as part of a Worker Environmental Awareness Program (WEAP). Topics addressed should include definitions and characteristics of cultural resources and Tribal Cultural Resources (TCRs), regulatory requirements and penalties for intentionally disturbing cultural resources, and protocols to be taken in the event of an inadvertent discovery.

MM-CUL-2 Cultural Resources Management and Inadvertent Discovery Program. It is recommended that a Cultural Resources Management and Inadvertent Discovery Plan (CRMIDP) be prepared and subject to lead agency review prior to initiation of construction. This should detail, at a minimum, requirements for archaeological and Native American monitoring (as applicable); roles and responsibilities; inadvertent discovery, management, and communication protocols; and daily and post-construction reporting. The CRMIDP should be prepared by a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for archaeology, and implemented upon approval by the CEC. Archaeological monitors shall be present part-time (and as defined by the CRMIDP) during initial ground-disturbing activities to monitor rough and finish grading, excavation, and other ground-disturbing activities in the native soils. Archaeological monitoring may be adjusted (increase, decreased, or discontinued) at the recommendation of the qualified archaeologist and based on inspection of exposed cultural material and the observed potential for soils to contain intact cultural deposits or otherwise significant archaeological material. The requirement to include a Native American monitor should be determined by the CEC through consultation and review of the present report findings. If it is determined that Native American monitoring is required during ground-disturbing activities, an archaeological monitor shall also be present to support and coordinate with Native American efforts.

If cultural materials are discovered during initial disturbances associated with site preparation, grading, or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. The area of avoidance shall be assumed to be a minimum of 50 feet around the find, however, may be adjusted to support construction needs by the qualified archaeologist in coordination with the construction team so long as protection of the discovery can be ensured. If determined necessary by the qualified archaeologist for the protection of this area, it shall be delineated by a temporary physical exclusionary boundary using staking and survey tape or other similar materials. The CRMIDP shall address protocols for TCRs, integrating management strategies informed through the process of Government-to-Government consultation. In the event that a potential inadvertent cultural resources discovery may meet the definition of a TCR, the lead agency or identified representative should management strategies stipulated by approved mitigation and outlined in the CRMIDP. Non-cultural project personnel shall not handle, collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing on the California Register of Historical Resources (CRHR). If the deposits are not eligible, regulations provide that avoidance is not necessary. If the deposits are eligible, adverse effects to the identified resource must be avoided, or such effects must be mitigated. Mitigation strategies are dependent on the nature of the resource, and can include, but are not necessarily limited to: preservation in place, excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations [CCR] Title 4(3) Section 5126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials. The CEC, or designee, shall be responsible for reviewing management plans and any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.

Daily monitoring logs should be completed by onsite archaeological monitors (and Native American monitors, if present). Within 90 days following completion of construction, the qualified archaeologist should provide an archaeological monitoring report to the lead agency for review. The intent of this report should be to document compliance with approved mitigation. This report should include the results of the cultural resources monitoring program (even if negative), including a summary of any findings or evaluation/data recovery efforts, and supporting documentation that demonstrates all mitigation measures defined in the environmental document were appropriately met. Appendices should include monitoring logs and documentation relating to any newly identified or updated cultural resources.

MM-CUL-3 Human Remains. In accordance with Section 7050.5 of the California Health and Safety Code and the requirements of the California Code of Regulations (CCR) Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the project site, the construction contractor shall halt work within 50 feet of the discovery; all work within 50 feet of the discovery shall be redirected and the Los Angeles County Medical Examiner

(County Coroner) notified immediately. This exclusionary buffer may be adjusted based on project needs, while also ensuring the protection of this area and regulatory compliance, at the recommendation of a qualified archaeologist. If determined necessary by the qualified archaeologist for the protection of this area, it shall be delineated by a temporary physical exclusionary boundary using staking and survey tape or other similar materials. No further disturbance shall occur in areas likely to contain human remains until the County Coroner has made a determination with regard to if the find is human in origin pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify the Most Likely Descendant (MLD). With the permission of the CEC and land owner, the MLD may inspect the site of the discovery. The MLD shall make recommendations or preferences for treatment within 48 hours of being granted access to the site. Public Resources Code Section 5097.98 includes reasonable options for treatment that may be requested by the MLD. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the CEC, in coordination with the landowner, shall consult with the MLD identified by the NAHC to develop an agreement for the treatment and disposition of the remains.

Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report shall be submitted to the CEC, or designee, and the South Central Coastal Information Center. The CEC, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations. See Table 8 for a list of the Project's agency contacts for Cultural Resources.

3.3.6 Laws, Ordinances, Regulations, and Standards

The following, outlined in Table 3.3-6, provides a summary of the applicable laws, ordinances, regulations, and standards (LORS) relating to the proper management of cultural resources.

Table 3.3-6. LORS Applicable to Cultural Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
State	California Register of Historical Resources	Program used by state and local agencies to identify, evaluate, register, and protect California's historical resources.	**Yes.** The project complies with the CRHR because properties in the project study area were evaluated using the evaluation criteria of the CRHR to determine if the properties meet the criteria and retain integrity to convey their significance.	Section 3.3.3.3.1 Section 3.3.6.2
State	California Environmental Quality Act	Requires state and local government agencies to inform decisionmakers	**Yes.** Certification of the project by the CEC will be required to comply with CEQA as required by the	Throughout this Opt-In Application

Table 3.3-6. LORS Applicable to Cultural Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		and the public about the potential environmental effects of a project and to prevent significant, avoidable environmental impacts to extents feasible.	CEC's Opt-In Application process.	
State	Assembly Bill 52	Requires lead agencies to consult with Tribal Governments to address Tribal Cultural Resources that may be impacted by a Project.	**Yes**. The CEC will complete Government-to-Government consultation pursuant to AB 52 as part of the Opt-In Application process.	Section 3.3.6.2
State	California Health and Safety Code Section 7050.5	Work shall be halted in the event of human remains discovery.	**Yes.** Mitigation Measure CUL-3 requires compliance with the California Health and Safety Code Section 7050.5.	Section 3.3.3.3.2 Section 3.3.5 Section 3.3.6.2
State	Public Resources Code Section 5097.98	Most Likely Descendant designation following the discovery of human remains determined by the County Coroner to be Native American in origin.	**Yes**. Mitigation Measure CUL-3 requires compliance with Public Resources Code Section 5097.98.	Section 3.3.3.3.2 Section 3.3.5 Section 3.3.6.2
Local	Los Angeles County General Plan	Protects historic, cultural, and paleontological resources in unincorporated areas of Los Angeles County.	**Yes**. The project would conform with the Los Angeles County General Plan goal and policies.	Section 3.3.6.3
Local	Los Angeles County Historic Preservation Ordinance	Establishes criteria and procedures for the nomination, designation, and review of work on historic landmarks and property located within	**Yes**. The current study identified two cultural resources that meet the Los Angeles County Historic Preservation Ordinance criteria. The project will not cause an impact to these resources because there will	Section 3.3.3.3.1 Section 3.3.6.3

Table 3.3-6. LORS Applicable to Cultural Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		historic districts in unincorporated areas of Los Angeles County.	be no alteration to the character-defining features of the resources and they will continue to retain integrity and convey their significance.	

Notes: LORS = laws, ordinances, regulations, and standards; CRHR = California Register of Historic Resources; CEC = California Energy Commission; CEQA = California Environmental Quality Act.

3.3.6.1 Federal LORS

No federal nexus has been identified that would require the proposed project to comply with federal LORS related to cultural resources.

3.3.6.2 State LORS

California Register of Historical Resources

In California, the term "historical resource" includes, but is not limited to, "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1[j]). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Place (NRHP), enumerated as follows: According to California Public Resources Code (PRC) Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity" and (ii) meets at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (14 CCR 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

The project complies with the CRHR because properties in the project study area were evaluated using the evaluation criteria of the CRHR to determine if the properties meet the criteria and retain integrity to convey their significance.

California Environmental Quality Act

The following CEQA statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and Tribal Cultural Resources (TCRs):

- PRC Section 21083.3(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "Tribal Cultural Resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated cemetery.
- PRC Sections 21083.3(b) and 21083.3(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14-CCR 15064.5[b]).

A "substantial adverse change in the significance of an historical resource," reflecting a significant effect under CEQA, means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14- CCR 15064.5[b][1]; PRC Section 5020.1[q]). In turn, the significance of a historical resource is materially impaired when a project does any of the following (14 CCR 15064.5[b][2]):

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register [CRHR]; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k)

of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any historical resources, then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.3[a]–[c]).

PRC Section 21083.3(g) defines a *unique archaeological resource* as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC Section 21083.3[g]):

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts on non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.3[a]; 14 CCR 15064.5[c][4]). However, if a non-unique archaeological resource qualifies as a TCR (PRC Sections 21074[c] and 21083.3[h]), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in PRC Section 5097.98.

The project complies with CEQA because properties in the project study area were evaluated using the evaluation criteria of the NRHP and the CRHR to determine if the properties are resource as defined by CEQA. Identified resources were analyzed to determine if the project would cause a substantial adverse change in the significance of a resource.

California State Assembly Bill 52

Assembly Bill (AB) 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.3, 21080.3.3, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that TCRs must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American tribe and that is either:

- On or determined to be eligible for the California Register of Historical Resources or a local historic register; 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 Section 5024.1.

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Section 1(a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.3 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to TCRs, the consultation shall include those topics (PRC Section 21080.3.3[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, the procedures are detailed in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code Section 7050.5[b]). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (California Health and Safety Code Section 7050.5[c]). In accordance with California Public Resources Code Section 5097.98(a), the NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. Within 48 hours of being granted access to the site, the MLD may recommend means of treatment or disposition, with appropriate dignity, of the human remains and associated grave goods.

3.3.6.3 Local LORS

Los Angeles County 2035 General Plan

Chapter 9, the Conservation and Natural Resources Element of the Los Angeles County 2035 General Plan, Section VIII. Historic, Cultural, and Paleontological Resources provides the following goals and policies potentially relevant to the project (County of Los Angeles 2015b): The following summarizes Goals and Policies specific to cultural and historical resources:

Goal C/NR 14. Protected historic, cultural, and paleontological resources.

Topic: Historic, Cultural, and Paleontological Resource Protection

Policy C/NR 14.1. Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.

Policy C/NR 14.2. Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.

Policy C/NR 14.3. Support the preservation and rehabilitation of historic buildings.

Policy C/NR 14.4. Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).

Policy C/NR 14.5. Promote public awareness of historic, cultural, and paleontological resources.

Policy C/NR 14.6. Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

Los Angeles County Historic Preservation Ordinance

Los Angeles County's Historic Preservation Ordinance was adopted on September 1, 2015, and establishes criteria and procedures for the nomination, designation and review of work on landmarks and property located within historic districts. Unless exempted, the Historic Preservation Ordinance applies to privately owned property within unincorporated areas of Los Angeles County and all publicly owned landmarks.

The criteria for designating landmarks and historic districts is below (County of Los Angeles 2015a: 22.124.070).

A. A structure, site, object, tree, landscape, or natural land feature may be designated as a landmark if it is 50 years of age or older and satisfies one or more of the following criteria:
    1. It is associated with events that have made a significant contribution to the broad patterns of the history of the nation, State, County, or community in which it is located;
    2. It is associated with the lives of persons who are significant in the history of the nation, State, County, or community in which it is located;
    3. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to the nation, State, County, or community in which it is located; or possesses artistic values of significance to the nation, State, County, or community in which it is located;
    4. It has yielded, or may be likely to yield, significant and important information regarding the prehistory or history of the nation, State, County, or community in which it is located;
    5. It is listed, or has been formally determined eligible by the United States National Park Service for listing, in the National Register of Historic Places, or is listed, or has been formally determined eligible by the State Historical Resources Commission for listing, on the California Register of Historical Resources;

6. If it is a tree, it is one of the largest or oldest trees of the species located in the County; or
7. If it is a tree, landscape, or other natural land feature, it has historical significance due to an association with a historic event, person, site, street, or structure, or because it is a defining or significant outstanding feature of a neighborhood.

B. Property less than 50 years of age may be designated as a landmark if it meets one or more of the criteria set forth in Subsection A, above, and exhibits exceptional importance.

C. The interior space of a property, or other space held open to the general public, including but not limited to a lobby, may be designated as a landmark or included in the landmark designation of a property if the space qualifies for designation as a landmark under Subsection A or B, above.

D. Historic Districts. A geographic area, including a noncontiguous grouping of related properties, may be designated as a historic district if all of the following requirements are met:

1. More than 50 percent of owners in the proposed district consent to the designation;
2. The proposed district satisfies one or more of the criteria set forth in Subsections A.1 through A.5, above; and
3. The proposed district exhibits either a concentration of historic, scenic, or sites containing common character-defining features, which contribute to each other and are unified aesthetically by plan, physical development, or architectural quality; or significant geographical patterns, associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of parks or community planning.

The project conforms to the local LORS because resources were analyzed to determine their significance and where necessary mitigation measures were developed to reduce potential impacts to cultural resources.

3.3.7 Agencies and Agency Contacts

Table 3.3-7 lists the state agencies responsible for cultural resource management for the project and the issues they are responsible for addressing.

Table 3.3-7. Agencies and Agency Contacts

Issue	Agency	Contact
Native American Tribal Cultural Resources, Traditional Cultural Properties, Most Likely Descendant Designation	Native American Heritage Commission	1550 Harbord Blvd, Suite 100 West Sacramento, California 95691 916.373.3710
Local Regulatory Requirements	Los Angeles County Planning	335A East Avenue K-6 Lancaster, California 93535 213.974.6411
Human Remains	Los Angeles County Medical Examiner	1104 N Mission Road Los Angeles, California 90033 323.343.0711

3.3.8 Permits and Permit Schedule

Other than certification by the CEC, no state, federal, or local permits are required for the project for management of cultural resources. Consultation with the SHPO will not be required under Section 106 of the NHPA unless the project requires a federal permit. No federal permits are expected for the project.

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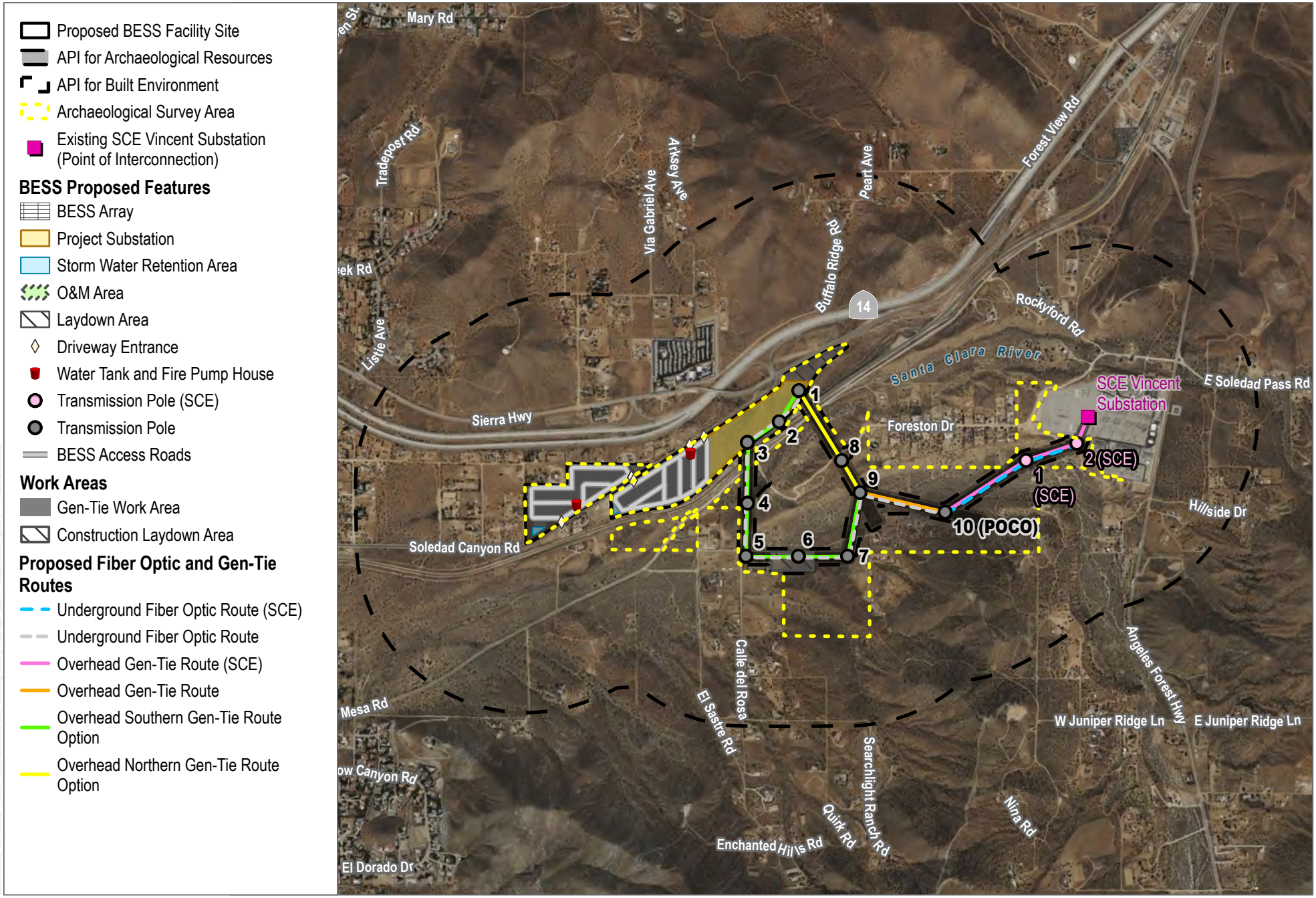

SOURCE: Bing Maps

DUDEK

0 500 1,000 Feet

FIGURE 3.3-1

Area of Potential Impacts for Cultural Resources

Prairie Song Reliability Project

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3.4 Geological Hazards and Resources

This section describes the potential effects of the construction and operation of the Prairie Song Reliability Project (project) may have on geological hazards and resources at and in the vicinity of the project site. The project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This evaluation of geological hazards and resources includes the following elements:

- Section 3.4.1 describes the existing environment that could be affected, including regional and local geologic environment, faulting, and seismicity, and geologic resources.
- Section 3.4.2 identifies potential environmental impacts that may result from project construction, operation, maintenance, and decommissioning.
- Section 3.4.3 discusses cumulative effects.
- Section 3.4.4 describes project design and mitigation measures that will be implemented to avoid or minimize potentially significant impacts.
- Section 3.4.5 presents laws, ordinances, regulations, and standards (LORS) applicable to geologic resources.
- Section 3.4.6 identifies regulatory agency contacts.
- Section 3.4.7 describes permits required for the project related to geologic hazards and resources.
- Section 3.4.8 provides references used to develop this section.

The following environmental setting and impact evaluation is based in part on the following project-specific geotechnical report and engineering plans:

- Appendix 2A – Site Plan Package
- Appendix 3.4A – Geotechnical Report (Terracon 2025)

A summary of the geological hazards and resources evaluation is provided in the table below.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
1) Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving the following: 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?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Strong seismic ground shaking? Seismic-related ground failure, including liquefaction? Landslides?				
2) 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 onsite- or offsite landslide, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
3) 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.	☐	☐	☒	☐
4) 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?	☐	☐	☐	☒
5) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local plan, specific plan, or other land use plan?	☐	☐	☐	☒

3.4.1 Affected Environment

3.4.1.1 Regional Geology

The project site is located within the Transverse Ranges Geomorphic Province. The Transverse Ranges are characterized by an east-west trending series of steep mountain ranges and valleys (CGS 2002). The east-west structure of the Transverse Ranges is oblique to the normal northwest trend of coastal California, hence the name "Transverse." The province extends offshore to include San Miguel, Santa Rosa, and Santa Cruz islands. Its eastern extension, the San Bernardino Mountains, has been displaced to the south along the San Andreas Fault. Intense north–south compression by tectonic forces is squeezing the Transverse Ranges. As a result, this is one of the most rapidly rising regions on earth. Great thicknesses of Cenozoic (younger than 66 million years old) petroleum-rich sedimentary rocks have been folded and faulted, making this one of the important oil producing areas in the United States.

3.4.1.2 Local Geology and Stratigraphy

The proposed BESS facility site has an approximately 4% slope increasing from the southwest to the northeast direction (Appendix 3.4A). The approximate elevations of the BESS facility site range from 2,980 feet to 3,140 feet. The proposed gen-tie routes will traverse flat terrains and rolling hill topographies. The elevation at the proposed

gen-tie structures ranges from 3,010 feet to 3,125 feet. The majority of the surface of the project site is covered by exposed soils with desert vegetation.

According to geologic mapping by the U.S. Geologic Survey, the subsurface regime of the project site is primarily underlain by Mesozoic (252 to 66 million years ago) granitic rocks (grMz map symbol) as well as some of portions of the site underlain by Precambrian (older than 539 million years) granitic rocks (grpC map symbol) (Figure 3.4-1, Geological Units). Mesozoic granitic rocks consist of a wide variety of coarse-grained igneous rocks formed when magma that intruded the earth's crust cooled and was later exposed by erosion. Granitic rocks occur throughout the state, but are most common in the mountainous areas such as the Klamath Mountains, the Sierra Nevada, and the Peninsular Ranges. Some granitic rocks are Cenozoic, Paleozoic (539 to 252 million years ago), and Precambrian. According to the geotechnical investigation performed at the project site, the near surface materials that underly the proposed BESS facility site include loose to medium dense sand with varying amounts of silt, clay, and gravel which becomes more dense (i.e., medium dense to very dense) with depth.

3.4.1.3 Summary of Geotechnical Investigation

A subsurface geotechnical investigation was completed for the project (Appendix3.4A. The purpose of the investigation was to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Seismic site classification per the California Building Code (CBC)
- Site preparation and earthwork
- Foundation design and construction
- Access roadway design and construction
- Infiltration design rates

The project's geotechnical investigation included test borings, electrical resistivity testing, laboratory testing, engineering analysis, and preparation of a report (Appendix 3.4A). Specifically, the geotechnical investigation included the following:

- Fifteen (15) soil test borings to approximately 21 feet to 51.5 feet below ground surface (bgs) in the proposed BESS yards
- Two (2) soil test borings to approximately 51.5 feet bgs in the proposed substation area within the BESS facility site
- Two (2) soil test borings to approximately 21.5 feet bgs in the proposed Operations and Maintenance (O&M) building area
- Seven (7) soil test borings to approximately 51.5 feet bgs along the gen-tie routes
- Four (4) percolation tests at approximately 3 feet and 5 feet bgs in the proposed stormwater basin areas within the BESS yards
- Corrosion testing on soil samples obtained from seven (7) locations
- Field electrical resistivity tests at seven (7) locations
- Lab thermal resistivity testing on soil samples obtained from four (4) locations

3.4.1.4 Faulting and Seismicity

The project site is located in a geologically complex and seismically active region that is subject to earthquakes and potentially strong ground shaking. Based on criteria established by the California Geological Survey (CGS), faults are classified as either Holocene-active, pre-Holocene, or age-undetermined. Faults are considered active when they have shown evidence of movement within the past 11,700 years (i.e., Holocene epoch). Pre-Holocene faults, also known as potentially active faults, are those that have shown evidence of movement more than 11,700 years ago and generally before 1.6 million years (Quaternary age). Faults whose age of most recent movement is not known or is unconstrained by dating methods or by limitations in stratigraphic resolution are considered age-undetermined and inactive (CGS 2018). These CGS fault classifications are in part used to determine locations of Alquist–Priolo Fault Zones, which are regulatory zones that set exclusionary minimum distances for human occupancy from active faults that have the potential for surface rupture. No structures designed for human occupancy can be placed over the fault or within 50 feet in any direction.

No Holocene-active faults or their associated Alquist–Priolo Fault Zones intersect or are in the immediate vicinity of the project site. The closest such zone is located approximately 7 miles northeast of the site, along the San Andreas Fault (Figure 3.4-2, Faults).

While no Holocene-active faults are located on-site, several Holocene-active faults are located within the vicinity project site (Table 3.4-2, Faults). The closest major Holocene-active fault is the San Andreas Fault, located approximately 4 miles northeast of the project site (Figure 3.4-2, Faults). The San Fernando fault was the source of a 6.6 magnitude earthquake in 1971. In addition, there are several mapped fault strands throughout the area with the closest located approximately 0.4 miles northeast of the project site; however these strands are age-undetermined (CGS 2025a).

Table 3.4-1. Regional Active Faults

Fault	Approximate Distance and Direction to Project Site
San Andreas (Holocene-active)	4 miles to the northeast of the site
Soledad (pre-Holocene/Quaternary)	5 miles southwest of the site
San Gabriel (Late Quaternary)	12 miles southwest of the site
San Fernando (Holocene-active;historic)	15 miles southwest of the site

Source: CGS 2025a.
Note: Late Quaternary faults are defined as faults that have evidence of displacement between 700,000 to 11,700 years ago.

3.4.1.5 Liquefaction

Liquefaction is a mode of ground failure that results from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose saturated sandy soils are present. The CGS has designated certain areas as potential liquefaction hazard zones. These are areas considered at a risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table.

The BESS facility site is not located within a liquefaction hazard zone as designated by the CGS (Appendix 3.4A). According to the geotechnical investigation for the project, portions of the proposed gen-tie routes are located within a potential liquefaction hazard zone (see Figure 3.4-3). An examination of the geotechnical exploration data indicated that the native soils encountered in the exploratory borings generally consisted of loose to very dense

sand to the maximum exploration depth of 51.5 feet below ground surface (bgs). Groundwater was not encountered in these borings while drilling and the recorded historical groundwater depth is more than 100 feet bgs. To evaluate the presence of liquefiable soils and determine the amount of settlement of saturated/unsaturated soils during seismic shaking, a liquefaction analysis was performed in accordance with the DMG Special Publication 117 as detailed in Appendix 3.4A. Based on the depth to groundwater (100 feet bgs), liquefaction hazard risk was considered to be low (Appendix 3.4A).

3.4.1.6 Landslides

The potential for landslides to occur depends on a variety of factors including, but not limited to, the steepness of the slope, geology, and soil moisture present in the underlying materials. The project site is not located within a landslide hazard zone as designated by CGS (CGS 2003a; 2003b). Landslide susceptibility is shown in Figure 3.4-4. According to mapping data from the Department of Conservation, the majority of the BESS site is in an area that has generally low susceptibility for landslides. The nearest reported landslide occurred on February 25, 2023 along Soledad Canyon Road near Agua Dulce Canyon Road, located approximately 11 miles southwest of the project site (CGS 2025b).

3.4.1.7 Subsidence

Subsidence occurs when a substantial portion of land is vertically displaced, usually due to the withdrawal of groundwater, oil, or natural gas, or as a result of decomposition of natural organic materials. Soils that are particularly subject to subsidence include those with high silt or clay content and/or high organic content. The effects of subsidence include damage to buildings and infrastructure, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic systems.

The project site is not located in an area of historic or recent subsidence (USGS 2025).

3.4.1.8 Tsunamis and Seiches

Tsunamis are large ocean waves that are seismically induced and often the result of offshore earthquakes or landslides. The project site is not located in a coastal area and will not be susceptible to tsunami runup, and as a result this issue is not discussed further in this document.

Seiches are waves and oscillations within confined or semi-confined bodies of water that are seismically induced by ground shaking. There are no large, confined or semi-confined bodies of water immediately adjacent to the site; therefore, the project site will not be subject to seiche hazards and is not discussed further in this document.

3.4.1.9 Geologic Resources of Recreational, Commercial, or Scientific Value

The California Division of Mines and Geology classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act (SMARA) of 1975, using a classification system that divides land into four mineral resource zones (MRZs) that have been designated based on quality and significance of mineral resources. The project site is not located within a designated MRZ (CDMG 1994; Los Angeles County 2014a), and no mines or gravel pits are located in the vicinity of the project site (CDOC 2016). The nearest MRZs

are located approximately 11 miles to the southwest and approximately 8 miles to the northeast (Los Angeles County 2014b) (Figure 3.4-5, Mineral Resources Zones).

The California Geologic Energy Management Division (CalGEM) provides locations of active and abandoned oil and gas wells in California. The project site is not located in a designated CalGEM oil/gas field, and no oil/gas wells are located in the vicinity of the site (CalGEM 2025).

3.4.2 Impact Analysis

The following sections present the potential effects from the construction and operation of the proposed project on geologic hazards and geologic resources.

3.4.2.1 Methodology

Potential direct and indirect project impacts related to geological hazards and resources were evaluated against the California Environmental Quality Act (CEQA) Guidelines and are discussed below.

3.4.2.2 Impact Evaluation Criteria

Appendix G of the California Environmental Quality Act is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to make a determination as to whether a project requires an EIR, a Mitigated Negative Declaration or a Negative Declaration. As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances."

The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Appendix G are instructive. With respect to geological hazards and resources, CEQA Appendix G asks, in part, would the project:

- Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving the following:
  - 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
  - Landslides
- 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 onsite- or offsite landslide, subsidence, liquefaction, or collapse.
- 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.
- 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.

- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local plan, specific plan, or other land use plan.

3.4.2.3 CEQA Appendix G Assessment Criteria

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

A. 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 based on other substantial evidence of as known fault?

No Impact. As discussed in Section 3.4.1.4, the project site is not located within or near an Alquist–Priolo Fault Zone, and no known Holocene-active faults intersect any of the proposed project elements. The closest major Holocene-active fault is the San Andreas fault, located approximately 4 miles northeast of the project site (Figure 3.4-2, Faults). In addition, construction and operation of the project will not increase the potential for earthquakes or fault movement to occur. The proposed project will not directly or indirectly cause potential substantial adverse effects, including rupture of a known earthquake fault. **No impact** will occur.

B. Strong seismic ground shaking?

Less than Significant. The closest major Holocene-active fault is the San Andreas Fault, located approximately 4 miles northeast of the project site (Figure 3.4-2, Faults). Other Holocene-active faults in the area includes the San Fernando Fault located approximately 15 miles southwest of the project site. There are also unnamed age-undetermined fault strands in the area including one approximately 0.4 miles to the northeast of the site. Moderate to strong ground shaking is anticipated as a result of an earthquake on these and other regional faults, including the San Andreas Fault. The degree of ground shaking will depend on numerous factors including the magnitude and distance to the epicenter as well as the duration of shaking. The proposed project will be constructed in accordance with the recommendations of the project-specific geotechnical report (Appendix 3.4A), Los Angeles County Building Code, Los Angeles County Grading Ordinance, current seismic design specifications, current California Building Code (CBC) standards, and other applicable regulatory requirements, which will include seismic design requirements to reduce the potential for risks related to seismic events. Therefore, the proposed project will not directly or indirectly cause potential substantial adverse effects, including strong seismic ground shaking. Impacts will be **less than significant**.

C. Seismic-related ground failure, including liquefaction?

Less than Significant. Liquefaction is a geotechnical hazard that is generally highest when saturated cohesionless soils (e.g., sandy soils) within 50 feet of ground surface are subjected to seismic ground shaking. Seismically induced ground shaking could exacerbate soil settlement, including differential settlement, which is variable amounts of settlement over a given distance. Differential settlement can result in cracking and distress of foundations, utilities, and other infrastructure. However, the project's site-specific geotechnical investigation determined that the depth to groundwater was more than 100 feet bgs and thus will have a low potential for liquefaction. In addition, the report concluded that the proposed construction will not be subjected to a hazard from settlement, slippage, or landslide, provided the recommendations of the report are incorporated into the proposed construction which is consistent with building code requirements. The proposed project will be constructed in accordance with Los Angeles County Building Code including current seismic design specifications, current CBC

standards, and other regulatory requirements, which will reduce the potential for risks related to seismic ground failure. Therefore, the proposed project will not directly or indirectly cause potential substantial adverse effects due to seismic related ground failure including liquefaction and impacts will be **less than significant**.

D. Landslides?

Less than Significant. The project site is not located within a landslide hazard zone as designated by CGS (CGS 2003a, 2003b). The project site is characterized by gentle rolling topography with slopes that are approximately 4% in inclination. Proposed grading as part of site preparation will include cut and fill around the site interior and boundary that if not designed appropriately, could be subject to slope failure or mass wasting. In addition, temporary excavations created during grading and construction could result in temporary vertical or steep slopes pending completion of final site grading. These temporary excavations will likely include relatively narrow trenches with vertical walls, such as for utility installation, or larger open excavations with temporary steep slopes. Vertical slopes greater than 5 feet in height will require shoring. The created cut and fill slopes around the perimeter will be constructed with slope inclinations up to 2:1 (horizontal to vertical). In the absence of proper shoring and/or slope construction, trench sidewalls and temporary slopes could collapse, resulting in risk to on-site personnel. If fill is placed in areas of the site that will create slopes steeper than 2:1 (horizontal to vertical), the area will be subject to slope stability analysis with the addition of structural retaining walls as required and in accordance with County Building Code requirements. Constructed slopes will be compacted to the code specifications for fill embankments and vegetated to ensure ongoing stability. In addition, areas could be graded to include benching to reduce the potential for slippage between existing slopes and fill materials (Appendix 3.4A). Benches will be wide enough to accommodate compaction and earth moving equipment, and to allow placement of horizontal lifts of fill in accordance with building code requirements. Temporary excavations will be completed in accordance with Cal/OSHA, which has responsibility for implementing federal rules relevant to worker safety, including slope protection during construction excavations (see Section 3.4.5, LORS below). Cal/OSHA's requirements are more restrictive and protective than federal OSHA standards. Title 8 of the CCR, Chapter 4, Division of Industrial Safety, covers requirements for excavation and trenching operations, as well as safety standards whenever employment exists in connection with removal or wrecking of any fixed structure or its part. Compliance with Cal/OSHA regulations will prevent caving of temporary trench walls and failure of temporary steep slopes during grading and construction activities. Overall, with implementation of project-specific geotechnical recommendations pertaining to slope stability consistent with current Los Angeles County Building Code requirements, as well as compliance with Cal/OSHA regulations, the proposed project will not directly or indirectly cause potential substantial adverse effects involving landslides, slope stability, or mass wasting. Impacts will be **less than significant**.

3.4.2.3.2 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 offsite landslide, subsidence, liquefaction, or collapse?

Less than Significant. As discussed for Section 3.4.2.3.1 above, the project site is not located in an area susceptible to liquefaction or subsidence. Project grading will result in temporary steep slopes and vertical trench excavations. Overall, the project's site-specific geotechnical investigation (Appendix 3.4A) determined the proposed construction will not be subjected to a hazard from settlement, collapse, slippage, or landslide, provided the recommendations of the report are incorporated into the proposed construction site preparations and site design which is consistent with building code requirements. With implementation of project-specific geotechnical recommendations pertaining to slope stability (including mass wasting), soil stability (i.e., collapse), and soil settlement, as well as compliance with Los Angeles County Building Code and Cal/OSHA regulations, the proposed project will not result in on- or

off-site landslide, subsidence, liquefaction or collapse. The project will also be required to be designed and constructed to meet the applicable seismic and site soils requirements of the California Building Code (CBC) to adequately support all proposed improvements. Impacts will be **less than significant**.

3.4.2.3.3 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. Expansive soils, if present, can adversely affect improvements over time through cyclical volumetric changes that can crack foundations, pathways, and other improvements. However, as part of adherence to current building code requirements, a final design level geotechnical investigation would be required prior to approval of a building permit for all proposed improvements and would be required to evaluate for the presence of expansive soils. In general, the use of engineered fill materials which must meet minimum standards for expansion potential, as well as foundation design, such as the use of drilled shaft or driven pile foundations, as recommended in the geotechnical investigation report, would be sufficient to minimize the potential for adverse effects related to expansive soils. Recommendations from the final design level geotechnical report would include measures to address expansive soils (e.g., use of engineered fill or pile driven foundations), consistent with building code requirements, and would reduce the potential impacts related to expansive soils to **less than significant**.

3.4.2.3.4 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 project site is not located within a designated MRZ, and no mines or gravel pits are in the vicinity of the project site. As a result, the project will not result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state. **No impact** will occur.

3.4.2.3.5 Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local plan, specific plan, or other land use plan?

No Impact. As stated for Section 3.4.2.3.4 above, the project site is not located within a designated MRZ, and no mines or gravel pits are in the vicinity of the project site. As a result, the project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local plan, specific plan, or other land use plan. **No impact** will occur.

3.4.3 Cumulative Effects

The cumulative projects detailed in Section 3, Environmental Analysis, Table 3-2, Cumulative Projects, have the potential to result in cumulative impacts to geologic hazards and resources when considered together with the project. Risks related to geological hazards and resources are typically localized in nature because they tend to be site-specific and related to on-site geotechnical constraints. Cumulative projects were chosen based on proximity to the proposed project. These projects include residential, commercial, and industrial development. The majority of the cumulative projects will involve both construction and operational activities. These selection factors are appropriate in the context of geological hazards and resources cumulative impacts because generally there needs to be a direct nexus and similar geologic conditions for a synergistic impact to occur, such as site modifications at

nearby projects combining to destabilize soils. Currently, there is not a known existing significant cumulative impact related to geological hazards and resources within this geographic scope.

As discussed above, like much of California, the project site is a seismically active area. All areas of Los Angeles County are considered seismically active, to a lesser or greater extent depending on their proximity to active regional faults. Impacts of the proposed project will be cumulatively considerable if the project, in combination with related projects, will result in significant cumulative impacts. However, the effects of the cumulative projects are not of a nature to cause cumulatively significant effects from geological hazards and resources impacts, because such impacts are site-specific and will only have the potential to combine with impacts of the proposed project if they occurred in the same location.

All planned projects in the vicinity of the proposed project are subject to environmental review and will be required to conform to Los Angeles County and CBC building code requirements. With implementation of geotechnical engineering site preparation and design measures and other grading and building requirements, the proposed project will not contribute to cumulative impacts for geological hazards and resources or related events because the proposed project and other cumulative projects in the area will be required to demonstrate compliance with local, state, and federal building and safety standards. As a result, cumulative impacts related to geological hazards and resources will not be cumulatively considerable.

3.4.4 Mitigation Measures

Because the project design will avoid or minimize potentially significant effects, no mitigation measures beyond the project's design are necessary.

3.4.5 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to geological hazards and resources are discussed below and summarized in Table 3.4-2.

Table 3.4-2. LORS Applicable to Geological Hazards and Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	International Building Code	Requires state to comply with during design and construction of engineered facilities	**Yes.** Project design and construction will comply with the International Building Code with respect to geologic hazards through compliance with the CBC and the recommendations of a project-specific geotechnical report.	Section 3.4.2.3.1 Section 3.4.2.3.2 Section 3.4.2.3.3 Section 3.4.5.1
State	California Building Code, 2022	Defines acceptable design criteria for structures with respect to seismic design and load-bearing capacity	**Yes.** Project design and construction will comply with the California Building Code with respect to geologic hazards through compliance with the recommendations of	Section 3.4.2.3.1 Section 3.4.2.3.2 Section 3.4.2.3.3 Section 3.4.5.2

Table 3.4-2. LORS Applicable to Geological Hazards and Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
			a project-specific geotechnical report.	
State	Cal/OSHA, CCR Title 8	Specifies the measures to be used for temporary excavation and trench work where workers could be exposed to unstable soil conditions	**Yes.** Project construction will comply with Cal/OSHA with respect to temporary slopes and excavations.	Section 3.4.2.3.1 Section 3.4.2.3.2 Section 3.4.2.3.3 Section 3.4.5.2
State	Alquist–Priolo Earthquake Fault Zone Act	Identifies areas subject to surface rupture from active faults	**Yes.** Project design and construction will comply with the California Building Code with respect to geologic hazards through compliance with the recommendations of a project-specific geotechnical report.	Section 3.4.2.3.1 Section 3.4.5.2
State	Seismic Hazards Mapping Act	Identifies secondary seismic hazards (liquefaction and seismically induced landslides)	**Yes.** Project design and construction will comply with the California Building Code with respect to geologic hazards through compliance with the recommendations of a project-specific geotechnical report.	Section 3.4.2.3.1 Section 3.4.5.2
State	Surface Mining and Reclamation Act	Regulates surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition.	**Yes.** The project is not located within a designated MRZ, and no mines or gravel pits are in the vicinity of the project site.	Section 3.4.2.3.4 Section 3.4.2.3.5
Local	Los Angeles County Code of Ordinances, Title 25 – Building Code	Adopts the 2022 California Building Code, with amendments	**Yes.** Project design and construction will comply with the Los Angeles County Building Code with respect to geologic hazards through compliance with the recommendations of a project-specific geotechnical report.	Section 3.4.2.3.1 Section 3.4.2.3.2 Section 3.4.2.3.3 Section 3.4.5.3

Table 3.4-2. LORS Applicable to Geological Hazards and Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Local	Los Angeles County Code of Ordinances, Appendix J - Grading	Standards for grading and erosion control, including permit requirements	**Yes.** Project construction will comply with Los Angeles County erosion and sediment control ordinances with respect to erosion control during grading and construction through compliance with the CBC and the recommendations of a project-specific geotechnical report.	Section 3.4.2.3.1 Section 3.4.2.3.2 Section 3.4.2.3.3 Section 3.4.5.3
Local	Los Angeles County General Plan, Safety Element: Goal 1 – Seismic and Geotechnical Hazards	Goals and policies to protect against geologic hazards	**Yes.** Project design and construction will comply with Los Angeles County Safety Element goals with respect to seismic and geotechnical hazards through compliance with the CBC and the recommendations of a project-specific geotechnical report.	Section 3.4.2.3.1 Section 3.4.2.3.2 Section 3.4.2.3.3 Section 3.4.5.3
Local	Antelope Valley Area Plan, Public Safety, Services and Facilities Element: Goals and Policies – Geologic Hazards	Includes goals and policies that are intended to protect the public from geologic hazards	**Yes.** Project design and construction will comply with the Antelope Valley Area Plan goals and policies with respect to geological hazards through compliance with the CBC and the recommendations of a project-specific geotechnical report.	Section 3.4.2.3.1 Section 3.4.2.3.2 Section 3.4.2.3.3 Section 3.4.5.3

Notes: LORS = Laws, Ordinances, Regulations, and Standards; Cal/OSHA = California Division of Occupational Safety and Health; CCR = California Code of Regulations; MRZ = mineral resource zone; CBC = California Building Code;

3.4.5.1 Federal LORS

No federal regulations apply to mineral resources in the project area. The following federal regulations are related to geologic hazards.

International Building Code

The design and construction of engineered facilities in California must comply with the requirements of the International Building Code as adopted by the State of California (see California Building Code in the State LORS subsection).

Project design and construction will comply with the International Building Code with respect to geologic hazards through compliance with the CBC and the recommendations of a project-specific geotechnical report.

3.4.5.2 State LORS

California Building Code

The project is subject to the applicable sections of Title 24, Part 2 of the 2022 CBC, which is administered by the California Building Standards Commission. Under state law, all building standards must be centralized in Title 24 to be enforceable. The CBC contains necessary California amendments, which are based on American Society of Civil Engineers/Structural Engineering Institute Standards. These standards provide requirements for general structural design and include means for determining earthquake loads, as well as other loads for inclusion into building codes. The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, which are used to determine a seismic design category for a project. Once a project is categorized according to a seismic design category, design specifications can be determined. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure—or any appurtenances connected or attached to such buildings or structures—throughout California.

Building requirements specific to BESS enclosures are included in Chapter 17A of the 2022 California Building Code. Division of State Architects Interpretation of Regulations (IR) N-3 specifies code requirements relating to BESS enclosures that consist of prefabricated modular structures not on or inside a building for structural safety and fire life safety reviews.

IR N-3 clarifies the design or alternative shake table testing requirements of premanufactured enclosures and the internal components for seismic loading. The design of BESS enclosures connections shall comply with the applicable sections of the CBC, American Institute of Steel Construction Specification for Structural Steel Buildings (AISC 360), American Institute of Steel Construction Seismic Provisions for Structural Steel Buildings (AISC 341), and ASCE 7 Minimum Design Loads and Associated Criteria for Buildings and Other Structures (Division of State Architect 2023).

The BESS enclosures envisioned for this project are not “walk-in” type enclosures because the battery racks are accessible from outside the enclosure for maintenance purpose, and there is no ability to enter the enclosures. Based on this arrangement, each individual enclosure is considered electrical equipment (Battery Cabinet or Enclosure) and does not constitute a building. Therefore, construction type, fire resistance rated construction, means of egress requirements, etc., for buildings do not apply to the enclosures. In addition to the other laws, ordinances, regulations, and standards listed elsewhere in this section, the project site and systems will be designed according to the applicable 2021 California Fire Code (CFC), 2023 National Electric Code (NEC), and 2023 NFPA codes and standards such as NFPA 72 and NFPA 855. As required by NFPA855, given the size and type of the BESS, the system will be tested per UL9540A testing standard (at the cell, module, and unit levels), and listed to the UL9540 listing.

Project design and construction will comply with the California Building Code with respect to geologic hazards through compliance with the recommendations of a project-specific geotechnical report.

California Division of Occupational Safety and Health

Grading and construction activities are subject to occupational safety standards for excavation and trenching, as specified in California Division of Occupational Safety and Health (Cal/OSHA) regulations (Title 8 of the CCR). These regulations specify the measures to be used for excavation and trench work where workers could be exposed to

unstable soil conditions. The proposed project will be required to employ these safety measures during excavation and trenching.

Project construction will comply with Cal/OSHA with respect to temporary slopes and excavations.

Alquist-Priolo Earthquake Fault Zone Act (Title 14, Division 2, Chapter 8, Subchapter 1, Article 3, CCR)

The Alquist–Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults, and published maps showing these zones. Earthquake fault zones are designated by the CGS and are delineated along traces of faults where mapping demonstrates surface fault rupture has occurred within the past 11,700 years. Construction within these zones cannot be permitted until a geologic investigation has been conducted to prove that a building planned for human occupancy will not be constructed across an active fault. These types of site evaluations address the precise location and recency of rupture along traces of the faults, and are typically based on observations made in trenches excavated across fault traces.

Project design and construction will comply with the California Building Code with respect to geologic hazards through compliance with the recommendations of a project-specific geotechnical report.

Seismic Hazards Mapping Act (Title 14, Division 2, Chapter 8, Subchapter 1, Article 10, CCR)

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code, Chapter 7.8, Section 2690 et seq.) directs the CGS to protect the public from earthquake-induced liquefaction and landslide hazards (these hazards are distinct from fault surface rupture hazard regulated by the Alquist–Priolo Act). This act requires the State Geologist delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones (i.e., zones of required investigation). Before a development permit may be granted for a site within a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into project design. Evaluation and mitigation of potential risks from seismic hazards within zones of required investigation must be conducted in accordance with the CGS Special Publication 117A, adopted March 13, 1997, updated in 2008, by the State Mining and Geology Board.

Project design and construction will comply with the California Building Code with respect to geologic hazards through compliance with the recommendations of a project-specific geotechnical report.

Surface Mining and Reclamation Act

The California Geological Survey (CGS) provides geologic expertise and information about California's diverse non-fuel mineral resources. As required by the Surface Mining and Reclamation Act (SMARA) of 1975, the State Geologist classifies these resources in an effort to locate economically significant mineral deposits and potential areas of deposits based upon scientific data. Information relating to California's nonfuel resources, naturally occurring mineral hazards, and active and historic mining activities are collected to classify land under the Mineral Resources and Mineral Hazards Mapping Program.

The project is not located within a designated MRZ, and no mines or gravel pits are in the vicinity of the project site.

3.4.5.3 Local LORS

Los Angeles County Code of Ordinances

The Los Angeles County Code of Ordinances, Title 26 – Building Code, adopts the 2022 CBC, with amendments and added sections. The purpose of the Building Code is to provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings, structures, grading, and certain equipment within the unincorporated Los Angeles County. Building code provisions apply to the construction, alteration, moving, demolition, repair, use of any building or structure, and grading within the County. With establishment of the Building Code of Los Angeles County, the County exercised its authority to establish more restrictive and reasonably necessary differences to the provisions of the 2022 CBC, including modifications to Health and Safety Code Section 18941.5 for Building Standards Law.

Appendix J – Grading of the Los Angeles County Code of Ordinances, Title 26 – Building Code, establishes standards for grading, excavation, and earthwork construction, including fills and embankments, and the control of runoff from graded sites, including erosion sediments and construction-related pollutants, and permit requirements for work on property in Los Angeles County (Los Angeles County 2025).

Project design and construction will comply with the Los Angeles County Building Code with respect to geologic hazards through compliance with the recommendations of a project-specific geotechnical report. Project construction will also comply with Los Angeles County erosion and sediment control ordinances with respect to erosion control during grading and construction through compliance with the CBC and the recommendations of a project-specific geotechnical report.

Los Angeles County 2035 General Plan, Safety Element

The Los Angeles County 2035 General Plan includes goals and policies that are intended to address seismic and geotechnical hazards and guide future development in a way that reduces impacts from these hazards. Specifically, the Safety Element (Los Angeles County 2022) address issues related to protecting the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards; flooding; and wildland and urban fires.

Goal. An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.

Policies

Policy S 1.1. Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.

Policy S 1.2. Prohibit construction of structures for human occupancy adjacent to active faults unless a comprehensive fault study that addresses seismic hazard risks and proposes appropriate actions to minimize the risk is approved.

Policy S 1.3. Require developments to mitigate geotechnical hazards, such as soil instability and landslides, in Hillside Management Areas through siting and development standards.

Policy S 1.4. Support the retrofitting of unreinforced masonry structures and soft-story buildings to help reduce the risk of structural and human loss due to seismic hazards.

Project design and construction will comply with Los Angeles County Safety Element goals with respect to seismic and geotechnical hazards through compliance with the CBC and the recommendations of a project-specific geotechnical report.

Antelope Valley Area Plan, Public Safety, Services and Facilities Element

The Antelope Valley Area Plan, Public Safety, Services and Facilities Element of the Los Angeles County 2035 General Plan (Antelope Valley Area Plan 2015) includes goals and policies that are intended to protect the population as a whole and reduce the risks associated with geologic hazards. Applicable goals and policies from the Antelope Valley Area Plan are summarized below:

Goal. Protection of the public through geological hazard planning and mitigation.

Policies

Policy PS 2.1. Limit the amount of potential development in Seismic Zones and along the San Andreas Fault and other fault traces, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

Policy PS 2.2. Limit the amount of development on steep slopes (Hillside Management Areas) and within landslide and liquefaction areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

Policy PS 2.3. Prohibit the construction of new structures on or across a fault trace.

Policy PS 2.4. Ensure that new development does not cause or contribute to slope instability.

Project design and construction will comply with the Antelope Valley Area Plan goals and policies with respect to geological hazards through compliance with the CBC and the recommendations of a project-specific geotechnical report.

3.4.6 Agencies and Agency Contacts

Applicable permits and agency contacts for geologic hazards and resources are shown in Table 3.4-3. Building and grading permits from Los Angeles County Public Works will be superseded by CEC approval of the project under the opt-in program.

Table 3.4-3. Permits and Agency Contacts

Permit or Approval	Agency Contact	Applicability
Los Angeles County Public Works	Los Angeles County Public Works Agency 900 S. Fremont Avenue Alhambra, California 91803	Building and grading permits
NPDES Construction General Permit	Los Angeles County Public Works Agency 900 S. Fremont Avenue Alhambra, California 91803	Grading and erosion control

Note:
* Building and grading permits from Los Angeles County Public Works will be superseded by CEC approval of the project under the opt-in program.

3.4.7 Permits and Permit Schedule

There are no applicable permits or permit schedule for geological hazards and resources.

3.4.8 References

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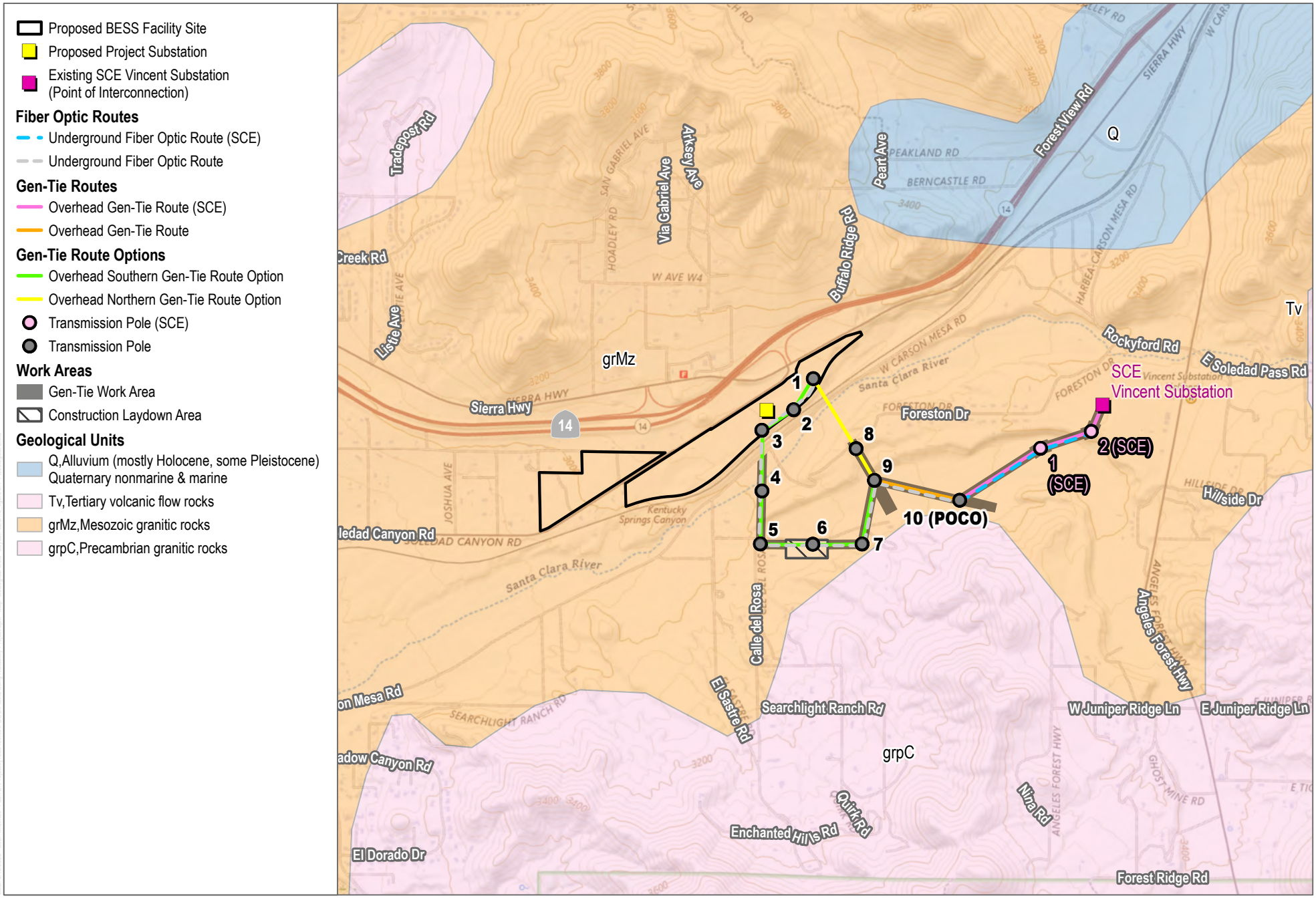

SOURCE: USGS

DUDEK

0 500 1,000 Feet

FIGURE 3.4-1

Geological Units

Prairie Song Reliability Project

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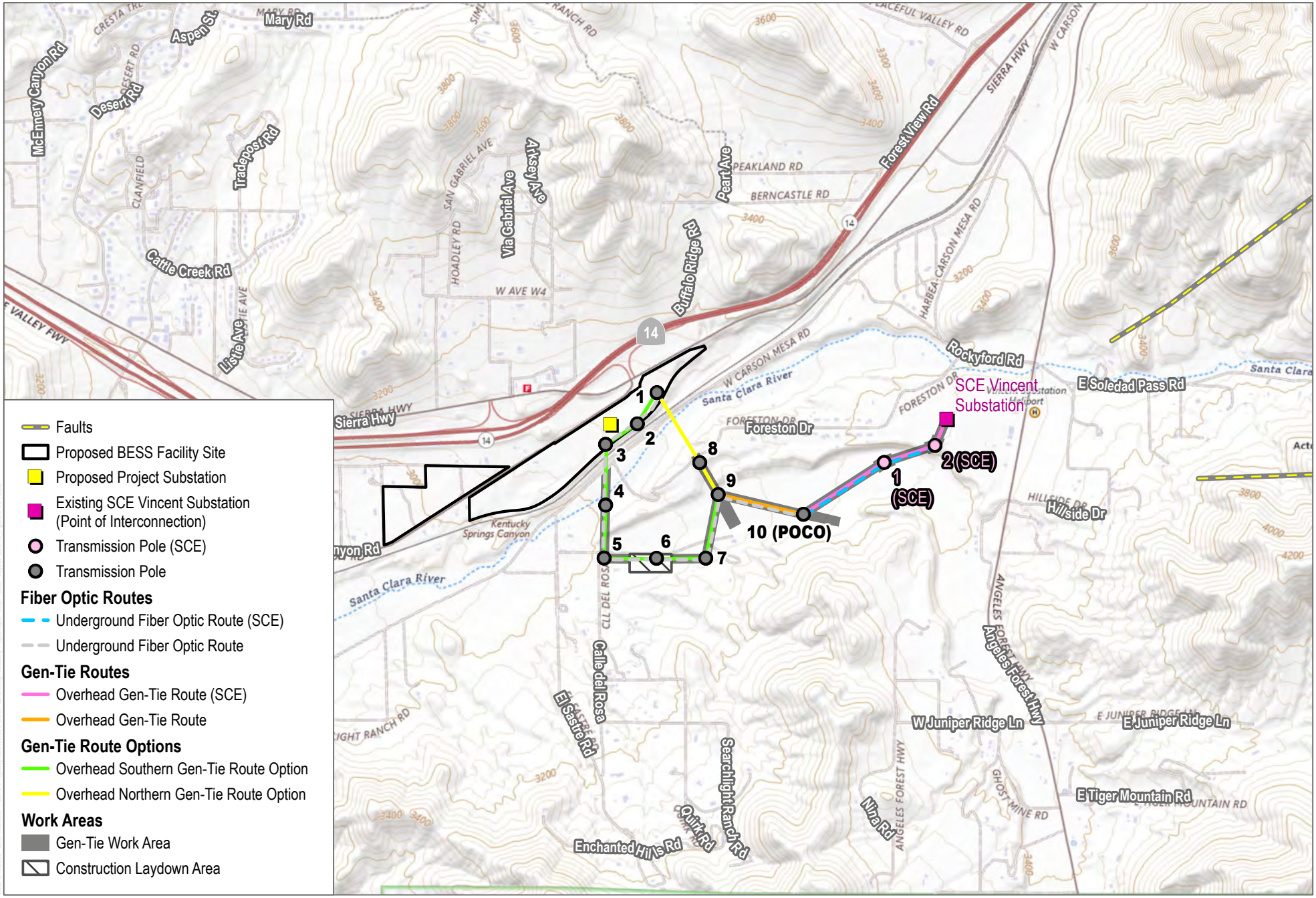

SOURCE: USGS 2000; California Department of Conservation

DUDEK

0 500 1,000 Feet

FIGURE 3.4-2

Faults

Prairie Song Reliability Project

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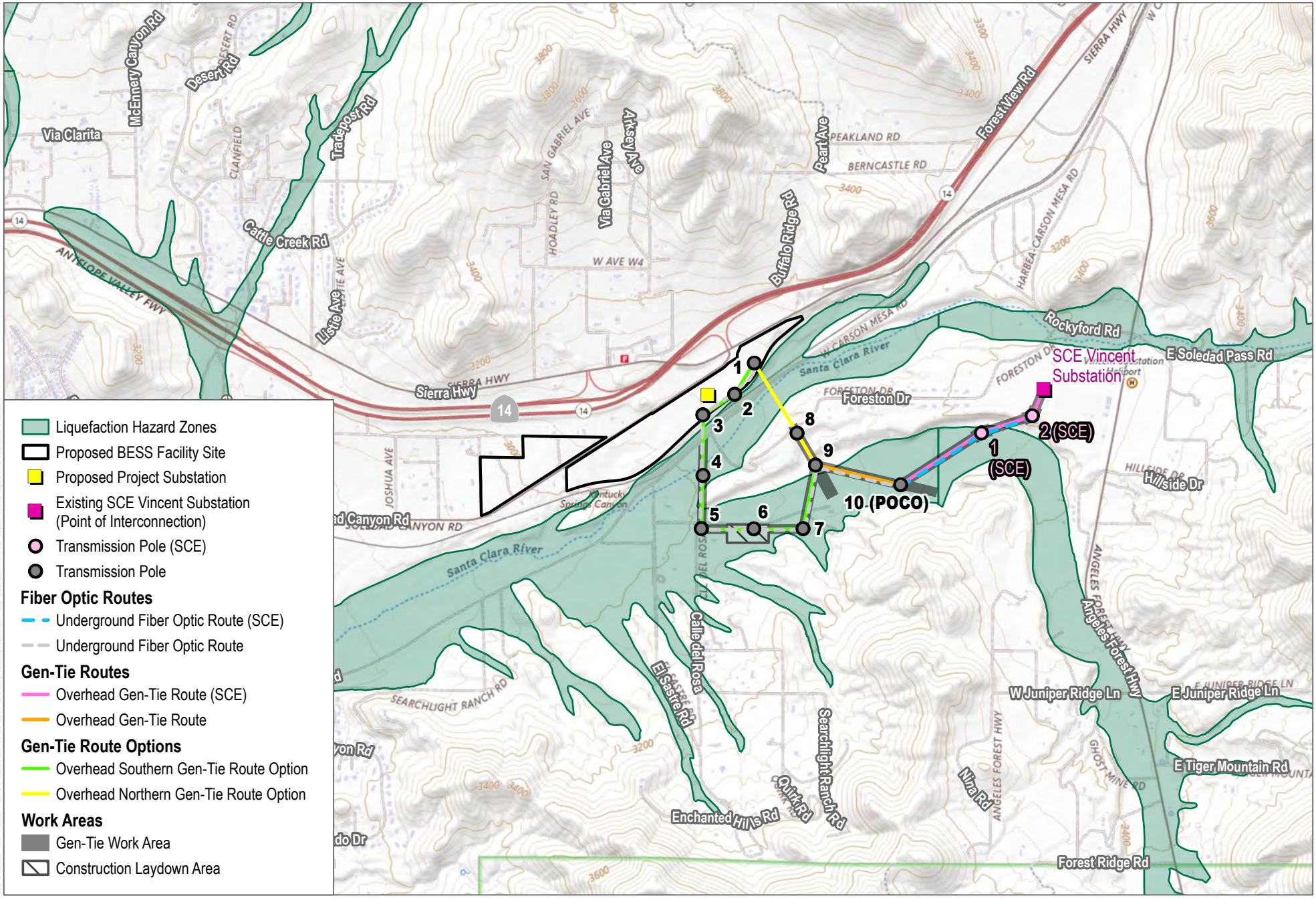

SOURCE: USGS; California Department of Conservation

DUDEK

0 500 1,000 Feet

FIGURE 3.4-3

Liquefaction Potential

Prairie Song Reliability Project

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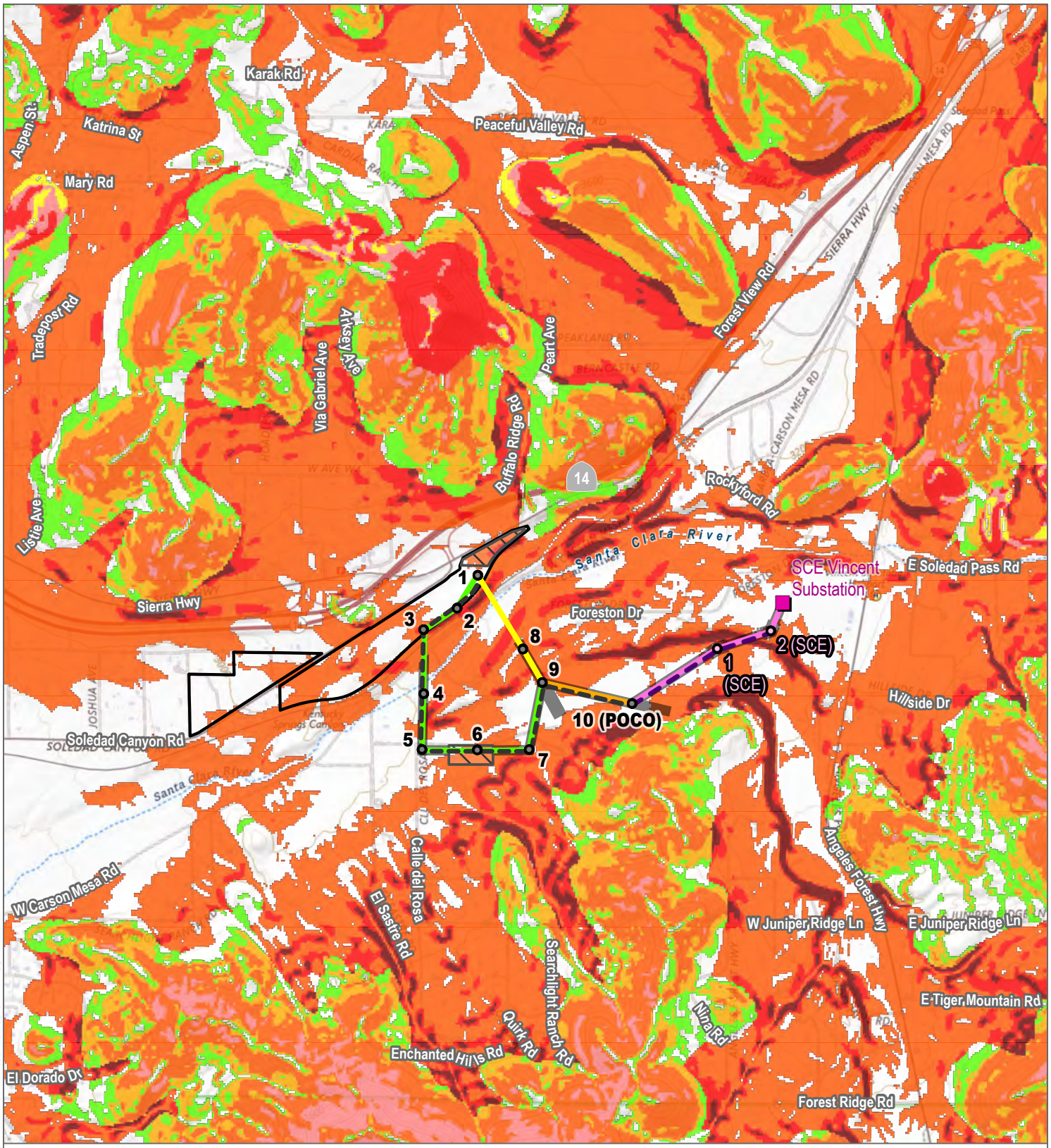

SOURCE: USGS; California Department of Conservation

DUDEK

0 500 1,000 Feet

FIGURE 3.4-4

Landslide Susceptibility

Prairie Song Reliability Project

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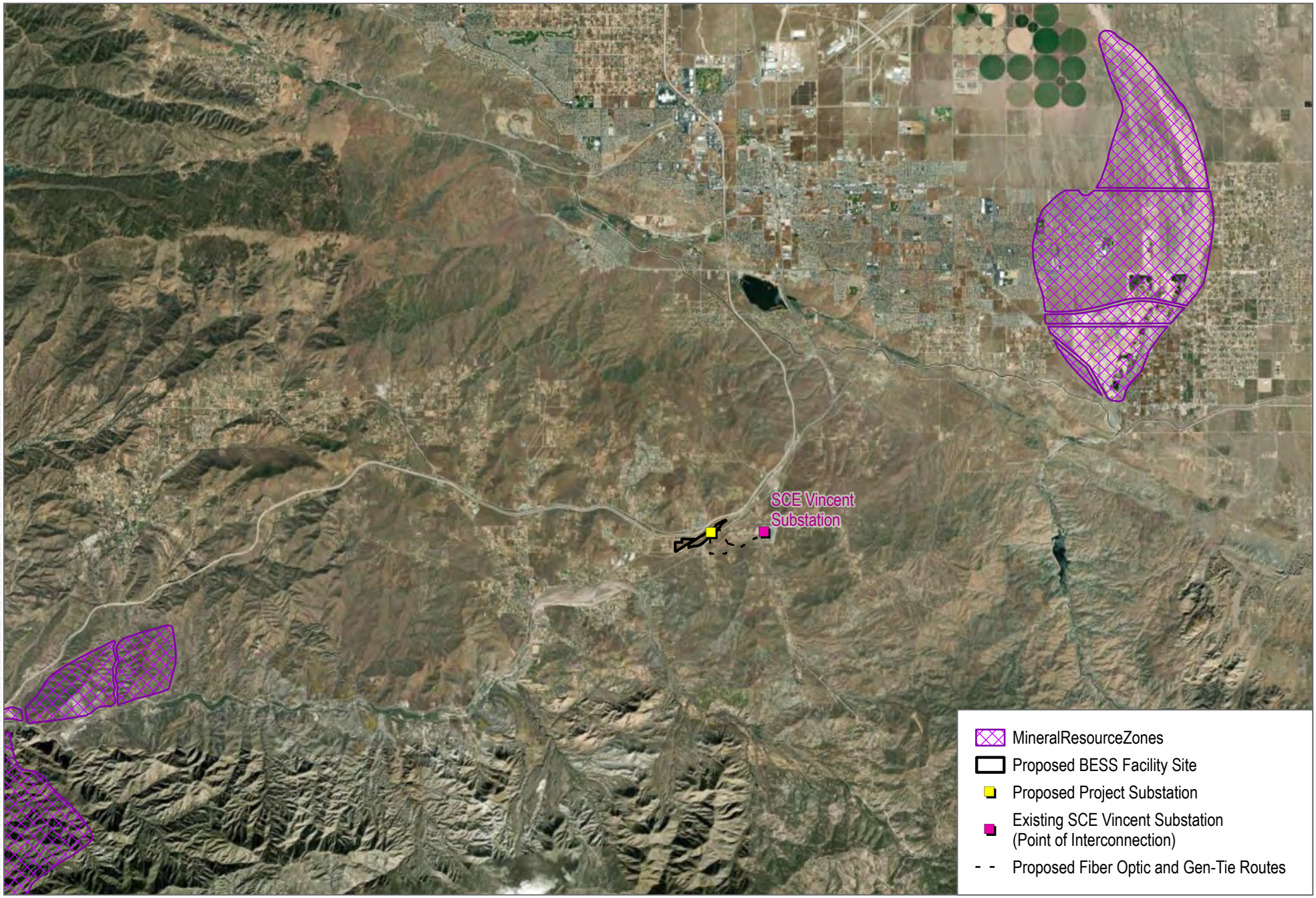

SOURCE: California Department of Conservation; World Imagery

DUDEK

0 5,000 10,000 Feet

FIGURE 3.4-5

Mineral Resource Zones

Prairie Song Reliability Project

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3.5 Hazardous Materials Handling

This section discusses the use and storage of hazardous materials associated with the Prairie Song Reliability Project (Project) and the potential effects on human health and the environment. The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

The evaluation of hazardous materials handling includes the following elements:

- Section 3.5.1 describes the existing environment that may be affected, including land use and hazardous use materials and storage.
- Section 3.5.2 identifies potential impacts to the environment and on human health during construction and operations.
- Section 3.5.3 discusses potential cumulative effects.
- Section 3.5.4 identifies project design and proposed mitigation measures that will be implemented to avoid or minimize potentially significant impacts.
- Section 3.5.5 presents laws, ordinances, and standards (LORS) applicable to hazardous materials.
- Section 3.5.6 identifies agencies involved and provides agency contacts.
- Section 3.5.7 describes permits.
- Section 3.5.8 provides all references used to develop this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical reports:

- Appendix 3.5A – Phase I Environmental Site Assessment, dated October 2024 (for Southern Gen-Tie Route parcels)
- Appendix 3.5A – Phase I Environmental Site Assessment, dated November 2024 (for remainder of Project site [BESS Facility and Northern Gen-Tie Route parcels])

A summary of the hazardous materials handling evaluation is provided in the table below.

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
1	Create a significant hazard to the public or environment through routine transport or use of hazardous materials?z	☐	☐	☒	☐
2	Create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the	☐	☒	☐	☐

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
	release of hazardous materials into the environment?				
3	Emit hazardous emissions or handle materials, substances, or waste within 0.25 miles of an existing or proposed school?	☐	☐	☐	☒
4	Be located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and result in a significant hazard to the public or environment?	☐	☐	☐	☒
5	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency plan?	☐	☐	☒	☐

3.5.1 Affected Environment

3.5.1.1 Land Use

Most of the Project site is vacant, undeveloped land except for a few rural residences and outbuildings. The Project site is adjoined by the Antelope Valley Freeway (California State Route 14), Sierra Highway, Soledad Canyon Road and residential properties to the north; roads and residential properties to the west and south; and the SCE Vincent Substation to the east along with a series of electric transmission lines which traverse across the eastern border of the Project site. The greater surrounding area includes residential properties, an RV park, horse ranches, a fire station, and undeveloped desert land. The Project is in the Antelope Valley area of unincorporated Los Angeles County, California, approximately 3 miles northeast of the community of Acton. The nearest incorporated city, the City of Palmdale, is located approximately 4 miles north of the Project site.

The Phase I ESAs did not identify any recognized environmental conditions (RECs), conditional RECs, or historical RECs associated with the Project site. During the site reconnaissance, the Phase I ESA identified evidence of unauthorized dumping along dirt access roads on APNs 3056-017-007, 3056-017-020, 3056-017-021, 3056-019-013, 3056-019-037, and 3056-019-040, north of the railroad property.

The proposed BESS facility site is directly north of a railroad line; a buffer of approximately 100 feet is located between the BESS facility site and the railroad line. Contaminants common in railway corridors include wood preservatives (e.g., creosote, arsenic) and heavy metals in ballast rock. Asbestos might also occur in ballast rock and soils associated with railroad tracks. In addition, soils in and adjacent to these corridors might contain herbicide residues as a result of historic and ongoing weed-abatement practices. Potential contaminants include chemically treated lumber (creosote), polycyclic aromatic hydrocarbons, herbicides, metals, petroleum hydrocarbons, and solvents. Based on this historic use and given the separation between the railroad-controlled lands and the Project site, the potential for such impacts related to railroad activity are low with respect to the Project.

The Project site is not currently used for agricultural purposes and historical records do not indicate the Project site has been used for agricultural purposes (Appendix 3.5A). The Project site contains some fenced pasture areas that

have been and are currently used for small horse ranches. Pesticides are not typically used for grazing pastures (DTSC 2008). Based on the absence of irrigation systems, the short duration of agricultural use for recreational livestock, and the low likelihood of pesticide application, this former agricultural use is considered de minimis.

Asbestos has been specifically designated a hazardous substance pursuant to Comprehensive Environmental Response, Compensation, and Liability Act Section 102. Many building materials commonly contained asbestos until the late 1970s, and a smaller list of building materials contained asbestos in the 1980s, such as drywall, joint compounds, vinyl flooring, roofing, asbestos-cement products, and stucco. Under the Toxic Substances Control Act, the U.S. Environmental Protection Agency (EPA) banned the use of asbestos in many products, with partial bans occurring in 1989 and 1993. However, a full ban of asbestos products did not occur until 2019. Therefore, if a building was constructed prior to 1989, it may contain asbestos. If it was constructed between 1989 and 2019, it is less likely asbestos is present, but there is still a chance that asbestos was still widely used. Several structures were identified on the Project site, and some were constructed as early as 1980. Based on this information, asbestos may be of concern and is further discussed in Section 3.5.2.3.2 below.

Table 3.5-1 contains a list of schools, hospitals, day-care facilities, and long-term health care facilities within a 6-mile radius of the Project site. Figure 3.5-1 shows the location of these facilities. It should be noted that no hospitals are located within the 6-mile radius of the Project site.

Table 3.5-1. Schools/Daycare/Health Facilities Located within 6 Miles of the Project Site

Facility Type	Facility Name	Distance to Project Site	Address
Emergency Medical Services (EMS), fire and rescue services and Safe Haven	Los Angeles County Fire Department - Battalion 17 - Station 80	Approximately 0.2 miles north	1533 Sierra Hwy Acton, California 93510
Private and Charter School	Shiloh Christian School	Approximately 1.9 miles west	32311 Ohio Street Acton, California 93510
Public Elementary School	Meadowlark School	Approximately 2.1 miles west	3015 Sacramento Street Acton, California 93510
Public Middle School	High Desert School	Approximately 2.7 miles west	3620 Antelope Woods Road Acton, California 93510
Substance Abuse Programs	Los Angeles County Department of Health Services - High Desert Health System - Antelope Valley Rehabilitation Center	Approximately 3.7 miles west	30500 Arrastre Canyon Road Acton, California 93510
Public High School	Vasquez High School	Approximately 3.7 miles west	33630 Red Rover Mine Road Acton, California 93510
Public Middle School	Desert Willow Intermediate	Approximately 4.0 miles north	36555 Sunny Lane Palmdale, California 93550
Adult Education	Regional Occupational Program	Approximately 4.6 miles north	1156 E. Ave. S Palmdale, California 93550
Adult Education	South Antelope Valley Adult School	Approximately 4.6 miles north	1212 E. Avenue S Palmdale, California 93550

Table 3.5-1. Schools/Daycare/Health Facilities Located within 6 Miles of the Project Site

Facility Type	Facility Name	Distance to Project Site	Address
Private and Charter School	Eil Excellence In Learning	Approximately 4.6 miles north	36509 Jenna Lane Palmdale, California 93550
Public Elementary School	Barrel Springs Elementary School	Approximately 4.8 miles north	3636 Ponderosa Way Palmdale, California 93550
Public Elementary School	Joshua Hills Elementary School	Approximately 4.9 miles north	3030 Fairfield Avenue Palmdale, California 93550
Public High School	Palmdale High School	Approximately 4.9 miles north	2137 East Avenue R Palmdale, California 93550
Public Elementary School	Tumbleweed Elementary School	Approximately 5.4 miles north	1100 E. Avenue R-4 Palmdale, California 93550
Private and Charter School	St. Mary's School	Approximately 5.4 miles north	1600 E. Avenue R-4 Palmdale, California 93550
Private and Charter School	Patterns In Excellence	Approximately 5.5 miles north	37841 Lasker Avenue Palmdale, California 93550
Public Elementary School	Palm Tree Elementary School	Approximately 5.6 miles north	326 East Avenue R Palmdale, California 93550
Mental Health/Substance Abuse Program	Action Family Counseling - Antelope Valley	Approximately 5.6 miles north	37230 37th Street E Palmdale, California 93551
Public Elementary/Middle School	Palmdale Learning Plaza	Approximately 5.7 miles north	38043 Division Street Palmdale, California 93551
Public Elementary School	Cimarron Elementary School	Approximately 5.7 miles north	36940 45th Street East Palmdale, California 93551
Health Center	South Valley Health Center	Approximately 5.7 miles north	38350 40th Street E Palmdale, California 93551
Private and Charter School	Pinecrest-Palmdale	Approximately 5.8 miles north	2320 East Avenue R Palmdale, California 93551
Public Elementary/Middle School	Oak Tree Learning Center	Approximately 5.8 miles north	37230 37th Street East Palmdale, California 93551
Public Elementary School	Desert Rose Elementary School	Approximately 5.8 miles north	37730 27th Street East Palmdale, California 93551
Public Elementary School	Anaverde Hills School	Approximately 5.8 miles north	2902 Greenbrier Street Palmdale, California 93551
Public Middle School	Cactus Middle School	Approximately 5.8 miles north	3243 East Avenue R-8 Palmdale, California 93551
Emergency Medical Services (EMS), fire and rescue services and Safe Haven	Los Angeles County Fire Department - Battalion 17 - Station 37	Approximately 6.0 miles north	38318 E. 9th Street East Palmdale, California 93551

3.5.1.2 Hazardous Materials Use and Storage

Hazardous materials will be used during construction and operation; the facility will comply with all applicable LORS. Proper use and storage of hazardous materials will minimize potential for accidental release. The following sections describe use, followed by general characteristics of hazardous materials.

During construction, operation, and decommissioning, all fuels, waste oils, and solvents will be collected and stored in tanks or drums within a containment area consisting of an impervious floor and sidewalls. Each containment area will be calculated and designed to be larger than the volume stored within to ensure containment (per Spill Prevention Control and Countermeasures [SPCC] rules [40 CFR 112], 110% capacity is required). Fuel will be stored in aboveground storage tanks. These tanks may have either a double wall or will be placed within temporary containment skid or lined, earthen berms for spill containment. Upon the conclusion of construction and decommissioning phases, excess fuels will be removed from the site and any de minimis drips or surface staining resulting from fuel handling operations will be remediated.

The Project is anticipated to require a Hazardous Materials Business Plan (HMBP; Appendix 3.5B) during construction, operations, and decommissioning because it is anticipated to have materials on site that are greater than the State of California thresholds for quantities of hazardous materials. Threshold quantities are hazardous materials at or above the reporting quantities of 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas. A list of the hazardous substances which qualify for reporting is maintained in California Occupational Safety and Health Regulations Chapter 3.2 Article 5 Section 339. The hazardous materials anticipated at the Project are discussed below. A safe designated Hazardous Waste Storage Location will be determined closer to design finalization for storage of any hazardous materials and waste used or generated during construction, normal operations, and emergency actions. It is expected the location will be within the main laydown yard during construction and within the O&M area during operations.

3.5.1.2.1 Construction Phase

The hazardous materials used for construction will be typical of most construction projects of this type. Materials will include small quantities of gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, ethylene glycol, dust palliatives, herbicides, and welding materials/supplies. Petroleum, such as Diesel No. 2 or gasoline, may be stored on site during construction and decommissioning to fuel construction and decommissioning equipment, with minimal amounts of diesel anticipated to be stored on site during the operation of the Project.

Hazardous material use will present relatively low public health risk, but have the potential to contaminate subsurface soils, and/or groundwater if a release or incident were to occur. The use of best management practices (BMPs) will reduce the likelihood of potential incidents involving hazardous materials.

General industry health, safety, and environmental BMPs will be implemented by construction personnel. The following BMPs are designed to reduce incidents involving hazardous materials:

- Refueling and maintenance of equipment and vehicles will generally occur in designated areas that are designed to control potential spills. Designated areas will be bermed and/or covered by an impervious surface (asphalt or concrete) to control potential spills. Employees will be present during diesel refueling activities. When mobile diesel refueling is required, the diesel refueling vehicle will be equipped with fire extinguishers and spill containment equipment, such as absorbents. The facility and surface drainage systems are designed to manage stormwater runoff within the property bounds during construction in accordance with the Construction General Permit and Storm Water Pollution Prevention Plan.
- Only authorized personnel will conduct vehicle and equipment service maintenance.
- Only EPA approved pumps, hoses and nozzles will be used to refuel equipment and vehicles.
- During servicing, catch-pans will be placed under equipment to catch potential spills or leaks.
- After servicing, disconnected hoses will be placed in containers to collect any residual fuel from the hoses.
- During diesel refueling, vehicle engines will be shut off.
- Smoking, open flames, or welding will not be permitted in diesel refueling and service areas or hazardous waste storage areas.
- Diesel refueling will be performed away from surface water or storm water drains.
- Following diesel refueling activities, service trucks will immediately leave the construction zone.
- All maintenance and diesel refueling areas will be inspected monthly. Results of inspections will be recorded in a logbook that will be maintained on site.

3.5.1.2.2 Operations Phase

Limited amounts of hazardous materials will be stored or used on the Project site during operations, including mineral oil to be sealed within the transformers. Appropriate spill containment and cleanup kits will be maintained during operation of the Project. Fuels and lubricants used in operations will be subject to an SPCC Plan to be prepared for the Project (Appendix 3.5C). Federal and California regulations requires a SPCC Plan if stored quantities are equal to or greater than 1,320 gallons total. The Project will store sufficient diesel to supply local backup power for emergency operations and fire pumps required to meet fire department and insurance requirements. Should this exceed 1,320 gallons total on site, an SPCC will be prepared. Solid waste, if generated during operations, will be subject to the material disposal and solid waste management plan to be prepared for the proposed Project.

The enclosures that are anticipated to be used at the Project site are safe under normal handling and operating conditions. Each individual enclosure will be monitored and controlled to ensure safe and efficient operations, and every BESS enclosure will be equipped with ventilation, as well as gas, heat, and smoke detection and alarms. The systems will be designed, constructed, and operated pursuant to the California Fire Code.

Hazardous chemicals use, typical quantities, and toxicity are described in Table 3.5-2.

Table 3.5-2. Hazardous Materials Use During Construction and Operation

Hazardous Material	Uses	Typical Quantities	Potential for Toxicity
Diesel[a]	Fuel for construction equipment and vehicles during construction and decommissioning. Used to power emergency generators during operation.	Over 5,000 gallons will be stored in aboveground tanks during construction and operation. The amount of diesel to be stored on site during decommissioning is unknown at this time but is assumed be similar to that of construction.[b]	Fuel oils are liquid mixtures produced from petroleum, and their use mostly involves burning them as fuels. Drinking or breathing fuel oils may cause nausea or nervous system effects. However, exposure under normal use conditions is not likely to be harmful (ATSDR 1996).
Gasoline	Some construction equipment and vehicles	Gasoline will not be stored on site during construction, operation, or decommissioning.	
Lubricating oils/ grease/ hydraulic fluids/gear oils	Lubricating oil will be present in the diesel engine of the emergency generators, and in engines of construction equipment and vehicles	Limited quantities will be stored in portable containers (capacity of 55 gallons or less) and maintained on site during all phases of the Project. Containers will be double lined and stored within secondary containment.	Exposure to hydraulic fluids occurs mainly in the workplace. Some hydraulic fluids have a bland, oily smell, and others have no smell; some are flammable, and some are not. Ingesting large amounts of some types of hydraulic fluids can cause pneumonia (ATSDR 1997).
Glycol-based antifreeze	Used in the diesel engine for the emergency generators.	Limited quantities (10 gallons to 20 gallons of concentrate) will be stored on site during all phases of the Project.	Ethylene glycol is a clear liquid used in antifreeze and de-icing solutions. Exposure to large amounts of ethylene glycol can damage the kidneys, nervous system, lungs, and heart (ATSDR 2013).
Lead-acid storage batteries and electrolyte solution	Present in construction equipment and vehicles. Backup power source for control equipment.	Limited quantities of electrolyte solution (<20 gallons) for maintenance of construction equipment and vehicles during construction and decommissioning. Approximately 6,000 pounds of H_2SO_4 (sulfuric acid) within the control house.	The electrolyte solution in lead acid batteries contains sulfuric acid, which is highly corrosive and can cause severe chemical burns to the skin and can damage the eyes (NLM 2025).
Lithium-iron phosphate batteries	Used for Project operations	Due to the constantly improving and changing technology of these energy storage systems, a specific manufacturer and model has not been selected at this time. Based on industry averages, the	Batteries commonly contain materials such as lithium, as well as graphite and a flammable electrolyte. Under normal usage conditions, they do not exhaust vapors. In normal usage, cell electrolyte should not be encountered by anyone handling a battery, making the risk of a spill of electrolyte from any commercial battery

Table 3.5-2. Hazardous Materials Use During Construction and Operation

Hazardous Material	Uses	Typical Quantities	Potential for Toxicity
		maximum expected quantity by weight is as follows: Lithium: 5%–10%. It is important to note that elements are all sealed with the battery cells. Even when the cell is physically damaged, the internal chemicals will not "pour" out of the cells.	pack very remote. Furthermore, in most commercial cells, the electrolyte is largely absorbed in electrodes, such that there is no free or "spillable" electrolyte within individual sealed cells. In those instances, severe mechanical damage (e.g., severe crushing) can cause a small fraction of total electrolyte quantity to leak out of a single cell; however, any released electrolyte is likely to evaporate rapidly (NFPA 2016).
Cleaning solvents	Organic solvents will be used for equipment cleaning and maintenance when water-based cleaning and degreasing solvents cannot be used.	Limited quantities or organic solvents (<55 gallons) will be stored on site during construction and decommissioning to maintain construction equipment and vehicles. Limited quantities (<10 gallons) of water-based cleaning solvents will be stored on site during operation.	Exposure to solvents and other organic liquids is one of the most common chemical health risks at places of work. Most of the organic solvents are combustible, often highly volatile, and extremely flammable, and they should always be handled with care. Some solvents produce vapors which are heavier than air. These may move on the floor or ground to a distant ignition source, such as a spark from welding or caused by static electricity. The vapors may also explode from smoking. Vapors of solvents can also accumulate in confined places and stay there for a long time, presenting risks for health and property. Solvents enter the body by inhalation, by swallowing and through the skin. The effect depends on several factors (International Labour Organization 2004).
Dielectric fluids (i.e., Mineral Oil)[c]	Used in electrical transformers and other electric power management devices as an electrical insulator.	Some transformers may contain more than 500 gallons of dielectric fluid. On-site transformers each contain approximately 10,000 gallons of mineral oil.	Dielectric fluids such as mineral oil may cause allergic reactions. Primary Routes of Entry: Eye and skin contact, inhalation; Target Organs: Eyes, skin, respiratory tract; Persons with preexisting skin and respiratory conditions may be more susceptible to the effects of this product. Mineral oil is not listed in the National Toxicology Program (NTP) Annual Report on Carcinogens and not listed as OSHA carcinogens (Environmental Protection Services 2023).
Herbicides that contain glyphosate	May be used for vegetation control around facilities for fire safety.	If deemed necessary, herbicides will be brought to the site and applied by a licensed applicator.	If a large amount is swallowed, glyphosate can cause nausea and vomiting. It can be very irritating if it is left on your skin or eyes. Glyphosate has been associated with respiratory effects (lung and nose), such as irritation in the nose, or asthma, in people

Table 3.5-2. Hazardous Materials Use During Construction and Operation

Hazardous Material	Uses	Typical Quantities	Potential for Toxicity
			using glyphosate products. Workers that use large amounts of glyphosate products for long periods of time may be more likely to develop respiratory effects. Studies in animals have shown that glyphosate can cause developmental effects (such as lower body weight and problems with bone and organ growth) when the pregnant animals were given very large amounts of glyphosate. (ATSDR 2020)

Notes: OSHA = Occupational Safety and Health Administration.

a Diesel fuel will be replenished on site by commercial vendors, as necessary.

b These values represent the total on-site storage capacity, not the total amount of fuel which will be consumed during Project construction.

c It is assumed that the majority of transformers and other electrical devices that rely on dielectric fluids will have those fluids added during fabrication and will not require dielectric fluid to be added on site. It is assumed that servicing of electrical devices that involves wholesale removal and replacement of dielectric fluids will not occur on site and that equipment requiring such servicing will be removed from the site and replaced. New transformers or electrical devices are expected to contain mineral oil based, or synthetic dielectric fluids that are free of polychlorinated biphenyls. Depending on commercial availabilities in response to active regulatory proceedings, some equipment may instead contain gaseous dielectric agents rather than liquid dielectric fluids.

3.5.2 Impact Analysis

Construction and operation will involve the use of various hazardous materials. The use of hazardous materials and their potential to cause adverse environmental and human health effects are discussed in the sections below.

3.5.2.1 Methodology

The information presented is based on site-specific engineering plans, Phase I Environmental Site Assessments, and readily available resources provided online. Potential direct and indirect Project impacts related to hazardous materials handling were evaluated against the California Environmental Quality Act (CEQA) significance criteria and are discussed below. The impact analysis evaluates potential Project impacts during Project construction, operation, and decommissioning.

3.5.2.2 CEQA Appendix G Assessment Criteria

CEQA Guidelines Appendix G is a screening tool, not a method for setting thresholds of significance. CEQA Guidelines Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to make a determination as to whether a project requires an EIR, a Mitigated Negative Declaration or a Negative Declaration. As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances."

The answers to the CEQA Guidelines Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Guidelines Appendix G are instructive. With Respect to Hazardous Materials Handling, CEQA Guidelines Appendix G asks, in part, would the project:

- Create a significant hazard to the public or environment through routine transport or use of hazardous materials;
- Create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle materials, substances, or waste within 0.25 miles of an existing or proposed school;
- Be located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and result in a significant hazard to the public or environment;
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency plan?

3.5.2.3 CEQA Appendix G Assessment Criteria

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

Construction

Less than Significant. The proposed Project, including the BESS facility and gen-tie connection, will involve the routine transport, use, or disposal of hazardous materials. Most of the hazardous waste generated by the Project will occur during the construction period and will consist of liquid waste, including cleaning fluids, dust palliative, herbicides, and solvents. Some solid hazardous waste, such as welding materials, may also be generated during construction. These materials will be transported to the Project site during construction, and any hazardous materials that are produced as a result of the construction of the Project will be collected and transported away from the site for disposal in an approved off-site waste disposal facility. During Project construction, material safety data sheets for all hazardous materials present on site will be made readily available to on-site personnel to ensure awareness and proper handling. Workers will be trained to properly identify and handle all hazardous materials.

Transportation of hazardous materials will be required during construction, operation, and decommissioning activities. All transportation of hazardous materials associated with the Project construction and operations will comply with the following:

- U.S. Environmental Protection Agency (EPA)
- California Department of Transportation (Caltrans)
- California Department of Toxic Substance Control (DTSC)
- California Highway Patrol (CHP)
- California State Fire Marshal Regulations

Overall, the use of hazardous materials, and subsequent transport and disposal of such materials during construction, will be controlled through compliance with applicable regulations to limit releases of hazardous

materials and wastes. Diesel fuel and lubricants used on field equipment will be subject to an HMBP and a SPCC plan which requires include routine inspection, annual reporting, and rules for labeling, storage, secondary containment, spill prevention and response measures, employee training, and safety and security measures. The disposal of all oils, lubricants, and spent filters will occur in accordance with applicable local, State, and federal regulations. Recyclable materials including wood, shipping materials, and metals will be separated as feasible for recycling. Liquids and oils in the transformers and other equipment will be used in accordance with applicable regulations. As such, Project construction is not anticipated to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts will be **less than significant**

Operations

Less than Significant. O&M activities associated with a BESS facility and will require use of hazardous materials to maintain the BESS enclosures and transformers. Those that will be used will be stored on site in designated, secured areas with secondary containment. The perimeter of the BESS facility will be fenced to prevent public access to any hazardous materials on site. Operational activities will be limited to monitoring facility performance and conducting scheduled or emergency maintenance of on-site electrical equipment and/or the gen-tie line. No heavy equipment will be routinely used during normal Project operation. O&M vehicles will include trucks (i.e., pickup, flatbed), forklifts, and/or loaders for routine and unscheduled maintenance. Large heavy-haul transport equipment and cranes may be brought to the Project site when needed for equipment repair or replacement. Longterm maintenance and equipment replacement will be scheduled in accordance with manufacturer recommendations. The Project will also include operational and maintenance protocols that will be used to identify and remove damaged or defective battery modules as required. A HMBP and SPCC plan will be prepared, which includes requirements for handling, storage, employee training, site security measures, annual reporting, and routine inspections of facilities that store reportable quantities of hazardous materials associated with Project operation. These operations will be conducted in accordance with standard practices to minimize potential exposure of workers or the public. As such, operations and maintenance of the Project is not anticipated to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts will be **less than significant**.

3.5.2.3.2 Will the project create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Hazardous Materials Use

Construction and Decommissioning

Less than Significant. As discussed under Section 3.5.2.3.1 above, construction will involve storage and use of hazardous materials; regulatory controls and measures, along with best management practices and training, reduce the risks associated with the storage and use of hazardous materials.

Project construction and decommissioning activities could result in the transport, use, and disposal of hazardous materials such as fuels, asphalt, lubricants, toxic solvents, pesticides, and herbicides. Although care will be used when transporting, using, and disposing of these materials, there is always a possibility that upset or accidental conditions may arise, which could release hazardous materials into the environment. Accidental releases of

hazardous materials are those releases that are unforeseen or that result from unforeseen circumstances, while reasonably foreseeable upset conditions are those release or exposure events that can be anticipated and planned for.

Project construction and decommissioning activities will occur in accordance with all applicable local standards set forth by Los Angeles County, as well as state and federal health and safety requirements that are intended to minimize hazardous materials risk to the public, such as California Division of Occupational Safety and Health requirements, the Hazardous Waste Control Act, the California Accidental Release Protection Program, and the California Health and Safety Code. As noted above, the HMBP and SPCC will include spill prevention and control measures, and include training requirements. Also, the Project will be subject to routine regulatory inspection by the California Energy Commission (CEC), therefore protective measures are reviewed by agencies. The construction and decommissioning contractors will be required to implement such regulations relative to the transport, handling, and disposal of any hazardous materials, including the use of standard construction controls and safety procedures that will avoid or minimize the potential for accidental release of such substances into the environment. Standard construction practices will be observed such that any materials released are appropriately contained and remediated as required by local and state laws.

Furthermore, a stormwater pollution prevention plan will be implemented to minimize potential hazards associated with construction and decommissioning site pollutants. The stormwater pollution prevention plan will include BMPs, such as covering and containing hazardous materials so that they are not in contact with precipitation or runoff, identifying the worst-case and most likely spill scenarios, and providing adequate response equipment to ensure that hazardous materials are not carried off site through stormwater runoff. The facility is anticipated to require a HMBP during construction, operations, and decommissioning because it is anticipated to have materials on site that are greater than the State of California thresholds for quantities of hazardous materials. The HMBP includes an emergency action plan, clean-up and containment provisions, and training and recordkeeping requirements.

Therefore, construction and decommissioning related Project impacts will be **less than significant** with implementation of the required BMPs and training and compliance with applicable federal, state, and local requirements related to hazardous materials.

Operations Phase

Less than Significant. As discussed under Section 3.5.2.3.1 above, operation will involve use and storage of hazardous materials. Most of the hazardous materials used and stored on site will consist of lithium-ion batteries for Project operations, diesel storage for back-up generators, and mineral oil in transformers. Uncontrolled release of liquid chemicals could run off and drain into the stormwater system and potentially have harmful effects. However, the use and storage of hazardous materials will pose less than significant risks for release if best management practices are adopted and regulatory requirements are adhered to, as detailed above.

The use and storage of hazardous materials will be contained in designated areas on site that will be outlined in the HMBP, which is required for construction and operation. The HMBP includes an emergency action plan, clean-up and containment provisions, and training and recordkeeping requirements. The risk of public exposure to hazardous materials, with appropriate BMPs, is low and will not be significant. All equipment (particularly equipment operating in or near a drainage or in a basin) will be maintained in good working condition, and free of leaks. All vehicles will be equipped with drip pans during storage to contain minor spills and drips. Refueling and storage will take place within dedicated and established O&M areas. Spill kits will be located on site and in vehicles for use in spill

response. In addition, all maintenance crews working with heavy equipment will be trained in spill containment and response.

As described in Table 3.5-2, the Project may contain approximately 6,000 pounds of H_2SO_4 (sulfuric acid) within the control house. The reportable quantity for sulfuric acid under EPA's Regulated Substances list is 10,000 lbs, therefore, there are no federal requirements. However, the California Accidental Release Prevention Program's (CalARP's) threshold reporting quantity is 1,000 lbs, therefore a Risk Management Plan (RMP) will be required (EPA 2023). The RMP will contain detailed information including, but not limited to: the regulated substances, potential off-site consequence of an accidental release, emergency response program, coordination with local emergency responders, operating and training procedures, and incident investigation.

Therefore, operation-related Project impacts will be **less than significant** with implementation of the BMPs and training and compliance with applicable federal, state, and local requirements related to hazardous materials.

Accidental Release Hazards

Less than Significant. Without proper engineering controls, the public could be at risk of exposure to harmful vapors in the event of an accidental release during construction, operation, and decommissioning activities associated with the Project, as incompatible chemicals have the potential to mix, causing vapors that could also have harmful effects. However, the Project will implement California Fire Code (Articles 79 and 80) requirements for safe storage and handling of hazardous materials. The proposed Project and the affiliated staff will use engineering controls to reduce the potential for release of hazardous materials and mixing of incompatible materials.

All transportation of hazardous substances will be with Department of Transportation-approved personnel and trucking/transport equipment. Project operations will not involve the handling of any other acutely hazardous materials other than those listed in Table 3.5-2 that will have the potential to generate significant off-site consequences. However, release prevention measures are required under HMBP and SPCC rules and regulations, which will be implemented in the event hazardous materials and/or petroleum products are stored above reportable quantities. These measures, which include protections like secondary containment and accessible spill response kits, will further reduce the potential for accidental releases.

As such, construction, operation, and decommissioning impacts related to Project implementation will be **less than significant** with implementation of the BMPs and training and compliance with applicable federal, state, and local requirements related to hazardous materials.

Fire and Explosion Hazards

See Section 3.16, Wildfire, for a discussion on impacts related to fire. As detailed in Section 3.16, Wildfire, CAL FIRE's Fire and Resource Assessment Program database includes map data documenting areas of significant fire hazards in the state. These maps categorize geographic areas of the state into different fire hazard severity zones. As shown in Figure 3.16-2, Fire Hazard Severity Zones, the proposed Project site and the surrounding area are located on SRA lands where the state has the primary responsibility for fire suppression. According to the State Fire Marshal Fire Hazard Severity Zone Maps, the proposed Project site and the surrounding area are in an area currently designated as a Very High Fire Hazard Severity Zones.

Less than Significant. All hazardous material storage areas will be equipped with a fire extinguishing system and ventilation for enclosed substances per the requirement of Article 80 of the California Fire Code. Hazardous

materials used and stored on site during Project construction and operation will be stored in appropriate containers in compliance with federal and State regulations. Procedures for the use and handling of hazardous materials will be described within the Project-specific HMBP as well as the Emergency Response Plan (ERP), and SPCC Plan.

The Project will require the use of flammable materials such as lubrication oil and diesel fuel. Storage of flammable materials will be in accordance with Article 80 of the California Fire Code. A fire extinguishing system will be nearby the storage and lube oil pumping areas. Flammable materials will be handled by in accordance with the HMBP and SPCC.

For emergency spills, hazardous materials, and fire related incidents, CAL FIRE will first be called. For additional assistance, the closest fire station is the Los Angeles County Fire Department Station 80, located at 1533 W. Sierra Hwy. Acton CA 93510, which is immediately across the Antelope Valley Freeway and approximately 0.2 miles north of the Project site. If a fire involves hazardous materials, the Los Angeles County Fire Department, Health Hazardous Materials Division can be contacted to direct fire stations equipped to handle hazardous materials. The ERP, HMBP, and SPCC Plan require emergency response procedures to be documented and available at the operating site. Contact information for applicable emergency response agencies must be included in these plans and posted in conspicuous locations at the site.

The applicant will use battery storage systems that are National Fire Protection Association 855 Code compliant, and UL certified and that include built-in failsafe and cooling systems designed to prevent thermal runaway and the spread of fire. A fire protection system will be installed to automatically shut down any affected battery storage components and prevent the spread of the fire to the other battery storage modules. In addition, a fire wall will be installed around the perimeter of the BESS area for fire protection purposes – both to prevent wildfire from impacting the site and to reduce the chance of an on-site fire from escaping beyond the property. Fire hydrants will be installed in accordance with Los Angeles County Fire Department standards. As such, impacts will be **less than significant**.

Hazardous Materials in Soils

Less than Significant with Mitigation. The Phase I ESAs did not identify any RECs, conditional RECs, or historical RECs associated with the Project site. The Phase I ESA did identify evidence of unauthorized dumping along dirt access roads north of the railroad property, potential for contaminants in railway corridors, and potential for asbestos since some structures on site were constructed as early as 1980.

While illegal dumping was observed on some of the dirt roads on the Project site, based on the type of waste observed (no hazardous materials were observed), contamination is not expected. Conformance with applicable federal, state, and local ordinances related to the proper handling and disposal of this waste will be implemented during Project construction (CalRecycle, EPA, DTSC, etc.).

The Antelope Valley Air Quality Management District requires asbestos surveys and notification prior to demolition (AVAQMD 2022). The Project will comply with this LORS prior to demolition of the structures on site.

While there is a buffer of approximately 100 feet between the BESS facility site and the railroad line, there is potential for contaminants on the BESS facility site due to historical use of the railroad. Contaminants common in railway corridors include wood preservatives (e.g., creosote, arsenic) and heavy metals in ballast rock. Asbestos might also occur in ballast rock and soils associated with railroad tracks. Potential contaminants include chemically treated lumber (creosote), polycyclic aromatic hydrocarbons, herbicides, metals, petroleum hydrocarbons, and

solvents. However, any treated wood waste encountered during Project construction will be handled and disposed of in accordance with State law. The Project will adhere to State requirements under Health and Safety Code section 25230 for treated wood waste, as necessary (DTSC 2025). In addition, the Project will implement Mitigation Measure HAZ-1 to address potential contaminated soil associated with the adjacent railroad.

The Project site contains some fenced pasture areas that have been and are currently used for small horse ranches. Pesticides are not typically used for grazing pastures (DTSC 2008). Based on the absence of irrigation systems, the short duration of agricultural use for recreational livestock, and the low likelihood of pesticide application, this former agricultural use is considered de minimis.

As such, impacts will be **less than significant with mitigation**.

3.5.2.3.3 Will the project emit hazardous emissions or handle materials, substances, or waste within 0.25 miles of an existing or proposed school?

No Impact. There are no schools, day-care facilities, hospitals, or long-term health care facilities within a 1-mile radius of the Project site. The Project site is located directly adjacent to the Antelope Valley Freeway and its Soledad Canyon Road and Sierra Highway on- and off-ramps therefore the proposed transportation route for delivery of hazardous materials and regulated materials will allow for a direct route to from the Antelope Valley Freeway to the Project site. Due to the selected routes for hazardous material delivery and the distance relative to existing or proposed schools, there will be **no impact**.

3.5.2.3.4 Will the project be included on a list of hazardous materials sites compiled pursuant to Cortese List outlined in Government Code Section 65962.5 and result in a significant hazard to the public or environment?

No Impact. The Phase I ESAs (Appendix 3.5A) included a review of hazardous material release sites identified on regulatory databases, including Cortese List Data Resources (Cortese List) compiled pursuant to Government Code Section 65962.5. The Project site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (CalEPA 2025). The closest listed site is the Jasons Auto Parts site, which is located at 415 Sierra Highway, Palmdale, California 93550. The site is located approximately 1.1 miles northeast of the proposed BESS facility. A former leaking underground storage tank was initially reported at this site in March 1999. Cleanup of the site has been completed, and the California Regional Water Quality Control Board Lahontan Region issued a no further action required letter in September 2010. Since the Project site and gen-tie line are not located on a site that is included on a list of hazardous materials sites, there will be **no impact** and development of the Project site present will not pose a significant hazard to the public or the environment.

3.5.2.3.5 Will the project Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency plan?

Less than Significant. The proposed Project will not physically impede an existing ERP, emergency vehicle access, or personnel access to the Project site. The Project site is located in an area with several alternative roadways allowing access in the event of an emergency. Access to existing roadways near the Project site will be maintained throughout construction, operation, and decommissioning phases and appropriate detours will be provided in the

event of potential road closures. Therefore, no significant impacts related to impairment of the implementation of or physical interference with an adopted ERP or emergency evacuation plan will occur during Project construction.

The limited size of the Project's operational work force will not generate significant traffic volumes during an emergency evacuation scenario that could complicate area-wide emergency evacuation efforts. Driveways built to connect to existing local roads for direct site access will not affect designated emergency evacuation routes, as these are public roadways, and the driveways will not conflict with potential evacuation routes for surrounding land uses. As such, impacts will be **less than significant**.

3.5.3 Cumulative Effects

A cumulative impact refers to a proposed Project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed Project (Public Resources Code [PRC] Section 21083; CCR, Title 14, Section 15064[h], 15065[c], 15130, and 15355). The CEQA Guidelines further note that: The cumulative impact from several projects is the change in the environment which results from the incremental impact of the Project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative effects can result from individually minor, but collectively significant, projects taking place over a period of time (CCR Section 15355).

Potential risks related to hazards and hazardous materials are typically localized in nature because they tend to be related to on-site existing hazardous conditions and/or hazards caused by a project's construction or operation. Cumulative projects were chosen based on proximity and similarity to the proposed Project. These selection factors are appropriate in the context of hazards and hazardous cumulative impacts because generally there needs to be a direct nexus and similar hazard for a synergistic impact to occur, such as hazardous materials from multiple sites being carried into the same river via stormwater runoff. Accordingly, there is not a known existing significant cumulative impact related to hazards or hazardous material within this geographic scope.

The proposed Project and other related infrastructure projects may involve the storage, use, disposal, and transport of hazardous materials to varying degrees. Impacts from these activities are anticipated to be less than significant, because similar projects will also comply with federal, state, and local regulations and policies. For example, all of the identified projects will be required to implement safety measures and precautions necessary to minimize any potential disturbance of hazardous materials and prevent the creation of additional hazards that cannot be mitigated or contained properly. Furthermore, other storage facilities will also be equipped with secondary containment and fire suppressant technology to lessen the impacts of potential battery fires. In light of all of the evidence provided here, cumulative impacts related to hazards will be less than significant.

3.5.4 Mitigation Measures

The following sections present mitigation measures for handling and storing hazardous materials during construction and operation to mitigate potential public health and environmental effects.

3.5.4.1 Construction Phase

MM-HAZ-1 Railroad Soil and Ballast Management: Prior to grading within an approximately 100-foot buffer of the railroad track ("railroad area"), the Project Owner shall conduct sampling and analysis on the ballast rock and soils within this portion of the BESS Facility Site

Verification: Ballast rocks within the approximately 100-foot buffer of the railroad track ("railroad area") will be evaluated for asbestos; asbestos survey, sampling, and analysis must be completed by a technician or supervisor certified for asbestos survey by the California Department of Health. Soils will be sampled and analyzed for polycyclic aromatic hydrocarbons, herbicides, metals, petroleum hydrocarbons, and volatile organic compounds.

The qualified environmental consultant will review soil and ballast analytical results and compare them to California asbestos criteria and regulatory screening levels applicable to future project development (such as DTSC-SLs for commercial development). If concentrations of contaminants exceed applicable regulatory screening levels, a soil management plan (SMP) will be prepared to manage contaminated soils.

The SMP will outline the proper screening, handling, characterization, transportation, and disposal procedures for contaminated or potentially contaminated soils on site. Contaminated or potentially contaminated soils include those identified in the sampling and analysis efforts that exceed applicable regulatory screening levels for proposed project construction. The SMP may include some or all of the following, as recommended by the qualified environmental consultant:

- Procedures for field screening, stockpiling, sampling, characterizing contaminated or potentially contaminated soils.
- Procedures and requirements for onsite soil reuse, offsite soil reuse, and offsite soil disposal (landfilling) as applicable. Soils with contamination above applicable regulatory screening levels shall be removed for offsite disposal.
- Health and safety and training procedures for workers who may come in contact with contaminated soils.
- Onsite soil management requirements to avoid fugitive dust and stormwater runoff, including stockpile management.
- Response and reporting procedures in the event a release of contaminated soils or violation of air quality or water quality rules occurs (Antelope Valley Air Quality Management District and Los Angeles Regional Water Quality Control Board, respectively).
- Procedures to meet all applicable federal, state, and local regulations (including Riverside County Department of Environmental Health and Mojave Desert Air Quality Management District) associated with handling, excavating, stockpiling, and disposing of contaminated soils
- The proposed disposal facility that will accept the contaminated soils and procedures for authorization and transportation, as needed.

The SMP shall be submitted to the CPM for review and approval before the Project Owner begins earthwork in the railroad area. The SMP will be implemented by the Project Owner for all earthwork activities and activities that have the potential to encounter contaminated soils within the railroad area.

3.5.4.2 Operations Phase

Hazardous materials storage will all occur on site and will be in accordance with applicable codes and regulations specified in Section 3.5 and the HMBP, the ERP, and the SPCC Plan. As a result, no additional mitigations measures are required.

3.5.5 Laws, Ordinances, Regulations, and Standards

Storage and use of hazardous materials at the Project site are governed by laws, ordinances, regulations, and standards (LORS) established and enforced at the federal, state, and local levels. Applicable laws are addressed and described below and summarized in Table 3.5-3.

Table 3.5-3. LORS Applicable to Hazardous Materials Handling

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	40 CFR 112	Facilities that store oil in excess of 1,320 gallons aboveground or 42,000 gallons below ground, in containers 55 gallons or larger, must prepare a Spill Prevention, Control and Countermeasure (SPCC) Plan.	**Yes.** An SPCC Plan will be prepared and implemented.	Section 3.5.2.3.1 Section 3.5.2.3.2 Section 3.5.5.1
Federal	40 CFR 260 through 273	Establishes requirements for the management of solid wastes, hazardous wastes, landfills, underground storage tanks, and some medical wastes.	**Yes.** Waste generated by the Project will be characterized for disposal. If hazardous wastes are generated, they must be managed in accordance with the rules outlined in 40 CFR Part 262.	Section 3.5.2.3.1 Section 3.5.2.3.2 Section 3.5.5.1
Federal	29 CFR 1910	The Occupational Safety and Health Administration (OSHA) has multiple rules and regulations established for worker protections, health, and safety to be established in the workplace.	**Yes.** Personal protective equipment and training will be provided to workers handling hazardous materials and/or wastes. Fire protection systems and equipment are required for the workplace to protect against site-specific fire hazards. Additional fire protection requirements are discussed in Section 3.16. Chemical products will include	Section 3.5.2.3.1 Section 3.5.2.3.2 Section 3.5.5.1

Table 3.5-3. LORS Applicable to Hazardous Materials Handling

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
			an SDS for downstream product users.	
Federal	49 CFR 172	Establishes standards for transportation of hazardous materials and wastes. These include labeling, packaging, shipping manifests, recordkeeping, and training requirements.	**Yes.** The project will comply with required standards for transportation of hazardous materials and wastes.	Section 3.5.2.3.1 Section 3.5.2.3.2 Section 3.5.5.1
Federal	40 CFR 68	A facility, defined in 40 CFR 68.3 as a "stationary source," that stores a hazardous material above its applicable threshold quantity is required to comply with emergency response coordination activities, implement an emergency response program, conduct emergency response training exercises, and implement applicable accident prevention measures as required by 40 CFR 68.10.	**Yes**. An Emergency Response Plan will be prepared and implemented.	Section 3.5.2.3.1 Section 3.5.2.3.2 Section 3.5.5.1
State	Health and Safety Code Section 25230 / Assembly Bill 332	Allows handling non-RCRA hazardous treated wood waste in accordance with a set of alternative management standards in lieu of the requirements for hazardous waste pursuant to Health and Safety Code, division 20, chapter 6.5, articles 6, 6.5, and 9 and California Code of Regulations, title 22, division 4.5, chapters 12, 13, 14, 15, 16, 18, and 20.	**Yes**. The Project will handle treated wood waste in accordance with this LORS.	Section 3.5.2.3.2 Section 3.5.5.2
State	Health and Safety Code Division 20, Chapter 6.11	California's Unified Hazardous Waste and Hazardous Materials Management Regulatory (Unified) Program consolidates administration, permitting, inspection, and enforcement activities of several environmental programs at a local level. Duties are delegated to Certified Unified Program Agencies (CUPAs). Multiple programs are managed under the Unified Program, including the Aboveground Petroleum Storage Act (APSA),	**Yes**. An HMBP will be prepared and implemented.	Section 3.5.2.3.2 Section 3.5.5.2

Table 3.5-3. LORS Applicable to Hazardous Materials Handling

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		area plans for hazardous material emergencies, California Accidental Release Prevention (CalARP), Hazardous Material Business Plans (HMBPs), Hazardous Materials Management Plans (HMMPs), Hazardous Materials Inventory Statements (HMISs), hazardous waste permitting (tiered permitting), and underground storage tanks.		
State	HSC Division 20 Chapter 6.95, Sections 25500 through 25519	A facility that handles a hazardous material, hazardous waste, or mixture containing a hazardous material at any one time during the reporting year greater than or equal to 55 gallons of liquid, 500 pounds of solid, or 200 cubic feet of gas is required to prepare and submit an HMBP.	**Yes.** The facility will be required to prepare and submit an HMBP for hazardous materials stored on site. HMBPs are submitted through the California Environmental Reporting System (CERS) online; submittals then go to Los Angeles County for review, approval, and further inspection. HMBPs are updated annually, or within 30 days of a change in hazardous material or waste storage at a facility.	Section 3.5.2.3.2 Section 3.5.5.2
State	California Health and Safety Code, Division 20, Chapter 6.95, Article 2, Sections 25531 to 25543.3 (California Accidental Release Prevention Program (CalARP))	The purpose of the CalARP program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, and to minimize the damage if releases do occur. CalARP requires certain facilities (referred to as "stationary sources") which handle, manufacture, use, or store any regulated substances above threshold quantities to take actions to proactively prevent and prepare for accidental releases. Facilities subject to CalARP	**Yes.** Approximately 6,000 pounds of H_2SO_4 (sulfuric acid) will be within the control house. The project will prepare and implement an RMP to proactively prevent and prepare for accidental releases.	Section 3.5.2.3.2 Section 3.5.5.2

Table 3.5-3. LORS Applicable to Hazardous Materials Handling

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		requirements must submit a Risk Management Plan (RMP).		
State	Health and Safety Code, Section 25270 through 25270.13 (Aboveground Petroleum Storage Act)	APSA regulations include aboveground petroleum storage tanks that are subject to Spill Prevention, Control, and Countermeasure (SPCC) regulations under 40 CFR 112, aboveground petroleum storage tanks that are larger than 1,320 gallons, and aboveground petroleum storage tanks in underground areas	**Yes**. An SPCC Plan will be prepared and implemented.	Section 3.5.2.3.1 Section 3.5.2.3.2 Section 3.5.5.2
Local	RULE 1403 Asbestos Emissions From Demolition/ Renovation Activities	Specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM).	**Yes**. The Project will comply with this LORS prior to demolition of the structures on site. Asbestos might also occur in ballast rock and soils associated with railroad tracks. The Project will implement Mitigation Measure HAZ-1 to address potential contaminated soil associated with the adjacent railroad.	Section 3.5.2.3.2 Section 3.5.4.1 Section 3.5.5.3
Local	Antelope Valley Area Plan	Preservation of public health, safety, and welfare, through identification of natural and environmental hazards, including noise, seismic, fire, and airborne emissions, and designation of land uses in an appropriate manner to mitigate these impacts	**Yes**. The proposed Project will not physically impede an existing emergency response plan, emergency vehicle access, or personnel access to the Project site. The Project will handle hazardous materials in accordance with applicable LORS and prepare and implement an HMBP.	Section 3.5.2.3.5 Section 3.5.5.3
Local	All-Hazards Mitigation Plan	Identifies and mitigates natural hazards	**Yes**. The proposed Project will not physically impede an existing emergency response plan,	Section 3.5.2.3.5 Section 3.5.5.3

Table 3.5-3. LORS Applicable to Hazardous Materials Handling

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
			emergency vehicle access, or personnel access to the Project site.	

3.5.5.1 Federal LORS

Clean Water Act (40 CFR 112)

The SPCC rule under the Clean Water Act is designed to prevent or contain the discharge or threat of discharge of oil into navigable waters or adjoining shorelines. Regulations (40 CFR 112) under the Clean Water Act require facilities to prepare a written SPCC plan if they store oil, and its release will pose a threat to navigable waters. The SPCC rule is applicable if a facility has a single oil aboveground storage tank with a capacity greater than 660 gallons, total petroleum storage (including aboveground storage tanks, oil-filled equipment, and drums) greater than 1,320 gallons, or underground storage capacity greater than 42,000 gallons. The SPCC rule is administered by the local Certified Unified Program Agency, which is the Los Angeles County Los Angeles County Fire Department, Health Hazardous Materials Division.

Should this exceed 1,320 gallons total on site, measures consistent with the Los Angeles County Fire Department, Health Hazardous Materials Division, ASPA Program guidance will be followed in preparation of the SPCC, which will be included in the HMBP.

Other related federal laws that address hazardous materials but do not specifically address their handling include the Resource Conservation and Recovery Act and the Occupational Safety and Health Act.

A SPCC Plan will be prepared and implemented for the Project.

40 CFR 260 through 273

The Resource Conservation and Recovery Act establishes requirements for the management of solid wastes, hazardous wastes, landfills, underground storage tanks, and some medical wastes. The following parts specifically apply to the Project.

Part 261, Identification and Listing of Hazardous Waste, outlines the requirements for identifying, characterizing, testing, and listing hazardous wastes.

Part 262, Standards Applicable to Generators of Hazardous Waste, outlines the requirements that must be followed if hazardous waste is generated at a facility, including handling, labeling, containerization, reporting, disposing, and record-keeping. Requirements vary based on the volume of hazardous waste generated.

Parts 263, 264, and 265 set forth rules and requirements for transportation, treatment, and disposal. The "generator," as defined and discussed in Part 262, is responsible for hazardous waste being transported and disposed of in accordance with these regulations.

Part 268, Land Disposal Restrictions, further requires that hazardous waste not be landfilled in non-hazardous waste facilities.

Part 273, Universal Waste Management, establishes requirements for management of specific waste identified as "universal wastes," including batteries, pesticides, mercury-containing equipment, lamps, and aerosols.

Waste generated by the Project will be characterized for disposal. If hazardous wastes are generated, they must be managed in accordance with the rules outlined in 40 CFR Part 262. All Project wastes must be characterized based on processes or chemical composition. Materials generated by the Project that cannot be used as products and must therefore be disposed of must be characterized in accordance with these rules and regulations. Wastes that are not categorized as hazardous wastes must be managed as solid waste (e.g., disposal at municipal solid waste landfill).

29 CFR 1910

The Occupational Safety and Health Administration has multiple rules and regulations established for worker protections, health, and safety to be established in the workplace.

Subpart A requires employers to provide workers with personal protective equipment and training.

Subpart I establishes requirements for the type and use of personal protective equipment.

Subpart L establishes fire protection standards.

Subpart Z establishes rules regarding toxic and hazardous substances. Under Subpart Z, the Hazard Communication Standard requires chemical manufacturers, distributors, and/or importers to provide Safety Data Sheets for each hazardous chemical to downstream users.

Personal protective equipment and training will be provided to workers handling hazardous materials and/or wastes. Fire protection systems and equipment are required for the workplace to protect against site-specific fire hazards. Additional fire protection requirements are discussed in Section 3.16. Chemical products will include a Safety Data Sheet for downstream product users.

49 CFR 172

Establishes standards for transportation of hazardous materials and wastes. These include labeling, packaging, shipping manifests, recordkeeping, and training requirements.

The project will comply with required standards for transportation of hazardous materials and wastes.

40 CFR 68

A facility, defined in 40 CFR 68.3 as a "stationary source," that stores a hazardous material above its applicable threshold quantity is required to comply with emergency response coordination activities, implement an emergency

response program, conduct emergency response training exercises, and implement applicable accident prevention measures as required by 40 CFR 68.10.

An ERP will be prepared and implemented.

3.5.5.2 State LORS

California laws and regulations relevant to hazardous materials handling at the facility include Health and Safety Code Section 25500 (hazardous materials), Health and Safety Code 25531 (regulated substances), and the Above Ground Petroleum Storage Act (petroleum in aboveground tanks).

Health and Safety Code Section 25230

The Alternative Management Standards (AMS) are statutes (HSC 25230 – 25230.18) established by Assembly Bill 332, that allows handling non-Resource Conservation and Recovery Act hazardous treated wood waste (TWW) in accordance with a set of alternative management standards in lieu of the requirements for hazardous waste pursuant to Health and Safety Code, division 20, chapter 6.5, articles 6, 6.5, and 9 and California Code of Regulations, title 22, division 4.5, chapters 12, 13, 14, 15, 16, 18, and 20. In summary, the AMS lessen storage requirements, extend accumulation periods, allow shipments without a hazardous waste manifest and a hazardous waste hauler, and allow disposal at specific non-hazardous waste landfills. The AMS simplify and facilitate the safe and economical disposal of TWW.

The AMS, which went into effect on August 31, 2021, are intended to ease regulatory burdens. Although hazardous waste generators are required to properly classify their waste through knowledge or laboratory analysis, generators of TWW can presume their TWW is hazardous waste and avoid expensive laboratory testing. Generators can then manage their waste in accordance with the AMS, including disposal at certain non-hazardous waste landfills. Upon acceptance at these certain landfills, the TWW, at that point, becomes non-hazardous waste pursuant to Health and Safety Code section 25230.16.

The Project will handle treated wood waste in accordance with this LORS.

Health and Safety Code Section 25500

California Health and Safety Code, Section 25500, et seq., and the related regulations in 19 CCR 2620, et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases.

Those using and storing hazardous materials are required to submit an HMBP to their local Certified Unified Program Agency and to report releases to their Certified Unified Program Agency and the State Office of Emergency Services. The TQs for hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure.

The facility will be required to prepare and submit an HMBP for hazardous materials stored on site. HMBPs are submitted through the California Environmental Reporting System online; submittals then go to Los Angeles County for review, approval, and further inspection. HMBPs are updated annually, or within 30 days of a change in hazardous material or waste storage at a facility.

California Health and Safety Code, Division 20, Chapter 6.95, Article 2, Sections 25531 to 25543.3 (CalARP)

The purpose of CalARP is to prevent accidental releases of substances that can cause serious harm to the public and the environment, and to minimize the damage if releases do occur. CalARP requires certain facilities (referred to as "stationary sources") which handle, manufacture, use, or store any regulated substances above threshold quantities to take actions to proactively prevent and prepare for accidental releases. Facilities subject to CalARP requirements must submit an RMP. An RMP is a document prepared by the owner or operator of a stationary source containing detailed information including, but not limited to the following:

- Regulated substances held on site at the stationary source
- Off-site consequences of an accidental release of a regulated substance
- The accident history at the stationary source
- The emergency response program for the stationary source
- Coordination with the local emergency responders
- Hazard review or process hazard analysis
- Operating procedures at the stationary source
- Training of the stationary source's personnel
- Maintenance and mechanical integrity of the stationary source's physical plant; and Incident investigation

Approximately 6,000 pounds of H_2SO_4 (sulfuric acid) will be within the control house. The project will prepare and implement an RMP to proactively prevent and prepare for accidental releases.

Aboveground Petroleum Storage Act

The California Health and Safety Code Sections 25270 to 25270.13 ensure compliance with the Clean Water Act. The law applies to facilities that operate a petroleum aboveground storage tank with a capacity greater than 660 gallons or combined aboveground storage tanks capacity greater than 1,320 gallons, or oil-filled equipment where there is a reasonable possibility that the tank(s) or equipment may discharge oil in "harmful quantities" into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare an SPCC plan.

A SPCC Plan will be prepared and implemented to ensure compliance with this LORS.

3.5.5.3 Local LORS

Antelope Valley Air Quality Management District Rule 1403 (Asbestos Emission From Demolition/Renovation Activities)

The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM; AVAQMD 1994). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

The Project will comply with this LORS prior to demolition of the structures on site. Asbestos might also occur in ballast rock and soils associated with railroad tracks. The Project will implement Mitigation Measure HAZ-1 to address potential contaminated soil associated with the adjacent railroad.

Antelope Valley Area Plan

The purpose of the Antelope Valley Area Plan is to achieve the communities' shared vision of the future through the development of specific goals, policies, land use and zoning maps, and other planning instruments. As a component of the Los Angeles County General Plan, the Antelope Valley Area Plan refines the countywide goals and policies in the General Plan by addressing specific issues relevant to the Antelope Valley.

The Conservation and Open Space and Public Safety, Services and Facilities Elements of the Plan contains goals and policies related to hazardous materials handling and the proposed Project (Los Angeles County 2015):

Conservation and Open Space (Energy)

Goal COS 10: Diverse energy systems that utilize existing renewable or waste resources to meet future energy demands.

Policy COS 10.1: Encourage the use of non-hazardous materials in all individual renewable energy systems and all utility-scale renewable energy production facilities to prevent the leaching of potentially dangerous run-off materials into the soil and watershed.

Disaster Preparedness and Emergency Response

Goal PS 6: Government officials work with community members to promote community safety.

Policy PS 6.6: Develop an inclusive master emergency plan that designates evacuation routes, emergency relief centers, emergency animal keeping shelters, and information centers in every Antelope Valley community.

Goal PS 7: Emergency services that respond in a timely manner. ·

Policy PS 7.1: Require visible addresses on buildings and at entrances to properties as required by the Fire Code.

Policy PS 7.2: Ensure that Fire Stations are adequately staffed.

Policy PS 7.3: Strive for a timely response to every call for service.

Note, goals and policies related to fire hazards, geological hazards, and flood hazards are provided in Sections 3.17, 3.16, and 3.13, respectively.

The proposed Project will not physically impede an existing ERP, emergency vehicle access, or personnel access to the Project site. The Project will handle hazardous materials in accordance with applicable LORS and prepare and implement an HMBP.

County of Los Angeles All-Hazards Mitigation Plan

The County of Los Angeles All-Hazards Mitigation Plan was last updated in 2020. The purpose of this plan, a requirement of FEMA, is to assess risks posed by natural hazards and to develop a mitigation action plan for reducing the risks in Los Angeles County (Los Angeles County 2020).

The proposed Project will not physically impede an existing ERP, emergency vehicle access, or personnel access to the Project site.

Codes

The design, engineering, construction, and operation of hazardous materials storage and dispensing systems will be in accordance with all applicable codes and standards, including the following:

- **CVC, 13 CCR 1160, et seq.** – Provides CHP with authority to adopt regulations for the transportation of hazardous materials in California. CHP can issue permits and specify which route for hazardous material delivery
- **The California Fire Code, Articles 79 and 80** – These are the hazardous materials sections of the Fire Code. Local fire agencies or departments enforce this code and can require than a HMBP and a Hazardous Materials Inventory Statement be prepared. The California Fire Code is based on the federal fire guidelines, which include the Uniform Fire Code.
- **State Building Standard Code, Health, and Safety Code Sections 18901 to 18949** – Incorporates the Uniform Building Code, Uniform Fire Code and Uniform Plumbing Code

3.5.6 Agencies and Agency Contacts

Applicable agency contacts for hazardous materials handling are shown in Table 3.5-4. Approval of an HMBP and RMP from the Los Angeles County Fire Department, Health Hazardous Materials Division will be superseded by CEC approval of the Project under the opt-in program. The Project will prepare a SPCC and approval of the SPPC will also be superseded by CEC approval under the opt-in program. In addition, the Project will be designed per Los Angeles County Fire Department requirements and standards for BESS, however, approval from the Los Angeles County Fire Department will also be superseded by CEC approval of the Project under the opt-in program.

Table 3.5-4. Permits and Agency Contacts

Issue/Approval	Agency Contact	Applicability
HMBP*	Los Angeles County Fire Department, Health Hazardous Materials Division Mario Tresierras, Division Chief 5825 Rickenbacker Road Commerce, California 90040 323.890.4045 Fire-HHMDCERS@fire.lacounty.gov	Hazardous materials compliance

Table 3.5-4. Permits and Agency Contacts

Issue/Approval	Agency Contact	Applicability
SPCC*	Same contact as above.	Hazardous materials compliance
RMP*	Same contact as above.	Hazardous materials compliance
Plan check approval*	Los Angeles County Fire Department, Fire Prevention Division Richard H. Stillwagon, Division Chief 5823 Rickenbacker Road Commerce, California 90040 323.890.4243 richard.stillwagon@fire.lacounty.gov	Fire protection compliance

Note:
* State and local approvals will be superseded by CEC approval of the Project under the Opt-In program.

3.5.7 Permits and Permit Schedule

Given the Commission's preemptive authorities under applicable State law, there are no additional applicable permits or permit schedule for hazardous materials handling.

3.5.8 References

ATSDR (Agency for Toxic Substances and Disease Registry). 1996. Fuel Oils CAS # 8008-20-6, 70892-10-3, 68476-30-2, 68476-34-6, 68476-31-3 Fact Sheet. September 1996. Accessed January 2025. https://www.atsdr.cdc.gov/toxfaqs/tfacts75.pdf.

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Los Angeles County. 2020. *County of Los Angeles All-Hazards Mitigation Plan*. Accessed January 2025. https://ceo.lacounty.gov/wp-content/uploads/2022/04/County-of-Los-Angeles-All-Hazards-Mitigation-Plan-APPROVED-05-2020.pdf.

NFPA (National Fire Protection Association). 2016. *Hazard Assessment of Lithium Ion Battery Energy Storage Systems FINAL REPORT*. February 2016. Accessed January 2025. https://www.nfpa.org/education-and-research/research/fire-protection-research-foundation/projects-and-reports/hazard-assessment-of-lithium-ion-battery-energy-storage-systems.

NLM (National Library of Medicine). 2025. Emergency and Continuous Exposure Limits for Selected Airborne Contaminants – Sulfuric Acid. Accessed June 17, 2025. https://www.ncbi.nlm.nih.gov/books/NBK208279/.

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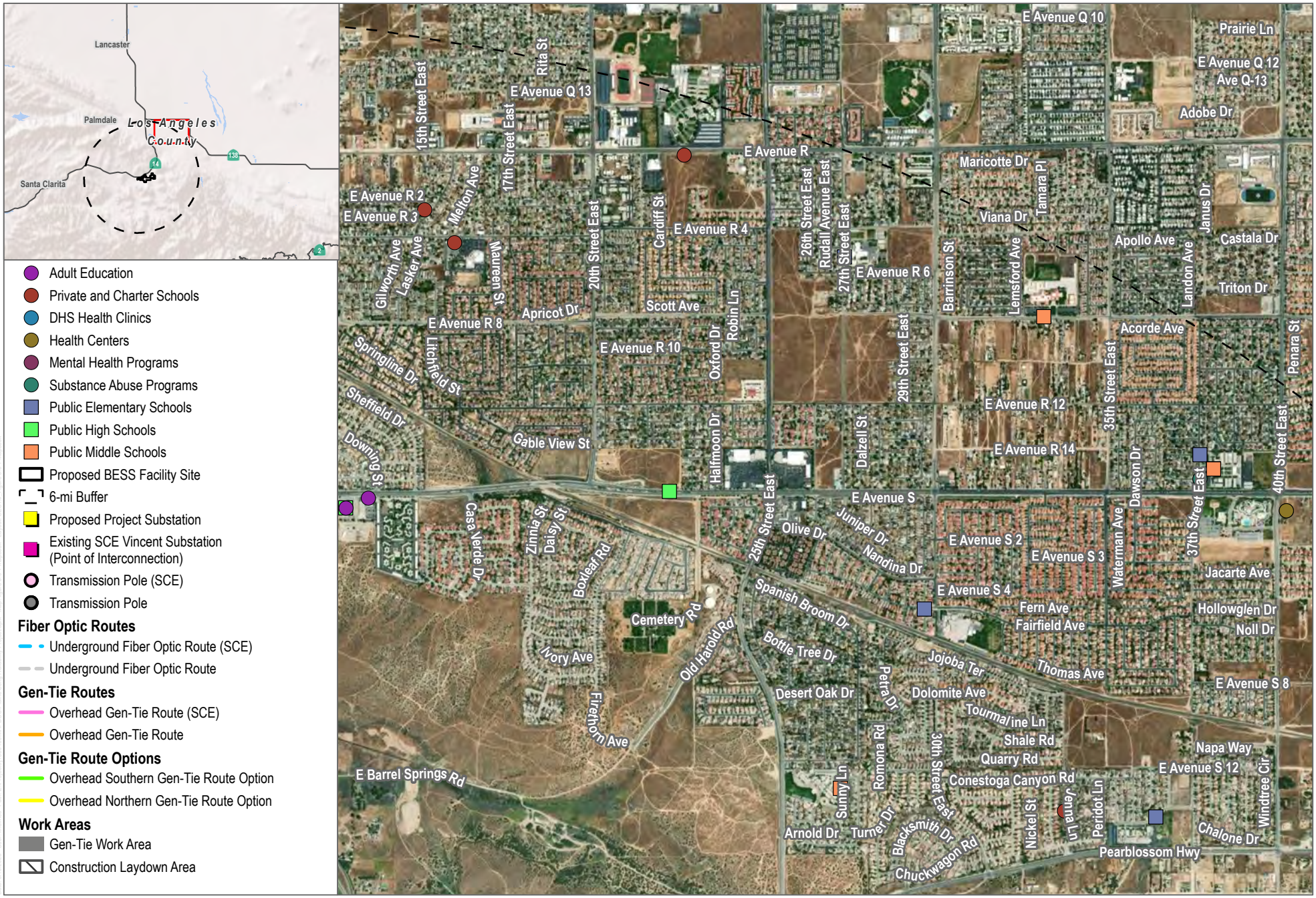

SOURCE: Los Angeles County; World Imagery

DUDEK

0 1,000 2,000 Feet

FIGURE 3.5-1-1

Sensitive Receptors within a 6-Mile Radius of the Project Site

Prairie Song Reliability Project

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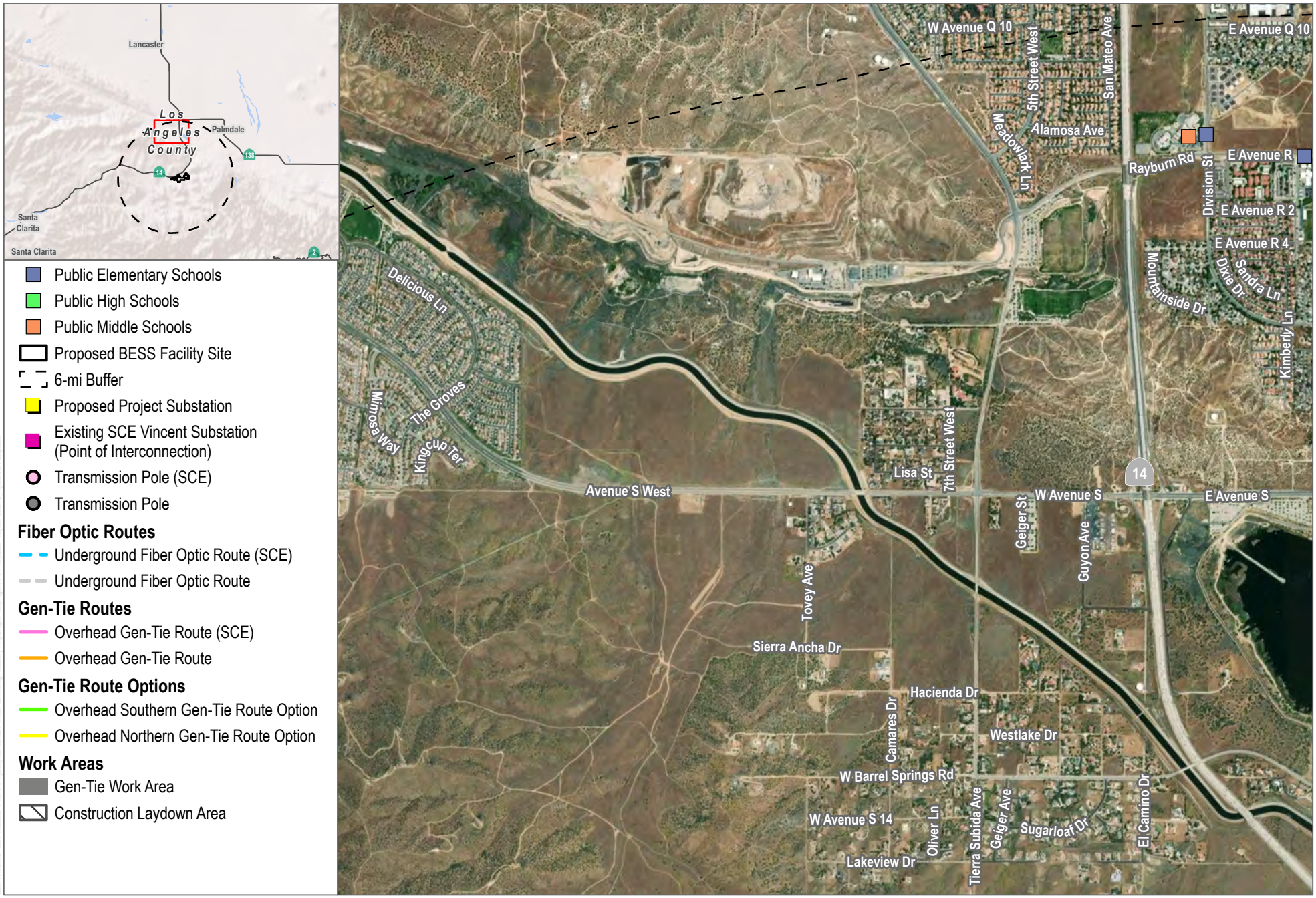

SOURCE: Los Angeles County; World Imagery

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0 1,000 2,000 Feet

FIGURE 3.5-1-2

Sensitive Receptors within a 6-Mile Radius of the Project Site

Prairie Song Reliability Project

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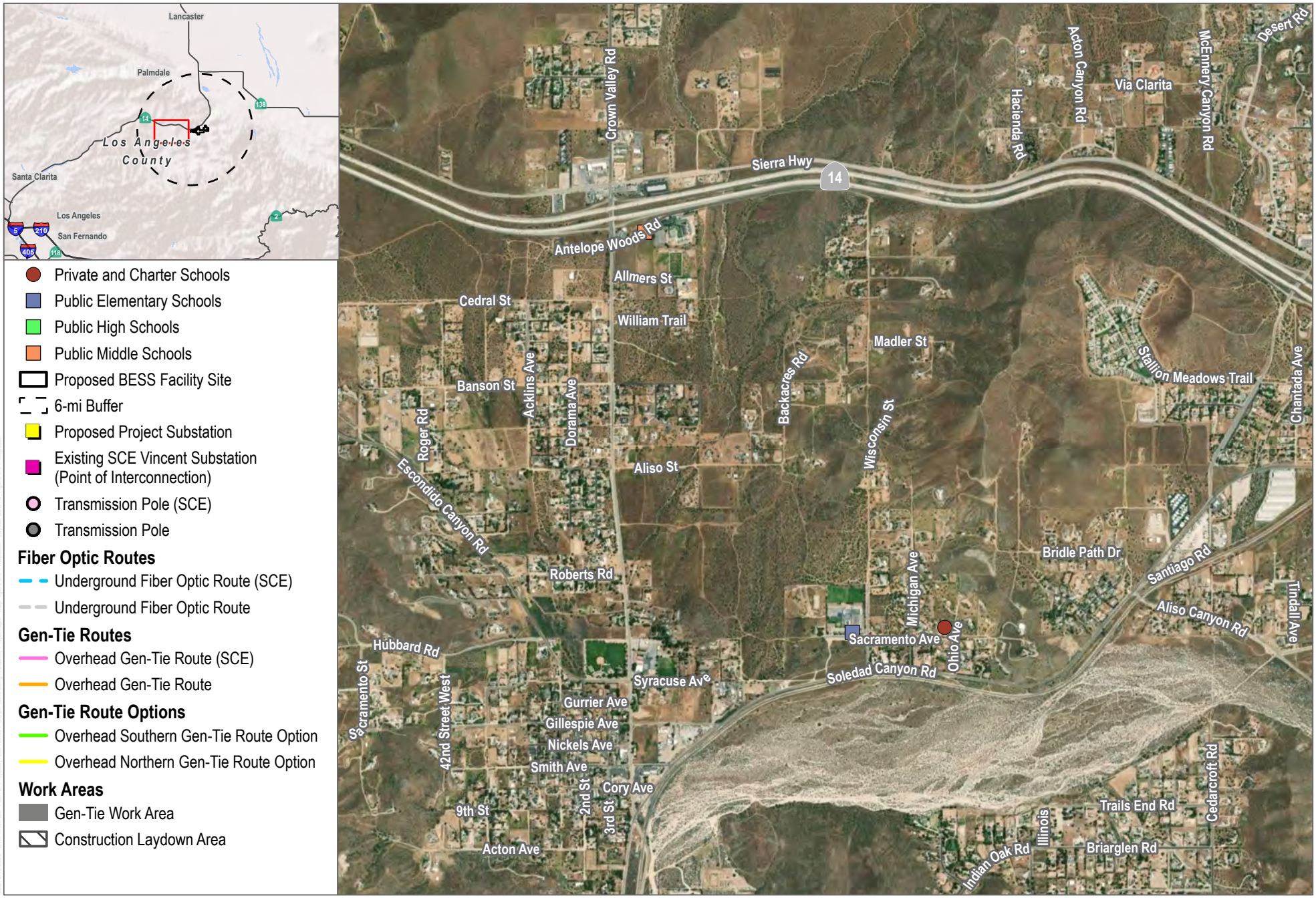

SOURCE: Los Angeles County; World Imagery

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FIGURE 3.5-1-3

Sensitive Receptors within a 6-Mile Radius of the Project Site

Prairie Song Reliability Project

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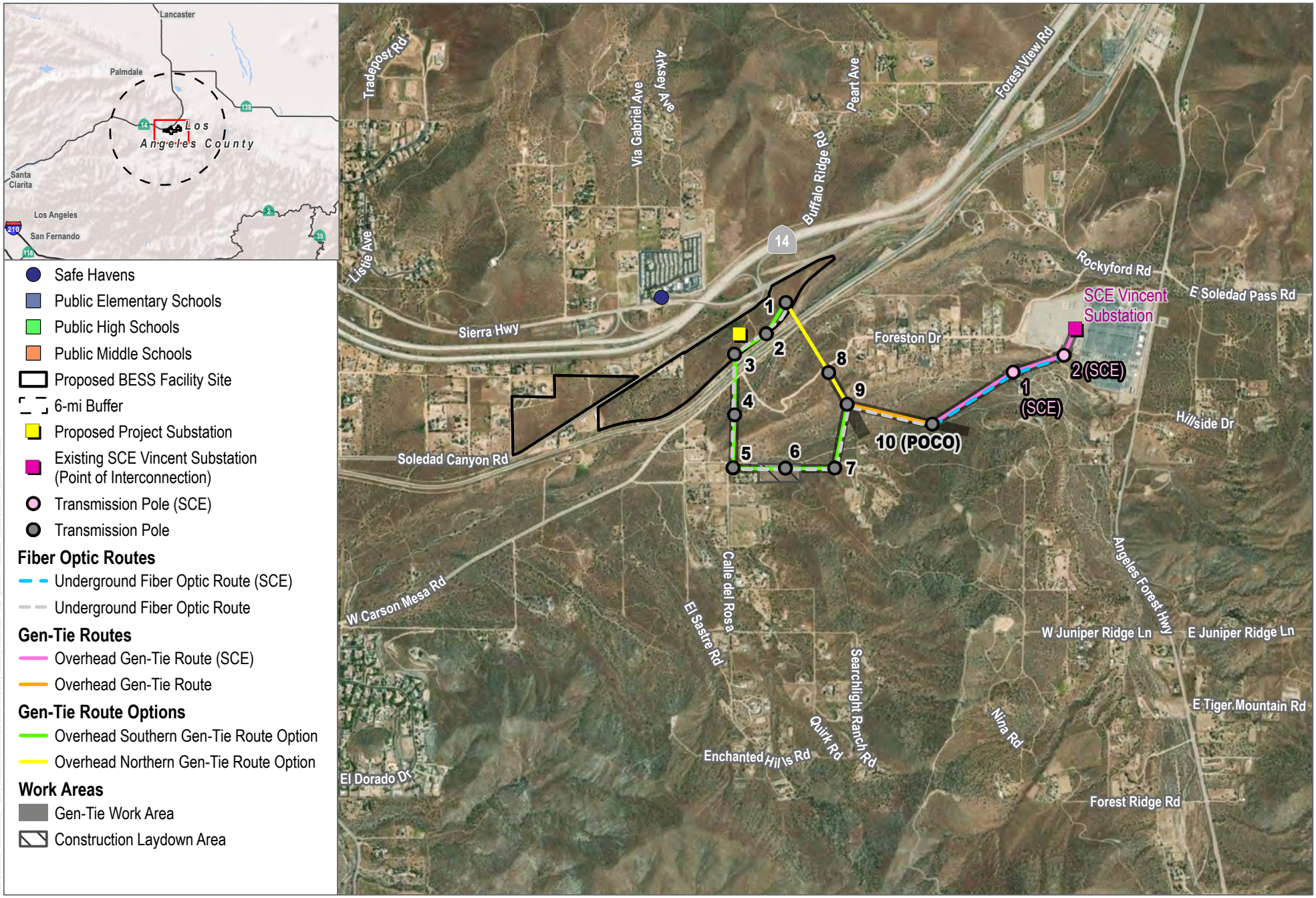

SOURCE: Los Angeles County; World Imagery

DUDEK

0 1,000 2,000 Feet

FIGURE 3.5-1-4

Sensitive Receptors within a 6-Mile Radius of the Project Site

Prairie Song Reliability Project

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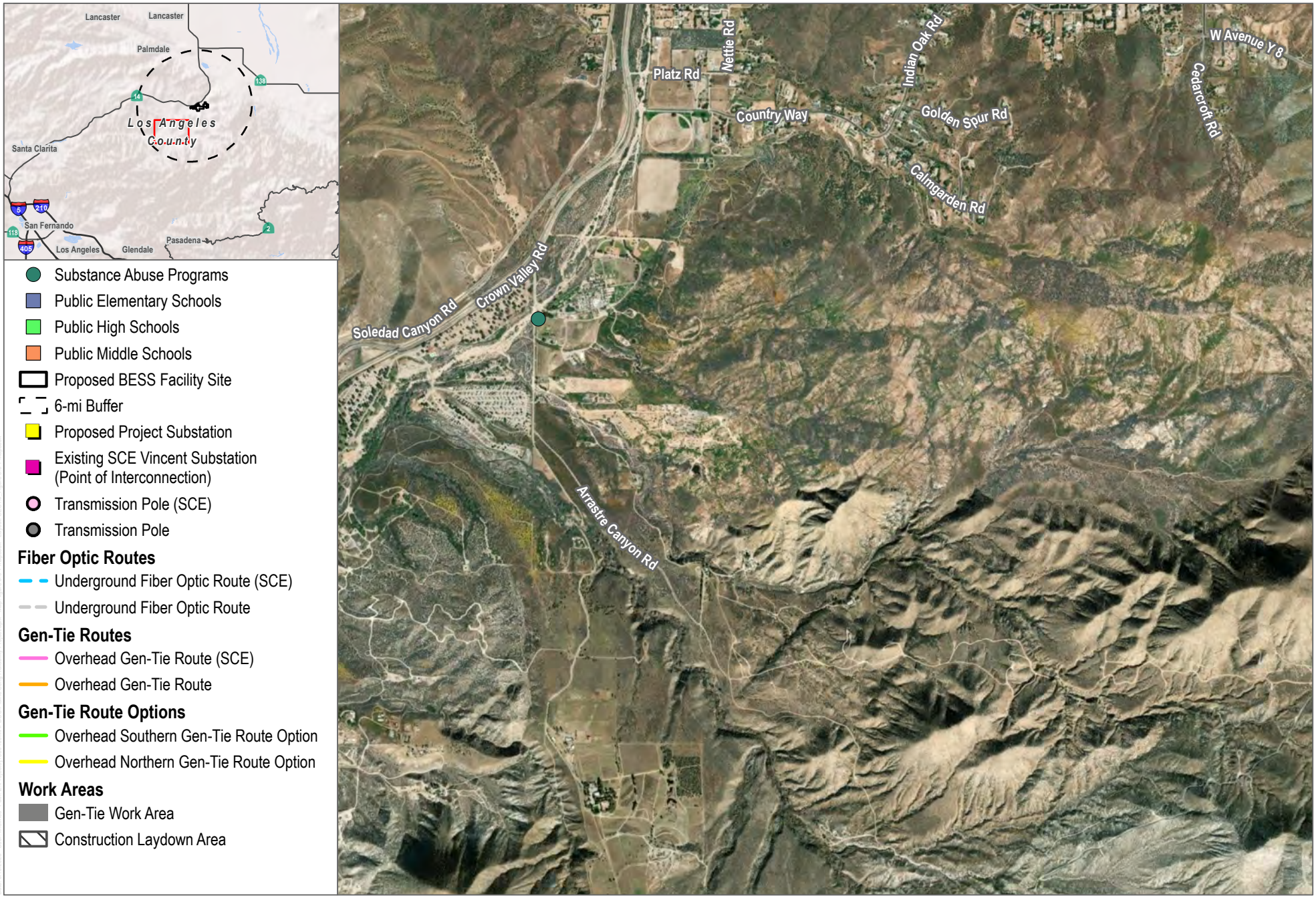

SOURCE: Los Angeles County; World Imagery

DUDEK

0 1,000 2,000 Feet

FIGURE 3.5-1-5

Sensitive Receptors within a 6-Mile Radius of the Project Site

Prairie Song Reliability Project

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3.6 Land Use

This section provides an evaluation of land use within the study area and is based on review of local, regional, and statewide policies, regulations, and plans applicable to the Prairie Song Reliability Project (Project). The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility using lithium-iron phosphate cells or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This evaluation of land use includes the following elements:

- Section 3.6.1 describes the existing land use environment that could be affected from Project implementation.
- Section 3.6.2 identifies potential environmental impacts that may result from Project construction, operation, maintenance, and decommissioning.
- Section 3.6.3 discusses potential cumulative effects.
- Section 3.6.4 describes Project design and mitigation measures that will be implemented to avoid or minimize potentially significant impacts.
- Section 3.6.5 discusses the applicable laws, ordinances, regulations, and standards (LORS).
- Section 3.6.6 lists of agencies and agency contacts.
- Section 3.6.7 discusses permits and permit schedules.
- Section 3.6.8 lists reference materials used in the preparing this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical information, included as an appendix to this application:

- Appendix 3.6A – Department of Defense Military Aviation and Installation Assurance Siting Clearinghouse Letter

A summary of the land use evaluation is provided in the table below.

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
1	Physically divide an established community?	☐	☐	☐	☒
2	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?	☐	☐	☒	
3	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	☐	☐	☐	☒

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
	the California Resources Agency, to non-agricultural use, excepting those lands that would be expected to be converted or retired even without the project due to insufficient water resources for continued commercial agriculture, land subsidence due to historic groundwater over-pumping, soil contamination due to inadequate drainage, or the local weather effects of climate change?				
4	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
5	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

3.6.1 Environmental Setting

This section describes the existing land use environment of the Project site, which comprises the approximately 100-acre BESS facility and associated gen-tie line routes.

3.6.1.1 Regional Setting

The Project site is in the Antelope Valley area of unincorporated Los Angeles County, California, approximately 3 miles northeast of the community of Acton. The Project site is north of Angeles National Forest and is between two existing transportation corridors: the Antelope Valley Freeway (State Route 14) to the north and the Southern Pacific Railroad lines to the south. The nearest incorporated municipality is the City of Palmdale, which is approximately 4 miles to the northeast.

3.6.1.2 Local Setting

The BESS facility will be in Los Angeles County, California, within an approximately 71-acre portion of Assessor's Parcel Numbers (APNs) 3056-017-007, 3056-017-020, 3056-017-021, 3056-019-013, 3056-019-026, 3056-019-037, and 3056-019-040 (see Figure 3.6-1, Project Site, and Figure 3.6-2, Assessor Parcel Number (APN) Map). The parcels currently consist of undeveloped lands, a residence, and disturbed dirt roads.

The Project will use one of two potential gen-tie routes. The Northern Gen-Tie Route will extend approximately 1.1 miles south and east from the Project substation, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceed northeast to the point of interconnection (POI) at the Vincent Substation. The Northern Gen-Tie Route will be sited on APNs 3056-017-021, 3056-017-905, 3056-017-026, 3056-015-008, 3056-015-023, 3056-005-818, 3056-005-817, 3056-005-816, 3056-015-802, and 3056-015-801. The Southern Gen-Tie Route will extend approximately 1.8 miles and will be south and east of the Project substation,

crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceeding northeast to the point of interconnection at the SCE Vincent Substation. The Southern Gen-Tie Route will be sited on APNs 3056-017-021, 3056-017-020, 3056-017-022, 3056-017-016, 3056-027-031, 3056-027-007, 3056-017-028, 3056-017-027, 3056-017-026, 3056-015-008, 3056-015-023, 3056-005-818, 3056-005-817, 3056-005-816, 3056-015-802, and 3056-015-801. The Project will also include three fiber-optic telecommunications lines: one will be installed aboveground on the gen-tie structures (along whichever gen-tie route is ultimately selected) and the other two will be installed underground within the Southern Gen-Tie Route corridor. The two other fiber-optic lines will be installed underground within the Southern Gen-Tie Route corridor regardless of which gen-tie route option is selected. The Project's interconnection facilities will be within the SCE Vincent Substation.

Land uses in the immediate vicinity of the Project site include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, State Route 14, and railroad lines. There are a few single-family residences adjacent to the BESS site's northern and western boundaries, as well as a few other single-family residences in the vicinity of the gen-tie line routes.

3.6.1.3 Existing Land Use and Zoning

Most of the Project site is currently undeveloped and has remained largely unchanged since the 1990s based on aerial imagery (Google Earth 2025). The Project site is within the Antelope Valley Area Plan area, and land use of the Project parcels is designated as Rural Land 2 and Rural Land 5 (RL-2 and RL-5) (County of Los Angeles 2015, 2024a) (Figure 3.6-3, Existing Land Use). The zoning of the Project parcels is Heavy Agriculture (A-2-2) and Light Agriculture (A-1-2) (County of Los Angeles 2024a) (Figure 3.6-4, Existing Zoning). As designated in the Los Angeles County General Plan, the Project site is within a Military Operation Area – Floor Elevation from Ground Level – 1,000 to 2,000 Feet (County of Los Angeles 2024b).

Beyond the Project site to the north, south, east, and west, the zones and land use designations are predominantly agriculture and rural land. Relative to the proposed BESS facility, the Antelope Valley Freeway (State Route 14) is approximately 0.10 miles north, and the Southern Pacific Railroad lines are 0.06 miles to the south. Vacant land and scattered residences are east and west of the site (Google Earth 2025).

3.6.1.4 Farmland and Williamson Act Contract

The Project site currently consists of land designated as Other Land per the California Department of Conservation's Important Farmland Finder. Other Land is defined as "land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land" (California Department of Conservation 2025a, 2025b). Additionally, the surrounding lands, except for a small area along Foreston Drive designated as Urban and Built-Up Land, are also mapped as Other Land. No lands designated as Prime Farmland, Unique Farmland, or Farmland of Local Importance are on, or within the immediate vicinity of the Project site (Figure 3.6-5, Farmland Mapping and Monitoring Program Designations).

The California Land Conservation Act of 1965 authorizes local governments to contract with private landowners for the purpose of restricting specific parcels of land to agricultural, recreational, or open space uses, and compatible uses. These contracts are referred to as Williamson Act contracts. Per the California Williamson Act Enrollment

Finder, the proposed BESS facility site and gen-tie corridors are not under any Williamson Act contract (Department of Conservation 2025c).

3.6.2 Impact Analysis

3.6.2.1 Methodology

The potential impacts associated with the Project were evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses, and includes consideration of applicable planning documents. The change in the land use on the Project site is considered potentially significant if the effect described under the thresholds of significance below occurs as a result of the Project.

3.6.2.2 Impact Evaluation Criteria

California Environmental Quality Act (CEQA) Guidelines Appendix G is a screening tool, not a method for setting thresholds of significance. CEQA Guidelines Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to make a determination as to whether a project requires an Environmental Impact Report, Mitigated Negative Declaration, or Negative Declaration. As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances."

The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Guidelines Appendix G are instructive. With respect to land use, CEQA Guidelines Appendix G asks, in part, would the project:

- Physically divide an established community?
- 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?
- 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, excepting those lands that would be expected to be converted or retired even without the project due to insufficient water resources for continued commercial agriculture, land subsidence due to historic groundwater over-pumping, soil contamination due to inadequate drainage, or the local weather effects of climate change?
- Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

3.6.2.3 CEQA Appendix G Assessment Criteria

3.6.2.3.1 Would the Project divide an established community?

No Impact. Neither the BESS facility nor the gen-tie transmission line routes will physically divide an established community. The BESS facility will be on undeveloped property between two transportation corridors: the Antelope Valley Freeway (State Route 14) and the Southern Pacific Railroad Lines and Carson Mesa Road. The gen-tie will

extend from the BESS facility site to the SCE Vincent Substation, which is approximately 1 mile to the east, and will be sited within an area that contains several existing high-voltage transmission lines. Additionally, the Project site will be within an undeveloped rural area on the outskirts of the unincorporated community of Acton. The nearest municipality to the Project site is the City of Palmdale, which is approximately 4 miles to the northeast. There are a few single-family residences adjacent to the BESS site's northern and western boundaries, as well as a few other single-family residences in the vicinity of the gen-tie line routes.

The Project will maintain all existing access routes in the area. The Project will not result in the construction of new roadways or the elimination of existing roadways that could have the potential to isolate existing uses or create a diversion between existing local uses. There will be new private access roads internal to the Project site, but they will not affect public roads. The proposed Project will not impede the movement of goods or services to the surrounding residences because operational traffic demands will be almost negligible. Construction and decommissioning traffic will be temporary and short-term. Therefore, n**o impact** will occur.

3.6.2.3.2 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. As part of the Opt-In Application process, the California Energy Commission (CEC) will review the Project for consistency with the County of Los Angeles's (County) land use plans, policies, and regulations. Assembly Bill (AB) 205 expanded the CEC's authority under the Warren-Alquist Act to establish a new certification program for eligible non-fossil-fueled power plants using emergency rulemaking authority provided by AB 205. As part of the Opt-In Application process established under AB 205, the CEC will determine whether the Project will conflict with the County's land use and zoning policies. The Project's conformity with the County's General Plan and Municipal Code is provided below.

Consistency with the County's General Plan/Antelope Valley Area Plan

The Project site is within the Antelope Valley community and falls under the jurisdiction of the Antelope Valley Area Plan, which contains goals and policies that are designed to guide future development within the Antelope Valley community. As a component of the Los Angeles County General Plan, the Antelope Valley Area Plan refines the Countywide goals and policies in the General Plan by addressing specific issues relevant to the Antelope Valley, such as community maintenance and appearance, and provides more specific guidance on elements already found in the General Plan (County of Los Angeles 2024a).

The Antelope Valley Area Plan addresses goals, values and vision, land use, mobility, conservation and open space, public safety, services and facilities, economic development, community-specific land use concepts, and plan implementation (County of Los Angeles 2024a).

Table 3.6-1 details the Project's conformity with the Antelope Valley Area Plan.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy LU 3.1: Except within economic opportunity areas, prohibit new development on fault traces and limit the amount of development in Seismic Zones, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable.** The Project site is not within a Seismic and Geotechnical Hazard Zone per the Los Angeles County General Plan Seismic and Geotechnical Hazard Zones Policy Map. Further, the Project is in an area designated in an area of very low residential densities per the Land Use Policy Map (Map 2.1) and will not conflict with this policy.
Policy LU 3.2: Except within economic opportunity areas, limit the amount of potential development in Very High Fire Hazard Severity Zones, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Applicable and consistent.** The Project site is within a Very High Fire Hazard Severity Zone but does not contain residential uses. The Project will maintain the existing land use designation of very low residential densities per the Land Use Policy Map (Map 2.1). In addition, there will be limited number of on-site operational employees (16 employees) once construction is complete. Furthermore, the Project is equipped with multiple fire detection systems and is designed to comply with all applicable fire codes. The Project will not conflict with this policy.
Policy LU 3.3: Except within economic opportunity areas, limit the amount of potential development in Flood Zones designated by the Federal Emergency Management Agency, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Applicable and consistent.** The Project's gen-tie lines traverse over a Flood Zone designated by the Federal Emergency Management Agency as a special flood hazard area. However, the Project is designed to minimize development in these hazard areas. Furthermore, the Project does not contain residential uses and will maintain the existing land use designation of very low residential densities per the Land Use Policy Map (2.1). The Project will not conflict with this policy.
Policy LU 3.4: Except within economic opportunity areas, limit the amount of potential development on steep slopes identified as Hillside Management Areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable.** The Project is not on land identified as a Hillside Management Area per the Los Angeles County General Plan Hillside Management Areas and Ridgeline Management Map. The Project will maintain the existing land use designation of very low residential densities per Land Use Policy Map (Map 2.1) and will not conflict with this policy.
Policy LU 3.5: Except within economic opportunity areas, limit the amount of potential development in landslide and liquefaction areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable**. The Project is not within landslide and liquefaction areas per the Los Angeles County General Plan Seismic and Geotechnical Hazard Zones Policy Map. The Project will maintain the existing land use designation of very

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
	low residential densities per the Land Use Policy Map (2.1) and will not conflict with this policy.
Policy LU 3.6: Except within economic opportunity areas, limit the amount of potential residential development in airport influence areas and near military lands, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable**. The Project is not within an airport influence area per the Los Angeles County General Plan Airport Influence Areas Policy Map. The Project will limit development within the military operation area by maintaining the existing land use designation of very low residential densities and will not conflict with this policy
Policy LU 3.7: All development projects located on parcels that are within an airport influence area shall be consistent with all policies of that airport's land use compatibility plan.	**Not applicable**. None of the Project parcels are within an airport influence area per the Los Angeles County General Plan Airport Influence Areas Policy Map and will not conflict with this policy.
Policy LU 4.1: Direct the majority of the unincorporated Antelope Valley's future growth to the economic opportunity areas and areas that are served by existing or planned infrastructure, public facilities, and public water systems, as indicated in the Land Use designations shown on the Land Use Policy Map (Map 2.1) of this Area Plan.	**Applicable and consistent**. The Project will be a remotely operated facility with 16 on-site operational and maintenance employees. The Project's operations and maintenance building will connect to existing water and septic systems and will not conflict with this policy.
Policy LU 5.1: Ensure that development is consistent with the Sustainable Communities Strategy adopted in 2012, an element of the Regional Transportation Plan developed by the Southern California Association of Governments.	**Applicable and consistent**. The Project will provide the State of California with a mechanism of capturing, storing, and deploying renewable energy sources that will assist the State of California in complying with the Renewables Portfolio Standard under Senate Bill 350 (2015), which requires that 50% of all electricity sold in the state to be generated from renewable energy sources by December 31, 2030, and will support the Sustainable Communities Strategy's goal of reducing greenhouse gas emissions by enhancing the efficiency and reliability of renewable energy sources. Senate Bill 100 was approved in September 2018 and would increase the Renewables Portfolio Standard to a 100% goal by 2045.
Policy LU 5.2: Encourage the continued development of rural town centers that provide for the daily needs of surrounding residents, reducing the number of vehicle trips and providing local employment opportunities.	**Not applicable**. The Project will not contain commercial or residential uses and will not result in the continued development of rural town centers. Further, during operation of the Project, the number of vehicles trips associated with operations and maintenance of the Project will be minimal.

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Policy	Project Consistency
Policy LU 5.3: Preserve open space areas to provide large contiguous carbon sequestering basins.	**Not applicable**. The Project site is not designated as an open space area.
Policy LU 5.4: Ensure that there is an appropriate balance of residential uses and employment opportunities within close proximity of each other.	**Not applicable**. The Project is not a residential project.
Policy LU 6.2: Ensure that the Area Plan is flexible in adapting to new issues and opportunities without compromising the rural character of the unincorporated Antelope Valley.	**Applicable and consistent**. The Project will support the local community by providing improved efficiency and reliability of the electric grid, and, combined with other sustainable new energy technology that the Area Plan promotes, decrease the reliance on fossil fuels. The Project will be sited between two transportation corridors, near existing utility structures. Further, the Project will include a split face minimum 8-foot-tall masonry wall surrounding the BESS facility to aid as a visual buffer that will blend with the surrounding area. Refer to Section 3.13, Visual Resources, for additional details regarding visual resources.
Policy COS 3.1: Discourage the use of chemical fertilizers, herbicides and pesticides in landscaping to reduce water pollution.	**Applicable and consistent**. The Project will limit the use chemical fertilizers, herbicides, and pesticides in landscaping to the extent feasible.
Policy COS 3.2: Restrict the use of septic systems in areas adjacent to aqueducts and waterways to prevent wastewater intrusion into the water supply.	**Applicable and consistent**. The Project will remove the existing septic system on site and replace it with one that is farther away from major waterways, and will adhere to applicable regulations governing septic systems to prevent intrusion into the water supply.
Policy COS 3.3: Require a public or private sewerage system for land use densities that would threaten nitrate pollution of groundwater if unsewered, or when otherwise required by County regulations.	**Not applicable.** The Project will not require sewage systems.
Policy COS 3.4: Support preservation, restoration and strategic acquisition of open space to preserve natural streams, drainage channels, wetlands, and rivers, which are necessary for the healthy functioning of ecosystems.	**Applicable and consistent**. At the end of the Project's useful life, the Project will undergo decommissioning to standards required by then-current LORS.
Policy COS 3.5: Protect underground water supplies by enforcing controls on sources of pollutants.	**Applicable and consistent**. The Project will adhere to all applicable requirements governing spill prevention, hazardous materials, and stormwater management.
Policy COS 3.6: Support and encourage water banking facilities throughout the Antelope Valley, including within Significant Ecological Areas.	**Not applicable**. The Project will not entail a water banking facility.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy COS 4.1: Direct the majority of the unincorporated Antelope Valley's future growth to rural town centers and economic opportunity areas, minimizing the potential for habitat loss and negative impacts in Significant Ecological Areas.	**Applicable and consistent**. The BESS facility is not within a Significant Ecological Area. The gen-tie line will be sited in a Significant Ecological Area, but it falls in line with the existing land uses in the vicinity (SCE Vincent Substation). Furthermore, the Project will facilitate deployment of additional renewable energy resources in furtherance of several recent federal and state goals and targets regarding renewable energy resources, clean electricity, and zero carbon emissions.
Policy COS 4.2: Limit the amount of potential development in Significant Ecological Areas, including the Joshua Tree Woodlands, wildlife corridors, and other sensitive habitat areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Applicable and consistent**. The Project will limit the amount of disturbance within the Significant Ecological Area. The BESS facility site is not within a Significant Ecological Area. The gen-tie line will be sited within a Significant Ecological Area but will maintain the existing very low residential density.
Policy COS 4.3: Require new development in Significant Ecological Areas to comply with applicable Zoning Code requirements, ensuring that development occurs on the most environmentally suitable portions of the land. Policy COS 4.4: Require new development in Significant Ecological Areas, to consider the following in design of the project, to the greatest extent feasible: ▪ Preservation of biologically valuable habitats, species, wildlife corridors and linkages; ▪ Protection of sensitive resources on the site within open space; ▪ Protection of water sources from hydromodification in order to maintain the ecological function of riparian habitats; ▪ Placement of development in the least biologically sensitive areas on the site, prioritizing the preservation or avoidance of the most sensitive biological resources onsite; ▪ Design of required open spaces to retain contiguous undisturbed open space that preserves the most sensitive biological resources onsite and/or serves to maintain connectivity; ▪ Maintenance of watershed connectivity by capturing, treating, retaining and/or infiltrating storm water flows on site; and ▪ Consideration of the continuity of onsite open space with adjacent open space in project design.	**Applicable and consistent**. The BESS facility is not within a Significant Ecological Area. A portion of the gen-tie line will be sited within a Significant Ecological Area and will comply with all Zoning Code requirements. In addition, the gen-tie line has been sited along existing roads to the extent feasible. Furthermore, environmental clearance surveys will be conducted to ensure that no unmitigated impacts will occur to biologically valuable habitats, species, wildlife corridors, or linkages. No water sources or watersheds will be impacted by the Project. Detention basins and stormwater facilities will be created for hydrologic control, and applicable best management practices will be implemented to prevent soil erosion and sedimentation.

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Policy	Project Consistency
Policy COS 4.5: Subject to local, state or federal laws, require new development to provide adequate buffers from preserves, sanctuaries, habitat areas, wildlife corridors, State Parks, and National Forest lands, except within Economic Opportunity Areas.	**Applicable and consistent**. The BESS facility is not within a Significant Ecological Area. A portion of the gen-tie line is sited within a Significant Ecological Area and will comply with all Zoning Code requirements. The Angeles National Forest is more than 1 mile from the Project site, which provides an adequate buffer. Further, the Project will be sited between two transportation corridors, near existing utility structures.
Policy COS 4.6: Encourage connections between natural open space areas to allow for wildlife movement. Policy COS 4.7: Restrict fencing in wildlife corridors. Where fencing is necessary for privacy or safety, require appropriate development standards that maximize opportunities for wildlife movement.	**Applicable and consistent.** The BESS facility site is between two transportation corridors: State Highway 14 and the Southern Pacific Rail lines, and will not impede wildlife movement north of State Highway 14 or south of the Southern Pacific Rail lines. The Project will include an overhead gen-tie line and underground communication lines, neither of which will be fenced, allowing wildlife to move without restriction. Refer to Section 3.2, Biological Resources, for additional details.
Policy COS 4.8: Ensure ongoing habitat preservation by coordinating with the California Department of Fish and Game to obtain the latest information regarding threatened and endangered species. Policy COS 4.9: Ensure water bodies are well-maintained to protect habitat areas and provide water to local species. Policy COS 4.10: Restrict development that would reduce the size of water bodies, minimizing the potential for loss of habitat and water supply.	**Applicable and consistent**. The Project applicant established communication with the California Department of Fish and Wildlife and is committed to future correspondence. The Project will not interfere or conflict with this policy. Please refer to Section 3.2, Biological Resources, for additional details.
Policy COS 5.1: Identify and protect natural landforms and vistas with significant visual value, such as the California Poppy Preserve, by designating them as Scenic Resource Areas.	**Not applicable**. The Project will not interfere or conflict with this policy. Please refer to Section 3.13, Visual Resources, for additional details regarding visual resources.
Policy COS 5.2: Except within economic opportunity areas, limit the amount of potential development in Scenic Resource Areas through appropriate land use designations with very low densities in order to minimize negative impacts from future development.	**Not applicable**. The Project is not in a Scenic Resource Area.
Policy COS 5.3: Require new development in Hillside Management Areas to comply with applicable Zoning Code requirements, ensuring that development occurs on the most environmentally suitable portions of the land.	**Not applicable**. The Project is not within a Hillside Management Area.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy COS 5.4: Require appropriate development standards in Hillside Management Areas that minimize grading and alteration of the land's natural contours, ensure that development pads mimic natural contours, and ensure that individual structures are appropriately designed to minimize visual impacts.	
Policy COS 5.5: Require adequate erosion control measures for all development in Hillside Management Areas, both during and after construction.	**Not applicable**. The Project site is not in a Hillside Management Area. Regardless, the Project will implement best management practices to reduce erosion during construction.
Policy COS 5.6: Restrict development on buttes and designated significant ridgelines by requiring appropriate buffer zones.	**Not applicable**. The Project site is not on a butte or designated significant ridgeline.
Policy COS 5.7: Ensure that incompatible development is discouraged in designated Scenic Drives by developing and implementing development standards and guidelines for development within identified viewsheds of these routes (Map 4.2: Antelope Valley Scenic Drives).	**Not applicable**. The Project site is not in a designated Scenic Drive.
Policy COS 6.1: Limit the amount of potential residential development in Agricultural Resource Areas (Map 4.3: Agricultural Resource Areas) through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan, minimizing the potential for future land use conflicts. Policy COS 6.2: Limit incompatible non-agricultural uses in Agricultural Resource Areas. Where non-agricultural uses are necessary to meet regional or community needs, require buffering and appropriate development standards to minimize potential conflicts with adjacent agricultural uses.	**Not applicable**. The Project is not a residential development project. The Project site is not in an Agricultural Resource Area.
Policy COS 6.3: Ensure that agricultural activities are included within the Antelope Valley's economic development strategies and pursue funding to support rural economic development and agriculture. Policy COS 6.4: Encourage the establishment of community farms, community gardens, and similar agricultural operations to produce local food and demonstrate the history, importance, and value of agriculture in the Antelope Valley. Policy COS 6.5: Encourage the establishment of local farmer markets, roadside stands, wineries and tasting rooms, and other forms of "agricultural tourism" throughout the Antelope Valley to expand potential sources of farm income	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 6.6: Provide educational resources to farmers.	**Not applicable**. The Project is not an agricultural use. The Project does not contain any Williamson Act Contract lands (California Department of Conservation 2025c).

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy COS 6.7: Investigate the feasibility of financial and/or zoning incentive programs for farmers, such as Williamson Act contracts, conservation easements and flexible zoning provisions. Policy COS 6.8: Support innovative agricultural business practices, such as agricultural tourism and farmers' cooperatives, necessary for adapting to changing economic and environmental conditions by streamlining regulations. Policy COS 7.1: Promote agricultural uses which sequester carbon and fix nitrogen. Policy COS 7.2: Support the use of alternative and renewable energy systems in conjunction with agricultural activities. Policy COS 7.3: Encourage sustainable agricultural and water quality best management practices such as runoff detention basins, use of vegetation filter strips, and organic farming. Policy COS 7.4: Ensure that agricultural activity is managed to minimize soil erosion and the release of contaminants into surface and groundwater resources.	
Policy COS 8.1: Allow new mineral resource extraction activities only in designated Mineral Resource Areas. Policy COS 8.2: Where new mineral resource extraction activities are allowed, ensure that applications undergo full environmental review and public noticing. Require site remediation after completion of mineral resource extraction activities. Policy COS 8.3: Provide strict enforcement of illegal or unpermitted mineral extraction activities. Policy COS 8.4: Protect MRZ-2's and access to MRZ-2's in the Antelope Valley from incompatible development and discourage incompatible adjacent land uses Policy COS 8.5: Work collaboratively with agencies to identify Mineral Resource Zones in the Antelope Valley and to prioritize mineral land use classifications in regional efforts. Policy COS 8.6: Manage mineral resources in the Antelope Valley in a manner that effectively plans for the access to, and the development and conservation of mineral resources for existing and future generations.	**Not applicable**. The Project site is not in a Mineral Resource Area and will not involve mineral resource extraction activities. The Project site is not in a Mineral Resource Zone.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy COS 9.1: Implement land use patterns that reduce the number of vehicle trips, reducing potential air pollution, as directed in the policies of the Land Use Element. Policy COS 9.2: Develop multi-modal transportation systems that offer alternatives to automobile travel to reduce the number of vehicle trips, including regional transportation, local transit, bicycle routes, trails, and pedestrian networks, as directed in the policies of the Mobility Element. Policy COS 9.3: In evaluating new development proposals, consider requiring trip reduction measures to relieve congestion and reduce air pollution from vehicle emissions.	**Applicable and consistent**. The Project will be a remotely operated facility and will limit the number of on-site operational employees to 16, thereby limiting the number of vehicle trips and air pollution.
Policy COS 9.4: Promote recycling and composting throughout the Antelope Valley to reduce air quality impacts from waste disposal activities and landfill operations.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 9.5: Encourage the use of alternative fuel vehicles throughout the Antelope Valley.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 9.6: Educate Antelope Valley industries about new, less polluting equipment, and promote incentives for industries to use such equipment.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 9.7: Encourage reforestation and the planting of trees to sequester greenhouse gas emissions.	**Applicable and consistent**. A Landscaping Plan will be prepared for the Project, which will describe the vegetation to be planted, the number of plants to be installed, and the placement of each plant.
Policy COS 9.8: Coordinate with the Antelope Valley Air Quality Management District and other local, regional, state, and federal agencies to develop and implement regional air quality policies and programs.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 10.1: Encourage the use of non-hazardous materials in all individual renewable energy systems and all utility-scale renewable energy production facilities to prevent the leaching of potentially dangerous run-off materials into the soil and watershed.	**Applicable and consistent**. The Project will implement procedures and best management practices to prevent the leaching of potentially dangerous run-off materials into the soil and watershed.
Policy COS 10.2: Ensure that all individual renewable energy systems and all utility-scale renewable energy production facilities do not interfere with commercial and military flight operations or communication facilities. Consult with Edwards Air Force Base and U.S. Air Force Plant 42 on all proposed renewable energy projects that require discretionary approval.	**Applicable and consistent**. The Project will not interfere with commercial or military flight operations or communication facilities. Consultation with the Department of Defense is ongoing.
Policy COS 10.3: Encourage the safe and orderly development of biomass conversion facilities as an alternative to burning agricultural wastes.	**Not applicable**. The Project will not burn agricultural waste, nor will it include development of biomass conversion facilities.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy COS 10.4: Promote methane recapture at landfills for purpose of generating energy and reducing fugitive greenhouse gas emissions.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 10.5: Encourage the development of emerging energy technologies, such as "solar roads."	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 10.6: Encourage the development of Conversion Technologies such as anaerobic digestion and gasification for converting post recycled residual waste into renewable fuels and energy.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 11.1: Promote energy retrofits of existing public facilities throughout the County to complement and reduce dependence upon utility-scale renewable energy production facilities.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 11.2: Promote the use of solar-powered lighting for highways, streets, and public facilities, including parks and trails.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 11.3: Promote the use of renewable energy systems in public facilities, such as hospitals, libraries, and schools, to ensure access to power in the case of major disasters.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 12.1: Promote the use of individual renewable energy systems throughout the County to complement and reduce dependence upon utility-scale renewable energy facilities.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 12.2: Require appropriate development standards for individual renewable energy systems to minimize potential impacts to surrounding properties. Simplify the permitting process for individual renewable energy systems that meet these development standards.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 13.1: Direct utility-scale renewable energy production facilities, such as solar facilities, to locations where environmental, noise, and visual impacts will be minimized.	**Applicable and consistent**. The Project site will be on vacant land between two transportation corridors, thereby reducing negative impacts to local residents. The Project will comply with local noise ordinance and aesthetic-related development standards.
Policy COS 13.2: Restrict development of utility-scale wind energy production facilities within the vicinity of Edwards Air Force Base to limit interference with military operations.	**Not applicable**. The Project is not a utility-scale wind energy production facility.
Policy COS 13.3: Require all utility-scale renewable energy production facilities to develop and implement a decommissioning plan, with full and appropriate financial guarantee instruments that will restore the full site to its natural state upon complete	**Applicable and consistent**. The Project will undergo decommissioning in accordance with an approved Decommissioning Plan, consistent with then-applicable LORS.

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Policy	Project Consistency
discontinuance of operations and will restore non-operational portions of the site while the remainder continues operating.	
Policy COS 13.4: Promote the use of recycled water in utility-scale renewable energy production facilities to limit impacts on the available fresh water supply.	**Applicable and consistent**. Recycled water will be used during Project construction to the extent feasible.
Policy COS 13.5: Where development of utility-scale renewable energy production facilities cannot avoid sensitive biotic communities, require open space dedication within Significant Ecological Areas as a mitigation measure.	**Applicable and consistent**. The Project will comply.
Policy COS 13.6: Ensure that all utility-scale renewable energy production facilities, such as solar facilities, do not create land use conflicts with adjacent agricultural lands or existing residential areas in the vicinity. Require buffering and appropriate development standards to minimize potential conflicts. Policy COS 13.7: Limit the aesthetic impacts of utility-scale renewable energy production facilities to preserve rural character.	**Applicable and consistent**. The BESS facility will include a minimum 8-foot-tall block wall and include landscaping outside to act as an aesthetic buffer. Elements exhibiting rural character will be employed in the wall and landscape design to the extent feasible. Please refer to Section 3.13, Visual Resources, for additional details regarding visual resources.
Policy COS 13.8: Coordinate with other jurisdictions to plan for utility-scale renewable energy production facilities in order to minimize impacts to sensitive biotic communities and existing residential areas.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 13.9: Prohibit ground-mounted utility-scale renewable energy production facilities within Significant Ecological Areas and Economic Opportunity Areas.	**Not applicable**. The Project is not a ground-mounted energy production facility.
Policy COS 14.1: Require that new transmission lines be place underground whenever physically feasible. Policy COS 14.2: If new transmission lines cannot feasibly be placed underground due to physical constraints, require that they be collocated with existing transmission lines, or along existing transmission corridors, whenever physically feasible. Policy COS 14.3: If new transmission lines cannot be feasibly be placed underground or feasibly collocated with existing transmission lines or along existing transmission corridors due to physical constraints, direct new transmission lines to locations where environmental and visual impacts will be minimized. Policy COS 14.4: Discourage the placement of new transmission lines on undisturbed lands containing sensitive biotic communities. Policy COS 14.5: Discourage the placement of new transmission lines through existing communities or through properties with existing residential uses.	**Applicable and consistent**. The Project's gen-tie line will be overhead to minimize the amount of disturbance. For an overhead gen-tie line, the permanent disturbance will be limited to the gen-tie structures themselves and associated access roads, as opposed to a gen-tie line that requires a fixed disturbance width to place the line underground. The proposed route location of the Project's gen-tie line was selected to minimize the number of existing utility crossings, cross existing utilities at the optimum locations, minimize the total gen-tie length and number of gen-tie structures required, minimize the number of turning structures required, and enter the SCE Vincent Substation as close as possible to the point of interconnection. No parks, recreational areas, or scenic areas are within 1 mile of the proposed gen-tie route. The proposed gen-tie structures have been sited to avoid potential impacts to environmental resources to the extent feasible.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy COS 14.6: Review all proposed transmission line projects for conformity with the Goals and Policies of the Area Plan, including those listed above. When the California Public Utilities Commission is the decision-making authority for these projects, provide comments regarding conformity with the Goals and Policies of the Area Plan.	**Applicable and consistent**. The Project will comply with all California Public Utilities General Orders (GOs), specifically GO 95 (Rules for Overhead Electric Line Construction) and GO 128 (Rules for Construction of Underground Electric Supply and Communications Systems). The Project will also comply with the Goals and Policies of the Area Plan, as demonstrated in this table.
Policy COS 14.7: Require that electrical power lines in new residential developments be placed underground.	**Not applicable.** The Project is not a residential development.
Policy COS 15.1: Ensure that outdoor lighting, including street lighting, is provided at the lowest possible level while maintaining safety. Policy COS 15.2: Prohibit continuous all-night outdoor lighting in rural areas, unless required for land uses with unique security concerns, such as fire stations, hospitals, and prisons. Policy COS 15.3: Replace outdated, obtrusive, and inefficient light fixtures with fixtures that meet dark sky and energy efficiency objectives. Policy 15.4: Require compliance with the provisions of the Rural Outdoor Lighting District throughout the unincorporated Antelope Valley.	**Applicable and consistent**. The Project's lighting will only be in areas where it is required for safety, security, or operations. Low-elevation controlled security lighting will be installed at the Project substation and around the BESS yards, in accordance with applicable requirements and regulations. Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around the substation and points of ingress/egress. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties, compliant with applicable codes and regulations.
Policy COS 16.1: Except within Economic Opportunity Areas, require new development to minimize removal of native vegetation. Discourage the clear-scraping of land and ensure that a large percentage of land is left in its natural state.	**Applicable and consistent**. Vegetation removal will be performed to ensure the BESS facility is free from combustible vegetation to allow for fire protection and defensible space. The gen-tie structure access path will use existing access roads to the extent feasible to minimize new ground disturbance.
Policy COS 16.2: Maximize the use of native vegetation in landscaped areas, provided that vegetation meets all applicable requirements of the Fire Department and the Department of Public Works.	**Applicable and consistent**. Native vegetation will be used in the Project's landscaped areas to the maximum extent and will meet all applicable requirements of the Fire Department and the Department of Public Works.
Policy COS 17.1: Promote green building techniques for the construction and operation of public and private buildings in the unincorporated Antelope Valley.	**Applicable and consistent**. Green building techniques, such as waste reduction and recycling and water conservation, will be employed throughout the Project's life cycle.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy COS 17.2: Require that new buildings be sited and designed in a manner that maximizes efficient use of natural resources, such as air and light, to reduce energy consumption, heat profiles, and greenhouse gas emissions.	**Applicable and consistent**. The Project's operations and maintenance building will be designed in a manner to comply with this policy.
Policy COS 17.3: Promote energy retrofits of existing buildings.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 17.4: Promote the use of individual renewable energy systems and require appropriate development standards for such systems to minimize potential impacts to surrounding properties. Simplify the permitting process for individual renewable energy systems that meet these development standards.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 17.5: Protect active and passive solar design elements and systems from shading by neighboring structures and trees through appropriate development standards.	**Not applicable to the Project**. There are no solar fields adjacent to the Project site, and therefore will not cast shade on any active or passive solar elements.
Policy COS 17.6: Require new landscaping to comply with applicable water efficiency requirements in the County Code.	**Applicable and consistent**. The Project's Landscaping Plan will outline its compliance with applicable water efficiency requirements in the County Code.
Policy COS 17.7: Require low-flow plumbing fixtures in all new developments.	**Applicable and consistent**. The Project will comply.
Policy COS 17.8: Require onsite stormwater infiltration in all new developments through use of appropriate measures, such as permeable surface coverage, permeable paving of parking and pedestrian areas, catch basins, and other low impact development strategies.	**Applicable and consistent.** The Project will include the development of underground detention basins and stormwater facilities. Stormwater generated on site will flow to stormwater detention basins in the western portion of the proposed BESS facility site. Stormwater treatment and storage sizing will be designed to hold the anticipated runoff from a 100-year, 24-hour storm event in compliance with applicable regulations. In the event stormwater basins reach capacity, stormwater will be discharged from the detention basins via storm drainpipes and sheet flow at rates no greater than pre-development conditions following natural drainage patterns.
Policy COS 17.9: Require reduction, reuse, and recycling of construction and demolition debris.	**Applicable and consistent**. Solid waste produced from the Project's construction activities will be segregated and recycled to the extent feasible.
Policy COS 18.1: Encourage government agencies and conservancies to acquire mitigation lands in the following areas and preserve them as permanent open space: ▪ Significant Ecological Areas, including Joshua Tree Woodlands, wildlife corridors, and other sensitive habitat areas:	**Not applicable**. The Project will not interfere or conflict with this policy.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
▪ Hillside Management Areas; ▪ Scenic Resource Areas, including water features such as the privately owned portion of Elizabeth Lake, significant ridgelines, buttes, and other natural landforms; ▪ Land adjoining preserves, sanctuaries, State Parks, and National Forests; and ▪ Privately owned lands within the National Forest.	
Policy COS 18.2: Ensure that open space acquisition is conducted in a fair and equitable manner.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 18.3: Maintain permanently preserved open space areas to ensure attractiveness and safety.	**Not applicable**. The Project will not impact any permanently preserved open space areas.
Policy COS 18.4: Pursue funding for open space acquisition and maintenance on an ongoing basis.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy COS 18.5: Provide parks and recreational facilities, as directed in the policies of the Public Safety, Services, and Facilities Element.	**Not applicable**. The Project will not interfere or conflict with this policy. The Project will not entail residential development that will require new parks or recreational facilities.
Policy COS 19.1: When new development is required to preserve open space, require designs with large contiguous open space areas that maximize protection of environmental and scenic resources. Policy COS 19.2: Allow large contiguous open space areas to be distributed across individual lots so that new development preserves open space while maintaining large lot sizes that are consistent with a rural environment, provided that such open space areas are permanently restricted through deed restrictions.	**Not applicable**. The Project is not required to preserve, distribute, or restrict open space.
Policy COS 19.3: Pursue innovative strategies for open space acquisition and preservation through the land development process, such as Transfers of Development Rights, Land Banking, and Mitigation Banking, provided that such strategies preserve rural character.	**Not applicable**. The Project will not interfere or conflict with this policy.
Policy PS 1.1: Limit the amount of potential master-planned development in Very High Fire Hazard Severity Zones through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable**. The Project site is in a Very High Fire Hazard Severity Zone but will not entail residential development.
Policy PS 1.2: Require that all new developments provide sufficient access for emergency vehicles and sufficient evacuation routes for residents and animals.	**Applicable and consistent**. All internal roadways and private driveways will be constructed to meet access requirements for emergency response requirements. All new access roads,

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
	driveways, and internal and perimeter roads will be constructed to sufficient standards as to not impede evacuation routes for residents and animals.
Policy PS 1.3: Promote fire prevention measures, such as brush clearance and the creation of defensible space, to reduce fire protection costs.	**Applicable and consistent**. Vegetation on the site will be removed where necessary to ensure the BESS facility is free from combustible vegetation. The gen-tie structure access path will use existing roads to the maximum extent possible to minimize new ground disturbance and allow for fire protection and defensible space.
Policy PS 1.4: Provide strict enforcement of the Fire Code and all Fire Department policies and regulations.	**Applicable and consistent**. The Project will comply with all Fire Code and Fire Department policies and regulations. The Project has established communication with the Los Angeles County Fire Department has reviewed the Draft Standards, and will comply with the standards reviewed.
Policy PS 2.1: Limit the amount of potential development in Seismic Zones and along the San Andreas Fault and other fault traces, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable**. The Project site is not in a Seismic Zone.
Policy PS 2.2: Limit the amount of development on steep slopes (Hillside Management Areas) and within landslide and liquefaction areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable**. The Project site is not in a Hillside Management Area, nor is it within landslide and liquefaction areas.
Policy PS 2.3: Prohibit the construction of new structures on or across a fault trace.	**Not applicable**. The Project site is not on a fault trace.
Policy PS 2.4: Ensure that new development does not cause or contribute to slope instability.	**Applicable and consistent**. The Project will adhere to all applicable building codes.
Policy PS 3.1: Limit the amount of potential development in Flood Zones designated by the Federal Emergency Management Agency through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.	**Not applicable**. The Project site is not within a Flood Zone designated by the Federal Emergency Management Agency. The gen-tie route is designed to minimize development within a Flood Zone.
Policy PS 3.2: Require onsite stormwater filtration in all new developments through use of appropriate measures, such as permeable surface coverage, permeable paving of parking and pedestrian areas, catch basins, and other low impact development strategies.	**Applicable and consistent**. The Project will include development of detention basins and stormwater facilities for hydrologic control.

Table 3.6-1. Project Conformity with Antelope Valley Area Plan

Policy	Project Consistency
Policy PS 3.3: Review the potential local and regional drainage impacts of all development proposals to minimize the need for new drainage structures.	**Applicable and consistent**. Construction of the Project will entail rough grading and grubbing/vegetation removal where required to accommodate site drainage. Stormwater generated on site will flow to underground stormwater detention basins, avoiding the need for new regional drainage structures.
Policy ED 1.10: Promote small-scale, household based renewable energy systems to enable Antelope Valley residents to become energy independent.	**Not applicable**. The Project is utility-scale.
Policy ED 1.11: Encourage the development of utility-scale renewable energy projects at appropriate locations and with appropriate standards to ensure that any negative impacts to local residents are sufficiently mitigated.	**Applicable and consistent**. The Project site is on mostly vacant land between two transportation corridors, and in close proximity to existing electrical infrastructure and the existing SCE Vincent Substation, thereby avoiding and minimizing potential negative impacts to local residents.
Policy ED 1.12: Adopt regulations that ensure that local residents receive a fair share of the benefits of utility-scale renewable energy projects that are commensurate to their impacts.	**Applicable and consistent**. The Project will improve efficiency and the reliability of the electrical grid for the community. The Project will also provide a net economic benefit to the community through construction jobs, property and sales taxes, construction and maintenance services, and increased energy efficiency and reliability, while requiring little in the way of public facilities and services. Please refer to Section 3.10, Socioeconomics, for additional details regarding economic benefits.
Policy ED 1.13: Ensure early discussions with Edwards Air Force Base and U.S. Air Force Plant 42 regarding new industries, such as utility-scale renewable energy production facilities, to limit potential impacts on mission capabilities.	**Applicable and consistent**. The Project has established communication with the Department of Defense and is committed to continued consultation.

Sources: County of Los Angeles 2024a, 2024b, 2025.
Notes: BESS = battery energy storage system; County = County of Los Angeles; LORS = laws, ordinances, regulations, and standards; SCE = Southern California Edison

Conformity with the County's Municipal Code Title 22 Planning and Zoning

The Project site is zoned as Light and Heavy Agriculture (A-1 and A-2) (County of Los Angeles 2024b). A BESS is not expressly defined in the County's Zoning Code. However, the County issued a memorandum in 2021 regarding BESS, which, in the context of land use, specifically defines a BESS as an energy storage device that is considered most similar to an electrical distribution substation, and further confirms that BESS facilities "are allowed in all zones with either a Site Plan Review (SPR) or a Conditional Use Permit (CUP), except the Mixed Use Development Zone where it is prohibited" (County of Los Angeles 2021). In the Project's case, a Conditional Use Permit will apply, but for the Commission's jurisdiction. Consistent with Zoning Code Section 22.58.050 (Findings and Decision), the following Conditional Use Permit findings are provided:

- The PSRP will be consistent with the adopted General Plan for the area:
  - The Project site is designated "Rural Land" according to the Los Angeles County Antelope Valley Area Plan: Town & Country. The proposed Project is consistent with the applicable County plans for the Project site and will be designed in compliance with applicable regulations and conditions pertaining to energy storage facilities. The Project is also consistent with Area Plan goals that call for the development of renewable energy resources while preserving and protecting the natural and rural environments of the Antelope Valley. As discussed in the Area Plan, "Utility-scale renewable energy production facilities may be allowed in Rural Land designations without a Plan Amendment. However, applications for such facilities may require discretionary approval and shall be subject to the California Environmental Quality Act and the County's environmental review and public hearing procedures. Applications for such facilities must be carefully considered and must be consistent with the relevant Goals and Policies of the Area Plan, especially Goal COS 10 and related policies, Goal COS 13 and related policies, and Goal COS 14 and related policies. Table 3.6-1 above discusses how the Project is consistent with all Area Plan policies, including COS 10, 13, and 14.
- The PSRP [Project] at the location proposed will not:
  a. Adversely affect the health, peace, comfort, or welfare of persons residing or working in the surrounding area;
  b. Be materially detrimental to the use, enjoyment, or valuation of property of other persons located in the vicinity of the site; and
  c. Jeopardize, endanger, or otherwise constitute a menace to the public health, safety, or general welfare.
  - The Project will not adversely affect public health, safety, or welfare or be detrimental to use, enjoyment, or valuation of property of other persons located in the vicinity of the site. Please refer to the analysis and mitigation measures in the following Sections that discuss public health, safety, property: Section 3.1 Air Quality, Section 3.5 Hazardous Materials Handling, Section 3.7 Noise, Section 3.9 Public Health, Section 3.10 Socioeconomics, and Section 3.17 Worker Health and Safety.
- The BESS Facility Site is adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping, and other development features prescribed in this Title 22, or as is otherwise required in order to integrate said use with the uses in the surrounding area.
  - The BESS Facility site is approximately 71 acres in size and has been designed to meet project objectives while ensuring compliance with local development standards. All fencing, landscaping, access roads, and other development features will be designed in accordance with the County's development standards. Refer to Appendix 2A, Site Plan Package, Appendix 2B, Conceptual Landscape Plan, and Section 2.0, Project Description for more details.

- The PSRP is adequately served:
  a. By highways or streets of sufficient width, and improved as necessary to carry the kind and quantity of traffic such use would generate; and
  b. By other public or private service facilities as are required.
  - Construction and operation traffic will access the Project site from existing adequate roadways including SR-14, Sierra Highway, and Soledad Canyon Road. Driveways will be constructed in accordance with County and Fire Department standards. No public roadway improvements are expected to be required. In addition, operational traffic will be minimal as the project will employ 16 onsite staff. Regarding service facilities, the project's O&M buildings will be served by an existing groundwater well which will provide water for washroom and a septic system will provide for sanitary facilities. The O&M buildings will be powered via a distribution line from the Project substation.

Development standards applicable to BESS as found in Section 22.140.200 require the following:

- Walls.
  - All installations shall be completely surrounded by a masonry wall a minimum of eight feet in height.
  - The requirements may be modified upon approval a Minor Conditional Use Permit application. The Commission or Hearing Officer may approve the substitution of such wall with an industrial-type fence that serves a similar purpose, such as a chain-link fence with embedded plastic or PVC strips or screen planting that evenly obscures at least 95 percent of the fence surface area.
  - Landscaping. The area between the fence or wall and the property line shall be landscaped and maintained while such use exists.

The Project will conform to the wall requirement. The BESS facility will be enclosed with a minimum 8-foot-tall block wall topped with 1-foot of three-stranded barbed wire or razor wire. The wall will be installed on the outside of the perimeter road. An additional internal chain-link fence will be installed around the Project substation area, separating the BESS containers from the Project substation. Where feasible, landscaping will be installed and maintained between the wall and property line. The northeast area of the Project site may not have landscaping installed because the space between the wall and property line will be used to provide access to the neighboring landowners. Therefore, the Project will conform to the wall development standard.

Conformity with Department of Defense Military Influence Areas

The Los Angeles County General Plan shows the Project site being located within a military influence area, specifically within a Military Operation Area – Floor Elevation from Ground Level – 1,000 to 2,000 Feet (County of Los Angeles 2024b). A Military Operation Area is defined as a three-dimensional airspace designated for military training and transport activities that have a defined floor (minimum altitude) and ceiling (maximum altitude). Within Los Angeles County, there are several Military Operation Areas used by military aircraft to practice high- and low-altitude training exercises and to travel between military installations.

To understand potential constraints, the applicant contacted the Military Aviation and Installation Assurance Siting Clearinghouse. The Military Aviation and Installation Assurance Siting Clearinghouse responded to the Applicant noting that they coordinated within the Department of Defense to conduct an informal review of the Project. The results of the review indicated that the energy storage project as proposed will have minimal impact on military operations conducted in the area (see Appendix 3.6A for correspondence). Further review will be required as part of the Federal Aviation Administration's (FAA) Obstruction Evaluation Airport Airspace Analysis (OE/AAA) process,

more commonly referred to as Title 14 of the Code of Federal Regulations (CFR) Part 77, for the Project's gen-tie line structures and construction equipment that are greater than 200 feet in height. In general, based on FAA requirements, any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet, or exceeds any obstruction standard contained in 14 CFR Part 77, should be marked and/or lighted. The last two structures of the gen-tie line heading into the Vincent substation are expected to be over 200 feet tall and will be lighted in accordance with FAA requirements.

Entitlement History

No permits or entitlement requests for the Project have been submitted outside of this Opt-In Application.

Based on the above analysis, implementation of the Project will not conflict with an applicable land use plan, policy, or regulation. Therefore, impacts will be **less than significant**.

3.6.2.3.3 Will 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, excepting those lands that would be expected to be converted or retired even without the project due to insufficient water resources for continued commercial agriculture, land subsidence due to historic groundwater over-pumping, soil contamination due to inadequate drainage, or the local weather effects of climate change?

No Impact. The California Department of Conservation classifies and maps land throughout the state by its Farmland Mapping and Monitoring Program (California Department of Conservation 2025a). The classification system combines technical soil ratings and current land use that is the basis for the mapping of important farmlands. The seven categories of land are Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing, Urban and Built Up, and Other, as defined in Section 3.6.5.3, Local, below.

The Farmland Mapping and Monitoring Program designations for the Project site and a 1-mile buffer surrounding the Project site are shown in Figure 3.6-5. The BESS facility and gen-tie line are sited on lands categorized as Other Land (California Department of Conservation 2025a, 2025b). Other Land, as defined in the Farmland Mapping and Monitoring Program, is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. This category of land is not constituted as "agricultural land" for environmental review purposes under CEQA (California Public Resources Code [PRC] Section 21060.1).

The Project will have no direct, indirect, cumulative, short-term, or long-term significant impacts to surrounding parcels in the vicinity of the Project site that are also mapped as Other Land. As such, the Project will have **no impact.**

3.6.2.3.4 Will the Project conflict with existing zoning for agricultural use, or a Williamson Act Contract?

No Impact. The BESS facility site and gen-tie line corridors are not under any Williamson Act contract (California Department of Conservation 2025c), and there are no active agricultural operations occurring on site. Furthermore, the Project site and surrounding lands are designated as Other Land per the Department of Conservation Farmland Mapping and Monitoring Program. For environmental review purposes under CEQA, the Other Land category is not constituted as "agricultural land" (PRC Section 21060.1). As such, the Project will have **no impact.**

3.6.2.3.5 Will the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

No Impact. The Project site is zoned as Light and Heavy Agriculture (A-1 and A-2). As discussed above, BESS is not explicitly defined in the County's Zoning Code; rather, they are treated similarly to electrical distribution systems. The County issued a memorandum regarding BESSs, which, in the context of land use, specifically defines BESS as an energy storage device that is considered most similar to an electrical distribution substation, and further permits this land use in Agricultural zones with either a Site Plan Review or a Conditional Use Permit (County of Los Angeles 2021). The proposed Project is compatible with the development character of the area; the existing SCE Vincent Substation is 1 mile northeast of the Project site, and the BESS facility site is between two transportation corridors: State Route 14 to the north, and Southern Pacific Rail lines and Carson Mesa Road to the south. AB 205 encourages the development of new clean energy projects meeting set criteria. The proposed Project aligns with these criteria. At the end of the facility's useful life, the Project will undergo decommissioning in accordance with then-applicable LORS. As part of the decommissioning activities, all site improvements that are no longer in use and cannot be repurposed will be removed from the Project site, and the lands will be restored to a substantially similar condition in which they currently exist. As such, the Project will have **no impact.**

3.6.3 Cumulative Impacts

A cumulative impact refers to a proposed Project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed Project (PRC Section 21083; CCR, Title 14, Sections 15064[h], 15065[c], 15130, and 15355). The CEQA Guidelines further note that the cumulative impact from several projects is the change in the environment that results from the incremental impact of a project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative effects can result from individually minor, but collectively significant, projects taking place over a period of time (CCR Section 15355).

Cumulative land use impacts could occur if development of the Project and other related past, present, and reasonably foreseeable probable future projects would be inconsistent with applicable plans and policies or have other cumulative land-use-related impacts, such as the conversion of farmland. The Project is consistent with land use plans and policies, and is compatible with adjacent uses. Therefore, the Project will not contribute to cumulative impacts associated with land use compatibility. Moreover, there are no past, present, or reasonably foreseeable future projects proposed within the study area that will result in adjacent incompatible land uses (see Chapter 3, Environmental Analysis, for a list of cumulative projects).

Long-term cumulative impacts related to land use are not anticipated with implementation of the Project and the listed projects because each project is required to comply with the CEQA Guidelines requirements for evaluating

potential cumulative impacts and/or obtain approval from the lead agency prior to permitting and construction by demonstrating conformance to existing land use policies. For these reasons, the Project will not cause a significant cumulative land use impact.

3.6.4 Mitigation Measures

Because the Project design will avoid or minimize potentially significant effects and will thereby not cause any significant adverse impacts to land use and land use plans, no mitigation measures beyond the Project's design are necessary.

3.6.5 Laws, Ordinances, Regulations, and Standards

This section lists and discusses the land use LORS that apply to the Project. The Project, including all its Project components, is entirely within the County of Los Angeles, Antelope Valley Area Plan. Table 3.6-2 lists the potentially applicable federal, state and local plans and policies.

Table 3.6-2. Laws, Ordinances, Regulations, and Standards Applicable to Land Use

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	Title 14 of the Code of Federal Regulations (CFR) Part 77	Any person or an agent who intends to sponsor construction is required to submit notice to the FAA if the proposed construction or alteration meets notice requirements.	**Yes**. The Project will file notice under Section 77.9 for gen-tie line structures that are over 200 feet tall, as required. The FAA's notice criteria tool has been used to determine which gen-tie line structures require notice.	Section 3.6.2.3.2 Section 3.6.5.1
Federal	49 U.S. Code Section 44718 – Structures interfering with air commerce or national security	Notice is required when a project may obstruct (1) safety in air commerce; (2) the efficient use and preservation of the navigable airspace and of airport traffic capacity at public-use airports; or (3) the interests of national security, as determined by the Secretary of Defense.	**Yes**. The Project will comply. Initial outreach with the Military Aviation and Installation Assurance Siting Clearinghouse and results of their review indicate that the Project will have minimal impact on military operations conducted in the area (Appendix 3.6A). Additional coordination will occur as part of the FAA's Section 77.9.	Section 3.6.2.3.2 Section 3.6.5.1
State	Assembly Bill 205	Legislation that created and gives statutory authority to the CEC.	**Yes.** As part of the Opt-In Application process, the CEC will review the Project for consistency with Los Angeles County's land use plans, policies, and regulations.	Throughout this Opt-In Application

Table 3.6-2. Laws, Ordinances, Regulations, and Standards Applicable to Land Use

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
State	California Land Conservation Act of 1965 (Williamson Act)	Preserves agricultural land and encourages open space. preservation and efficient urban growth.	**Yes**. The BESS facility site and gen-tie corridors are not under any Williamson Act contract. Furthermore, the Project site and surrounding lands are designated as Other Land per the Department of Conservation Farmland Mapping and Monitoring Program. For environmental review purposes under CEQA, the Other Land category is not constituted as "agricultural land" (California Public Resources Code Section 21060.1).	Section 3.6.2.3.4 Section 3.6.2.3.5 Section 3.6.5.2
State	CEQA	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce environmental impacts to the extent feasible.	**Yes.** Per the CEC's certified regulatory program and the AB 205 Opt-In Application process.	Throughout this Opt-In Application
Local	Los Angeles County General Plan / Antelope Valley Area Plan	A document that provides a comprehensive policy framework guiding the long-term physical development and conservation of the unincorporated areas of Los Angeles County. The plan includes elements such as land use, mobility, air quality, conservation, parks and recreation, noise, safety, public services, and economic development.	**Yes**. As part of the Opt-In Application process, the CEC will review the Project for consistency with the County's land use plans, policies, and regulations. AB 205 expanded the CEC's authority under the Warren-Alquist Act to establish a new certification program for eligible non-fossil-fueled power plants using emergency rulemaking authority provided by AB 205. As part of the Opt-In Application process established under AB 205, the CEC will determine whether the Project will conflict with the County's land use and zoning policies.	Section 3.6.2.3.2 Table 3.6-1 Section 3.6.5.3

Table 3.6-2. Laws, Ordinances, Regulations, and Standards Applicable to Land Use

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Local	Los Angeles County Municipal Code, Title 22 Planning and Zoning	Establishes regulations and standards for land use and development in the unincorporated areas of Los Angeles County. It includes Countywide provisions that apply to all areas, such as general rules, zoning classifications, and development standards.	**Yes.** BESSs are not expressly defined in the County's Zoning Code. However, the County issued a memorandum dated October 18, 2021, regarding BESSs, which, in the context of land use, specifically defines a BESS as an energy storage device that is considered most like an electrical distribution substation, and further permits this land use in Agricultural zones with either a Site Plan Review or a Conditional Use Permit. The Project will conform to the applicable development standards.	Section 3.6.2.3.2 Section 3.6.2.3.4 Section 3.6.5.3

Notes: AB = Assembly Bill; BESS = battery energy storage system; CEC = California Energy Commission; CEQA = California Environmental Quality Act; County = County of Los Angeles; FAA = Federal Aviation Administration; LORS = laws, ordinances, regulations, and standards

3.6.5.1 Federal

Title 14 CFR Part 77 - Safe, Efficient Use, and Preservation of the Navigable Airspace

The FAA regulates aviation at regional, public, and private airports. The FAA regulates objects affecting navigable airspace. According to 14 CFR 77.9, any person/organization who intends to sponsor construction or alterations must notify the Administrator of the FAA about the following:

- Any construction or alteration exceeding 200 feet above ground level.
- Any construction or alteration:
  - Within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway where the longest airport runway exceeds 3,200 feet in actual length.
  - Within 10,000 feet of a public use or military airport which exceeds a 50:1 surface from any point on the runway where the longest airport runway is less than 3,200 feet in actual length.
  - Within 5,000 feet of a public use heliport which exceeds a 25:1 surface.
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed the above standards.
- When requested by the FAA.
- Any construction or alteration located on a public use airport or heliport regardless of height or location.

Failure to comply with the provisions of Federal Aviation Regulation Part 77 is subject to civil penalty under Section 902 of the Federal Aviation Act of 1958, as amended, and pursuant to 49 United States Code Section 46301(a).

As discussed in this Application and in this section, the Project complies with these requirements. The Project will file notice under FAA's Section 77.9 for gen-tie line structures that are over 200 feet tall, as required. The FAA's notice criteria tool was used to determine which gen-tie line structures require notice.

49 U.S. Code Section 44718 - Structures Interfering with Air Commerce or National Security

The Secretary of Transportation requires a person to give adequate public notice, in the form and way the Secretary prescribes, of the construction, alteration, establishment, or expansion, or the proposed construction, alteration, establishment, or expansion, of a structure or sanitary landfill when the notice will promote:

- safety in air commerce;
- the efficient use and preservation of the navigable airspace and of airport traffic capacity at public-use airports; or
- the interests of national security, as determined by the Secretary of Defense.

Under regulations prescribed by the Secretary, if the Secretary decides that constructing or altering a structure may result in an obstruction of the navigable airspace, an interference with air or space navigation facilities and equipment or the navigable airspace, or, after consultation with the Secretary of Defense, an adverse impact on military operations and readiness, the Secretary of Transportation shall conduct an aeronautical study to decide the extent of any adverse impact on the safe and efficient use of the airspace, facilities, or equipment. As discussed in this Application and in this section, the Project complies with these requirements.

The Project will comply. Initial outreach with the Military Aviation and Installation Assurance Siting Clearinghouse and results of their review indicate that the Project will have minimal impact on military operations conducted in the area (Appendix 3.6A). Additional coordination will occur as part of the FAA's Section 77.9.

3.6.5.2 State

Assembly Bill 205

Governor Gavin Newsom signed AB 205 into law on June 30, 2022. This legislative effort significantly expands the CEC's jurisdiction and encourages the development of new clean energy projects. In short, AB 205 allows developers to opt in to a new streamlined environmental review and authorization process for certain solar, wind, and other qualifying clean energy projects under exclusive state jurisdiction. The law also provides new funding for qualifying generation and energy storage facilities. Before AB 205, the CEC's siting authority was limited to thermal power plants with capacities of 50 MW or more. AB 205 expands CEC's siting authority to include non-thermal generating facilities, and establishes a new siting certification process for the following eligible facilities:

- Solar photovoltaic (PV) and onshore wind generating facilities with capacities of 50 MW or more.
- Energy storage facilities capable of storing at least 200 megawatt hours (MWh) of energy.
- A stationary electrical generating powerplant using any source of thermal energy, with a generating capacity of 50 MW or more, excluding any powerplant that burns, uses, or relies on fossil or nuclear fuels.
- Facilities for the manufacture, production, or assembly of energy storage systems, wind systems, solar PV systems, or the components of those systems if the developer certifies the project will require a capital investment of $250 million over a period of 5 years.

- Transmission lines from the above-mentioned generating or storage facilities to the first point of interconnection.
- TA hydrogen production facility and associated on-site storage and processing facilities that do not derive hydrogen from a fossil fuel feedstock and that receive funding from specified sources.

AB 205 gives CEC exclusive siting authority over these eligible projects if a developer submits an application to CEC under this certification process instead of an application for entitlements from the jurisdiction in which the project is located. CEC's siting certification is in lieu of any permit, certificate, or similar document required by any state, local, or regional agency, or federal agency to the extent permitted by federal law. It also supersedes any applicable statute, ordinance, or regulation of any state, local, or regional agency, or federal agency to the extent permitted by federal law, with limited exceptions. AB 205 specifically provides that the certification does not supersede the authority of an exclusive list of agencies: the California State Lands Commission, the California Coastal Commission, the San Francisco Bay Conservation and Development Commission, the California State Water Resources Control Board or the applicable regional water quality control boards, local air quality management districts, or the California Department of Toxic Substances Control.

As part of the Opt-In Application process, the CEC will review the Project for consistency with the County's land use plans, policies, and regulations.

California Department of Conservation Farmland Mapping and Monitoring Program

The California Department of Conservation developed categorical definitions of important farmlands for land inventory purposes, which are applied within the Farmland Mapping and Monitoring Program. Important farmlands provide the best opportunity for agricultural production. The following are the Important Farmland categories (California Department of Conservation 2025a):

- **Prime Farmland:** Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance:** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and local advisory committee. In some counties, Confined Animal Agriculture facilities are part of the Farmland of Local Importance, but are shown separately
- **Confined Animal Agriculture:** Lands used for confined animal agricultural facilities, including but not limited to dairies, feedlots, poultry facilities, and fish farms. Although these uses do not qualify for the major agricultural categories, some counties include them in their Farmland of Local Importance definitions.
- **Unique Farmland:** Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock.

- **Urban and Build-up Land:** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, and other developed purposes.
- **Other Land:** Land not included in any other mapping category, Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing or confined livestock. Additionally, vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

The Project site and surrounding lands are designated as Other Land per the Department of Conservation Farmland Mapping and Monitoring Program. For environmental review purposes under CEQA, the Other Land category is not constituted as "agricultural land" (PRC Section 21060.1).

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act, better known as the Williamson Act, has been the state's primary agricultural land protection program since its enactment in 1965. More than 16 million of the state's 30 million acres of farm and ranch land are currently protected under the Williamson Act. The Williamson Act creates an arrangement, whereby private landowners agree with counties and cities to voluntarily restrict land in designated Agricultural Preserve areas to agricultural, recreational and open-space uses, and compatible uses. In return, the landowner receives property tax assessments that are lower than normal because the assessments are based on the restricted uses rather than full market value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971. Williamson Act contracts automatically renew each year for a new 10-year period, unless either party files a "notice of non-renewal" to terminate the contract before the end of the current 10-year period. During the ensuing 10-year non-renewal period following a "notice of non-renewal," property taxes are gradually raised to the applicable level for developable land.

The Williamson Act also authorizes cities and counties to establish Farmland Security Zones within existing Agricultural Preserves, and to enter into Farmland Security Zone contracts with a minimum initial term of 20 years, and annual renewal similar to a Williamson Act contract. To be eligible for a Farmland Security Zone contract, the subject land must be designated on the Important Farmland Series maps as predominantly prime farmland, farmland of statewide importance, unique farmland, or farmland of local importance.

The BESS facility site and gen-tie corridors are not under any Williamson Act contract (California Department of Conservation 2025c).

3.6.5.3 Local

Los Angeles County General Plan

The Los Angeles County General Plan outlines the policy framework for the growth and development of the unincorporated areas of the County through the year 2035. It aims to accommodate new housing and job opportunities while celebrating the County's cultural diversity, natural resources, and economic significance. The plan emphasizes sustainable development, discourages urban sprawl, and promotes infill development near transit and existing infrastructure. It also includes goals and policies to foster healthy, livable, and resilient communities by ensuring adequate services and infrastructure. Key elements of the general plan include land use, mobility, air quality, conservation and natural resources, parks and recreation, noise, safety, public services and facilities,

economic development, and housing. These focus areas collectively aim to create a balanced, sustainable and resilient future for the County (County of Los Angeles 2025).

Antelope Valley Area Plan

The Project has a land use designation under the Antelope Valley Area Plan of Rural Land (RL-2 and RL-5), which are defined as follows (County of Los Angeles 2015):

> Per Table L-1 of the Antelope Valley Area Plan, the purpose of Rural Land (RL-2 and RL-5) is to serve as single-family residences; equestrian and limited animal uses; and limited agricultural and related activities. Rural Land (RL-2) has a maximum density of 1 residential unit for each 2 gross acres of land, and Rural Land (RL-5) has a maximum density of 1 residential unit for each 5 gross acres of land. The maximum building intensity for non-residential buildings shall be 0.5 FAR (floor area ration). The Rural Land designations are intended to reflect the existing densities within various parts of the rural town area, and are not intended to promote further land divisions.

Relevant goals and policies of the Antelope Valley Area Plan are identified in Table 3.6-1.

As part of the Opt-In Application process, the CEC will review the Project for consistency with the County's land use plans, policies, and regulations. AB 205 expanded the CEC's authority under the Warren-Alquist Act to establish a new certification program for eligible non-fossil-fueled power plants using emergency rulemaking authority provided by AB 205. As part of the Opt-In Application process established under AB 205, the CEC will determine whether the Project will conflict with the County's land use and zoning policies.

Los Angeles County Municipal Code, Title 22, Planning and Zoning

Title 22, Division 3 – Zones, of the Los Angeles County Code of Ordinances further refines the County's General Plan and provides additional detail pertaining to allowed and conditional uses and specific development standards for the various zoning districts. Chapter 22.16 – Agricultural, Open Space, Resort and Recreation, and Watershed Zones covers the zoning requirements specific to the Project site. Chapter 22.170 – Lot Line Adjustments provides a process to adjust the lot line between two or more existing adjacent lots, where the land taken from one lot is added to an adjacent lot and where a greater number of lots than originally existed are not thereby created.

A BESS is not expressly defined in the County's Zoning Code. However, the County issued a memorandum regarding BESSs that, in the context of land use, specifically defines a BESS as an energy storage device that is considered most like an electrical distribution substation, and further permits this land use in Agricultural zones with either a Site Plan Review or a Conditional Use Permit (County of Los Angeles 2021). The Project will conform to the applicable development standards.

3.6.6 Agencies and Agency Contacts

Applicable permits and agency contacts for land use issues are shown in Table 3.6-3. Land use approval permits (i.e., Conditional Use Permit) from the Los Angeles County Department of Regional Planning will be superseded by CEC approval of the Project under the Opt-In Application program.

Table 3.6-3. Permits and Agency Contacts

Permit or Approval	Agency Contact	Applicability
Federal Aviation Administration's Obstruction Evaluation Airport Airspace Analysis (OE/AAA) process, Title 14 of the Code of Federal Regulations Part 77	Dan Shoemaker, Western OE Team Manager Federal Aviation Administration Southwest Regional Office Obstruction Evaluation Group 10101 Hillwood Parkway Fort Worth, Texas 76177 206.231.2989 OEGroup@faa.gov	The Project will file notice under Section 77.9 for gen-tie line structures that are over 200 feet tall, as required.
49 United States Code Section 44718, Structures interfering with air commerce or national security,	Robbin Beard, Deputy Director Military Aviation and Installation Assurance Siting Clearinghouse Department of Defense, Office of the Assistant Secretary of Defense 3400 Defense Pentagon Washington DC 20301-3400 (no phone number provided) robbin.e.beard.civ@mail.mil	An informal review was conducted by the Military Aviation and Installation Assurance Siting Clearinghouse. The results of the review indicated that the Project, will have minimal impact on military operations conducted in the area. Further review will be required as part of the FAA's Obstruction Evaluation Airport Airspace Analysis (OE/AAA) process.
Site Certification for Opt-In Project (with environmental review under CEQA and Assembly Bill 52 Tribal Consultation)	California Energy Commission Siting, Transmission and Environmental Protection Division Ann Crisp, Senior Environmental Planner 715 P Street, MS-40 Sacramento, California 95814 916.352.0543 STEPsiting@energy.ca.gov	Land use entitlement.
Lot Line Adjustment	Samuel Dea, North County Development Services Section Head Los Angeles County Department of Regional Planning, Current Planning 320 West Temple Street Los Angeles, California 90012 213.974.6411 sdea@planning.lacounty.gov	If applicable, the applicant could combine the BESS facility site parcels so that the proposed Project, excluding linears and temporary laydown or staging area, will be on a single legal parcel.
Franchise Agreement	Los Angeles County Public Works Department 900 S. Fremont Avenue Alhambra, California 91803 626.458.5100	For Project components (collection lines and water line) that will be underground within Soledad Canyon Road and Carson Mesa Road.
Franchise Agreement	Los Angeles County Metropolitan Transportation Authority One Gateway Plaza Los Angeles, California 90012-2952 213.922.6000	For Project components (gen-tie and fiber-optic lines) that will cross above and be underneath the railroad tracks.

Table 3.6-3. Permits and Agency Contacts

Permit or Approval	Agency Contact	Applicability
N/A*	Samuel Dea, North County Development Services Section Head Los Angeles County Department of Regional Planning, Current Planning 320 West Temple Street Los Angeles, California 90012 213.974.6411 sdea@planning.lacounty.gov	Local LORS consultation.

Notes: BESS = battery energy storage system; CEQA = California Environmental Quality Act; FAA = Federal Aviation Administration; LORS = laws, ordinances, regulations, and standards

* Not applicable. Local approvals will be superseded by California Energy Commission approval of the Project under the Opt-In Program.

3.6.7 Permits and Permit Schedule

Because of the exclusive jurisdiction of the CEC, no land use permits are required for the Project.

Lot line adjustment or merger may not be appropriate or feasible because the parcels under site control do not have a common owner. If required, a lot line adjustment application will be filed with the Los Angeles County Department of Regional Planning. Los Angeles County Municipal Code Section 22.170.010 provides a process to adjust the lot line between two or more existing adjacent lots, where the land taken from one lot is added to an adjacent lot and where a greater number of lots than originally existed are not thereby created. A Lot Line Adjustment in Los Angeles County is a Type I Review where the application is filed and processed in compliance with Chapter 22.226 (Type I Review—Ministerial).

3.6.8 References

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California Department of Conservation. 2025c. *Williamson Act Enrollment Finder*. Accessed January 2025. https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html.

County of Los Angeles. 2015. *Antelope Valley Area Plan*. Los Angeles County Department of Regional Planning. June 2015. Accessed January 2025. https://planning.lacounty.gov/wp-content/uploads/2022/10/Antelope-Valley-Area-Plan.pdf.

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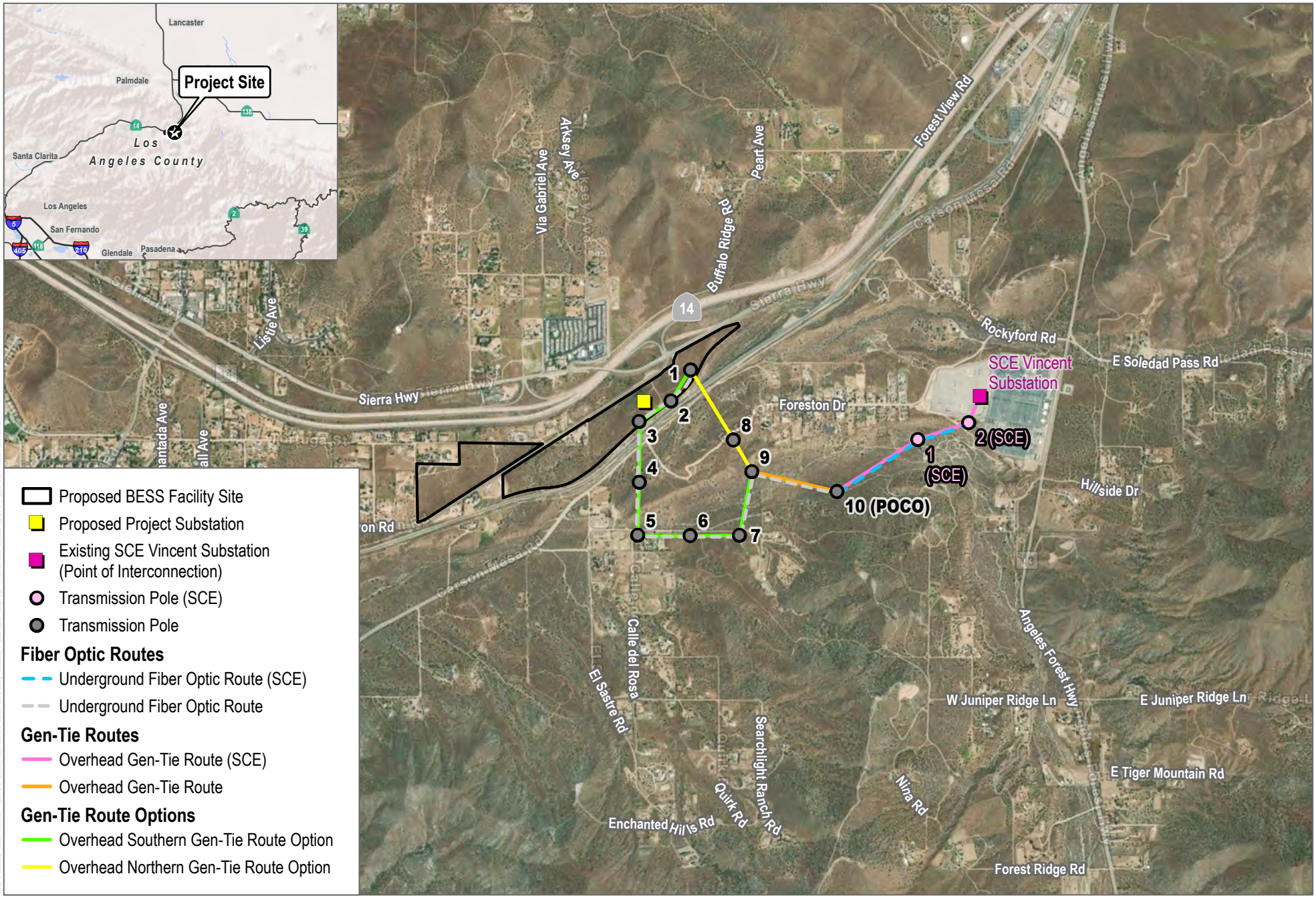

SOURCE: World Imagery

DUDEK

0 1,000 2,000 Feet

FIGURE 3.6-1

Project Site

Prairie Song Reliability Project

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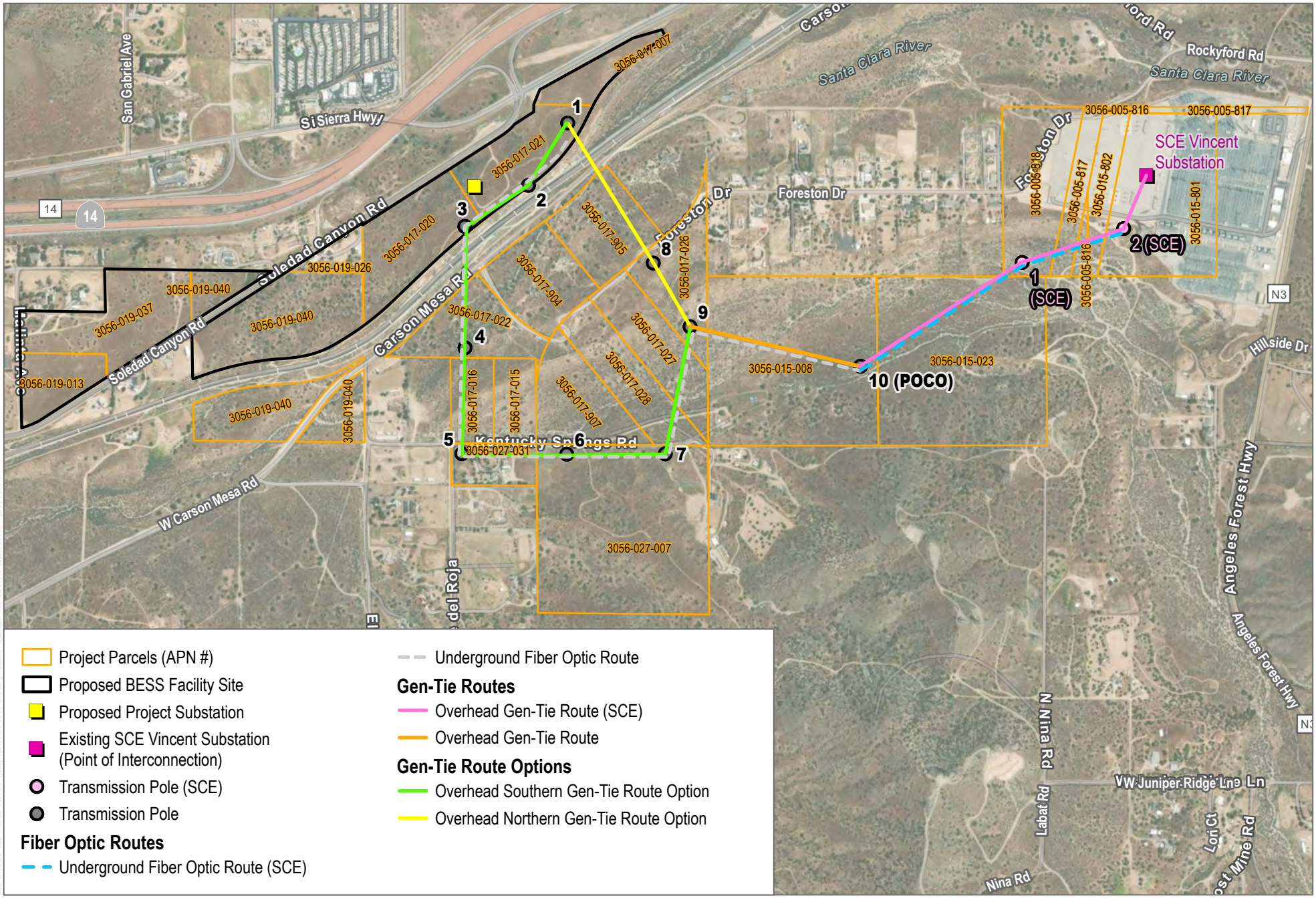

SOURCE: World Imagery; Los Angeles County

DUDEK

0 500 1,000 Feet

FIGURE 3.6-2

Assessor Parcel Number (APN) Map

Prairie Song Reliability Project

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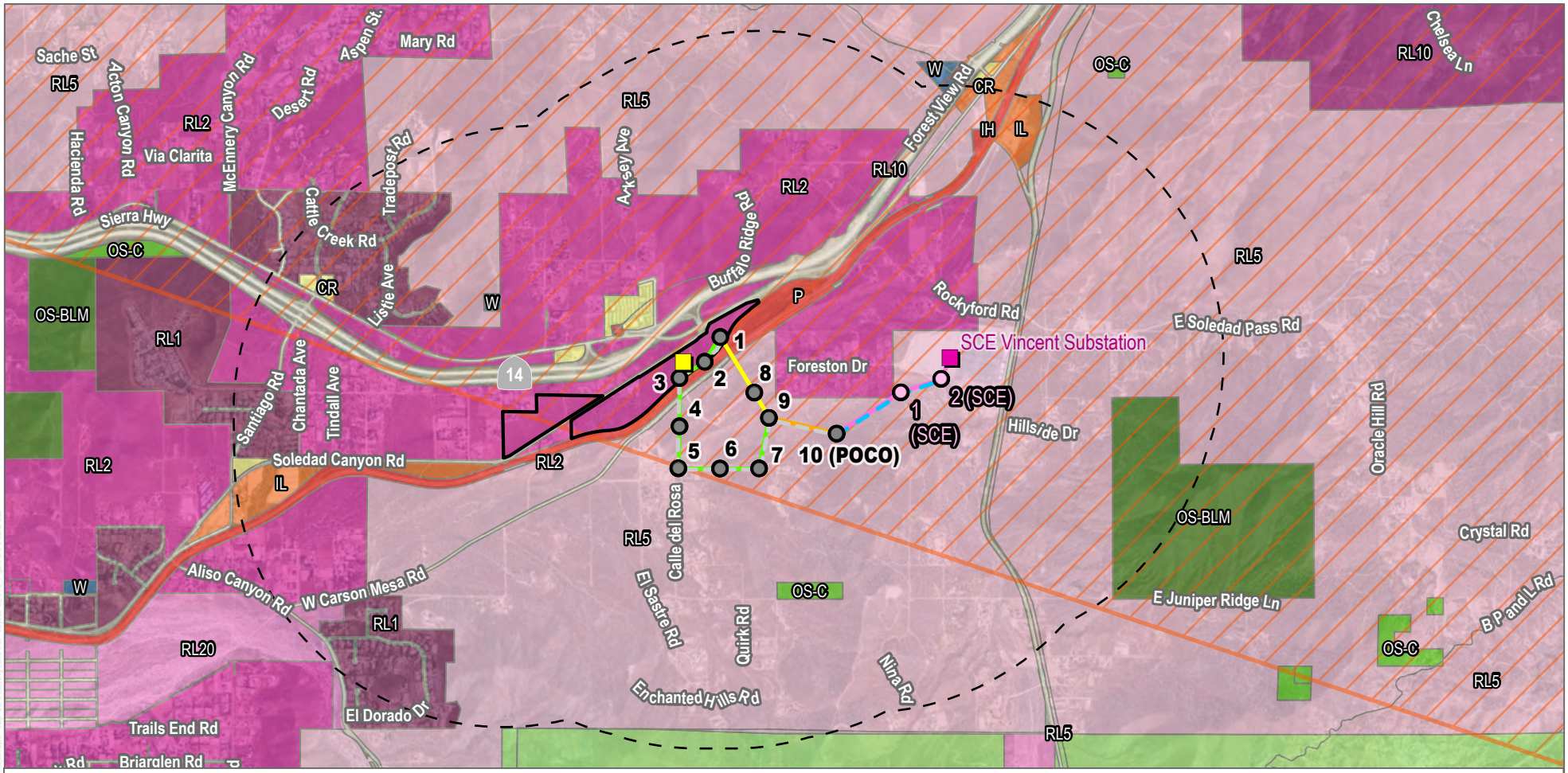

1-mile Buffer
Proposed BESS Facility Site
Proposed Project Substation
Existing SCE Vincent Substation (Point of Interconnection)
Transmission Pole (SCE)
Transmission Pole

Fiber Optic Routes
Underground Fiber Optic Route (SCE)
Underground Fiber Optic Route

Gen-Tie Routes
Overhead Gen-Tie Route (SCE)
Overhead Gen-Tie Route

Gen-Tie Route Options
Overhead Southern Gen-Tie Route Option
Overhead Northern Gen-Tie Route Option

Land Use
CR - Rural Commercial
IH - Heavy Industrial
IL - Light Industrial
OS-BLM - Bureau of Land Management
OS-C - Conservation
OS-NF - Open Space National Forest
P - Public and Semi-Public
RL1 - Rural Land 1
RL10 - Rural Land 10
RL2 - Rural Land 2
RL20 - Rural Land 20
RL5 - Rural Land 5
W - Water
Military Operation Area - Floor Elevation from Ground Level - 1000 to 2000 Feet

SOURCE: Los Angeles County; World Imagery

DUDEK

0 1,250 2,500 Feet

FIGURE 3.6-3
Existing Land Use
Prairie Song Reliability Project

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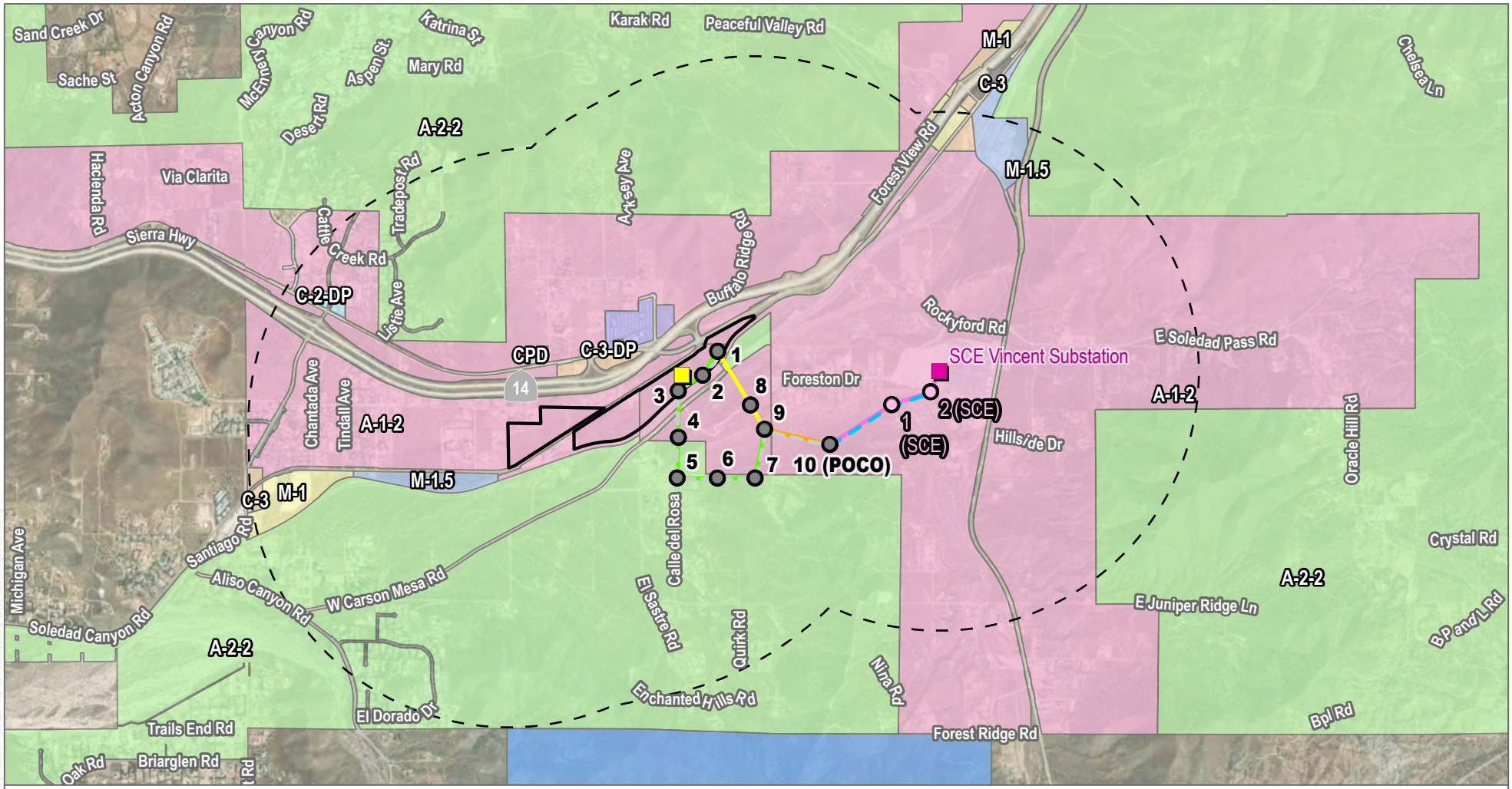

1-mile buffer
Proposed BESS Facility Site
Proposed Project Substation
Existing SCE Vincent Substation (Point of Interconnection)
Transmission Pole (SCE)
Transmission Pole

Fiber Optic Routes
Underground Fiber Optic Route (SCE)
Underground Fiber Optic Route

Gen-Tie Routes
Overhead Gen-Tie Route (SCE)
Overhead Gen-Tie Route

Gen-Tie Route Options
Overhead Southern Gen-Tie Route Option
Overhead Northern Gen-Tie Route Option

Zoning
A-1-2, Light Agricultural
A-2-2, Heavy Agricultural
C-2-DP, Neighborhood Business
C-3, Unlimited Commercial
C-3, Unlimited commercial
C-3-DP, Unlimited Commercial
CPD, Commercial Planned Development
M-1, Light Manufacturing
M-1.5, Restricted Heavy Manufacturing
W, Watershed

SOURCE: Los Angeles County; World Imagery

DUDEK

0 1,250 2,500 Feet

FIGURE 3.6-4
Existing Zoning
Prairie Song Reliability Project

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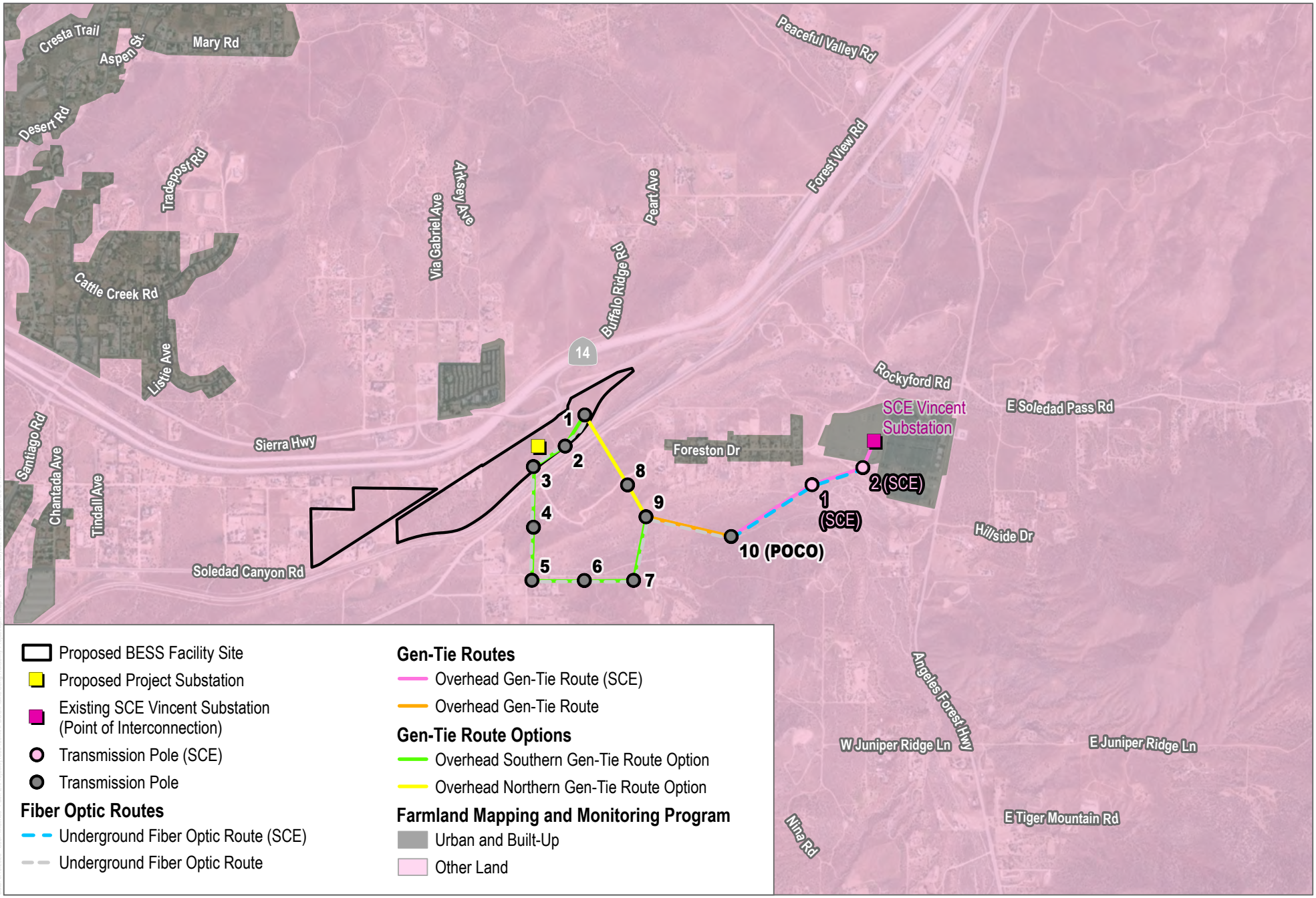

SOURCE: World Imagery; CA Department of Conservation

DUDEK

0 500 1,000 Feet

FIGURE 3.6-5

Farmland Mapping and Monitoring Program Designations

Prairie Song Reliability Project

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3.7 Noise

This section describes the potential noise effects of the Prairie Song Reliability Project (Project) arising from the construction and operation of the Project. The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation. This evaluation of noise includes the following elements:

- Section 3.7.1 describes the existing environment that could be affected, including fundamentals of acoustics, existing local sound sources and sensitive receptors.
- Section 3.7.2 identifies potential environmental impacts and impacts to humans that may result from Project construction, operation, maintenance, and decommissioning.
- Section 3.7.3 discusses potential cumulative effects.
- Section 3.7.4 describes project design and mitigation measures that will be implemented to avoid or minimize potentially significant impacts.
- Section 3.7.5 presents laws, ordinances, regulations, and standards applicable to noise.
- Section 3.7.6 identifies regulatory agency contacts.
- Section 3.7.7 describes permits required for the Project related to noise.
- Section 3.7.8 provides references used to develop this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical analysis:

- Appendix 3.7A – Baseline Sound Measurement Field Data
- Appendix 3.7B – Roadway Construction Noise Model Inputs and Outputs
- Appendix 3.7C – Construction Vibration Calculations
- Appendix 3.7D – Stationary Operations Source Inputs

A summary of the noise evaluation is provided in the table below.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
1) Generate 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?	☐	☒	☐	☐
2) Generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
3) Expose people residing or working in the project area to excessive noise levels (for a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport)?	☐	☐	☐	☒

3.7.1 Affected Environment

This subsection provides a discussion of fundamental acoustic concepts and terminology, the local setting related to noise sources and noise sensitive land uses, and the existing noise environment in the Project area.

3.7.1.1 Sound, Noise, and Acoustics

Sound consists of three (3) components: the sound source, sound path, and sound receptor. All three (3) components must be present for sound to exist. Without a source to produce sound, there is no sound. Similarly, without a medium to transmit sound pressure waves, there is no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are multiple sound sources, paths, and receptors. Acoustics is the field of science that deals with production, propagation, reception, effects, and control of sound. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

3.7.1.2 Sound Pressure Levels and Decibels

The amplitude of a sound wave determines its loudness. Loudness of sound increases with increasing amplitude. Sound pressure amplitude is measured in units of micronewtons per square meter, also called micropascals. One micropascal is approximately one-hundred billionth (0.00000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million micropascals, or 10 million times the pressure of the weakest audible sound. Because expressing sound levels in terms of micropascals would be very cumbersome, and the sensitivity of human hearing to changes in micropascals is rather coarse (e.g., a doubling of micropascals is just audible to most people), sound pressure level in logarithmic units is used instead to describe the ratio of actual sound pressure to a reference pressure squared. These units are called Bels. To provide a finer resolution, a Bel is subdivided into 10 decibels (dB).

3.7.1.3 A-Weighted Sound Level

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness, or human response, is determined by the characteristics of the human ear.

Human hearing is limited not only in the range of audible frequencies, but also in the way it perceives the sound in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 hertz and 5,000 hertz, and it perceives a sound within that range as more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of frequency-dependent sound level adjustments is usually applied to the sound measured by a sound level meter. The A-scale weighting network approximates the frequency response of the average young ear when listening to ordinary sounds. When people make judgments about the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Noise levels are typically reported in terms of A-weighted sound levels. All sound levels discussed in this report are A-weighted decibels (dBA). Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 3.7-1.

Table 3.7-1. Typical Noise Levels Associated with Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet	105	
	100	
Gas Lawn Mower at three feet	95	
	90	
Diesel Truck at 50 feet, 50 miles per hour	85	Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime	75	
	70	Vacuum Cleaner at 10 feet
Commercial Area	65	Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
	55	Large Business Office
Quiet Urban Daytime	50	Dishwasher (in next room)
	45	
Quiet Urban Nighttime	40	Theater, Conference Room (background)
Quiet Suburban Nighttime	35	
	30	Library
Quiet Rural Nighttime	25	Bedroom at Night, Concert Hall (background)
	20	
	15	Broadcast/Recording Studio
	10	
	5	
Lowest Threshold of Human Hearing (Healthy)	0	Lowest Threshold of Human Hearing (Healthy)

Source: Caltrans 2020a.
Notes: dBA = A-weighted decibel.

3.7.1.4 Human Response to Changes in Noise Levels

Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound pressure levels of 1 dB when exposed to steady, single-frequency signals in the mid-frequency range.

Outside such controlled conditions, the trained ear can detect changes of 2 dB in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dB. A change of 5 dB is readily perceptible, and a change of 10 dB is perceived as twice (if a gain) or half (if a loss) as loud. A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level.

3.7.1.5 Noise Descriptors

Additional units of measure have been developed to evaluate the long-term characteristics of sound. The energy-equivalent sound level (L_{eq}) is also referred to as the time-average sound level. It is the equivalent steady-state or constant sound level that in a stated period of time would contain the same acoustical energy as the time-varying sound level during the same time period. For instance, the 1-hour A-weighted equivalent sound level, $L_{eq(h)}$, is the energy average of the A-weighted sound levels occurring during a 1-hour period. The statistical sound level (L_{xx}) is a statistical value corresponding with the decibel level exceeded for a cumulative percent (XX%) over a defined time period. The "L-fifty" value (L_{50}) is a decibel level exceeded 50% during a given measurement period (such as 30 minutes out for 1 hour) and is the basis for most of the County's Noise Ordinance standards.

People are generally more sensitive to and thus potentially more annoyed by noise occurring during the evening and nighttime hours. Hence, another noise descriptor used in community noise assessments—the day-night equivalent level (L_{dn})—represents a time-weighted, 24-hour average noise level based on the A-weighted sound level. However, unlike an unmodified 24-hour L_{eq} value, the L_{dn} descriptor accounts for increased noise sensitivity during the nighttime (10 p.m. to 7 a.m.) by adding 10 dBA to the average sound levels occurring during these defined hours within a 24-hour period.

3.7.1.6 Sound Propagation

Sound propagation (i.e., the traverse of sound from a noise emission source position to a receptor location) is influenced by multiple factors that include geometric spreading, ground absorption, atmospheric effects, and occlusion by natural terrain and/or features of the built environment.

Sound levels attenuate (or diminish) geometrically at a rate of approximately 6 dB per doubling of distance from an outdoor stationary point-type source due to the spherical spreading of sound energy with increasing distance travelled and 3 dB per doubling of distance from an outdoor stationary line source (like vehicles traveling along a roadway). The effects of atmospheric conditions such as humidity, temperature, and wind gradients are typically distance-dependent and can also temporarily either increase or decrease sound levels measured or perceived at a receptor location. In general, the greater the distance the receptor is from the source of sound emission, the greater the potential for variation in sound levels at the receptor due to these atmospheric effects. Additional attenuation can result from sound path occlusion and diffraction due to intervention of natural (ridgelines, dense forests, etc.) and built features (such as solid walls, buildings, and other structures).

3.7.1.7 Groundborne Vibration Fundamentals

Ground-borne vibration is fluctuating or oscillatory motion transmitted through the ground mass (i.e., soils, clays, and rock strata). The strength of ground-borne vibration attenuates rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily sandy soils) do not. Several basic measurement units are commonly used to describe the intensity of ground vibration. The descriptors used by the Federal Transit Administration are

peak particle velocity (PPV), in units of inches per second (ips), and velocity decibel that is based on a root-mean square (RMS) of the vibration signal magnitude. Per the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual (Caltrans 2020b), the calculation to determine PPV at a given vibration source to receptor distance is as follows:

$$PPV_{distance} = PPV_{ref}*(25/D)^{1.1}$$

Where:

$PPV_{distance}$ = the peak particle velocity in inches per second of the equipment adjusted for distance

PPV_{ref} = the reference vibration velocity in inches per second at 25 feet

D = the distance from the equipment to the receptor

3.7.1.8 Sensitive Receptors

Existing potentially sensitive receptors in the vicinity of the Project site consist of rural residential single-family uses located to the south and to the north, west, and south of the Project site, as close as 50 feet from the Project boundary. These residential receptors have the greatest potential to be impacted by construction and/or operation of the Project.

The Project site is surrounded by other land uses, such as agricultural and substation land uses, that do not have the same noise sensitivity as residential use areas. Additionally, Project generated sounds attenuate as they propagate away from sound sources. As a result, off-site receptors that are more distant from the nearest noise-sensitive residences will be exposed to lower Project-attributed noise levels. For these reasons, Project sound level exposures found to be compliant with County standards at the nearest residences studied herein will support a logical inference that compliance could thus also be expected at more distant off-site receptors and less sensitive land uses where such receptors have higher noise thresholds for compliance and impact significance assessment.

3.7.1.9 Background Sound Monitoring Survey

Sound pressure level measurements were conducted near the Project site on October 21 through 25, 2024, to quantify and characterize the existing outdoor background sound levels. Long term sound level measurements were performed using SoftdB “Piccolo” model sound level meters (SLM) equipped with windscreen-protected, 0.5-inch diameter pre-polarized condenser microphones with pre-amplifiers. Short term sound level measurements were conducted with a Rion NL-52 SLM equipped with wind screen protected, 0.5-inch diameter pre-polarized condenser microphones with pre-amplifiers. The Piccolo meets the current American National Standards Institute standard for a Type 2 (General Use) SLM and the Rion NL-52 meets conditions as a Type 1 SLM. The accuracy of the sound level meters was verified using a field calibrator before and after the measurements, and the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

Three (3) long-term (LT) sound measurement locations (LT1–LT3) were selected to represent existing noise-sensitive receptors on and near the Project site (see Figure 3.7-1, Land Use and Sound Monitoring Locations). The primary sound source at all LT locations was traffic. Sound measurements were taken over multiple days in 5-minute intervals, capturing L_{eq}, L_{10}, L_{50}, and L_{90} metrics. L_{eq} provides an overview of the overall sound exposure detected, while L_{90} serves as an indicator of background noise, filtering out brief disturbances. L_{10} reflects the upper

range of fluctuating sound levels, and L_{50} represents the median sound level for the measurement period. A summary of the results of the sound monitoring is given in Tables 3.7-2 and 3.7-3. Plots showing these metrics, along with field survey photos and weather data, are included in Appendix 3.7A: Baseline Sound Measurement Field Data.

Table 3.7-2. Results of Long-Term Sound Monitoring

Site: Location	Monitoring Period	Daytime L_{eq-1hr} (dBA)	Nighttime L_{eq-1hr} (dBA)	L_{dn} (dBA)	Daytime L_{50-1hr} (dBA)	Nighttime L_{50-1hr} (dBA)
LT1: 1241 Soledad Canyon Road	10/21–10/24	62–72	54–75	73–75	**Range:** 52–64 **Average:** 59	**Range:** 52–69 **Average:** 59
LT2: 1428 W Carson Mesa Road	10/21–10/24	52–64	41–66	64 (all days)	**Range:** 38–52 **Average:** 44	**Range:** 37–54 **Average:** 45
LT3 823 Foreston Drive	10/21–10/24	48–61	48–60	60–61	**Range:** 45–57 **Average:** 51	**Range:** 47–59 **Average:** 52

Notes: dBA = A-weighted decibel; L_{eq} = equivalent sound level; L_{dn} = day-night sound level (of 24-hour period); L_{50} = sound level exceeded for a cumulative 50% of the period.

Table 3.7-3. Results of Short-Term Sound Monitoring, October 25, 2024

Site: Location	Monitoring Period	L_{eq} (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	Primary Sound Source(s)
ST1: 32855 Santiago Road	12:11 p.m.– 12:26 p.m.	65	47	51	63	Traffic
ST2: 1501 Soledad Canyon Road	11:52 a.m. – 12:07 p.m.	66	45	49	66	Traffic
ST3: Sunrise View Street	11:29 a.m. – 11:44 a.m.	49	46	48	51	Traffic

Notes: dBA = A-weighted decibel; L_{eq} = equivalent sound level; L_{10} = sound level exceeded for a cumulative 10% of the period; L_{50} = sound level exceeded for a cumulative 50% of the period; L_{90} = sound level exceeded for a cumulative 90% of the period.

3.7.2 Impact Analysis

3.7.2.1 Methodology

The information presented is based on a Project-specific Noise Technical Assessment. Project impacts related to noise were evaluated against the California Environmental Quality Act (CEQA) significance criteria and are discussed below. The impact analysis evaluates potential Project impacts during Project construction, operation, and decommissioning.

3.7.2.2 Impact Evaluation Criteria

The following significance criteria are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and the County's Guidelines for Determining Significance (Los Angeles County 1978) and will be used to determine the

significance of potential noise impacts. Such potential noise and vibration impacts to the community would be considered significant if the proposed Project would result in the following:

- 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
- Generation of excessive groundborne vibration or groundborne noise levels
- Expose people residing or working in the project area to excessive noise levels (for a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport)

In light of these above significance criteria, this analysis uses the following standards to evaluate potential noise and vibration impacts.

- **On-Site Construction Noise –** Los Angeles County's Municipal Code limits stationary construction sources to 60 dBA and mobile construction sources to 75 dBA at residential structures between the hours of 7:00 a.m. and 8:00 p.m. on weekdays and Saturdays and to 50 dBA at residences at all other times. These limits are interpreted herein to represent maximum 8-hour L_{eq} values (L_{eq8hr}) values. These construction limits from Section 12.08.440 of the County code are presented in Section 3.7.5.3 herein.
- **Off-Site Project-Attributed Transportation Noise –** For purposes of this analysis, a noise impact due to transportation noise will be considered significant if predicted noise levels exceeded the Federal Interagency Committee on Noise (FICON) thresholds noted herein under Section 3.7.5.1. More specifically, an impact due to the project contribution to existing and future predicted ambient noise levels will be considered significant if it meets the following criteria:
  - Outdoor ambient sound level without the project is less than 60 dBA L_{dn}, then a project-attributed increase of 5 dBA or more would be considered significant
  - Outdoor ambient sound level without the project is between 60 and 65 dBA L_{dn}, project-attributed increase of 3 dBA or more would be considered significant
  - Outdoor ambient sound level without the project is greater than 65 dBA L_{dn}, then project-attributed increase of 1.5 dBA or more would be considered significant
- **On-Site Stationary Operations Noise –** Los Angeles County Municipal Code limits operational sound sources to 50 dBA L_{50} during daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA L_{50} during nighttime hours (10:00 p.m. to 7:00 a.m.) for residential areas with a 5 dB penalty for tonal and impulsive noise sources. Exterior sound limits for these and other receiving land use types from Section 12.08.390 of the County code are reproduced herein under Section 3.7.5.3. Allowances are made for pre-existing measurable ambient sound levels, as described in the County code and summarized herein under Section 3.7.5.3. The proposed Project equipment is not tonal, so the tonal penalty does not apply. However, the ambient exceeds the Municipal Code limits in many locations; therefore, the allowance for ambient is taken into account in the analysis.
- **Construction Vibration –** Since Los Angeles County's Municipal Code does not include limits for vibration due to construction to protect against structural damage, this analysis applies the Caltrans thresholds for building damage risk. As discussed in Section 3.7.5.2, Caltrans Guidance recommends that a vibration level of 0.3 ips PPV be used as the threshold for building damage risk to residential structures and 0.5 ips PPV be used as the damage threshold for non-residential structures. These thresholds are used in this analysis to determine vibration impacts.

3.7.2.3 CEQA Appendix G Assessment Criteria

3.7.2.3.1 Would the project result in 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.

Short-Term On-Site Construction Noise

Less Than Significant Impact with Mitigation. Noisy construction activities will not occur between the hours of 8:00 p.m. and 7:00 a.m. or at any time on Sundays or holidays. Construction activities include temporary noise and vibration sources with emission levels varying from hour to hour and day to day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. Construction noise modeling was performed using a recognized Microsoft Excel–based noise prediction model. Input variables include the equipment type (backhoe, crane, truck, etc.), the number of equipment pieces, the duty cycle for each piece of equipment (i.e., percentage of each hour the equipment typically works), and the distance from the sensitive receptor. Sound source information was obtained from the Noise Source Database developed under National Cooperative Highway Research Program 25-49 (NCHRP 25-49), Development of a Highway Construction Noise Prediction Model (NASEM 2022).

Table 3.7-4 provides a list of the sound levels generated by various powered equipment that could be associated with construction of the Project, measured at a distance of 50 feet using a "slow" response time constant (1 second). Usually, construction equipment operates in alternating cycles of full power and low power, producing average noise levels over time that are less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

Table 3.7-4. Sound Levels of Typical Construction Equipment

Equipment	Maximum Sound Level (dBA L_{max}) – 50 feet from Source
Air Compressor	67
Aerial Lift (Man Lift)	73
Backhoe	84
Compactor (Plate)	75
Compactor (Roller)	83
Concrete Mixer	82
Concrete Saw	88
Crane, Mobile	76
Dozer	86
Forklift	88
Generator	68
Grader	79
Horizontal Bore Drill	88
Loader	81
Paving - Asphalt	83
Paving - Concrete	88

Table 3.7-4. Sound Levels of Typical Construction Equipment

Equipment	Maximum Sound Level (dBA L_{max}) – 50 feet from Source
Pump	74
Scraper	92
Flatbed Truck	74
Welding Machine	72

Notes: dBA = A-weighted decibel; L_{max} = maximum instantaneous noise level.
Source: NASEM 2022

Noise emissions from Project construction were calculated at the nearest noise-sensitive land use, residences located about 50 feet to the north of the Project site's property line, based upon information provided by the Applicant and on the distance between the closest Project construction boundary and this use for each construction phase. The anticipated equipment to be used for construction of the Project is shown in Appendix 3.7B for each phase of Project construction. Aggregate sound emissions from Project construction activities, broken down by sequential phase of construction, were predicted for the worst-case noisy construction activity occurring along the closest construction boundary to the residence and also from the site center to the residence. Given the expanse of the site, only one of each type of mobile or stationary equipment per phase will be operating concurrently near the property line of the nearest noise sensitive receptor, with the understanding that equipment located farther from the boundary will have limited contribution to the overall noise levels at this location, given ambient levels. For the site center calculations, all equipment planned to be used for each phase of construction was included. Note that the Project sound wall, which ranges in height from 8 feet to 14 feet, will be constructed and in place during all phases of the Project, except demolition, site preparation, and grading. This barrier is included in the calculation of construction noise levels for the applicable construction phases. The results are summarized in Table 3.7-5.

Table 3.7-5. Construction Noise Levels, Worst-Case L_{eq}

Construction Phase	Receiver Distance	A-weighted Sound Level at Nearest Noise-Sensitive Receptor (Residence)	
		Mobile Equipment	Stationary Equipment
Phase 1: Decommission[1]	Closest Distance – 100 ft	63	58
	Acoustic Center – 500 ft	44	47
Phase 2: Demolition	Closest Distance – 350ft	70	73
	Acoustic Center – 500 ft	65	69
Phase 3: Site Preparation	Closest Distance – 50 ft	91	N/A
	Acoustic Center – 500 ft	66	N/A
Phase 4: Substation Site Preparation	Closest Distance – 1000 ft	59	N/A
	Acoustic Center – 1500 ft	55	N/A
Phase 5: Grading	Closest Distance – 50 ft	93	N/A
	Acoustic Center – 500 ft	69	N/A
Phase 6: Substation Grading	Closest Distance – 1000 ft	62	N/A
	Acoustic Center – 1500 ft	58	N/A
Phase 7: Substation Instillation[1]	Closest Distance – 1000 ft	48	30
	Acoustic Center – 1500 ft	45	26
	Closest Distance – 100 ft	66	52

Table 3.7-5. Construction Noise Levels, Worst-Case L_{eq}

Construction Phase	Receiver Distance	A-weighted Sound Level at Nearest Noise-Sensitive Receptor (Residence)	
		Mobile Equipment	Stationary Equipment
Phase 8: Gen-Tie Foundation and Tower Erection[1]	Acoustic Center – 500 ft	50	37
Phase 9: Gen-Tie Stringing and Pulling[1]	Closest Distance – 100 ft	64	N/A
	Acoustic Center – 500 ft	49	N/A
Phase 10: SCE Interconnection Upgrades[1]	Closest Distance – 110 ft	68	57
	Acoustic Center – 500 ft	53	43
Phase 11: Battery/Container Instillation[1]	Closest Distance – 100 ft	66	52
	Acoustic Center – 500 ft	50	37
Phase 12: Paving[1]	Closest Distance – 100 ft	74	N/A
	Acoustic Center – 500 ft	62	N/A

Source: Appendix 3.7B
Notes: $L_{eq\ 8hr}$ = average noise level equivalent over an 8-hour period; dBA = A-weighted decibel; N/A = not applicable.
[1] This phase includes shielding from project sound walls, which range in height from 8 feet to 14 feet.

As shown in Table 3.7-5, construction noise levels at the closest residence (ranging between 50 feet and 1,000 feet from the indicated construction phase activity) are estimated to range from 30 dBA to 73 dBA $L_{eq8\text{-}hr}$ for stationary equipment and 48 dBA to 93 dBA $L_{eq\ (8\text{-}hr)}$ for mobile equipment. At distances ranging between 500 feet and 1,500 feet—associated with the location of the indicated construction phase activity acoustic center with respect to the nearest residence—noise levels decrease to 26 dBA to 69 dBA $L_{eq8\text{-}hr}$ for stationary equipment and 44 dBA to 69 dBA $L_{eq8\text{-}hr}$ for mobile equipment. Activities during use of the concrete saw and during some initial phases of construction that occur prior to the construction of the Project sound walls could exceed Los Angeles County's construction noise limits of 60 dBA $L_{eq8\text{-}hr}$ for stationary equipment and 75 dBA $L_{eq8\text{-}hr}$ for mobile equipment at both distances.

With the installation of an 8-foot-high temporary noise barrier around the construction area where site preparation and grading activities are occurring within 250 feet of residences and for demolition activities that include use of the concrete saw, projected noise levels fall below the County's thresholds. In addition, a shroud shall be provided during all usage of the concrete saw within 150 feet of residences. All other construction activities will be within the construction noise limits with standard construction methods only. Mitigation Measures MM NOI-1 through MM NOI-3 will reduce this potential impact to a less than significant level. The potential impact will be less than significant with mitigation.

Workers during construction and operation are anticipated to use hearing protection as required by the Occupational Safety and Health Administration. During construction, noise levels from the various pieces of heavy equipment will be similar to those listed in Table 3.7-4 but will likely be less depending on use and distance.

Off-Site Construction Traffic Noise

Less Than Significant Impact. The Project will result in local, short-term increases in roadway noise as a result of construction traffic. Based on information developed as part of the Project's transportation analysis (see Section 3.12), Project-related traffic will include workers commuting to and from the Project site as well as vendor

and haul trucks bringing or removing materials. Table 3.7-6 shows the construction trips by day for each construction phase. As shown in Table 3.7-6, the highest number of average daily construction-related trips to and from the Project site for all construction phases will be 258 worker trips, 16 vendor trips, and 524 haul truck trips.

Table 3.7-6. Construction Trip Generation – Construction and Decommissioning

No.	Phase	Daily Trips			Total Trips
		Workers	Vendor Trucks	Haul Trucks	
Construction					
1	Demolition	10	4	6	20
2	Site Preparation	242	12	24	278
3	Substation Site Preparation	242	12	100	354
4	Grading	242	12	524	778
5	Paving	16	4	0	20
6	Substation Site Grading	242	12	486	740
7	Battery/Container Installation	242	12	20	274
8	Substation Installation	121	12	4	137
9	Gen-Tie Foundation and Tower Erection	121	12	0	133
10	Gen-Tie Stringing and Pulling	121	12	0	133
11	SCE Interconnection Facility Upgrades	121	12	0	133
12	Commissioning	242	12	0	254
Peak Phases for Construction (assuming overlap of Phases 4 and 5) [1]		258	16	524	798
Decommissioning					
13	Decommissioning	242	12	20	274

Source: Dudek 2025.
Note:
[1] Indicates the peak scenario during which construction of the project is occurring simultaneously.

Near the proposed Project, the trucks will primarily use SR-14 and its interchanges at Sierra Highway and Soledad Canyon Road to access the Project. All three (3) of these roadways are heavily trafficked. The average daily traffic along this segment of SR-14 near Sierra Highway, per Caltrans 2022 traffic census is approximately 105,000 vehicles. Sierra Highway has an existing average daily traffic of 5,456 and Soledad Canyon Road has an existing average daily traffic of 2,952 along the project frontage and 5,726 between Aliso Canyon Road and Santiago Road. All BESS and substation construction traffic will enter the main driveways of the Project before the homes along Soledad Canyon Road (represented as R6 through R8 in Figure 3.7-2, On-Site Operational Noise Level Prediction [Leq, dBA], Design Barrier). As a result, traffic noise level increases along this segment of roadway resulting from Project construction will be minimal (less than 1 dB). There are no noise sensitive receptors along the other portions of Sierra Highway and Soledad Canyon Road that will be used to access the site. Traffic noise increases in noise sensitive areas will be less than 1.5 dB and will not be considered significant. The potential impact will be **less than significant**.

Short-Term Helicopter Noise

Less Than Significant Impact. Construction of the project may include use of a helicopter for a period of up to 3 days, for a maximum of up to 10 hours per day, to string the transmission line across the railroad tracks. The helicopter will operate during the County's allowable hours of 7:00 a.m. and 8:00 p.m. on weekdays and Saturdays. The Project proposes the use of an MD 600N type helicopter or similar. Overflights with this type of helicopter generate noise levels of up to 81 dBA at a distance of 200 feet, assuming a speed of 110 knots (Volpe 2004). Helicopter overflights and activity will be intermittent during the up to 3 days that helicopters will be used. The nearest sensitive receptor, a residence located along Kentucky Springs Road, will be vacated or demolished as part of the project. The nearest remaining residences are located along Foreston Drive, as close as 650 horizontal feet (680 overall feet) from the helicopter path. At a distance of 680 feet, the helicopter will generate a sound level as high as 71 dBA and will meet the County's noise limit for mobile sources. The potential impact will be **less than significant**.

Operational Sound Levels

Less Than Significant Impact. Sound modeling of on-site Project operations was conducted in accordance with ISO Standard 9613-2, Acoustics – Attenuation of Sound During Propagation Outdoors, Part 2: General Method of Calculation (ISO 1996), implemented using Datakustik's CadnaA software application. The CadnaA model takes into account source sound power levels, surface reflection and absorption, atmospheric absorption, geometric divergence, meteorological conditions, walls, barriers, and berms. The Project area was modeled with a conservative ground factor of G = 0.5. A temperature of 10°C with 70% relative humidity was used. No attenuation due to foliage was included for purposes of the modeling.

Sound sources modeled for the Project were major producers of continuous-type noise generation, which include battery containers, power conversion systems, and main power transformers at the Project collector substation. While there may be other electrical transmission system components on site, such as breakers and buses, their noise emissions are—if any—sporadic and thus have no meaningful contribution to overall aggregate noise emission from the BESS facility during charging or discharging conditions. The following sound sources are included in the sound propagation model:

- ***Battery energy storage containers:*** The primary sound source within the battery energy storage containers is the operation of the thermal management system (i.e., the chiller components and/or cooling fan[s]) and the inverters. The Project modeled BESS enclosure with the available sound reduction kit which consists of a sound baffle over the air intake and exhaust openings of the container at a 50% fan speed at 35°C / 95°F or less. Based on manufacturer provided data, this equipment is not tonal and generates a sound power level of 79 dBA. The Project proposes installation of 2035 BESS enclosure on site.
- ***Power conversion system:*** This power conversion system includes a bi-directional inverter and a medium-voltage transformer. Based on sound emission data results provided by the manufacturer for a representative power conversion system, the reference sound power level for this unit is 84 dBA. The project proposes installation of 517 power conversion system units on site.
- ***Substation transformers:*** The Project utilizes five (5) 220 mega volt-amp high voltage transformers. Based on the methodology outlined in the Electric Power Plant Environmental Noise Guide (Teplitzky et al. 1979), this will generate a sound power level of 103 dBA under full power with cooling fans operating (i.e., oil natural air force conditions).

Potentially sound-sensitive uses in the vicinity of the Project site include rural-family residences located to the north, west and south of the Project. Sound modeling included 10 discrete off-site receivers. In addition, a rectangular

grid plane of in-model calculation positions spaced 10 meters by 10 meters was set at a height of 1.5 meters (5 feet) above the ground surface, spanning the Project area and its immediate surroundings.

An 8-foot to 14-foot-high sound barrier is proposed as part of the Project, to be located around the Facility. This barrier is included in the sound modeling results, as shown in Figure 3.7-2, On-Site Operational Noise Level Prediction (Leq, dBA), Design Barrier.

Los Angeles County Municipal Code limits operational sound sources to 50 dBA L_{50} during daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA L_{50} during nighttime hours (10:00 p.m. to 7:00 a.m.) for residential areas with a 5 dB penalty for tonal and impulsive noise sources and an allowance for ambient sound levels. Project operational sources are not tonal, so the 5 dB penalty will not apply. However, ambient sound levels in some residential areas were above the County's limits due to existing conditions, so an allowance for ambient conditions was warranted at these locations. In these cases, the adjusted limit will be the overall daytime and nighttime L_{50} for that location. In addition, the project was designed to maintain operational levels below 50 dBA L_{50}, except (as in the case of R1 and R2) where the lowest hourly L_{50} was above 50 dBA, in that case, the lowest hourly L_{50} was used as the adjusted limit.

Ambient L_{50} sound levels were calculated by adjusting the data given in Tables 3.7-2 and 3.7-3 for the difference in distance to the shared sound sources between the receptor location and the measurement location. The range and overall daytime and nighttime L_{50} sound levels for each of the nearest receptors (shown in Figure 3.7-1, Land Use and Sound Monitoring Locations) are given in Table 3.7-7, along with the County's unadjusted and adjusted limits for each location. Where the overall L_{50} magnitude exceeded the County's default limit, an adjustment was made. The model results are presented graphically in Figure 3.7-2, On-Site Operational Noise Level Prediction (Leq, dBA), Design Barrier, and numerically in Table 3.7-8, compared to the applicable sound limit at each receptor.

Table 3.7-7. Modeled Project Operation Sound Levels Compared to Limits (dBA L_{50})

Model Receiver	County Limit, Unadjusted		Ambient Levels, L_{50} dBA				Ambient Adjustment?	Adjusted Limits	
	Day	Night	Hourly Day	Hourly Night	Overall Day	Overall Night		Day	Night
R1	50	45	52–64	52–69	59	59	Yes	52	52
R2	50	45	52–64	52–69	59	59	Yes	52	52
R3	50	45	50–52	50–52	57	57	Yes	50	50
R4	50	45	50–52	50–52	57	57	Yes	50	50
R5	50	45	48–58	48–60	55	55	Yes	50	50
R6	50	45	47–57	47–59	54	54	Yes	50	50
R7	50	45	47–57	47–59	54	54	Yes	50	50
R8	50	45	47–57	47–59	54	54	Yes	50	50
R9	50	45	38–59	37–54	44	45	No	50	45
R10	50	45	47–57	47–59	51	52	Yes	50	50

Notes: dBA = A-weighted decibel; L_{50} = sound level exceeded 50% of the time during the stated period.

As indicated in Table 3.7-8, the sound level exposures at the nearest residences will be 43 dBA to 51 dBA L_{50} assuming continuous operation of the 50% fan-duty cycle conditions. As shown in Figure 3.7-2, On-Site Operational Noise Level Prediction (Leq, dBA), Design Barrier, and Table 3.7-8 below, the nearest sound sensitive locations are

outside of the sound level limits given in Table 3.7-7 and will be similar to or below existing ambient sound levels. Operational sound levels will meet the County's adjusted noise limits.

Table 3.7-8. Modeled Project Operation Sound Levels Compared to Noise Limits

Model Receiver	Land Use	Operational Sound Level, dBA L_{50}	Adjusted Nighttime Limit, dBA L_{50}	Meets Adjusted Limits?
R1	Residential	52	52	Yes
R2	Residential	52	52	**Yes**
R3	Residential	48	50	**Yes**
R4	Residential	48	50	**Yes**
R5	Residential	48	50	**Yes**
R6	Residential	49	50	**Yes**
R7	Residential	49	50	**Yes**
R8	Residential	49	50	**Yes**
R9	Residential	44	45	**Yes**
R10	Residential	40	50	**Yes**

Source: Dudek – CadnaA modeling (Attachment C).
Notes: dBA = A-weighted decibel; L_{50} = sound level exceeded 50% of the time during the stated period.

Figure 3.7-2, On-Site Operational Noise Level Prediction (Leq, dBA), Design Barrier, shows predicted operational noise levels within the Project site ranging from 50 dBA to exceeding 75 dBA, depending on proximity to the operating battery containers, inverters, and the collector substation step-up transformer. Based on the foregoing, the potential impact will be **less than significant**.

Transmission Line Noise Levels

Less Than Significant Impact. Audible noise is produced by the corona effect along transmission line conductors conveying electrical current. This corona effect results from dust or moisture on the conductor surfaces; hence, while sound may be generated from corona during dry, fair-weather conditions, it is louder and more likely to be audible depending on the outdoor background sound the proximity of the listener.

The Project collector substation sends 34.5kV electricity to the proposed adjoining switchyard, which will step-up the voltage to 500kV and connect to the regional grid via above-ground transmission lines, assumed herein (and based on Project plan information to date) as a single circuit with three (3) conductor wires (one per each of three phases) on steel monopole or tower structures up to a maximum of 243 feet in height above grade. Assuming these alternating current conductors are aluminum conductor steel reinforced "Bluebird" or "Drake" type (see Appendix 2E Corona Losses), it is possible for them to emit audible noise under rainy conditions.

Based on the Project's the maximum audible noise at the edge of the right of way will range from 24.6 dBA to 30.1 dBA L_{50} during fair weather and 49.6 dBA to 55.1 dBA L_{50} during rain (Sargent & Lundy 2025). During rainy conditions, the rain itself generates noise and people tend to stay indoors with windows closed. During periods of fair weather, sound from the transmission line will be well below the Los Angeles County Municipal Code daytime and nighttime limits and below measured ambient sound levels. The potential impact will be **less than significant.**

3.7.2.3.2 Generation of excessive groundborne vibration or groundborne noise levels.

Less Than Significant Impact. Construction activity can result in varying degrees of ground vibration and ground-borne noise at local receptors, depending on the equipment and methods used, distance to the affected structures, and soil type. Caltrans has been assembling data for vibration and ground-borne noise levels generated by heavy construction equipment during the building of transportation Projects for many years. The vibration and ground-borne noise levels from use of such equipment are representative for other types of construction efforts, not just transportation Projects, and are therefore widely employed to assess vibration and ground-borne noise levels from heavy equipment use for any effort. According to Caltrans (2020b), the most important equipment relative to generation of vibration and ground-borne noise, and the vibration and ground-borne noise levels produced by such equipment, is illustrated in Table 3.7-9. Impact pile driving will not be used as a method of construction.

Table 3.7-9. Vibration Velocities and Ground-borne Noise Levels for Typical Construction Equipment

Equipment	PPV at 25 Feet (Inches Per Second)
Sonic Pile Driver (Typical)	0.170
Vibratory Roller	0.210
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

Source: Caltrans 2020b.
Note: PPV = peak particle velocity.

Ground-borne vibration attenuates rapidly, even over short distances. The attenuation of ground-borne vibration as it propagates from source to receptor through intervening soils and rock strata can be estimated with expressions found in Caltrans guidance (Caltrans 2020b) and described in Section 3.7.1.7.

To protect against structural damage, this analysis applies the Caltrans guidance thresholds for building damage risk (Caltrans 2020b), which establishes a construction limit of 0.25 in/sec PPV for historic and old buildings, 0.3 in/sec PPV for older residential structures, and 0.5 in/sec PPV for new residential and modern commercial/industrial structures. The applicable threshold for Project-attributed construction vibration will be 0.3 in/sec PPV at the closest residences and 0.5 in/sec PPV at the closest industrial building.

The closest residential and non-residential structures to the Project site are located about 50 feet from the Project property line. Using the vibration source level of construction equipment provided in Table 3.7-9, the distance to the closest structures, and the equation supplied in the Caltrans (2020b) construction ground-borne noise assessment methodology (above), Dudek calculated the Project construction-related vibration levels shown in Table 3.7-10. Construction vibration calculations are shown in Appendix 3.7C.

Table 3.7-10. Predicted Construction Vibration Levels at Nearest Off-Site Structures

Equipment	PPV at Nearest Residencial Structure (50 feet)	PPV at Nearest Non-Residencial Structure (50 feet)	Complies with Caltrans Standards?
Sonic Pile Driver (Typical)	0.079	0.079	**Yes**

Table 3.7-10. Predicted Construction Vibration Levels at Nearest Off-Site Structures

Equipment	PPV at Nearest Residencial Structure (50 feet)	PPV at Nearest Non-Residencial Structure (50 feet)	Complies with Caltrans Standards?
Vibratory Roller	0.098	0.098	**Yes**
Large Bulldozer	0.042	0.042	**Yes**
Loaded Trucks	0.035	0.035	**Yes**
Small Bulldozer	0.001	0.001	**Yes**

Source: Caltrans 2020b.
Note: PPV = peak particle velocity, in units of inches per second.

The applicable damage threshold for Project-attributed construction vibration will be 0.3 in/sec PPV at the closest residence and 0.5 in/sec PPV at the closest industrial building. As shown in Table 3.7-10, Project construction will result in vibration levels well below these thresholds. Potential vibration impacts of the Project will therefore be **less than significant.**

3.7.2.3.3 Expose people residing or working in the project area to excessive noise levels (for a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport).

No impact. The closest airports to the Project are the Agua Dulce Airpark, located about 9.5 miles to the west, and the Palmdale Regional Airport, located about 8.5 miles to the northeast. There are no private or public airports within 2 miles of the site. Therefore, the Project site will not expose construction workers or operations employees to substantial airport noise. **No impact** will occur.

3.7.3 Cumulative Effects

Less than significant impact with mitigation. Implementation of the project and its component site-specific development, as well as unrelated development projects within its vicinity will all be subject to applicable noise standards. On this basis, and because noise impacts with respect to relevant standards are predicted to be less than significant with MM NOI-1 through MM NOI-3, the project will not contribute to cumulative exceedances of noise standards, and its incremental effect will be **a less than significant impact with mitigation incorporated**. Specific potential cumulative impact discussions are included below.

Short-Term Construction Noise

The project will result in temporary noise increases during construction activities, as discussed under Section 3.7.2.3.1 above. The construction period of the project has the potential to overlap with the construction of other development projects in the County but will not be anticipated to worsen these construction noise estimates in light of the physical distance between such activities and different receivers that are closest to the different phase area boundaries.

At a distance of over 1,000 feet, aggregate noise emission levels from the nearest cumulative project will attenuate due to the decrease in noise levels with distance and the presence of physical barriers (i.e., intervening buildings

and topography). Hence, noise due to construction of other projects will not meaningfully combine with future development under the project to produce a cumulative noise effect during construction. By way of illustration, if there are two (2) concurrent construction projects of comparable sound emission intensity, and the activity nearest to a studied noise-sensitive receptor is compliant with the aforementioned County threshold for construction noise as received by a residential property, the other activity could be no closer than three times the distance of the receptor to the nearest activity and not make a cumulatively measurable contribution to the total noise exposure level. If two (2) concurrent projects were close to a receptor, the cumulative noise will be one of the following:

- The louder (in dBA) of the two (2) concurrent activities.
- A logarithmic sum of the two (2) activity noise levels that, per acoustic principles, cannot be more than 3 dBA greater than the louder of the two (2) individual noise-producing activities.

In sum, cumulative construction noise is likely to be dominated by the closest or loudest activity to the receptor, and the combination will be no more than a barely perceptible difference (i.e., up to 3 dB).

Additionally, all future development under implementation of the project, as well as unrelated construction projects within County limits, will be required to comply with limits on allowable construction hours per relevant portions of the County's noise ordinance. Hence, for the above reasons, potential cumulative impacts due to cumulative construction noise will be **less than significant.**

Project Operations

Project implementation will include permanent on-site sound sources as addressed under Section 3.7.2.3.1 above. A cumulative impact could occur if sound produced from such sources due to implementation of the project were to combine with sound produced from the operation of other unrelated projects in the vicinity to create a cumulatively significant permanent increase in ambient sound levels. However, sound emission from project equipment attenuates with distance and can be occluded by structures and terrain. Additionally, the operation of the project, along with the operation of other unrelated projects, will be subject to applicable requirements from the County's noise ordinance, which limits the exterior noise levels at residences. Hence, for these two reasons, potential cumulative impacts to outdoor ambient noise levels resulting from project stationary sources will be **less than significant.**

Vibration

Construction-related vibration from future development under the project was addressed under 3.7.2.3.2 above. Other foreseeable projects within the vicinity of the project site will not be close enough to create a combined excessive generation of ground-borne vibration; therefore, potential cumulative impacts associated with excessive ground-borne vibration will be **less than significant.**

3.7.4 Mitigation Measures

MM NOI-1 Stationary noise sources (e.g., air compressors, generators) used during construction activities shall be located as far as feasible from existing potentially sensitive receptors. If stationary sources must be located near existing sensitive receptors, they shall be adequately muffled and enclosed within temporary sheds or portable sound blankets shall be used.

MM NOI-2 During project construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.

MM NOI-3 Eight-foot-tall temporary noise barriers shall be implemented at the construction boundaries for each on-site construction subphase as described below.

- Northern construction boundary of demolition area during periods of demolition that include use of the concrete saw.
- Construction boundary during periods of site preparation and grading where construction activities are located within 250 feet of residences.

The barriers can comprise one or more materials of construction and/or assembly, so long as the net sound transmission class (STC) is 25 or better and thus expected to yield anticipated noise reduction when blocking direct sound paths between on-site Project construction noise-producing activities or equipment and the off-site receptor of concern. The horizontal extent of the installed barrier should be compatible with California Department of Transportation (Caltrans) or other industry guidance with respect to minimizing flanking effects around the ends of the barrier, based on both the off-site receptor position and the on-site position or zone of construction activity. Once site walls have been installed temporary noise barriers will no longer be required for noise mitigation.

3.7.5 Laws, Ordinances, Regulations, and Standards

Laws, Ordinances, Regulations, and Standards (LORS) discussed in this section were used to evaluate the Project's noise impacts during construction and operation and are discussed briefly in previous subsections.

Table 3.7-11. LORS Applicable to Noise

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	Noise Control Act	Delegates authority to the states to regulate environmental noise and direct government agencies to ensure compliance with local community noise statutes and regulations.	**Yes.** The Project will not exceed the Los Angeles Code of Ordinances Chapter 12.08 threshold for noise or the prescribed time limits on noise generating activities.	Section 3.7.2.3.1 Section 3.7.5.1
Federal	Transit Noise and Vibration Impact Assessment guidance manual	Recommends a daytime construction noise level threshold when detailed construction noise assessments are performed to evaluate potential impacts to	**Yes.** Project construction will not exceed the recommended construction noise threshold of 80 dBA Leq over an 8-hour period	Section 3.7.2.3.1 Section 3.7.5.1

Table 3.7-11. LORS Applicable to Noise

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		community residences surrounding a project.		
Federal	1992 findings of the Federal Interagency Committee on Noise (FICON)	Provides guidance regarding the determination of a substantial permanent increase in ambient noise levels in the project vicinity above existing levels	**Yes.** The Project will not result in an increase in ambient noise that will create an annoyance based on the FICON guidance.	Section 3.7.2.3.1 Section 3.7.5.1
State	California Environmental Quality Act (CEQA)	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce environmental impacts to the extent feasible.	**Yes.** The CEC will serve as CEQA lead agency and evaluate potential noise impacts, per the CEC's Opt-In Application process.	Throughout this Opt-In Application
State	California Department of Health Services guidelines of community noise acceptability for use by local agencies	Provides guidance regarding normally and conditionally acceptable noise levels by receptor land use.	**Yes**. The Project will not exceed the recommended noise thresholds at nearby sensitive receptors.	Section 3.7.2.3.1 Section 3.7.5.2
State	California Occupational Safety and Health Administration (OSHA); Division of Occupational Safety and Health (DOSH) under the California Department of Industrial Relations (DIR).	Provides permissible noise exposure limits for worker safety related to noise-induced hearing loss.	**Yes.** Employee noise exposures will be limited in accordance with Cal/OSHA requirements.	Section 3.17 Section 3.7.5.2
State	California Department of Transportation and Construction Vibration	Provides procedures for predicting and assessing noise and vibration impacts of proposed transit projects.	**Yes**. The Project will not exceed vibration thresholds that will result in damage to structures or annoyance to nearby receptors.	Section 3.7.2.3.2 Section 3.7.5.2

Table 3.7-11. LORS Applicable to Noise

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
	Guidance Manual			
Local	Los Angeles County General Plan, Noise Element	Contains a goal and policies related to noise control, establishes noise and land use compatibility standards, and outlines goals and policies to achieve these standards	**Yes**. The Project will not exceed recommended noise levels at nearby sensitive receptors.	Section 3.7.2.3.1 Section 3.7.5.3
Local	Los Angeles Code of Ordinances Chapter 12.08	Establishes noise and vibration level limits "in order to control unnecessary, excessive and annoying noise and vibration in the county of Los Angeles.	**Yes**. The Project will not exceed the ordinances threshold for noise or the prescribed time limits on noise generating activities.	Section 3.7.2.3.1 Section 3.7.5.3

3.7.5.1 Federal LORS

Noise Control Act

The Noise Control Act of 1972 and its subsequent amendments in the Quiet Communities Act of 1978 (42 United States Code 4901 et seq.) delegate authority to the states to regulate environmental noise and direct government agencies to ensure compliance with local community noise statutes and regulations.

The project will not exceed the Los Angeles Code of Ordinances Chapter 12.08 threshold for noise or the prescribed time limits on noise generating activities.

Federal Transit Administration

In its Transit Noise and Vibration Impact Assessment guidance manual, the Federal Transit Administration recommends a daytime construction noise level threshold of 80 dBA L_{eq} over an 8-hour period when detailed construction noise assessments are performed to evaluate potential impacts to community residences surrounding a Project (FTA 2018). The Federal Transit Administration also recommends using a construction noise threshold of 75 dBA L_{dn} averaged over 30 days for residences exposed to construction noise lasting 30 days or longer. Although this Federal Transit Administration guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the state and local jurisdictional levels.

Project construction will not exceed the recommended construction noise threshold of 80 dBA L_{eq} over an 8-hour period

Federal Interagency Committee on Noise Administration

Some guidance regarding the determination of a substantial permanent increase in ambient noise levels in the Project vicinity above existing levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON 1992), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a qualitative measure of the adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment.

The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of L_{dn}. The changes in noise exposure that are shown below are expected to result in equal changes in annoyance at sensitive land uses. Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis to define a substantial increase in community noise levels related to all transportation noise sources and permanent non-transportation noise sources.

- Outdoor ambient sound level without the project is less than 60 dBA L_{dn}, then a project-attributed increase of 5 dBA or more would be considered significant;
- Outdoor ambient sound level without the project is between 60 and 65 dBA L_{dn}, project-attributed increase of 3 dBA or more would be considered significant; and
- Outdoor ambient sound level without the project is greater than 65 dBA L_{dn}, then project-attributed increase of 1.5 dBA or more would be considered significant.

The Project complies as it will not result in an increase in ambient noise that will create an annoyance based on the FICON guidance.

3.7.5.2 State LORS

California Environmental Quality Act

CEQA requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce environmental impacts to the extent feasible. Appendix G of the CEQA Guidelines includes criteria for evaluating potential impacts related to noise.

The CEC will serve as CEQA lead agency and evaluate potential noise impacts, per the CEC's Opt-In Application process. This Section 3.7 provides the foundational information for the Commission's CEQA review,

California Department of Health Services Guidelines

The California Department of Health Services has developed guidelines of community noise acceptability for use by local agencies (OPR 2017). Selected relevant levels are listed here:

- **Below 60 dBA Community Noise Equivalent Level (CNEL):** normally acceptable for low-density residential use
- **50 to 70 dBA:** conditionally acceptable for low-density residential use

- **Below 65 dBA CNEL:** normally acceptable for high-density residential use and transient lodging
- **60 to 70 dBA CNEL:** conditionally acceptable for high-density residential, transient lodging, churches, educational, and medical facilities.

The Project complies as it will not exceed the recommended noise thresholds at nearby sensitive receptors.

California OSHA

Section 5096 of Subchapter 7, Group 15, Article 105 of the California Code of Regulations provides the permissible employee noise exposure limits for protection against the potential for noise-induced hearing loss. These limits are based on time-weighted averaged exposures of 90 dBA for an 8-hour work shift, increasing by a factor of 5 dBA with each halving of permissible exposure time (e.g., 95 dBA for 4 hours or 100 dBA for 2 hours each day), up to a maximum permissible exposure level of 115 dBA for any period of time. These limits are enforced by the California Occupational Safety and Health Administration. (Cal/OSHA).

Employee noise exposures associated with the Project will be limited in accordance with Cal/OSHA requirements.

California Department of Transportation

In its Transportation and Construction Vibration Guidance Manual (Caltrans 2020b), Caltrans provides guidelines to assess the potential damage from ground vibration induced by construction equipment. These thresholds are presented in Tables 3.7-12 and 3.7-13.

Table 3.7-12. Caltrans Guidelines for Vibration Damage Potential

Structure and Condition	Maximum PPV, in/sec	
	Transient Sources[1]	Continuous / Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/ commercial buildings	2.0	0.5

Source: Caltrans 2020b.
Notes: PPV = peak particle velocity; in/sec = inches per second.
[1] Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 3.7-13. Caltrans Guidelines for Annoyance

Human Response	Maximum PPV, in/sec	
	Transient Sources[1]	Continuous / Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04

Table 3.7-13. Caltrans Guidelines for Annoyance

Human Response	Maximum PPV, in/sec	
	Transient Sources[1]	Continuous / Frequent Intermittent Sources
Strongly Perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2020b.
Notes: PPV = peak particle velocity; in/sec = inches per second.
[1] Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

The Project complies as it will not exceed vibration thresholds that will result in damage to structures or annoyance to nearby receptors.

California Energy Commission

In its California Code of Regulations, Title 20. Public Utilities and Energy, Division 2. State Energy Resources Conservation and Development Commission Appendix B Information Requirements for an Application (g) (4) Noise (CEC July 2021), the California Energy Commission (CEC) requires the following six (6) information sets be adequately addressed with respect to noise when an energy project is being proposed and reviewed by CEC technical staff (or its authorized consultants). For reader convenience, italicized notes following each topic indicate where the required information may be found herein.

A. A land use map which identifies residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment within the area impacted by the proposed project. The area potentially impacted by the proposed project is that area where, during either construction or operation, there is a potential increase of 5 dB(A) or more, over existing background levels.
   a. *Please refer to Figure 3.7-1, Land Use and Sound Monitoring Locations, which illustrates the tagged positions of off-site potentially impacted residences as studied herein.*

B. A description of the ambient noise levels at those sites identified under subsection (g)(4)(A) which the applicant believes provide a representative characterization of the ambient noise levels in the project vicinity, and a discussion of the general atmospheric conditions, including temperature, humidity, and the presence of wind and rain at the time of the measurements. The existing noise levels shall be determined by taking noise measurements for a minimum of 25 consecutive hours at a minimum of one site. Other sites may be monitored for a lesser duration at the applicant's discretion, preferably during the same 25-hour period. The results of the noise level measurements shall be reported as hourly averages in L_{eq} (equivalent sound or noise level), L_{dn} (day-night sound or noise level) or CNEL (Community Noise Equivalent Level) in units of dB(A). The L_{10}, L_{50}, and L_{90} values (noise levels exceeded 10%, 50%, and 90% of the time, respectively) shall also be reported in units of dB(A).
   a. *Please refer to Section 3.7.1.9 and Appendix 3.7A that quantify the outdoor ambient noise environment.*

C. A description of the major noise sources of the project, including the range of noise levels and the tonal and frequency characteristics of the noise emitted.
   a. *Please refer to Section 3.7.2.3. and Appendix 3.7D.*

D. An estimate of the project noise levels, during both construction and operation, at residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment, within the area impacted by the proposed project.
   a. *Please refer to Section 3.7.2.3.*

E. An estimate of the project noise levels within the project site boundary during both construction and operation and the impact to the workers at the site due to the estimated noise levels.
   a. *Please refer to Section 3.7.2.3*

F. The audible noise from existing switchyards and overhead transmission lines that would be affected by the project and estimates of the future audible noise levels that would result from existing and proposed switchyards and transmission lines. Noise levels shall be calculated at the property boundary for switchyards and at the edge of the right-of-way for transmission lines.
   a. *Please refer to Section 3.7.2.3*

3.7.5.3 Local LORS

Los Angeles County Noise Element

The Los Angeles County (Los Angeles County, 2022) Noise Element of the General Plan (Chapter 11) includes goals and policies to "reduce and limit the exposure of the general public to excessive noise levels." The following noise policies are relevant to the Project:

Policy N 1.1: Utilize land uses to buffer noise-sensitive uses from sources of adverse noise impacts.

Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.

Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies.

Policy N 1.6: Ensure cumulative impacts related to noise do not exceed health-based safety margins.

Policy N 1.7: Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.

Policy N 1.9: Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.

Policy N 1.11: Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.

As discussed in Section 3.7.2.3.1 above, the Project is consistent with these General Plan Policies. The Project will not exceed recommended noise levels at nearby sensitive receptors.

Los Angeles County Municipal Code

The Los Angeles Code of Ordinances Chapter 12.08 (Los Angeles County, 1978) establishes noise and vibration level limits "in order to control unnecessary, excessive and annoying noise and vibration in the county of Los Angeles."

Exterior Operational Noise Limits

Exterior noise standards are given in Table 3.7-14, as measured at the property line of the receiving use property. Daytime is defined as 7:00 a.m. to 10:00 p.m. and nighttime is defined as 10:00 p.m. to 7:00 a.m.

Table 3.7-14. Exterior Noise Standards

Receiving Use	Time of Day	L_{50}	L_{25}	L_{08}	L_{02}	L_{max}
Noise Sensitive Area	Anytime	45 dBA	50 dBA	55 dBA	60 dBA	65 dBA
Residential Properties	Daytime	50 dBA	55 dBA	60 dBA	65 dBA	70 dBA
	Nighttime	45 dBA	50 dBA	55 dBA	60 dBA	65 dBA
Commercial Properties	Daytime	60 dBA	65 dBA	70 dBA	75 dBA	80 dBA
	Nighttime	55 dBA	60 dBA	65 dBA	70 dBA	75 dBA
Industrial Properties	Anytime	70 dBA	75 dBA	80 dBA	85 dBA	90 dBA

Source: Los Angeles County Municipal Code
Notes:
1. Daytime is defined as 7:00 a.m. to 10:00 p.m. and nighttime is defined as 10:00 p.m. to 7:00 a.m.
2. If the ambient sound level exceeds the foregoing limit in the table, then the ambient becomes the exterior noise level limit.
3. For any source of sound which emits a pure tone or impulsive noise, the noise limit shall be reduced by 5 decibels.

Interior Operational Noise Limits

Interior noise standards are given in Table 3.7-15. Daytime is defined as 7:00 a.m. to 10:00 p.m., and nighttime is defined as 10:00 p.m. to 7:00 a.m.

Table 3.7-15. Interior Noise Standards from Exterior Sound Sources, dBA

Receiving Use	Time of Day	L_{08}	L_{02}	L_{max}
Multifamily Residential	Daytime	45 dBA	50 dBA	55 dBA
	Nighttime	40 dBA	45 dBA	50 dBA

Source: Los Angeles County Municipal Code
Notes:
1. Daytime is defined as 7:00 a.m. to 10:00 p.m. and nighttime is defined as 10:00 p.m. to 7:00 a.m.
2. If the ambient sound level exceeds the foregoing limit in the table, then the ambient becomes the exterior noise level limit.
3. For any source of sound which emits a pure tone or impulsive noise, the noise limit shall be reduced by 5 decibels.

As discussed in Section 3.7.2.3.1 above, the Project is consistent with the Los Angeles Code's provisions.

Construction Noise Limits

The County prohibits the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer.

The County specifies the noise limits given in Table 3.7-16 for construction as occurring at the receiving affected structures. Internal-combustion-engine powered equipment or machinery are required to be equipped with suitable exhaust and air-intake silencers in proper working order.

Table 3.7-16. Exterior Construction Noise Standards for Weekdays and Saturdays, dBA

Receiving Use	Mobile Sources, less than 10 days		Stationary Sources, 10 days or more	
	7:00 am to 8:00 pm Weekdays /Saturdays	All other times	7:00 am to 8:00 pm Weekdays /Saturdays	All other times
Single Family Residential	75 dBA	60 dBA	60 dBA	50 dBA
Multi-Family Residential	80 dBA	64 dBA	65 dBA	55 dBA
Semi-Residential / Commercial	85 dBA	70 dBA	70 dBA	60 dBA

Source: Los Angeles County Municipal Code.
Note: dBA = A-weighted decibels.

Operational Vibration Limits

The County prohibits operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 in/sec over the range of 1 hertz to 100 hertz.

The Project will not exceed the ordinances threshold for noise or the prescribed time limits on noise generating activities.

3.7.6 Agencies and Agency Contacts

There are no agencies that have wholesale jurisdiction over noise and vibration. See Section 3.6, Land Use for discussions of permitting in Los Angeles County.

3.7.7 Permits and Permit Schedule

No permit related to noise and vibration is required by any federal, state, or county agency during construction or operational activities.

3.7.8 References

Caltrans. 2020a. *Technical Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects.* California Department of Transportation Division of Environmental Analysis. April 2020.

Caltrans. 2020b. *Transportation- and Construction Vibration Guidance Manual*. California Department of Transportation Division of Environmental Analysis. April 2020.

FICON (Federal Interagency Committee on Noise). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August. https://www.faa.gov/fican/about_ficon_findings_1992.pdf. Accessed June 16, 2025.

FTA (Federal Transit Administration). 2018. *Transit Noise and Vibration Impact Assessment*. FTA Report No. 0123. September.

International Organization of Standardization (ISO). 1996. *Standard 9613-2 (Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation).* Geneva.

Los Angeles County. 1978. *Code of Ordinances: Chapter 12.08 – Noise Control.* 1978.

Los Angeles County. 2022. *General Plan Chapter 11: Noise Element*. 2022.

NASEM (National Academies of Sciences Engineering and Medicine). 2022. "NCHRP 25–49 [Final]." https://apps.trb.org/cmsfeed/trbnetprojectdisplay.asp?projectid=3889.

OPR (Governor's Office of Planning and Research). 2017. *State of California General Plan Guidelines*. July 2017.

Sargent & Lundy. 2025. Prairie Song Reliability Project, 500 kV Transmission Line, EMF Calculation. May 5, 2025.

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Volpe. 2004. Crows Landing Noise Measurement Study: Summary of Measurements, Data and Analysis for the MD 600N Helicopter, U.S. Department of Transportation Research and Special Programs Administration, Cambridge, MA.

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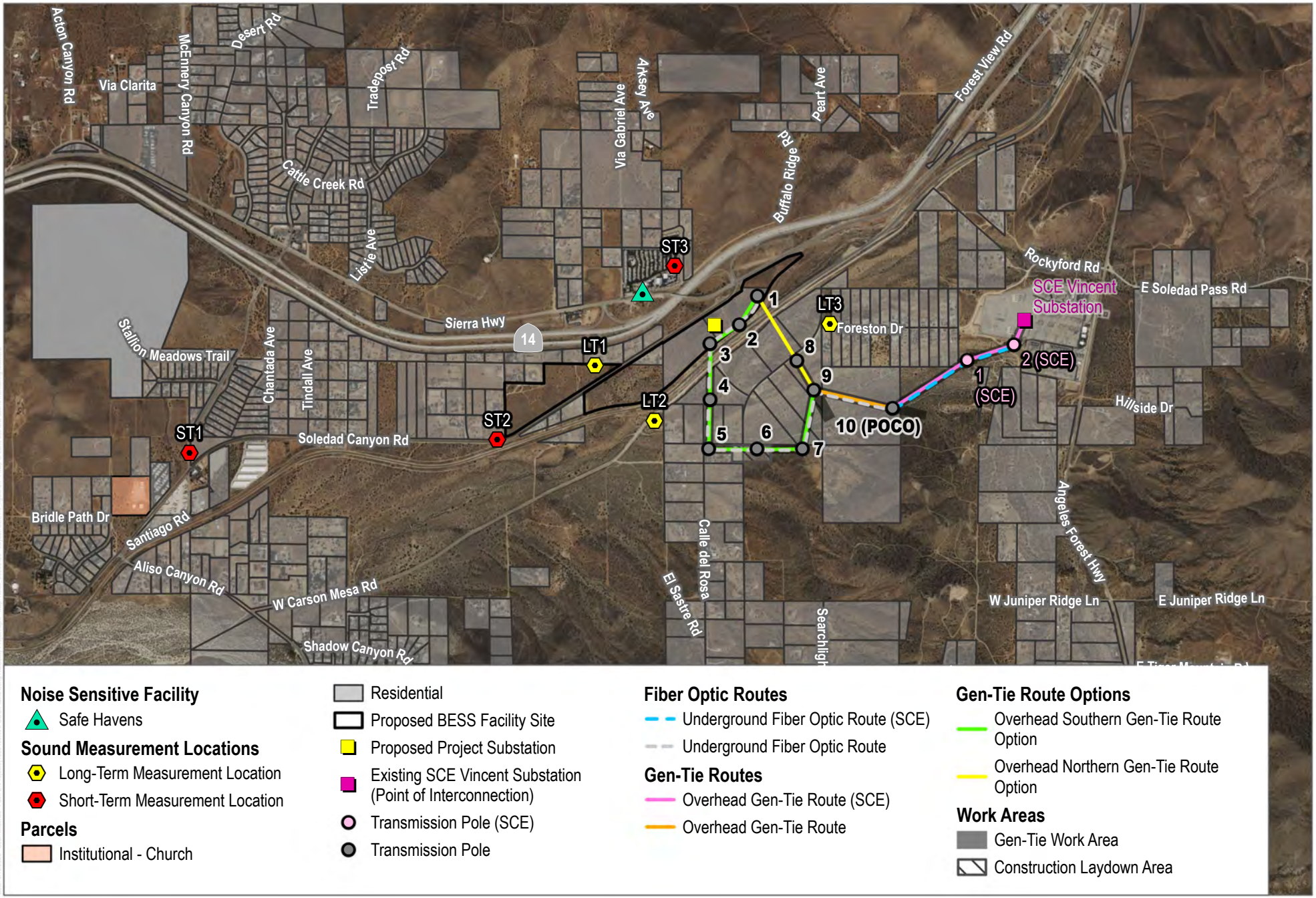

SOURCE: Los Angeles County; Bing Maps

DUDEK

0 1,000 2,000 Feet

FIGURE 3.7-1

Land Use and Sound Monitoring Locations

Prairie Song Reliability Project

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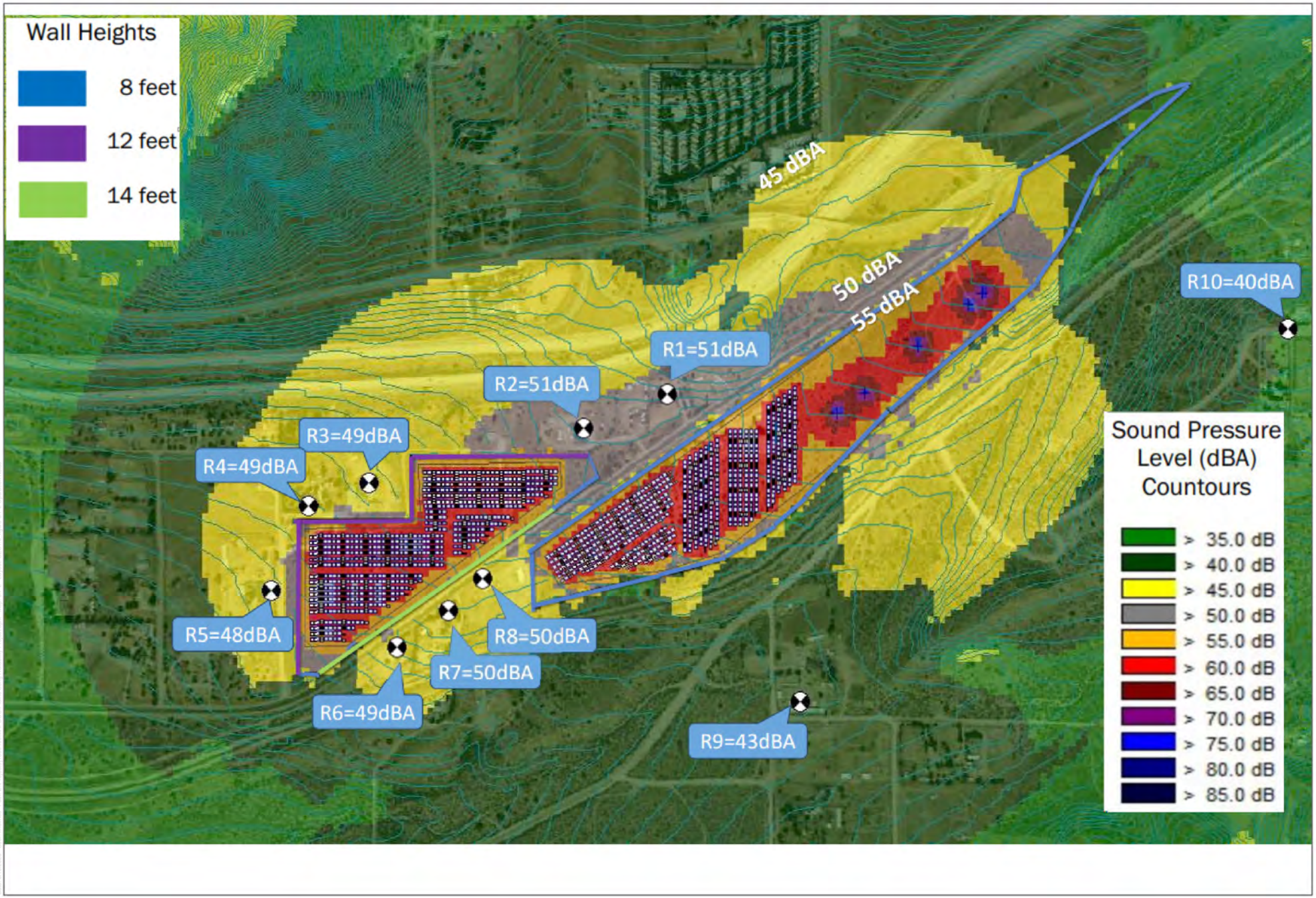

SOURCE: Dudek 2025

DUDEK

0 200 400 Feet

FIGURE 3.7-2

On-Site Operational Noise Level Prediction (Leq,dBA), Design Barrier

Prairie Song Reliability Project

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3.8 Paleontological Resources

This section describes the potential effects the construction and operation of the Prairie Song Reliability Project (project) may have on paleontological resources at and in the vicinity of the project site. The project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This evaluation of paleontological resources includes the following elements:

- Section 3.8.1 describes the existing environment that could be affected, including regional and local geologic environment, faulting, and seismicity, and geologic resources;
- Section 3.8.2 identifies potential environmental impacts that may result from project construction, operation, maintenance, and decommissioning;
- Section 3.8.3 discusses the potential cumulative effects;
- Section 3.8.4 identifies project design and mitigation measures that should be considered during project construction, operation, maintenance, and decommissioning to avoid or minimize potentially significant effects;
- Section 3.8.5 presents laws, ordinances, regulations, and standards (LORS) applicable to paleontological resources;
- Section 3.8.6 identifies regulatory agency contacts;
- Section 3.8.7 describes permits required for the project related to paleontological resources; and
- Section 3.8.8 provides references used to develop this section.

The following environmental setting and impact evaluation is based in part on the following project-specific technical report and engineering plans, included as appendices to this application:

1. Appendix 3.4A – Geotechnical Report
2. Appendix 3.8A – Confidential Paleontological Resources Records Search Results

A summary of the paleontological resources evaluation is provided in the table below.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
1) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.8.1 Affected Environment

3.8.1.1 Physiographic and Geologic Setting

The project site is located within the western San Gabriel Mountains, in the Transverse Ranges Geomorphic Province (CGS 2002; Harden 2004). The Transverse Ranges are an east–west trending series of steep mountains and valleys (CGS 2002).

As shown in Figure 3.8-1, the project site is mapped as being underlain by late Pleistocene (approximately 11,700 years ago to 129,000 years ago; Cohen et al. 2024) older dissected surficial sediments (map unit Qoa), with nearby mapped geological units consisting of Holocene (less than 11,700 years ago; Cohen et al. [2024]) surficial deposits (map units Qa and Qg), the Oligocene (approximately 23 million years ago [mya] to 33.9 mya; Cohen et al. 2024) Vasquez Formation andesitic rocks (map unit Tva), Cretaceous (approximately 66 mya to 145 mya; Cohen et al. 2024) granitic rocks (map unit gr), the early Triassic (approximately 220 mya; Cohen et al. 2024) Lowe Granodiorite (map unit Igdb), and the Mesozoic (approximately 66 mya to 251.9 mya; Cohen et al. 2024) or older Hornblende Diorite Gabbro (map unit hdg) according to published, surficial geological mapping at a 1:24,000 scale (Dibblee and Ehrenspeck 2001; Dibblee and Ehrenspeck (ed), 1996).

3.8.2 Impact Analysis

The following sections present the potential effects from the construction and operation of the proposed project on paleontological resources.

3.8.2.1 Methodology

The standards used for determining paleontological sensitivities as set forth by the Society of Vertebrate Paleontology (SVP 2010) are listed in Table 3.8-1.

Table 3.8-1. Standards for Determining Paleontological Sensitivities

Resource Sensitivity/Potential	Definition
High	Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rock units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcaniclastic formations (e.g., ashes or tephras), and some low-grade metamorphic rocks that contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e.g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones). Paleontological potential consists of both (1) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils; and (2) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Rock units that contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or

Table 3.8-1. Standards for Determining Paleontological Sensitivities

Resource Sensitivity/Potential	Definition
	middens, and rock units that may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.
Low	Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections or, based on general scientific consensus, only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule; e.g., basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.
Undetermined Potential	Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine whether these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
No Potential	Some rock units have no potential to contain significant paleontological resources; for instance, high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no paleontological resource potential require neither protection nor impact mitigation measures relative to paleontological resources.

Paleontological sensitivities have been assigned to each formation found within and nearby the project site and can be found in subsection 3.8.1.1.1.

A records search was conducted by the Natural History Museum of Los Angeles County (NHMLAC) on January 22, 2023. The purpose of the museum records search is to determine whether there are any known fossil localities in or near the project site, identify geological units present within the project site, and assist in determining whether a paleontological mitigation program is necessary. Published geological literature and maps were reviewed to identify geological units on the project site and determine their paleontological sensitivity. A pedestrian survey covering all accessible areas of the project site was performed by Dudek staff in February 2023 and a supplemental pedestrian survey for subsequently added project parcels was performed by Dudek staff in November 2024. The pedestrian surveys confirmed the geology, and no fossils were observed.

3.8.2.1.1 Records Search and Literature Review Results

The project site is underlain by late Pleistocene older dissected surficial sediments. These deposits in this area have the potential to produce fossils on the surface and at shallow depths below the surface. The NHMLAC reported eight (8) fossil localities nearby (along Avenue S between Palmdale and Lake Los Angeles), including fossil locality Los Angeles County Museum (LACM) Vertebrate Paleontology (VP) 5942-5950, from an unknown Holocene formation encountered 0 feet to 9 feet below ground surface that produced the following taxa: kingsnake

(*Lampropeltis*), lizards (*Lacertilia*), leopard lizard (*Gambelia*), snakes (Ophidia), gopher snake (*Pituophis*), rabbit (Lagomorpha), rodents (Rodentia), pocket gopher (*Thomomys*), pocket mouse (*Chaetodipus*), kangaroo rat (*Dipodomys*), and birds (Aves) (NHMLAC 2023).

The Pleistocene Harold Formation, which lies to the north of the project location, has one locality (LACM VP CIT451) near Barrel Springs Road and 47th Street that produced a Mastodon (*Mammutidae*) and a horse (*Equus*) from an unknown depth (NHMLAC 2023). This formation is likely correlative with the Pleistocene age, older dissected surficial sediments as mapped within the project site by Dibblee and Ehrenspeck (ed) (1996).

Pleistocene geological units are known to produce scientifically significant paleontological resources in this part of Los Angeles County. In his compilation of late Pleistocene to early Holocene fossil vertebrates from California, Jefferson (1991) reported several fossil localities containing mammoth, ground sloth, and bison from northeast Los Angeles County.

3.8.2.1.2 Results of the Field Survey

A pedestrian survey that covered the project site, Northern Gen-Tie Route, and area around the Vincent Substation was conducted by Dudek staff, Jessica Colston, Shane McDonnell, and Philip Sharp-Garcia on February 1 and 2, 2023, and a supplemental pedestrian survey for additional project parcels that were added following the 2023 (Parcels associated with the Southern Gen-Tie Route) survey was conducted by Dudek staff, Jessica Colston, on November 18, 19, and 20, 2024. Ground visibility was generally good and not obscured by vegetation. However, the central portion of the project site was densely vegetated, which obscured the ground surface. No paleontological resources were discovered on site during the field survey.

3.8.2.2 Impact Evaluation Criteria

Appendix G of the California Environmental Quality Act is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the California Environmental Quality Act (CEQA) process, asking a series of questions. The purpose of these questions is to make a determination as to whether a project requires an EIR, a Mitigated Negative Declaration or a Negative Declaration. As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances." The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Appendix G are instructive.

The potential for impacts related to paleontological resources were evaluated using the relevant criteria described in the CEQA Environmental Checklist (Appendix G of the CEQA Guidelines). Specific to paleontological resources, the CEQA Checklist asks, would the project: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.8.2.3 CEQA Appendix G Assessment Criteria

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

Less than Significant. The results of the institutional records search and desktop geological review did not identify any paleontological resources within the project site, or within a 0.5-mile radius buffer of the project site. In addition,

no paleontological resources were discovered on site during the field survey. However, intact paleontological resources may be present within the mapped, late Pleistocene-age older dissected surficial sediments. Given the proximity of past fossil discoveries in the surrounding area and the underlying Pleistocene deposits, the project site has a high resource sensitivity potential for supporting paleontological resources below any topsoil or weathered Pleistocene deposits.

The project site is underlain late Pleistocene age older dissected surficial sediments that would require monitoring. In the event that intact paleontological resources are located on the project site, ground-disturbing activities associated with construction of the project, such as grading during site preparation and trenching, have the potential to affect unique paleontological resources or sites. Without mitigation, the potential damage to paleontological resources during construction would have a potentially significant impact. However, upon implementation of Mitigation Measure GEO-1 (see below), impacts would be reduced to **less than significant**.

3.8.3 Cumulative Effects

Potential cumulative impacts to paleontological resources could result from projects that combine to create an environment where fossils, exposed on the surface, are vulnerable to destruction by earthmoving equipment, looting by the public, and natural causes such as weathering and erosion. The majority of impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis. projects with potential cumulative impacts would be required to assess impacts to paleontological resources through the environmental review (CEQA) process.

Additionally, as needed, projects would incorporate individual mitigation for site-specific geological units present on each individual project site. Furthermore, the project does not directly or indirectly contribute to an increase in a cumulative impact to paleontological resources, as the implementation of MM GEO-1 provided in this analysis ensures any significant paleontological resources uncovered during project excavations would be properly analyzed and salvaged by the on-site paleontological monitor. Therefore, the project, in combination with the past, present, and reasonably foreseeable future projects adjacent to the project, would result in less than cumulatively considerable impacts to paleontological resources.

3.8.4 Mitigation Measures

GEO-1 Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program for the Project.

Verification: The Paleontological Resources Impact Mitigation Program shall be consistent with the guidelines of the SVP (2010) and include the following elements: project description, requirements for preconstruction worker environmental awareness training, frequency of monitoring, salvage protocols, reporting, and collections management. The qualified paleontologist or a qualified monitor meeting the SVP (2010) guidelines shall be on site during all rough grading and other significant ground-disturbing activities below a depth of 5 feet below the existing ground surface in previously undisturbed older Holocene and Pleistocene-age deposits. If excavations below 5 feet are not impacting previously undisturbed deposits, as determined by the qualified paleontologist, spot-check monitoring shall ensue. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading

activity to allow recovery of the paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer, or at a safe distance as determined by the monitor and construction personnel, to document and collect the fossils. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. No monitoring is required during excavations that the paleontologist determines are within artificial fill or younger alluvium (e.g., Holocene age Quaternary alluvium, younger than approximately 11,700 years).

3.8.5 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to paleontological resources are discussed below and summarized in Table 3.8-2.

Table 3.8-2. LORS Applicable to Paleontological Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
State	California Environmental Quality Act (CEQA)	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the project, including to paleontological resources, and to reduce environmental impacts to the extent feasible.	**Yes.** California Energy Commission (CEC) will act as CEQA lead agency, per the CEC's Opt-in Application process.	Section 3.8.2.2 Section 3.8.2.3 Section 3.8.5.1
State	California PRC Section 5097.5	Provides protection for paleontological resources on public lands.	**Not applicable** to this project because it is located entirely on private property.	Section 3.8.5.1
Local	2035 County of Los Angeles General Plan Update EIR	Includes stipulations that are intended to address paleontological resources in the County of Los Angeles.	**Yes.** Siting of the project will comply with the General Plan with respect to areas of potential paleontological resources.	Section 3.8.4 Section 3.8.5.2

Notes: PRC = Public Resources Code; EIR = Environmental Impact Report.

Paleontological resources are protected on state lands under CEQA and on Los Angeles County lands according to CUL-5 of the 2035 Los Angeles County General Plan Update EIR (Los Angeles County 2015). The project, as currently planned, does not cross any Federal lands and is subject only to state and local regulatory conditions.

3.8.5.1 State LORS

California Environmental Quality Act

Paleontological resources are afforded consideration under the California Environmental Quality Act of 1970. Appendix G of the State of California CEQA Guidelines (14 CCR 15000 et seq.) includes the following as one of the questions to be answered in the Environmental Checklist (Appendix G, Section VII, Part f): "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?"

The CEQA lead agency (California Energy Commission) is responsible for ensuring that potential impacts to paleontological resources are analyzed.

California Public Resources Code Section 5097.5

California Public Resources Code Section 5097.5 provides that any knowing and willful excavation, removal destruction, injury, or defacement of vertebrate paleontological sites or paleontological features located on public lands is prohibited without the express permission of the public agency having jurisdiction over the lands.

Section 5097.5 does not apply to the project because it lies entirely on private property.

3.8.5.2 Local LORS

2035 County of Los Angeles General Plan Update EIR

The 2035 County of Los Angeles General Plan Update EIR (updated 2015) CUL-5 (paragraphs 1, 2 and 4) states the following:

> "Prior to the issuance of any grading permit, applicants shall provide written evidence to the County of Los Angeles that a County-certified paleontologist has been retained to observe grading activities greater than six feet in depth and salvage and catalogue paleontological resources as necessary. The paleontologist shall be present at the pre-grade conference, shall establish procedures for paleontologist resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate.
>
> If the paleontological resources are found to be significant, the paleontologist observer shall determine appropriate actions, in cooperation with the project applicant, for exploration and/or salvage. Prior to the release of the grading bond the applicant shall obtain approval of the paleontologist's follow-up report from the County. The report shall include the period of inspection, an analysis of any artifacts found and the present repository of the artifacts. Applicant shall prepare excavated material to the point of identification.
>
> * * *
>
> Unanticipated discoveries shall be evaluated for significance by a County-certified paleontologist. If the paleontological resources are found to be significant, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other

special studies; submit materials to the County of Los Angeles, or its designee, on a first refusal basis and provide a comprehensive final report including appropriate records for the California Department of Parks and Recreation."

Siting of the project will comply with the General Plan with respect to areas of potential paleontological resources.

3.8.6 Agencies and Agency Contacts

Applicable agency contacts are shown in Table 3.8-3. The agency was contacted on December 15, 2022, to request the paleontological resources records search. The agency responded on January 22, 2023 (see Appendix 3.8A).

Table 3.8-3. Agencies and Agency Contacts

Topic	Agency	Contact
Paleontological Resources Documentation and Specimen Repository	Natural History Museum of Los Angeles County	Alyssa Bell, PhD 900 Exposition Blvd. Los Angeles, California 90007 Ph. 213.763.3466 paleorecords@nhm.org

3.8.7 Permits and Permit Schedule

No permit related to paleontological resources is required by any federal, state, or county agency to allow for the recovery of fossil remains discovered as a result of construction-related ground-disturbance on the project site.

3.8.8 References

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Los Angeles County. 2015. Los Angeles County General Plan Update Final Environmental Impact Report. Update March 2015.

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SVP (Society of Vertebrate Paleontology). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources.* http://vertpaleo.org/The-Society/Governance-Documents/SVP_Impact_Mitigation_Guidelines.aspx.

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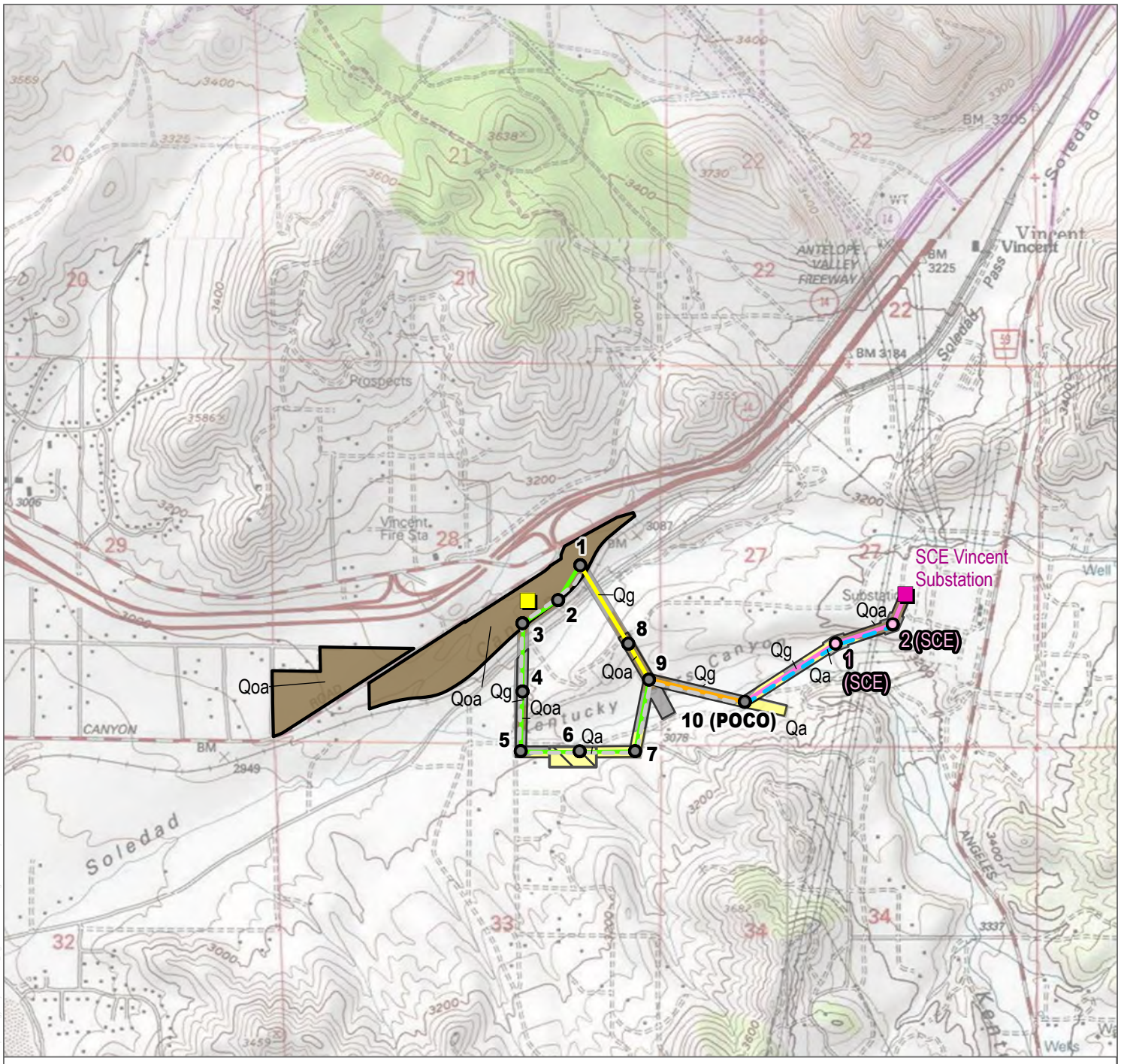

- Proposed BESS Facility Site
- Proposed Project Substation
- Existing SCE Vincent Substation (Point of Interconnection)
- Transmission Pole (SCE)
- Transmission Pole

Work Areas

- Gen-Tie Work Area
- Construction Laydown Area

Fiber Optic Routes

- Underground Fiber Optic Route (SCE)
- Underground Fiber Optic Route

Gen-Tie Routes

- Overhead Gen-Tie Route (SCE)
- Overhead Gen-Tie Route

Gen-Tie Route Options

- Overhead Southern Gen-Tie Route Option
- Overhead Northern Gen-Tie Route Option
- Qa - Generally Undissected Alluvial Deposits (Holocene) Low Paleontolgical Sensitivity
- Qg - Generally Undissected Alluvial Deposits (Holocene) Low Paleontolgical Sensitivity
- Qoa - Older Dissected Surficial Sediments (Late Pleistocene) High Paleontological Sensitivity

SOURCE: USGS

DUDEK

0 500 1,000 Feet

FIGURE 3.8-1

Paleontological Sensitivity

Prairie Song Reliability Project

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3.9 Public Health

This section discusses activities that could potentially affect public health as they relate to the construction and operation of the proposed Prairie Song Reliability Project (Project). The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility using lithium-iron phosphate cells, or similar technology; operations and maintenance (O&M) buildings; a Project substation; a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line; and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

Construction and operational Health Risk Assessments (HRAs) were performed to assess potential effects and public exposure associated with airborne toxic air contaminant (TAC) emissions, specifically diesel particulate matter (DPM), from the Project.

The following subsections are provided in this section:

- Section 3.9.1 describes the affected environment.
- Section 3.9.2 presents the significance criteria and methodology used to assess public health impacts.
- Section 3.9.3 identifies potential environmental impacts that may result from Project construction, operation, maintenance, and decommissioning.
- Section 3.9.4 discusses potential cumulative effects.
- Section 3.9.5 describes project design and mitigation measures that will be implemented to avoid or minimize potentially significant impacts.
- Section 3.9.6 presents applicable laws, ordinances, and regulations.
- Section 3.9.7 provides permit requirements and schedules, and agency contacts.
- Section 3.9.8 provides references cited or consulted in preparing this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical analysis:

- Appendix 3.9A – HRA support analysis

Air will be the dominant pathway for potential public exposure to chemical substances released by the Project. The HRAs were conducted following the guidelines established by the California Office of Environmental Health Hazard Assessment (OEHHA), the California Air Resources Board (CARB), and the Antelope Valley Air Quality Management District (AVAQMD). Combustion byproducts and fugitive dust with established California Ambient Air Quality Standards or National Ambient Air Quality Standards, including nitrogen oxides, carbon monoxide, coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$), as well as potential Valley Fever and odor impacts, are addressed in Section 3.1, Air Quality. Human health risks associated with the potential accidental release of acutely hazardous materials stored on site, if applicable, are discussed in Section 3.5, Hazardous Materials Handling.

A summary of the public health evaluation is provided in the table below.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
1) Expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a hazard index (non-cancerous) greater than or equal to 1?	☐	☐	☒	☐

3.9.1 Environmental Setting

3.9.1.1 Project Location

The Project site is in census tract Los Angeles County 9108.15, which has a population of 5,152 people per the American Community Survey (U.S. Census Bureau 2025). According to the Senate Bill 535 disadvantaged communities map, there are several parcels within 6 miles of the Project site in Palmdale that are identified as disadvantaged communities by the California Environmental Protection Agency because the parcels represent the 25% highest-scoring census tracts in CalEnviroScreen 4.0 (CalEPA 2022). No other public health studies related to respiratory illnesses, cancers, or related diseases within a 6-mile radius of the Project site were identified.

3.9.1.2 Characterization of Risks from Toxic Air Pollutants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. The state has formally identified more than 200 substances as TACs, including DPM. DPM is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (approximately 1/70 the diameter of a human hair). DPM is typically composed of carbon particles (“soot,” also called black carbon) and numerous organic compounds, including more than 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. CARB classified “particulate emissions from diesel-fueled engines” (i.e., DPM) (17 CCR 93000) as a TAC in August 1998 (CARB 1998). DPM is emitted from a broad range of diesel engines: on-road diesel engines, including trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a Diesel Risk Reduction Plan in 2000 (CARB 2000). Effects of DPM include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory

symptoms; and decreased lung function in children (CARB 2024). Those most vulnerable to non-cancer health effects are children, whose lungs are still developing, and older people, who often have chronic health problems.

3.9.1.3 Cancer Risk

Cancer risk is defined as the increase in lifetime probability (chance) of an individual developing cancer due to exposure to a carcinogenic compound, typically expressed as the increased probability in 1 million excess cancer risk cases. The cancer risk from inhalation of a TAC is estimated by calculating the inhalation (and if applicable, ingestion and dermal [i.e., skin]) dose in units of milligrams per kilogram body weight per day based on an ambient concentration in units of micrograms per cubic meter ($\mu g/m^3$), breathing rate, and exposure period, and multiplying the dose by the inhalation cancer potency factor, expressed as milligrams per kilogram of body weight per day. Cancer risks are typically calculated for all carcinogenic TACs and summed to calculate the overall increase in cancer risk to an individual. The calculation procedure assumes that cancer risk is proportional to concentrations at any level of exposure, and that risks due to different carcinogens are additive. This approach is generally considered a conservative assumption at low doses and is consistent with the current OEHHA regulatory approach. Exposure to carcinogenic TACs does not imply that the exposed individual will contract cancer; rather, the cancer risk is a probability of developing cancer if other factors (e.g., heredity, exposure to environmental or workplace risks that compromise the immune system, overall health) result in an increased susceptibility to developing cancer.

3.9.1.4 Acute and Chronic Non-Cancer Health Impacts

The non-cancer health impact of an inhaled TAC is measured by the hazard quotient, which is the ratio of the ambient concentration of a TAC in units of $\mu g/m^3$ divided by the reference exposure level (REL), also in units of $\mu g/m^3$. The REL is the concentration at or below which no adverse health effects are anticipated. The REL is typically based on health effects on a particular target organ system, such as the respiratory system, liver, or central nervous system. Hazard quotients of individual TACs are then summed for each target organ system to obtain a hazard index. No acute REL values are established for DPM.

3.9.1.5 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, older adults, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The AVAQMD identifies residences, daycare centers, playgrounds, and medical facilities as sensitive receptors for the purposes of identifying air quality impacts (AVAQMD 2016).

The closest sensitive receptors to the Project site are residences immediately adjacent to the west (along Malinta Avenue), north (along Tortuga Street and Soledad Canyon Road), and south (across Soledad Canyon Road) of the BESS facility site boundary. Single-family residences are also in close proximity to the gen-tie transmission line route. The nearest school is the Meadowlark Elementary School, approximately 2 miles west of the proposed BESS facility. All of these receptors were accounted for in the construction and operation HRAs.

3.9.2 Impact Analysis

3.9.2.1 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether a project would have a significant impact on air quality. As outlined in the AVAQMD CEQA Air and Federal Conformity Guidelines (CEQA Air Guidelines) (AVAQMD 2016), a project would result in a significant environmental impact if it:

- Would expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a hazard index (non-cancerous) greater than or equal to 1.

As indicated above, the AVAQMD recommends a carcinogenic (cancer) risk threshold of 10 in 1 million (AVAQMD 2016). For context, the National Cancer Institute estimates that approximately 40.5% of people will be diagnosed with cancer during their lifetimes (National Cancer Institute 2024). A cancer risk of 10 in 1 million indicates that a person has an additional risk of 10 chances in 1 million (0.001%) of developing cancer during their lifetime as a result of the air pollution scenario being evaluated, which is minimal and defined as the "No Significant Risk Level" for carcinogens in Proposition 65. Additionally, some TACs increase noncancer health risk due to long-term (chronic) or short-term (acute) exposures. The Hazard Index is the sum of the individual substance chronic or acute hazard indices for all TACs affecting the same target organ system.

3.9.2.2 Approach and Methodology

3.9.2.2.1 Emissions Inventory

Construction

The greatest potential for TAC emissions during Project construction will be DPM emissions from heavy equipment operations, heavy-duty trucks, and diesel generators. Exhaust from diesel engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. For risk assessment purposes, PM_{10} in diesel exhaust is considered a proxy for DPM.[1] DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts. However, as noted in Section 3.9.1.4, no short-term, acute relative exposure level has been established for DPM; therefore, acute impacts of DPM are not addressed in this assessment.

Emissions from the construction phase of the Project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.29 (CAPCOA 2022). All details for construction criteria air pollutants discussed in Section 3.1.3.2.1, Construction Mass Emissions, of Section 3.1, Air Quality, are also applicable for the estimation of construction-related DPM emissions. See Section 3.1.3.2.1 for a discussion of the construction emissions calculation methodology and assumptions used in the construction DPM emissions inventory. The primary source

[1] Under California regulatory guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mixture of chemicals that make up diesel exhaust as a whole. The California Environmental Protection Agency (EPA) is a proponent of using the surrogate approach to quantifying cancer risks associated with diesel exhaust over a component-based approach, which involves estimating risks for each component of a mixture. The California EPA has concluded that "potential cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multi-pathway cancer risk from the speciated components" (OEHHA 2003).

of DPM will be from the generators during commissioning, followed by diesel emissions from construction equipment. Diesel trucks will contribute minimal emissions along the roadway network. However, to account for localized emissions for the construction HRA, a one-way trip length of 0.25 miles for on-road vehicles was assumed (SJVAPCD 2018). Notably, as determined in Section 3.1, mitigation will be required to reduce emissions of criteria air pollutants to a less-than-significant level, which will also reduce DPM. Table 3.9-1 presents the estimated annual unmitigated and mitigated construction DPM generated by source and phase during construction of the Project.

Table 3.9-1. Project Construction Diesel Particulate Matter Emissions Inventory

Source/Construction Phase	TAC	CAS	Unmitigated Emissions		Mitigated Emissions	
			Pounds per Year	Pounds per Hour	Pounds per Year	Pounds per Hour
On-Site Equipment and Trucks for Construction	DPM	9901	124.18	0.048	33.90	0.013
Gen-Tie/SCE Interconnect Equipment and Trucks	DPM	9901	112.13	0.043	42.21	0.016
Diesel Generators for Commissioning	DPM	9901	932.36	0.359	124.35	0.048

Source: Appendix 3.9A.
Notes: TAC = toxic air contaminant; CAS = Chemical Abstracts Service; SCE = Southern California Edison.

Operations

The Project will involve installation of three emergency diesel generators (one rated at 323 horsepower near the O&M buildings and two rated at 744 horsepower near the substation control house) for emergency safety systems during a power outage and fire support. A spreadsheet model was used to estimate emissions of the generators, assuming 2 hours per day and 50 hours per year, pursuant to CARB's Air Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115), at 100% load for maintenance and testing. Current CARB and U.S. Environmental Protection Agency (EPA) Tier 4 engine standards were assumed based on the generator specification sheets. Table 3.9-2 presents the estimated annual DPM generated during Project operations.

Table 3.9-2. Project Operational Diesel Particulate Matter Emissions Inventory

Source	TAC	CAS	Unmitigated Emissions	
			Pounds per Year	Pounds per Hour
Emergency Diesel Generator Testing for Operations	DPM	9901	2.00	0.0002

Source: Appendix 3.9A.
Notes: TAC = toxic air contaminant; CAS = Chemical Abstracts Service; DPM = diesel particulate matter.

3.9.2.2.2 Dispersion Modeling

Dispersion modeling analyses were conducted of DPM generated during Project construction and operations for the HRAs to assess the health risk impacts of the Project on proximate, existing off-site sensitive receptors. The dispersion modeling was performed using the American Meteorological Society/EPA Regulatory Model (AERMOD), which is the model the AVAQMD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and

complex terrain. Principal parameters of this modeling for the construction and operational HRAs are presented in Table 3.9-3, with complete model results included in Appendix 3.9A.

Table 3.9-3. AERMOD Principal Parameters – Health Risk Assessments

Parameter	Details
Dispersion Model	The air dispersion model used was AERMOD Version 24142, with the Lakes Environmental Software implementation/user interface, AERMOD View, Version 13.0.0.
Meteorological Data	The latest 5-year meteorological data (2016–2020) for the Palmdale Station (airport code KPMD) were obtained from the California Air Resources Board and used in the analysis as the most representative data based on proximity and wind direction. The input data was also conservative, based on a test run that compared maximum concentrations using the Palmdale Station to the concentrations using the Santa Clarita Station (the other station in general proximity to the Project site) meteorological data.
Urban Versus Rural Option	Urban areas typically have more surface roughness, structures, and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. Based on the land use procedure from Section 4.4.1 of the Office of Environmental Health Hazard Assessment's Guidance Manual, the rural dispersion model was appropriate for the Project site (OEHHA 2015).
Terrain Characteristics and Elevation Data	Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the U.S. Geological Survey's National Elevation Dataset format with an approximately 1 arc-second resolution.
Emission Sources and Release Parameters	The following release parameters were based on the best information available at the time of analysis. <u>Construction</u> ▪ Off-road equipment and vehicles were modeled as a line of adjacent volume sources across the Project site with a release height of 5 meters, a plume height of 10 meters, and plume width of 10 meters (SCAQMD 2008). ▪ The eight, 1,006-horsepower diesel generators were modeled as point sources with a vertical stack height of 3.7 meters, inside stack diameter of 0.2 meters, gas exhaust temperature of 764 Kelvin, and gas exhaust velocity of 57.8 meters per second (SBCAPCD 2025). <u>Operations</u> ▪ The diesel generators were modeled as point sources with release parameters based on the specification sheets and default diesel-fired internal combustion stack parameters (SBCAPCD 2025), if generator-specific information was not available. The 323-horsepower generator was modeled with a vertical stack height of 3 meters, inside stack diameter of 0.13 meters, gas exhaust temperature of 780 Kelvin, and gas exhaust velocity of 63.9 meters per second. Each 744-horsepower generator was modeled with a vertical stack height of 3.7 meters, inside stack diameter of 0.2 meters, gas exhaust temperature of 719.82 Kelvin, and gas exhaust velocity of 14.05 meters per second.
Variable Emissions	For construction, emissions were assumed to occur 10 hours per day, 5 days per week. No variable emissions were assumed for operations.

Table 3.9-3. AERMOD Principal Parameters – Health Risk Assessments

Parameter	Details
Receptors	For both construction and operations, a nested grid of receptors was generated with the following spacing to evaluate potential air pollutant impacts within a 6-mile radius of the Project site: ▪ 25-meter spacing from the facility boundary out to 100 meters ▪ 50-meter spacing from 100 meters to 250 meters ▪ 100-meter spacing from 250 meters to 500 meters ▪ 250-meter spacing from 500 meters to 1,000 meters ▪ 500-meter spacing from 1,000 meters to 2,000 meters ▪ 1,500-meter spacing from 2,000 meters to 6,000 meters

Sources: OEHHA 2015; SBCAPCD 2025; SCAQMD 2008.
Notes: AERMOD = American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model.
See Appendix 3.9A for model outputs and parameters.

3.9.2.2.3 Health Risk Assessment Methodology

Office of Environmental Health Hazard Assessment Guidance

OEHHA's most recent guidance is the Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015), which was used to calculate the health risk impacts from Project construction and operations. The Children's Environmental Health Protection Act of 1999 (Senate Bill 25), which requires explicit consideration of infants and children in assessing risks from air toxics, requires revisions of the methods for both non-cancer and cancer risk assessment and of the exposure assumptions in the 2003 Risk Assessment Guidelines Manual (OEHHA 2003). In response to Senate Bill 25, OEHHA released three technical support documents addressing RELs (OEHHA 2008), cancer potency (OEHHA 2009), and exposure assessment and stochastic analysis (OEHHA 2012), and adopted the 2015 Risk Assessment Guidelines Manual (OEHHA 2015). The technical support document for RELs and continuing work to re-evaluate TACs to ensure adequate protection for infants and children has led to revisions of RELs for approximately 10 chemicals and chemical families. The basic methodology for evaluating acute and chronic health effects using the RELs otherwise remained the same as in the previous guidance manual. Moreover, RELs are designed to protect the most sensitive individuals in the population, including infants and children, by selecting appropriate toxicological data and including margins of safety. Accordingly, the evaluation methods are assumed to protect children and other sensitive subpopulations (groups of more highly susceptible individuals) from adverse health effects in the event of exposure (OEHHA 2008).

The cancer risk methodology described in the exposure assessment and stochastic analysis technical support document and the 2015 Risk Assessment Guidelines Manual accounts for the higher sensitivity of infants and children by applying age-specific daily breathing rates and age-sensitivity factors (ASFs) (OEHHA 2015). According to the technical support document, "accounting for effects of early-in life exposure requires accounting for both the increased potency of early in life exposure to carcinogens and the greater exposure on a per [kilogram] body weight that occurs early in life due to behavioral and physiological differences between infants and children, and adults" (OEHHA 2012). In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, and an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood (OEHHA 2015). The ASF for adults is 1. In addition to the ASFs, children have higher daily breathing rates per unit of body weight than adults. The 2015 Risk Assessment Guidelines Manual considers the age-specific breathing rates in the cancer risk calculations.

In addition, OEHHA and CARB evaluated information from activity pattern databases to estimate the fraction of time at home during the day. From the third trimester to just under 2 years, 85% of time is spent at home. From age 2 through just under 16 years, 72% of time is spent at home. From age 16 years and greater, 73% of time is spent at home. However, for facilities with any school within the 1 in 1 million or greater isopleth, OEHHA recommends using 100% for the fraction of time at home for children under 16 years old (OEHHA 2015). Cancer risk parameters for exposure to DPM from Project construction and operations, such as ASFs, daily breathing rates, exposure period, fraction of time at home, and cancer potency factors, were based on the values and data recommended by OEHHA as implemented in the Hotspots Analysis and Reporting Program (HARP2) tool. Accordingly, the construction and operational HRAs evaluate and reflect conservative, health-protective methodologies to assess health impacts to adults, as well as infants, children, and other sensitive subpopulations.

HARP2 Parameters for the Project

For the construction and operational HRAs, dispersion model plotfiles from AERMOD were imported into CARB's HARP2 to determine health risk from exposure to TAC emissions using the OEHHA Derived Method, as recommended by the AVAQMD. Regarding pathways evaluated in HARP2, the mandatory minimum pathways were selected, which includes inhalation and additional pathways; however, inhalation is the only applicable pathway for DPM. Exposure parameters were incorporated into HARP2 as listed below.

Construction HRA Exposure Parameters

- On-Site Equipment and Trucks for Construction: Exposure was assumed to begin in the third trimester of pregnancy (assumed to be the worst-case scenario for cancer risk) for a duration of 1.6 years.
- Gen-Tie/SCE Interconnect Equipment and Trucks: Exposure was assumed to begin at year 0.93 for a duration of 0.67 years.
- Diesel Generators for Commissioning: Exposure was assumed to begin at year 1.6 for a duration of 0.23 years.

Operational HRA Exposure Parameters

- Emergency Diesel Generator Testing for Operations: Exposure was assumed to begin in the third trimester of pregnancy for a duration of 30 years.

Cancer and Non-Cancer Health Risk Equations

The following equations were used in HARP2 (OEHHA 2015) to calculate the construction and operational cancer risk and chronic hazard quotients of the Project using the estimated emissions inventory, dispersion model output data, and exposure parameters described previously.

Cancer Risk Equation

$$Cancer\ risk = DOSE * CPF * ASF * ED/AT * FAH$$

$$DOSE = (C_{air} * DBR * A * EF * 10^{-6})$$

$$C_{air} = ER * X/Q$$

Where:

DOSE = daily inhalation dose (milligrams per kilograms [mg/kg] per day)
CPF = cancer potency factor $(mg/kg\ per\ day)^{-1}$
ASF = age sensitivity factor for a specified age group (unitless)
ED = exposure duration (in years) for a specified age group
AT = averaging time for lifetime cancer risk (years)
FAH = fraction of time spent at home (unitless)
C_{air} = average air concentration of TAC from the air dispersion model ($\mu g/m^3$)
DBR = daily breathing rate (liters per kilogram of body weight per day)
EF = exposure frequency (unitless), days/365 days
A = inhalation absorption factor (unitless)
10^{-6} = micrograms to milligrams conversion, liters to cubic meters conversion
ER = emission rates (grams per second)
X/Q = model output data ($\mu g/m^3$)/(grams per second)

Chronic Hazard Quotient Equation

$$HQ_C = (C_{air} / REL)$$

Where:

HQ_C = chronic hazard quotient
C_{air} = annual average concentration ($\mu g/m^3$)
REL = chronic reference exposure level ($\mu g/m^3$)

3.9.3 CEQA Appendix G Assessment Criteria

3.9.3.1 Would the Project expose sensitive receptors to substantial public health impacts?

Construction

TACs that will potentially be emitted during construction activities will be DPM emitted from heavy-duty construction equipment, heavy-duty trucks, and diesel generator use during the commissioning phase. The construction HRA methodology is described in Section 3.9.2.2, Approach and Methodology, and the detailed assessment is provided in Appendix 3.9A. Table 3.9-4 summarizes the results of the construction HRA for the Project at the maximally exposed sensitive receptor, which will be a residence directly north of the Project site, along Tortuga Street. Figure 3.9-1, Construction Health Risk Assessment – Sensitive Receptors, depicts the maximally exposed receptors in proximity to the Project site during construction.

Although mitigation measures will not be required to reduce construction health risk impacts, the mitigated scenario was also evaluated for disclosure purposes. Mitigation Measure (MM) AQ-1 and MM-AQ-2 (identified in Section 3.1, Air Quality) were included in the mitigated construction HRA analysis, which require Tier 4 Final off-road equipment with engines greater than 50 horsepower and Tier 4 Final diesel generators for commissioning, respectively.

Table 3.9-4. Construction Health Risk Assessment Results

Impact Parameter	Unit	Project Impact	AVAQMD CEQA Threshold	Level of Significance
Unmitigated Project				
Cancer Risk	Per million	4.73	10.0	Less than significant
Chronic Hazard Index	Not applicable	0.016	1.0	Less than significant
Mitigated Project				
Cancer Risk	Per million	1.03	10.0	Less than significant
Chronic Hazard Index	Not applicable	0.0023	1.0	Less than significant

Source: Appendix 3.9A.
Notes: AVAQMD = Antelope Valley Air Quality Management District; CEQA = California Environmental Quality Act.
The mitigated Project scenario presents risk after implementation of MM-AQ-1 and MM-AQ-2.

As shown in Table 3.9-4, the results of the construction HRA for the Project demonstrate that unmitigated DPM emissions will result in a potential incremental increase in cancer risk and Chronic Hazard Index that will each be below the applicable AVAQMD threshold. Potential health risk impacts associated with the Project will be **less than significant**. Implementation of MM-AQ-1 and MM-AQ-2 will further reduce potential cancer and non-cancer health risks from Project construction.

Operations

TACs that will potentially be emitted during operational activities will be DPM emitted from the routine testing and maintenance of the three emergency diesel generators. The operational HRA methodology was described in Section 3.9.2.2, and the detailed assessment is provided in Appendix 3.9A. Table 3.9-5 summarizes the results of the operational HRAs for the Project at the maximally exposed sensitive receptor, which will be a residence north of the Project site, nearest the O&M buildings. Figure 3.9-2, Operational Health Risk Assessment – Sensitive Receptors, depicts the maximally exposed receptors in proximity to the Project site during operations.

Table 3.9-5. Operational Health Risk Assessment Results

Impact Parameter	Unit	Project Impact	AVAQMD CEQA Threshold	Level of Significance
Unmitigated Project				
Cancer Risk	Per million	0.16	10.0	Less than significant
Chronic Hazard Index	Not applicable	0.00004	1.0	Less than significant

Source: Appendix 3.9A.
Notes: AVAQMD = Antelope Valley Air Quality Management District; CEQA = California Environmental Quality Act.

As shown in Table 3.9-5, the results of the operational HRA for the Project demonstrate that unmitigated DPM emissions will result in a potential incremental increase in cancer risk and Chronic Hazard Index that will each be below the applicable AVAQMD thresholds. Potential health risk impacts associated with Project will be **less than significant**.

3.9.4 Cumulative Impacts

In addition to evaluating the Project's potential incremental contribution to cancer and non-cancer health risk impacts, a records search was conducted to determine if there are other cumulative sources of TACs within a 6-mile radius of the Project site. Based on CARB's Pollution Mapping Tool, the nearest tracked facilities are near the Palmdale Regional Airport, which are approximately 8 miles northeast of the Project site (CARB 2025). Therefore, there were no tracked sources within a 6-mile radius of the Project site, and no cumulative effects from nearby sources are anticipated.

3.9.5 Mitigation Measures

As described in Section 3.9.3, CEQA Appendix G Assessment Criteria, the cancer risk and non-cancer health impacts from Project construction and operations will be less than significant without mitigation. However, implementation of MM-AQ-1 and MM-AQ-2 (identified in Section 3.1, Air Quality) will reduce DPM during construction, which will further reduce the potential cancer and non-cancer health risk impacts.

Construction

MM-AQ-1 Construction Equipment Emission Minimization. Prior to the commencement of construction activities for the Project, the applicant or its designee shall require its construction contractor to demonstrate that all 50-horsepower or greater diesel-powered offroad equipment is powered with California Air Resources Board-certified Tier 4 Final or better engines, if available or Tier 3, where Tier 4 engines are not available.

In the event of changed circumstances (e.g., changes in the availability of specific types of construction equipment), the construction contractor may submit a request to the California Energy Commission (CEC) Compliance Project Manager (CPM) to apply an equivalent method of achieving project-generated construction emissions that fall below the mass daily thresholds established by the Antelope Valley Air Quality Management District (AVAQMD). Documentation using industry-standard emission estimation methodologies shall be furnished to the CEC demonstrating that estimated project-generated construction emissions will not exceed the applicable AVAQMD thresholds with the alternate construction method(s). If the documentation demonstrates that project-generated construction emissions will remain below the applicable AVAQMD thresholds, then the CPM may approve the alternate construction method(s). Required construction equipment fleet and methodologies approved by the CPM shall be included in the contract specifications for the construction contractor.

MM-AQ-2 Commissioning Generators Emission Minimization. Prior to the commencement of construction activities for the Project, the applicant or its designee shall require its construction contractor to demonstrate that all diesel generators used during commissioning of the project are powered with California Air Resources Board-certified Tier 4 Final or better engines, if available or Tier 3, where Tier 4 engines are not available.

In the event of changed circumstances (e.g., changes in the availability of specific types of construction equipment), the construction contractor may submit a request to the California Energy

Commission Compliance Project Manager to apply an equivalent method of achieving project-generated construction emissions.

3.9.6 Laws, Ordinances, Regulations, and Standards

Table 3.9-6 summarizes the federal, state, and local laws, ordinances, regulations, and standards relevant to the analysis of public health.

Table 3.9-6. Laws, Ordinances, Regulations, and Standards

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	Clean Air Act	Establishes federal national emissions standards for hazardous air pollutants.	**Yes.** Construction and operational HRAs were performed to assess potential effects and public exposure associated with airborne hazardous air pollutant emissions, specifically DPM, from the Project. The Project will not exceed federal standards.	Section 3.9.3.1 Section 3.9.6.1
State	Air Toxics Program	Assembly Bill 1807 and Assembly Bill 2588 involve TAC risk identification and risk management, including facility prioritization.	**Yes.** Construction and operational HRAs were performed to assess potential effects and public exposure associated with airborne TAC emissions, specifically DPM, from the Project. The Project will not exceed state standards.	Section 3.9.3.1 Section 3.9.6.2
State	Diesel Risk Reduction Plan	The Diesel Risk Reduction Plan evaluated health effects of ambient DPM and identified potential control technologies to reduce DPM, which paved the way for development and adoption of ATCMs.	**Yes.** Construction and operational sources of DPM associated with the Project will be required to comply with the applicable ATCMs to reduce DPM.	Section 3.9.3.1 Section 3.9.6.2
State	California Health and Safety Code Section 41700	Prohibits discharging air contaminants causing injury, nuisance, or endangering public health or safety.	**Yes.** Based on the construction and operational HRAs performed for the Project, TAC exposure will not endanger public health or safety.	Section 3.9.3.1 Section 3.9.6.2
Local	Antelope Valley Air Quality	Regulates air pollutant emissions throughout the Los Angeles County	**Yes.** Based on the construction and operational HRAs performed for the Project, TAC exposure will not	Section 3.9.3.1 Section 3.9.6.3

Table 3.9-6. Laws, Ordinances, Regulations, and Standards

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
	Management District Rules	portion of the Mojave Desert Air Basin.	exceed the AVAQMD risk thresholds. In addition, the Project will be required to comply with applicable AVAQMD rules to minimize potential TAC emissions and exposure.	

Notes: LORS = laws, ordinances, regulations, and standards; HRA = Health Risk Assessment; TAC = toxic air contaminant; DPM = diesel particulate matter; ATCMs = Air Toxic Control Measures; AVAQMD = Antelope Valley Air Quality Management District.

3.9.6.1 Federal

The federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the CAA, including setting National Ambient Air Quality Standards for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric ozone protection measures, and enforcement provisions. Under the CAA, National Ambient Air Quality Standards are established for the following criteria pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM_{10}, $PM_{2.5}$, and lead.

The 1977 CAA Amendments required the EPA to identify national emission standards for HAPs to protect the public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard based on scientific studies of exposure to humans and other mammals. Under the 1990 CAA Amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

Construction and operational HRAs were performed to assess potential effects and public exposure associated with airborne HAP emissions, specifically DPM, from the Project. The Project will not exceed federal standards.

3.9.6.2 State

As described in Section 3.9.1.2, Characterization of Risks from Toxic Air Pollutants, the state Air Toxics Program was established in 1983 under Assembly Bill 1807 (Tanner). The California TAC list identifies more than 200 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with Assembly Bill 2728, the state list includes the federal HAPs. In 1987, the State Legislature enacted the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (Assembly Bill 2588) to address public concern over the release of TACs into the atmosphere. Assembly Bill 2588 requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform an HRA, and if specific thresholds are

exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. CARB also adopted several ATCMs that reduce diesel emissions, including the following (greater detail can be found in the California Code of Regulations [CCR] noted below):

- Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Residential and Commercial Solid Waste Collection Vehicles (13 CCR 2020, 13 CCR 2021)
- ATCM for Diesel Particulate Matter from Portable Engines Rated 50 Horsepower and Greater (17 CCR 93116)
- ATCM for Stationary Compression Ignition Engines (17 CCR 93115)
- ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling (13 CCR 2485)
- ATCM for In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.)
- ATCM for In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025)

California Health and Safety Code Section 41700 states that a person must not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

The construction and operational HRAs performed for the Project determined that potential cancer and non-cancer health risks will not exceed state standards. In addition, the Project will be required to comply with applicable ATCMs to reduce DPM, and will not result in TAC emissions that will endanger public health and safety.

3.9.6.3 Local

The AVAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the Los Angeles County portion of the Mojave Desert Air Basin, where the Project site is located. Emissions that will result from mobile, area, and stationary sources during construction and operation of the Project are subject to the rules and regulations of the AVAQMD. The AVAQMD rules applicable to TAC emissions from the Project may include the following:

- **Rule 201 – Permit to Construct.** This rule requires that a person must not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization.

- **Rule 203 – Permit to Operate.** This rule requires that a person must not operate or use any equipment, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit to operate.
- **Rule 219 – Equipment Not Requiring a Permit.** This rule identifies equipment exempt from the permit requirements of AVAQMD Rules 201 and 203. An AVAQMD permit is required for internal combustion engines with manufacturer's maximum continuous rating greater than or equal to 50 brake horsepower.
- **Rule 402 – Nuisance.** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 1000 – National Emission Standards for Hazardous Air Pollutants (NESHAPs).** This rule adopts by reference the NESHAP provisions of the Code of Federal Regulations Part 61, Chapter 1, Title 40.

The construction and operational HRAs performed for the Project determined that potential cancer and non-cancer health risks will not exceed AVAQMD thresholds. In addition, the Project will be required to comply with applicable AVAQMD rules to minimize potential TAC emissions and exposure.

3.9.7 Permits and Agency Contacts

Pursuant to Assembly Bill 205 Section 25545.1(b)(1), the California Energy Commission retains exclusive authority over permitting and supersedes any applicable statute, ordinance, or regulation of a local air quality management district. The applicant and the California Energy Commission will collaborate with the AVAQMD on review of this Opt-In Application to ensure compliance with AVAQMD rules and regulations. In addition, Table 3.9-7 lists other relevant agency contacts related to public health. The AVAQMD will provide an authority to construct, which will contain proposed permit conditions for the Project's stationary sources that the AVAQMD will impose but for the California Energy Commission's in-lieu authority over the Project. These AVAQMD conditions will be reflected in the California Energy Commission's Final Decision.

Table 3.9-7. Permits and Agency Contacts

Issue/Approval	Agency	Contact	Applicability
Public exposure to air pollutants	Antelope Valley Air Quality Management District	Taylor Morais Air Quality Engineer Antelope Valley Air Quality Management District tmorais@avaqmd.ca.gov	Authority to Construct/ Permit to Operate for Emergency Generators

3.9.8 References

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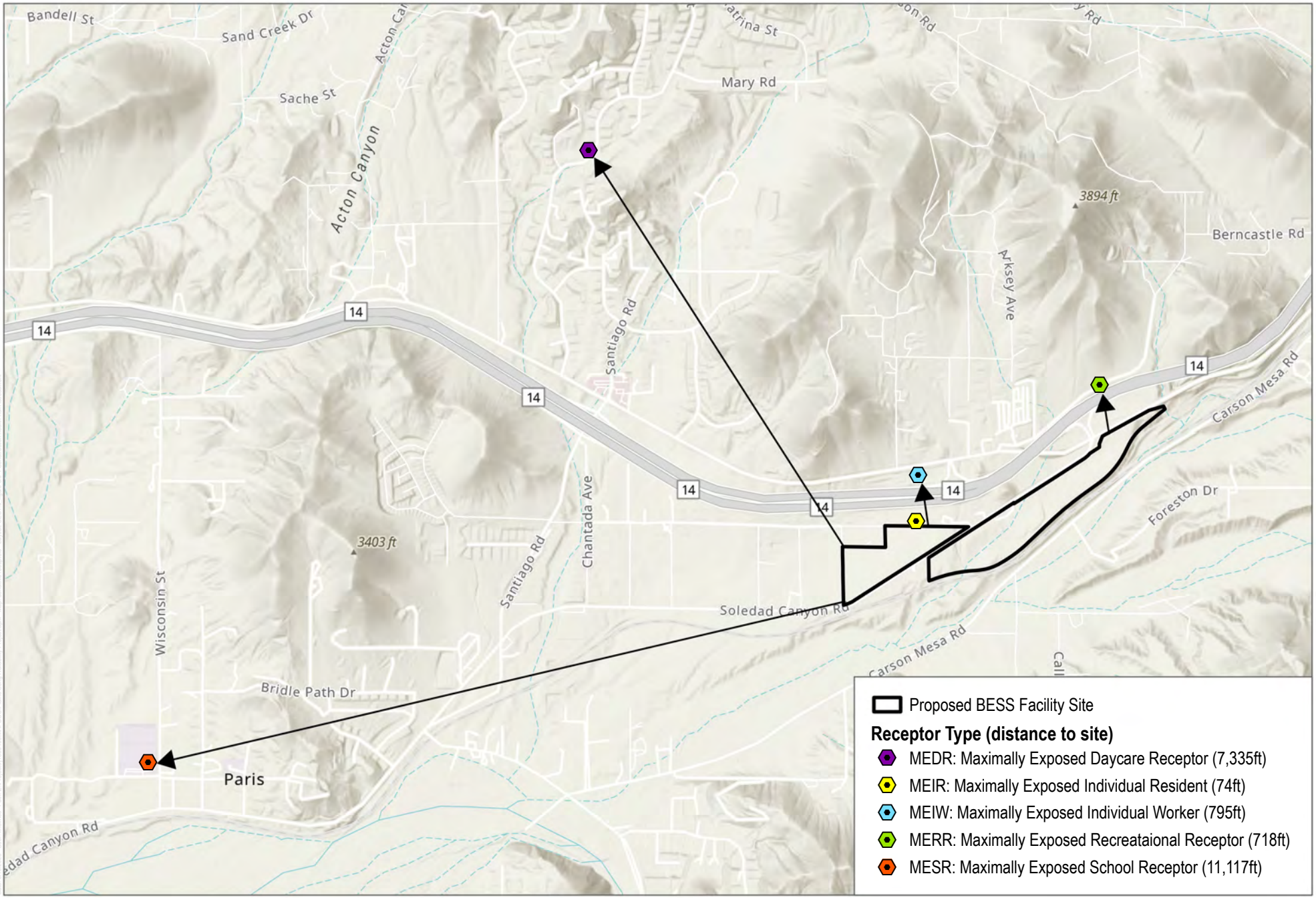

SOURCE: World Topographic

DUDEK

0 500 1,000 Feet

FIGURE 3.9-1

Construction Health Risk Assessment - Sensitive Receptors

Prairie Song Reliability Project

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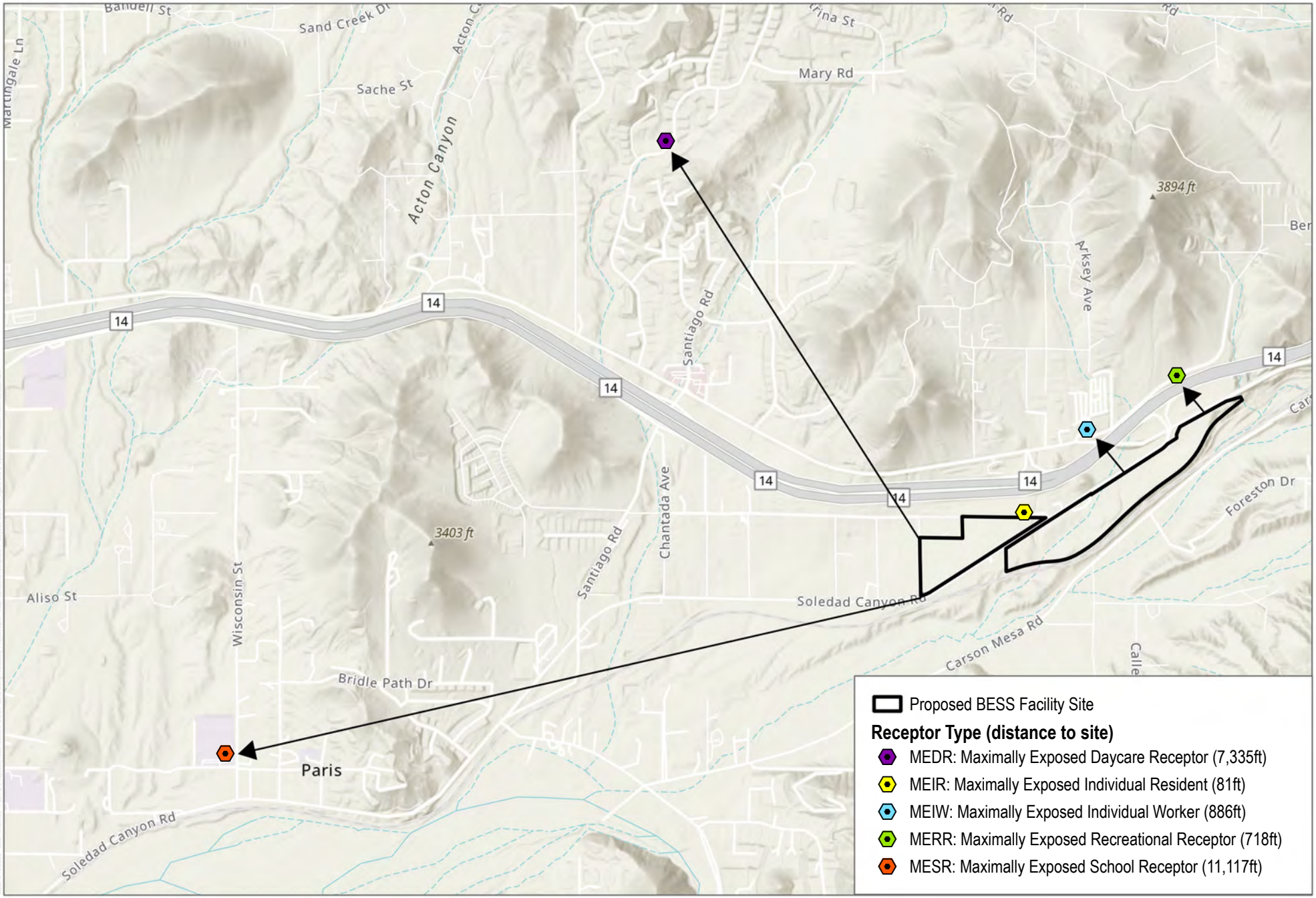

SOURCE: World Topographic

DUDEK

0 500 1,000 Feet

FIGURE 3.9-2

Operational Health Risk Assessment - Sensitive Receptors

Prairie Song Reliability Project

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3.10 Socioeconomics

This section describes the potential social and economic effects of the Prairie Song Reliability Project (Project) arising from construction and operation of the battery energy storage system (BESS). The Project will consist of an up to 1,150-megawatt (MW) containerized BESS facility using lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings; a Project substation; a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line; and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation. This discussion considers Project-related effects to population, housing, public services, utilities, and county tax revenue within the Project vicinity and region, and evaluates the economic benefits that will arise from the Project. This evaluation of socioeconomics includes the following elements:

- Section 3.10.1 describes the socioeconomic environment that might be affected by the BESS.
- Section 3.10.2 provides an environmental analysis of construction and operation of the Project.
- Section 3.10.3 evaluates any potential cumulative effects from the Project.
- Section 3.10.4 describes mitigation measures that will be implemented to avoid potential impacts.
- Section 3.10.5 discusses the applicable laws, ordinances, regulations, and standards.
- Section 3.10.6 lists the agencies involved and agency contacts.
- Section 3.10.7 discusses permits and permit schedules.
- Section 3.10.8 lists reference materials used in preparing this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical reports:

- Appendix 3.10A – Prairie Song Reliability Project Economic and Public Revenue Impact Study, prepared by Economic & Planning Systems, dated June 12, 2025 (hereinafter "Socioeconomics Report").
- Appendix 3.10B – Letter from the Los Angeles/Orange Counties Building and Construction Trades Council re: Affirming the Strength and Readiness of California's Skilled Labor.

A summary of the socioeconomics evaluation is provided in the table below.

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
1	Induce substantial growth or concentration of population?	☐	☐	☒	☐
2	Displace a large number of people or impact existing housing?	☐	☐	☒	☐
3	Result in substantial adverse impacts on the local economy and employment?	☐	☐	☐	☒ (beneficial impact)

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
4	Create adverse fiscal impacts on the community?	☐	☐	☐	☒ (beneficial impact)
5	Result in substantial adverse impacts on educational facilities?	☐	☐	☒	☐
6	Result in substantial adverse impacts on the provision of utility services?	☐	☐	☒	☐
7	Result in substantial adverse impacts associated with the provision of public services?	☐	☐	☒	☐

3.10.1 Environmental Setting

The Project site is in northern Los Angeles County within the foothills of the Sierra Pelona Mountains and at the edge of the Antelope Valley of the western Mojave Desert. The nearest municipality to the Project site is the City of Palmdale, which is approximately 4 miles to the northeast. Land uses in the immediate vicinity of the Project site include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, State Route 14, and railroad lines. The majority of the Project site is currently undeveloped, with the exception of a small portion of the area developed as rural residential.

The region of influence for purposes of evaluating the socioeconomic impacts associated with the Project is Los Angeles County, given that the Project site is in an unincorporated area of Los Angeles County.

3.10.1.1 Population

The social characteristics and trends of the County of Los Angeles (County) reported below are based on historical, current, and projected changes in population. The California Department of Finance estimates that the County's 2024 population is 9,824,091. The population of the County increased by less than 1% from 2010 to 2024. This equates to a net increase of 5,486 people from 2010 to 2024. The County's population is expected to decrease through 2050, with a net loss of 271,093 people, or 2.8% of the population, over the next 25 years (DOF 2024). Table 3.10-1 and Table 3.10-2 summarize the historical, current, and projected population changes and percent change over time.

Table 3.10-1. Historical, Current, and Projected Population

Area	2010	2015	2020	2024	2030 Projected	2040 Projected	2050 Projected
Los Angeles County	9,818,605	10,072,887	10,014,009	9,824,091	9,723,289	9,693,049	9,552,998
California	37,253,956	38,810,306	39,538,223	39,128,162	39,694,960	40,914,063	41,686,419

Source: DOF 2024.

Table 3.10-2. Population Percent Change in Project Region and the State

Area	2010–2024	2024–2030 Projected	2030–2040 Projected	2040–2050 Projected
Los Angeles County	0.06%	–1.03%	–0.31%	-1.44%
California	5.03%	0.40%	3.07%	1.89%

Sources: Appendix 3.10A; DOF 2024.

3.10.1.2 Housing

The permanent housing stock in Los Angeles County in 2024 was 3,696,408 units (Table 3.10-3). Approximately 55% of the County's housing stock is single-family units, 44% is multi-family units, and 2% is mobile homes. The state has a larger percentage of single-family units, representing 65% of the total housing stock, where multi-family homes represent 32% and mobile homes 4%. The vacancy rates for the County and state are 4.8% and 6.4%, respectively (DOF 2024).

Table 3.10-3. California Department of Finance 2024 Housing Estimates

Area	Total Units	Single-Family	Multi-Family	Mobile Homes	Vacancy Rate
Los Angeles County	3,696,408	2,018,199	1,621,906	56,303	4.8%
California	14,824,827	9,541,239	4,744,173	539,415	6.4%

Source: DOF 2024.

Table 3.10-4 summarizes the total estimated temporary housing units in Los Angeles County. This analysis defines temporary housing as housing units that provide transitional or short-term accommodation for individuals and families, including multi-family units, hotels and motels, and mobile homes. According to the California Department of Finance, there are more than 1.6 million multi-family units and more than 56,000 mobile homes in Los Angeles County, with a vacancy rate of 4.8%. This results in an estimated available supply of 78,195 multi-family housing units and 2,714 mobile home units (DOF 2024). Additionally, there are more than 27,000 economy class hotel units in Los Angeles County, according to CoStar, with a 66% vacancy rate, resulting in an estimated 9,224 units available for use (CoStar 2025). Altogether, the County has an estimated 90,133 available units for temporary housing.

Table 3.10-4. 2024 Temporary Housing Estimates

Accommodation Type	Estimated Units	Vacancy Rate	Estimated Supply
Multi-Family Units[1]	1,621,906	4.8%	78,195
Hotel/Lodging[2]	27,128	34.0%	9,224
Mobile Homes[3]	56,303	4.8%	2,714
		Total Units	**90,133**

Sources: CoStar 2025; DOF 2024.
Notes:
1. Multi-family unit estimates are sourced from the California Department of Finance (DOF), as seen in Table 3.10-3.
2. Hotel/Lodging is based on a 12-month occupancy rate of economy class hotels in Los Angeles County from 2024.
3. Mobile home estimates are sourced from DOF, as seen in Table 3.10-3.

3.10.1.3 Economy and Employment

The County's economy is distinct in its size and diversity, supporting more than 6.8 million jobs in 2023 and generating an estimated $950 million in gross domestic product based on IMPLAN[1] data from 2023 (see Appendix 3.10A for modeling). Table 3.10-5 displays the breakdown of 2023 County employment and gross domestic product by industry.

Table 3.10-5. Los Angeles County Employment and Economic Output by Industry

North American Industry Classification System Industry Type	Total Employment[1]		Gross Domestic Product/Value Added[2]	
	Number	Percent of Total	Amount	Percent of Total
Agriculture, Forestry, Fishing, and Hunting	6,546	0.1%	$332	0.0%
Mining, Quarrying, and Oil and Gas Extraction	6,048	0.1%	$1,062	0.1%
Utilities	15,521	0.2%	$13,310	1.4%
Construction	258,540	3.8%	$28,344	3.0%
Manufacturing	331,696	4.9%	$78,647	8.3%
Wholesale Trade	238,072	3.5%	$57,422	6.0%
Retail Trade	492,408	7.2%	$54,881	5.8%
Transportation and Warehousing	399,511	5.9%	$37,382	3.9%
Information	269,236	4.0%	$97,158	10.2%
Finance and Insurance	349,092	5.1%	$48,740	5.1%
Real Estate and Rental and Leasing	456,973	6.7%	$127,033	13.4%
Professional, Scientific, and Technical Services	602,439	8.8%	$104,388	11.0%
Management of Companies and Enterprises	77,264	1.1%	$13,089	1.4%
Administrative and Support and Waste Management and Remediation Services	415,842	6.1%	$29,228	3.1%
Educational Services	154,253	2.3%	$11,272	1.2%
Health Care and Social Assistance	890,277	13.1%	$68,322	7.2%
Arts, Entertainment, and Recreation	250,302	3.7%	$29,793	3.1%
Accommodation and Food Services	525,730	7.7%	$37,122	3.9%
Other Services (except Public Administration)	484,689	7.1%	$26,056	2.7%
Government Enterprises	57,247	0.8%	$9,310	1.0%
Administrative Government	531,746	7.8%	$77,029	8.1%
Total	**6,813,432**	**100%**	**$949,922**	**100%**

Source: Appendix 3.10A.
Notes:
1. Includes both wage and salary employment and proprietor employment.
2. Dollar values shown in millions. Value added is equal to gross domestic product, capturing the wealth created by industry activity.

1 IMPLAN (Impact Analysis for Planning) software is an input/output model that draws on data collected by the IMPLAN Group LLC from several state and federal resources, including the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the U.S. Census Bureau. The model is used widely for estimating economic impacts across a wide variety of industries and economic settings (see Appendix 3.10A for modeling).

Table 3.10-6 presents annual unemployment rates in Los Angeles County and statewide from 2014 to 2024 based on data from the California Employment Development Department. Statewide unemployment rates are used as a baseline for assessing change on the county level. Following the 2008 Recession, unemployment remained high in 2014, with statewide rates at 7.6% and rates in Los Angeles County slightly higher at 8.2%. The County's labor market steadily improved, and by 2019, unemployment had declined to approximately 4.5%, while the statewide rate decreased to 4.1%. However, the COVID-19 pandemic led to another sharp rise in unemployment, with rates surging to 12.4% in Los Angeles County and 10.2% statewide. Between 2019 and 2024, unemployment rates gradually approached pre-pandemic levels, down to 5.7% in the County and 5.4% statewide (CEDD 2025).

The California Department of Transportation projects a gradual increase in unemployment rates of less than 0.5 percentage points through 2035, reaching approximately 6% in both Los Angeles County and statewide. Overall, County unemployment trends closely follow statewide patterns, with California maintaining slightly lower unemployment rates (Caltrans 2023).

Table 3.10-6. Historical, Current, and Projected Unemployment Rates

Year[1]	Los Angeles County	California
2014	8.2%	7.6%
2015	6.7%	6.3%
2016	5.3%	5.5%
2017	4.8%	4.8%
2018	4.7%	4.3%
2019	4.5%	4.1%
2020	12.4%	10.2%
2021	9.0%	7.3%
2022	5.0%	4.3%
2023	5.0%	4.8%
2024	5.7%	5.4%
Projected 2030	5.8%	4.9%
Projected 2035	6.0%	5.9%

Sources: CEDD 2025; Caltrans 2023.
Note:
1. Unemployment rates from 2014 to 2024 are sourced from the California Employment Development Department, and projected unemployment rates are sourced from the California Department of Transportation (Caltrans).

3.10.1.3.1 Availability of Skilled Workers by Craft

Table 3.10-7 presents 2023 American Community Survey 5-year Estimates of Public Use Microdata Sample (PUMS) data for the County's construction labor force (U.S. Census 2023). The California Employment Development Department indicates that the County's most recent unemployment rate (December 2024) is 5.7% (CEDD 2025). Applying this rate to the County's 296,944 construction workers, an estimated 16,909 workers are currently unemployed and will be available during the Project's construction phase. The Project requires 303 full-time equivalent (FTE) workers, assuming FTE workers work an average of 2,080 hours. As such, the County's existing construction labor force has a sufficient number of unemployed workers to meet demand across all craft positions. In addition, a letter from the Los Angeles/Orange Counties Building and Construction Trades Council demonstrates that there are more than 160,000 skilled tradespeople and approximately 23,000 apprentices available for dispatch to construction jobs, and specifically references the proposed Project (see Appendix 3.10B).

Table 3.10-8 presents 2023 PUMS data for the County's workforce in occupations needed for Project operation (U.S. Census 2023). Using the same California Employment Development Department's unemployment rate of 5.7%, it is estimated that 2,809 workers will be locally available out of the workforce of 49,275 in the selected occupations to work on the Project. Annual operations will require 20 annual FTE operational workers. Based on the labor availability in the County and labor demanded for the Project, the County will have a sufficient number of locally available unemployed workers to fulfill the needs of Project operations.

Table 3.10-7. Los Angeles County Construction Labor Force

Construction Occupations	Los Angeles County Labor Force	Projected Available County Labor Force[1]
Construction Managers	27,782	1,584
First-Line Supervisors of Construction Trades and Extraction Workers	16,283	928
Boilermakers	135	8
Carpenters	36,110	2,058
Carpet, Floor, and Tile Installers and Finishers	6,236	355
Cement Masons, Concrete Finishers, and Terrazzo Workers	1,410	80
Construction Laborers	100,456	5,726
Construction Equipment Operators	4,722	269
Drywall Installers, Ceiling Tile Installers, and Tapers	6,291	359
Electricians	27,723	1,580
Glaziers	1,293	74
Insulation Workers	564	32
Painters and Paperhangers	25,066	1,429
Pipelayers	939	54
Plumbers, Pipefitters, and Steamfitters	18,908	1,078
Plasterers and Stucco Mason	1,477	84
Roofers	5,892	336
Sheet Metal Workers	3,713	212
Structural Iron and Steel Workers	1,991	113
Solar Photovoltaic Installers	1,092	62
Brickmasons, Blockmasons, Stonemasons, and Reinforcing Iron and Rebar Workers	2,476	141
Helpers, Construction Trades	1,601	91
Construction and Building Inspectors	3,215	183
Other Construction and Related Workers	1,269	72
Total Construction Labor Force	**296,644**	**16,909**

Sources: Appendix 3.10A; U.S. Census 2023.
Note:
1. California Employment Development Department's unemployment rate for Los Angeles County (5.7%) is applied to the current County workforce.

Table 3.10-8. Los Angeles County Operations Labor Force

Operations Occupations	Los Angeles County Labor Force	Projected Available County Labor Force[1]
First-Line Supervisors of Mechanics, Installers, and Repairers	4,716	269
Other Electrical and Electronic Equipment Mechanics, Installers, and Repairers	386	22
Maintenance Workers, Machinery	571	33
Industrial and Refractory Machinery Mechanics	7,442	424
Electrical Power-Line Installers and Repairers	1,760	100
Telecommunications Line Installers and Repairers	3,854	220
Precision Instrument and Equipment Repairers	2,301	131
Maintenance and Repair Workers, General	19,384	1,105
Helpers—Installation, Maintenance, and Repair Workers	919	52
Other Installation, Maintenance, and Repair Workers	7,942	453
Total Operations Labor Force	**49,275**	**2,809**

Sources: Appendix 3.10A; U.S. Census 2023.
Note:
1. California Employment Development Department's unemployment rate for Los Angeles County (5.7%) is applied to the current County workforce.

3.10.1.4 Fiscal Resources

The local agency with taxing power over the Project site is the County because the Project site is in unincorporated Los Angeles County. Table 3.10-9 presents the County's total change in net position for fiscal year (FY) 2023 and FY 2024. In 2024, the County collected $33 billion in revenue, an increase of just under 10% from $30.10 billion in 2023. The County's expenses decreased by less than 1% in 2024, from $30.90 billion in 2023 to $30.86 billion in 2024. The County had a negative net position in 2023 of $810 million, but a positive change in net position in 2024 with $2.15 billion (excluding excess and transfers) (County of Los Angeles 2024a).

Table 3.10-10 shows the County's General Fund financing sources in FY 2023–2024 and FY 2024–2025. As shown, State Aid is the largest source of revenue for the County's General Fund, making up more than 30% of its total available revenues. Property taxes are the second largest revenue source, accounting for more than 25% of General Fund revenues in both fiscal years shown. Total General Fund revenue is anticipated to increase in FY 2024–2025 from the previous year due to general increases across all sources of revenues (County of Los Angeles 2024a).

Table 3.10-9. Los Angeles County Change in Net Position – Total Activities

Item	Fiscal Year 2023	Fiscal Year 2024
Revenue		
Program Revenues		
Charges for Services	$4,342,851	$4,757,465
Operating Grants and Contributions	$14,134,795	$15,578,862
Capital Grants and Contributions	$64,023	$58,660

Table 3.10-9. Los Angeles County Change in Net Position – Total Activities

Item	Fiscal Year 2023	Fiscal Year 2024
General Revenues		
Taxes	$10,297,844	$10,811,926
Unrestricted Grants and Contributions	$632,188	$679,353
Investment Income	$347,504	$863,672
Miscellaneous	$278,413	$253,977
Total Revenues	**$30,097,618**	**$33,003,915**
Expenses		
General Government	$1,626,902	$1,884,559
Public Protection	$10,535,212	$10,040,684
Public Ways and Facilities	$543,472	$585,307
Health and Sanitation	$6,906,927	$8,032,810
Public Assistance	$10,390,815	$9,426,531
Education	$154,258	$173,303
Recreation and Cultural Services	$588,735	$534,164
Interest on Long-Term Debt	$161,604	$178,369
Total Expenses	**$30,907,925**	**$30,855,727**
Change in Net Position[1]	**($810,307)**	**$2,148,188**

Sources: Appendix 3.10A; County of Los Angeles 2024a.
Notes: Values shown in thousands.
1. Excludes excess (deficiency) before transfers.

Table 3.10-10. Los Angeles County General Fund Revenue Sources

	Fiscal Year 2023/2024 Actual		Fiscal Year 2024/2025 Final	
Total Available Financing by Source	Amount	Percent	Amount	Percent
Property Tax Revenues	$7,757	27%	$7,952	26%
Other Taxes	$269	1%	$228	1%
Licenses, Permits, and Franchises	$86	0%	$76	0%
Fines, Forfeits, and Penalties	$188	1%	$147	0%
Use of Money and Property	$652	3%	$425	1%
State Aid	$8,792	31%	$10,092	33%
Aid from Federal Government	$5,888	21%	$5,797	19%
Aid from Local Government Agencies	$30	0%	$61	0%
Charges for Services	$3,362	12%	$3,484	11%
Other Revenue	$245	1%	$188	1%
Other Financing Sources	$1,348	5%	$2,254	7%
Total	**$28,615**	**100%**	**$30,704**	**100%**

Sources: Appendix 3.10A; County of Los Angeles 2024b.
Note: Values shown in millions.

3.10.1.5 Education

The Acton–Agua Dulce Unified School District is the school district that serves the Project site and surrounding area. The Acton–Agua Dulce Unified School District was established in 1881, serves students over a 200-square-mile radius, and includes one elementary school, one junior high school, and one high school. Current enrollment is 12,875 students. Approximately 3,329 students are enrolled in kindergarten (transitional kindergarten) through Grade 5, approximately 1,694 students are enrolled in Grades 6 through 8, and approximately 7,852 students are enrolled in Grades 9 through 12 (CDE 2025).

3.10.1.6 Public Services and Facilities

This section describes public services and facilities in the Project area (Los Angeles County). Local governments with a large enough tax base provide public emergency services to their residents. In areas where the tax base is too small to create emergency service agencies, the responsibility for providing such services falls to the corresponding county. The three primary emergency service functions provided by local governments are police, fire, and emergency medical services. As their primary goal, these public service agencies share a role in protecting the safety of people and their property.

3.10.1.6.1 Law Enforcement

The Los Angeles County Sheriff's Department is the largest Sheriff's Department in the United States, with nearly 18,000 sworn staff operating out of 23 stations throughout Los Angeles County. The Project site falls within the Palmdale Sheriff's Station coverage area. The response time to an emergency call from the Project site depends on availability and proximity of sheriff's deputies at the time dispatch receives the emergency call. The Palmdale Sheriff's Station is the nearest station to the Project site and is located at 750 East Avenue Q, Palmdale, California 93550, approximately 8.8 road miles from the Project site (Los Angeles County Sheriff's Department 2025).

The California Highway Patrol provides uniform traffic law enforcement throughout the state. The Project site falls within the Southern Division of the California Highway Patrol. Specifically the California Highway Patrol's Antelope Valley office (2041 West Avenue I, Lancaster, CA 93536) is responsible for patrolling approximately 30 miles of State Route 14 from Acton, California, to the Kern County line, and approximately 1,400 miles of unincorporated roadways in various communities throughout the Antelope Valley, including Angeles Forest Highway, Angeles Crest Highway, State Route 138, and State Route 18 (California Highway Patrol 2025).

3.10.1.6.2 Fire Protection

The County of Los Angeles Fire Department is responsible for the protection of 4 million residents across 60 cities and the unincorporated areas of the County. The County of Los Angeles Fire Department conducts a wide range of emergency operations, including firefighting, emergency medical services, dispatch, air and wildland fire services, lifeguard services, urban search and rescue, hazardous materials response, and homeland security. The closest fire station to the Project site is County of Los Angeles Fire Department Station 80, located at 1533 W. Sierra Highway, Acton, California 93510, approximately 0.7 road miles from the Project site (County of Los Angeles Fire Department 2025). As discussed in more detail in Section 3.16, Wildfire, total response time, including call and turnout time, from Station 80 is calculated at roughly 4.32 minutes to the entrance of the BESS facility. All response calculations are based on an average response speed of 35 miles per hour, consistent with nationally recognized National Fire Protection Association (NFPA) 1710.

3.10.1.6.3 Emergency Response

Emergency Medical Services (EMS) in Los Angeles County is administered by the Los Angeles County EMS Agency. The EMS Agency has one of the largest EMS systems in the United States, with more than 18,000 certified EMS personnel employed by fire departments, law enforcement, ambulance companies, hospitals, and private organizations. The EMS Agency is responsible for implementing the local EMS system. First responders include the County of Los Angeles Fire Department, which responds to emergency calls in the unincorporated County areas and provides initial emergency medical aid. Transportation to hospital or other facilities in the unincorporated County is provided by the 38 licensed basic life support ambulance operators, 16 licensed advanced life support ambulance operators, 16 licensed critical care transport operators, and two licensed ambulette operators in the EMS Agency system (Los Angeles County EMS Agency 2025). The County of Los Angeles Fire Department will likely be the first responder and has an estimated response time of 4.32 minutes (from Station 80 to the Project site), it is expected that the response time from the nearest hospital (Palmdale Regional Medical Center) to the Project site will be 13 to 15 minutes (Google Maps 2025).

3.10.1.6.4 Medical Facilities

The Palmdale Regional Medical Center is the nearest hospital to the Project site, at 38600 Medical Center Drive, Palmdale, California 93551, approximately 9.5 road miles from the Project site (Google Maps 2025). Palmdale Regional Medical Center features 190 licensed acute care beds, inpatient and outpatient surgery, an Advanced Primary Stoke Center, cardiac services featuring a STEMI Receiving Center (heart attack), and a 35-bed 24-hour emergency department (Palmdale Regional Medical Center 2025).

3.10.1.6.5 County Libraries

The Los Angeles County Library system serves 3.4 million residents across 3,000 square miles through its 86 libraries, four Cultural Resource Centers, and a mobile fleet of 15 vehicles. The nearest library to the Project site is the Acton–Agua Dulce Library, at 33792 Crown Valley Road, Acton, California 93510, approximately 4.2 miles from the Project site (Los Angeles County Library 2025).

3.10.1.7 Utilities

A public utility is an organization that maintains the infrastructure for a public service. This section describes public utilities available in the Project area.

3.10.1.7.1 Electricity and Gas

Electricity in the area is provided by SCE. The Project is a BESS, which will draw electricity from the power grid to charge and store electrical energy and discharge it back into the power grid when the stored energy is needed. Power released or captured by the Project will be transferred to and from the SCE Vincent Substation via a newly constructed overhead or underground gen-tie line. The Project will provide several benefits to the power grid, including reducing the need to operate natural gas power plants to balance intermittent renewable generation and serving as an additional capacity resource that will enhance grid reliability.

3.10.1.7.2 Municipal Water

Municipal water in the area is provided by the Los Angeles County Public Works Department. The Project will not require a connection to a municipal water system. Construction water is anticipated to be purchased from a local water purveyor and trucked to the site. During construction, untreated water will be required for common construction-related purposes, including dust suppression, soil compaction, and grading. Dust-control water may be used during ingress and egress of on-site construction vehicle equipment traffic and during the construction of the Project. A sanitary water supply line will not be required during construction because restroom facilities will be portable units serviced by licensed providers, and water and sewage from the restroom facilities will be stored in on-site tanks and serviced by trucks. Drinking water will be provided via portable water coolers.

Operational water will be supplied by an on site well. A municipal connection will not be necessary for operational water requirements.

3.10.1.7.3 Wastewater Discharge

There will be no wastewater discharged as part of the Project. Portable toilets will be used during construction and will be serviced by licensed providers. A septic system will be used for restroom facilities during Project operations.

3.10.2 Impact Analysis

The Socioeconomics Report (Appendix 3.10A) prepared for the Project estimated the economic impacts during the construction and operations phases of the Project, as summarized in this section. All monetary estimates are in constant 2025 dollars.

3.10.2.1 Methodology

The analysis contained in the Socioeconomics Report used an input/output (I/O) modeling framework to quantify the Project's one-time and ongoing contributions to Countywide output, employment, and labor income. The I/O modeling framework is premised on the concept that industries in a geographic region are interdependent in the sense that they purchase output from and supply input to other industries. This regional economic analysis relies on IMPLAN (Impact Analysis for Planning) software, an I/O model that draws on data collected by the IMPLAN Group from several state and federal sources, including the Bureau of Economic Analysis, Bureau of Labor Statistics, and U.S. Census Bureau. The model is used widely for estimating economic impacts across a wide array of industries and economic settings. For this specific analysis, IMPLAN from the 2023 data year was used and shown in 2025 dollars. The geography of analysis is Los Angeles County (see Appendix 3.10A for modeling).

Regional economic impact analysis and I/O models in particular provide a means to estimate total effects stemming from a particular industry or activity, and yield estimates of the number and types of jobs created, the wages associated with those jobs, and the total economic output or "final sales" generated within various industries. I/O models rely on economic "multipliers" that mathematically represent the relationship between the initial change in one sector of the economy and the effect of that change on other interdependent industry sectors. These effects are commonly described as "direct," "indirect," or "induced," and are generally defined as follows:

- The **direct effect** is the initial change in economic activity in a specific industry or sector. For example, economic activities (business revenues, jobs, employee earnings) occurring at the Project site will represent a direct impact on the County's economy.

- The **indirect effect** results from industry-to-industry transactions required to support the direct activity. This effect is a measure of the change in the output of suppliers linked to the industry that is being evaluated. For example, construction of the Project will cause an increase in sales of construction materials, engineering services, and other goods from "business-to-business" suppliers in the County and elsewhere. Although the Project will create indirect effects in the state overall, for this analysis, only indirect effects within Los Angeles County are estimated.
- The **induced effect** consists of impacts from employee spending in the regional economy. Specifically, the employees of directly and indirectly affected businesses generate this effect by purchasing goods and services in Los Angeles County (e.g., food, clothing, automobiles, health care). As with the indirect effects, there will be additional induced effects felt in the state above and beyond the Countywide effects estimated in this analysis.
- The **total impact** is the sum of the direct, indirect, and induced effects. The total impact measures the overall impact of an activity as it "ripples" through the economy.

This section measures economic significance using common economic metrics, including employment, labor income, output, and value added, as defined below.

- **Full-time equivalent (FTE)** represents the total number of work hours, excluding overtime and holidays, worked by employees divided by the number of compensable hours in a full-time schedule. For example, an employee working 40-hour workweeks through an entire year will be equivalent to one FTE, and an employee working 20 hours weekly through the entire year will have an FTE of 0.5.
- **Employment** estimates the total number of jobs, both full-time and part-time, created as a result of Project construction and operations.
- **Labor income** represents payments to labor in the form of income and fringe benefits (e.g., health, retirement) for both wage and salary positions and proprietors.
- **Value added** represents an alternative and smaller metric of economic activity than economic output. Similar to the concept and definition of gross domestic product often used to report national levels of economic activity, value added counts only the additional economic value added at a particular site or area, excluding the value of any intermediate inputs purchased. As a result, value added equals economic output (described below) minus the value of intermediate inputs. A successful project will cover employee compensation, proprietor income and profit, and tax payments with its value added.
- **Economic output** represents a measure of economic activity calculated as production value or final sales value. This measure indicates the total value of the economic activity, including the value of intermediate inputs (i.e., the goods and services used in the production of final products that are not sold in final-demand markets).

There are two important caveats relevant to the interpretation of IMPLAN model estimates derived in the Socioeconomics Report (Appendix 3.10A). First, the I/O methodology assumes that demand for goods and services by industries or households directly relates to increase in income, and that an increase in demand results in a proportional increase in local supply and employment. This assumes fixed linear relationships between input (resource) use and output, and between income and consumption. This assumption allows for economic modeling and best estimates of economic impacts, recognizing that, in reality, responses to final demand changes may not occur in direct linear proportions.

Second, I/O models assume that local suppliers have sufficient capacity to respond to changes in final demand by increasing their output and hiring additional workers without shifting any production resources (inputs) from other

competing needs. This assumption may not hold in areas with tight labor or capital markets because suppliers may find it difficult to obtain the labor or material inputs or other resources necessary to expand production. Although the County's current unemployment rate of approximately 5.7% is low, the large size of the County's labor force suggests that there should be sufficient labor available to support the Project without affecting other businesses. Furthermore, I/O modeling does not delineate the origin of labor and whether or not the employees supported by projects will reside within the county or region of interest. The Project applicant expects to source construction labor from within a 75-mile radius of the Project site, encompassing all of Los Angeles County.

3.10.2.2 Impact Evaluation Criteria

The evaluation of socioeconomic impacts for the proposed Project is based on the criteria provided in Appendix B, Information Requirements for Application, which is part of Chapter 5, Article 6 of the California Code of Regulations, Title 20: Public Utilities and Energy. Specifically, the Socioeconomics Report prepared for the Project (Appendix 3.10A) addresses the requirements within Sections 7(A) and 7(B) of Appendix B to evaluate the "socioeconomic circumstances of the vicinity and region affected by construction and operation of the project" and "the socioeconomic impacts caused by the construction and operation of the project."

This evaluation of socioeconomic impacts is also based on the criteria provided in the California Environmental Quality Act (CEQA) Checklist (California Code of Regulations, Title 14, Section 15000). Impacts from construction and operation of the Project are determined to be potentially significant if they meet any of the following significance criteria:

- Induce substantial growth or concentration of population
- Displace a large number of people or impact existing housing
- Result in substantial adverse impacts on the local economy and employment
- Create adverse fiscal impacts on the community
- Result in substantial adverse impacts on educational facilities
- Result in substantial adverse impacts on the provision of utility services
- Result in substantial adverse impacts associated with the provision of public services

Other impacts may be significant if they cause substantial change in community interaction patterns, social organization, social structures, or social institutions; substantial conflict with community attitudes, values, or perceptions; or substantial inequities in the distribution of the Project's cost and benefit.

3.10.2.3 CEQA Appendix G Assessment Criteria

Construction Schedule and Workforce

The estimated monthly labor for the 26-month Project construction period is detailed in Table 3.10-11. Aggregate labor demand will fluctuate monthly, ranging from a low of 58 workers at the final commissioning phase to a peak of 230 to 250 workers during months 9 and 11. Following the peak, labor demand will remain elevated through month 18, ranging from 194 to 218 workers, before gradually decreasing in the following months leading up to completion, from a high of 162 workers in month 16 to a low of 58 workers in month 26. These jobs are monthly estimates that represent fractions of FTE. All combined, the number of workers to be employed aggregates to 303 total FTE over the duration of the Project.

The workforce will be concentrated in the early and middle phases of construction, particularly for site work and electrical crews, before tapering off as the Project nears finalization and commissioning. The labor demand is influenced by the specific phases of construction, with certain trades seeing higher demand during different stages. For instance, labor for site work is needed in higher numbers early on, peaking around months 5 and 6 as groundwork and preliminary tasks are prioritized. Electrical labor will ramp up in months 9 through 11, aligning with the installation of electrical systems and integration of the BESS infrastructure, which requires specialized labor.

Table 3.10-11. Monthly Employment Estimates by Craft

Employment	Construction Workforce Projection by Month																									Total FTE Over Project Duration[1]
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	Monthly Workers by Trade[2]																										
Supervision	21	23	25	27	28	29	31	32	34	35	36	35	34	34	34	32	31	29	28	24	21	17	14	14	14	14	58
Misc. Crew	9	12	15	17	19	19	19	22	24	26	29	29	29	26	24	21	19	19	19	16	15	12	9	9	9	9	40
Sitework Crew	36	36	36	40	44	44	44	44	44	40	36	32	29	29	29	29	29	0	0	0	0	0	0	0	0	0	52
Foundation Work	0	0	0	0	22	22	22	22	22	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Commissioning	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	21	25	22	19	17	15	15	15	15	15
Landscape Crew	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5	5	5	5	5	4
Sub & T-Line Crew	0	0	0	0	0	0	5	5	11	11	14	14	17	17	14	14	14	14	11	11	8	8	5	5	5	5	17
Electrical Crew	0	0	0	0	0	0	0	0	38	45	53	53	53	47	42	39	36	34	32	0	0	0	0	0	0	0	39
Mechanical Crew	0	0	0	0	0	0	19	19	19	19	19	19	19	19	19	0	0	0	0	0	0	0	0	0	0	0	14
Subtotal	*66*	*71*	*76*	*84*	*113*	*114*	*140*	*144*	*192*	*198*	*209*	*182*	*181*	*172*	*162*	*135*	*152*	*122*	*120*	*78*	*68*	*59*	*48*	*48*	*48*	*48*	*253*
Apprentices	*13*	*14*	*15*	*17*	*23*	*23*	*28*	*29*	*38*	*40*	*42*	*36*	*36*	*34*	*32*	*27*	*30*	*24*	*24*	*16*	*14*	*12*	*10*	*10*	*10*	*10*	*51*
Total Monthly Workers[2]	**79**	**85**	**91**	**101**	**136**	**137**	**168**	**173**	**230**	**238**	**251**	**218**	**217**	**206**	**194**	**162**	**182**	**146**	**144**	**94**	**82**	**71**	**58**	**58**	**58**	**58**	**3,521**
Total Workforce in Annual FTE	**7**	**7**	**8**	**8**	**11**	**11**	**14**	**14**	**19**	**20**	**21**	**18**	**18**	**17**	**16**	**14**	**15**	**12**	**12**	**8**	**7**	**6**	**5**	**5**	**5**	**5**	**303**

Source: Appendix 3.10A.
Notes: FTE = full-time equivalent
1. Total FTEs over the duration of the Project construction. Divides each of the number of workers each month by 12 and totals the number of workers each for Project duration.
2. Monthly workers represent FTE fractions.

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For operations, the permanent workforce is expected to be 20 FTEs (16 on-site FTE and 4 off-site FTE), as shown in Table 3.10-12. Annual permanent workers will draw from the labor force shown in Table 3.10-8.

Table 3.10-12. Annual Operations and Maintenance Employment

Category	Number of Workers
Annual Permanent Operations	20

Source: Appendix 3.10A.

3.10.2.3.1 Would the project induce substantial unplanned population growth in the area, either directly or indirectly?

Less-than-Significant Impact. Construction of the Project will introduce a temporary increase in workers to the Project area. However, the workers are not anticipated to relocate to the Project area because the workers will likely be residents of Los Angeles County or surrounding counties, and/or will be active on site for only a few months and will not permanently relocate. Peak construction of the Project will occur during months 9 and 11, with a total of 230 to 251 workers expected on site. These jobs are monthly estimates that represent fractions of FTE. During Project operations, the Project will employ 20 annual FTE workers. If non-local operational workers do relocate to the Project area, if will result in a negligible increase in population. Overall, the Project will have negligible to no impact on population growth, and therefore will not directly or indirectly induce substantial unplanned population growth. Impacts will be **less than significant**.

3.10.2.3.2 Would the project displace substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?

Less-than-Significant Impact. The construction phase of the Project is not expected to increase the demand for housing in the area because at least 90% of the labor force is expected to be sourced locally. Construction could induce a temporary increase in demand for housing, but there is sufficient temporary housing to accommodate all the expected construction workforce (see Table 3.10-4). The applicant expects to source construction labor within a 75-mile radius of the Project site, encompassing all of Los Angeles County. The Project will employ 20 FTE workers during the operational phase, who are estimated to be drawn from Los Angeles County. Any operational workers who relocate will result in a minimal impact on demand for housing. There will be a negligible impact on housing during construction and operations of the Project because the Project will not displace a substantial number of existing people or housing, or necessitate the construction of replacement housing elsewhere due to the availability of sufficient housing in the Project area to accommodate the expected construction and operation workforce. Impacts will be **less than significant**.

3.10.2.3.3 Would the project have substantial adverse impacts on the local economy and employment?

Construction Phase

No Impact. Project employment effects for construction and operation are shown in Table 3.10-13. Impacts were modeled using IMPLAN 2023 data from Los Angeles County (see Appendix 3.10A for modeling). Project construction will provide 303 direct jobs, 73 indirect jobs, and 167 induced jobs for a total of 543 jobs. Labor income averages for direct, indirect, and induced employment are approximately $142,500, $90,000, and $69,000, respectively.

Construction will provide a positive temporary impact on the County's economy. Therefore, there will be **no impact** from the Project.

Operation Phase

No Impact. Project operations will generate 20 direct jobs, 13 indirect jobs, and 16 induced jobs for a total of 49 jobs. Estimated average compensation per year for direct, indirect, and induced employment is $182,000, $72,000, and $69,000, respectively. Annual operation and maintenance will result in a positive impact on the County's economy. Therefore, there will be **no impact** from the Project.

Table 3.10-13. Project Employment and Labor Income

Phase and Type of Impact	Employment Number	Labor Income
Construction		
Direct[1]	303	$42,732,000
Indirect	73	$6,549,000
Induced	167	$11,544,000
Annual Operations		
Direct[2]	20	$3,630,000
Indirect	13	$954,489
Induced	16	$1,077,338

Source: Appendix 3.10A.
Notes:
1. Direct employment figures are based on estimated full-time equivalent workers provided by the applicant, and direct compensation is sourced from Southern California Contractors Association Inc. and from the Department of Industrial Relations Wage Determinations.
2. Direct operations employment and their corresponding compensation is provided by the applicant.

3.10.2.3.4 Would the project create adverse fiscal impacts on the community?

No Impact. The applicant is estimated to spend more than $1.73 billion on local purchases,[2] as detailed in Table 3.10-14. The majority of these local purchases will be a result of the applicant establishing a job-site sub-permit with the California Department of Tax and Fee Administration (CDTFA) for all materials and equipment purchases related to Project construction.[3] Consequently, the County will accrue the majority of sales and use tax revenues applicable to Project construction costs. The relevant sales tax rate for these purchases is 5.56%, with 2.06% allocated to the state (per CDTFA-105 REV. 35 [1-25]) and the remaining 3.5% allocated to the County. Construction costs for facilities built by SCE are included in this analysis.[4] However, construction purchases by SCE are not included in the job site address, and therefore are subject to the standard 6% sales tax. Only a portion of these capital costs ($468,896) are estimated to occur locally (in unincorporated Los Angeles County), which is represented in the total $1.73 billion in locally purchased materials. Capital costs not purchased locally—in unincorporated Los Angeles County—are estimated to occur in incorporated Los Angeles County ($19.1 million).

2 For this Project, "local" refers to unincorporated Los Angeles County.
3 The job site sub-permit allows a portion of capital purchases to be made locally, increasing the share of sales tax revenue captured in unincorporated Los Angeles County compared to a scenario without the permit. Capital purchases under the permit are assumed to be greater or equal to $5 million.
4 Construction costs generated by SCE will include the generation interconnect line, transmission towers, fiber-optic infrastructure, and associated equipment necessary to connect the Project to the grid.

Capital purchases in incorporated Los Angeles County jurisdictions will still generate sales tax revenue for the County.

During the construction phase, estimated sales tax from all combined capital purchases will total $97,879,532. Of that total, $36,559,902 will accrue to the state, $190,992 will accrue to incorporated County jurisdictions, and $61,128,638 will accrue to the County. Average annual sales tax from equipment purchases during the operations phase of the Project will total an estimated $1,190,177. Of that total, $751,691 will accrue to the state, $119,841 will accrue to incorporated jurisdictions in Los Angeles County, and $318,645 will accrue to the County. Not shown in this amount is the annual sales tax from personnel spending for operational employees. Although the operational labor force is expected to come from Los Angeles County, these employees may come from either existing positions or the unemployment pool. As such, the sales tax revenue from these workers may or may not represent a new net fiscal impact for the County, and are therefore excluded from the results.

During the 40-year operating period of the Project, the annual average property tax is estimated to generate $6,208,774 from the total 1% ad valorem property tax. Additional bond revenue could average $994,764 based on 2024 and 2025 Tax Rate Area allocations for the Project site. Construction and operational phases of the Project will generate positive tax revenues for the County.

Table 3.10-14. Los Angeles County Fiscal Impacts

Fiscal Impact	Estimated Tax Revenue
Estimate of Local Expenditures[1]	$1,732,890,230
Sales Tax from Construction to the State	$36,559,902
Sales Tax from Construction to Other Los Angeles County Jurisdictions	$190,992
Sales Tax from Construction to the County of Los Angeles	$61,128,638
Annual Average Sales Tax from Ongoing Operational Purchases to the State[2]	$751,691
Annual Average Sales Tax from Ongoing Operational Purchases to Other Los Angeles County Jurisdictions[2]	$119,841
Annual Average Sales Tax from Ongoing Operational Purchases to the County of Los Angeles[2]	$318,645
Average Annual Property Tax from Ongoing Operation[3]	$6,208,774
Average Annual Property Tax from Bonds to the County of Los Angeles from Ongoing Operation[4]	$994,764

Source: Appendix 3.10A.
Notes:
1 Local purchases are estimated to occur in unincorporated Los Angeles County.
2 Annual sales from equipment purchase tax during ongoing operation is an average of an estimated 25 years of operational activity.
3 Average annual property tax represents the average total 1% ad valorem property tax over the lifetime of the Project (40 years).
4 Bonds include revenue generated for a community college district, special water district, and local schools. This is representative of current property tax allocations. This represents the average annual property tax generated for these bonds over the lifetime of the Project (40 years).

Estimated capital costs for the Project will be $1,751,989,409. Costs related to the plant and supporting BESS infrastructure are expected to cost an estimated $81,342,256, and equipment related to the Project is expected to cost an estimated $1,670,647,153 (Table 3.10-15).

Table 3.10-15. Estimated Capital Costs of the Project

Item	Cost
Plant	$81,342,256
Equipment	$1,670,647,153
Total Estimated Capital Costs	**$1,751,989,409**

Total construction payroll is estimated at $42,732,000, covering all wages and benefits for workers involved in the construction phase. Construction payroll estimates are based off prevailing wages in Los Angeles County from the Department of Industrial Relations and the Southern California Master Labor Agreement in 2024 (Appendix 3.10A). The annual payroll for permanent operations employees is estimated at $3,630,000. Operational payroll estimates are sourced from the applicant. Therefore, there will be **no impact** from the Project.

3.10.2.3.5 Would the project result in substantial adverse impacts on educational facilities?

Less-than-Significant Impact. Construction of the proposed Project will introduce a temporary increase in workers to the area, but they are not anticipated to relocate to the area or bring their families because the workers will likely be sourced from Los Angeles County and/or be active on site temporarily and will not permanently relocate. As such, the Project will not result in an increase in population in the area that will necessitate additional school services. The operational phase of the Project will require only a small workforce that can be met by the local workforce. As such, operations will not cause a significant increase in demand for school services or significant adverse impact to school services.

The Project site is in the boundaries of the Acton–Agua Dulce Unified School District, which levies a school impact fee for new construction and commercial/industrial construction with covered and enclosed spaces. The fee was last updated by the Acton–Agua Dulce Unified School District in May 2020 from $0.61 to $0.66 per square foot (Appendix 3.10A). The covered and enclosed space for the Project consists of buildings that total 13,000 square feet. As such, the Project is expected to generate $8,580 in school impact fees. Therefore, impacts will be **less than significant.**

3.10.2.3.6 Would the project result in substantial adverse impacts associated with the provision of utility services?

Less-than-Significant Impact. Construction and operation of the proposed Project will not make significant demands on local water, sanitary sewer, electricity, or natural gas. Changes in electricity demand are generally predictable and have daily, weekly, and seasonal patterns. Because the intent of the Project is to store energy during off-peak hours, the applicant will plan installation and testing requirements accordingly. Construction water is anticipated to be purchased from a local water purveyor and trucked to the site. Given the number of workers and the temporary duration of the construction period, the impacts on the local water supply will not be significant. No connection to a municipal water system will be required for construction or operations. During construction, electricity will be provided by a nearby distribution line. During operations, the O&M buildings will be powered via a distribution line from the Project substation. Construction and operational electricity demand will be similar to existing uses along the distribution line. As such, construction and operations will not result in adverse impacts to local utilities, and impacts will be **less than significant**.

3.10.2.3.7 Would the project result in substantial adverse impacts associated with the provision of public services?

Less-than-Significant Impact. Construction and operation of the Project may have minor impacts on police, fire, and/or hazardous materials handling resources. For example, some public services may be required, such as fire protection, but these will be short-term requirements and will not require increases in the level of public service offered or affect these agencies' response times. Construction and operation of the Project will not place an undue burden on public service providers because public services are located near the Project site and distributed throughout Los Angeles County. As a result of the applicant's safety policies, construction and operation of the Project will not create significant adverse impacts on public services in the area, and impacts will be **less than significant**. Refer to Section 3.16, Wildfire, for details regarding fire services and response times.

3.10.2.4 Environmental Justice

In accordance with California Code of Regulations Title 20, Division 2, Section 1704, Appendix B, this section provides a discussion of impacts to environmental justice populations to determine whether disproportionately high and adverse human health or environmental effects of the Project are likely to fall on minority and/or low-income populations. President Clinton's Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was signed on February 11, 1994. The purpose of this Executive Order is to consider whether a project may result in disproportionately high and adverse human health or environmental effects on minority or low-income populations.

The federal guidelines set forth a three-step screening process (listed below), and impacts of the Project are applied to each of these steps.

1. Identify which impacts of the project, if any, are high and adverse.

The Project will not create any significant "high and adverse" impacts. As shown in the Socioeconomics Report (Appendix 3.10A), there will be no high and adverse impacts on human health or the environment.

2. Determine whether minority or low-income populations exist within the high and adverse impact zones.

Under U.S. Environmental Protection Agency guidelines, an affected area is considered a minority population if at least 50% of its residents belong to this group. Without other guidance, this analysis also uses a 50% threshold to identify low-income populations. The population within a 10-mile radius of the Project site is 173,334 (U.S. Census 2023). According to the U.S. Environmental Protection Agency Environmental Justice Screening and Mapping Tool (EJScreen), the minority population within this radius is 81% (Appendix 3.10A). The low-income population within the radius comprises approximately 36% of the total population. Therefore, minority populations are within a 10-mile radius of the Project site.

3. Examine the spatial distribution of high and adverse impact areas to determine whether these impacts are likely to fall disproportionately on the minority and/or low-income population.

As noted above, the Project will have no high or adverse impacts on human health or the environment. A spatial distribution is not required. Consequently, **no high or adverse human health or environmental impacts** related to the Project will disproportionately fall on minority and/or low-income members of the local community.

3.10.3 Cumulative Impacts

Cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of a proposed project (Public Resources Code Section 21083; Title 14, California Code of Regulations, Sections 15064[h], 15065[c], and 15355).

The analysis presented in the previous sections demonstrate that the Project by itself will have beneficial to insignificant effects on Los Angeles County and the study area over the construction and operations phases. Over the construction period, while employing a small worker population, the Project will contribute to the overall output of the regional economy and generate revenues for local and state governments. This is combined with insignificant impacts on utilities and other public infrastructure and services.

Cumulative impacts refer to the combined potential effects of all projects in a study area. Taken together, these projects could intensify demands on local agencies and community resources. Even if potential impacts from just one project are estimated to be insignificant for the overall study area, the presence of other construction projects in that project's vicinity might add pressure on communities closest to the project site, for example due to non-local labor requiring housing or excessive demands on public services. Although the extent of this cumulative impact is not known, this study estimates the availability of approximately 90,133 available units for temporary housing within Los Angeles County. Because most workers are anticipated to already live in Los Angeles County, sufficient housing will be available to house workers from multiple projects. Other kinds of cumulative socioeconomic impacts are also unlikely because the Project's effects on housing, schools, and public services will be negligible.

3.10.4 Mitigation Measures

Because there will be no significant adverse impacts caused by the Project, no socioeconomic-specific mitigation measures are proposed.

3.10.5 Laws, Ordinances, Regulations, and Standards

Table 3.10-16 presents a summary of the laws, ordinances, regulations, and standards and the Project's conformance to them.

Table 3.10-16. Laws, Ordinances, Regulations, and Standards

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	Executive Order 12898	Avoid disproportionately high and adverse impacts on minority and low-income members of the community. Applies only to federal agencies, but was used to inform an analysis of impacts to environmental justice communities for the Project.	**Yes**. No high or adverse human health or environmental impacts related to the Project will disproportionately fall on minority and/or low-income members of the local community.	Section 3.10.2.4 Section 3.10.5.1

Table 3.10-16. Laws, Ordinances, Regulations, and Standards

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
State	California Code of Regulations Title 14, Section 15131 (CEQA)	The California Environmental Quality Act (CEQA) identifies several environmental factors that are addressed or referenced in this analysis, including population and housing, utilities/service systems, and public services. Economic/social effects of a project are not treated as significant effects on the environment, but they may be used to determine the significance of physical changes caused by the Project.	**Yes**. This section evaluates the Project's effects to population, housing, utilities/service systems, public services, and socioeconomics. Impacts will be less than significant as described above.	Section 3.10.2.3 Section 3.10.5.2
State	Government Code Sections 65996–65997	Establishes that the levy of a fee for construction of an industrial facility be considered to mitigate impacts on school facilities. School districts may charge a one-time assessment fee to mitigate potential school impacts.	**Yes**. The Project will pay applicable school impact fees.	Section 3.10.2.3.5 Section 3.10.5.2
State	Education Code Section 17620	Allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities. Local school districts may charge a one-time assessment fee to mitigate potential school impacts.	**Yes**. The Project will pay applicable school impact fees.	Section 3.10.2.3.5 Section 3.10.5.2
Local	Los Angeles County General Plan, Economic Development Element (County of Los Angeles 2022)	Outlines the County of Los Angeles's economic development goals, and provides strategies that contribute to the economic well-being of the County of Los Angeles.	**Yes**. The Project will generate approximately $376 million in public revenue during the construction phase, with $154.9 million accruing to the County of Los Angeles (2025-dollar terms). In addition, Project construction is estimated to generate	Section 3.10.2.3.3 Section 3.10.2.3.4 Section 3.10.5.3

Table 3.10-16. Laws, Ordinances, Regulations, and Standards

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
			$60.8 million in employee compensation and approximately $145.1 million in total economic output in Los Angeles County. Annual Project operations will provide approximately $5.7 million in employee compensation and $14.5 million in economic output each year during its approximate 40-year lifetime.	
Local	Antelope Valley Area Plan, Economic Development Element (County of Los Angeles 2015)	Provides the blueprint for the planning area to build a healthy and sustainable economic base that will drive development and private-sector-led conservation, and preservation of open space in the area.	**Yes**. See above.	Section 3.10.2.3.3 Section 3.10.2.3.4 Section 3.10.5.3

Note: LORS = laws, ordinances, regulations, and standards

3.10.5.1 Federal

Executive Order 12898

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, requires federal agencies to consider whether a project may result in disproportionately high and adverse human health or environmental effects on any minority or low-income population by performing an environmental justice analysis. Since the signing of Executive Order 12898, the California Energy Commission has included this topic in its power plant siting decisions to ensure that applicants identify and address any potential adverse impacts to socioeconomic resources.

As described in Section 3.10.2.4, Environmental Justice, no high and adverse human health or environmental impacts related to the Project will disproportionately fall on minority and/or low-income members of the local community.

3.10.5.2 State

California Code of Regulations Title 14, Section 15131 (CEQA)

California Code of Regulations Title 14, Section 15131 states that the potential social or economic effects of a project are not treated as significant effects on the environment; however, they may be used to determine the significance of physical changes caused by a project. Additionally, the code states that social, economic, and housing factors be considered by public agencies, along with environmental and technology factors, to determine whether changes to a project are necessary to avoid or reduce potentially significant effects on the environment.

This relates to the Project's effects to population, housing, utilities/service systems, public services, and socioeconomics. Impacts will be less than significant, as described above.

California Government Code Sections 65996–65997

California Government Code Sections 65669 and 65997 provide the methods of considering and mitigating impacts on school facilities that might occur because of development of real property. Education Code Section 17620, listed in California Government Code Section 65997 as an approved mitigation method, allows school districts to levy a fee or other requirement against construction within the boundaries of the school district for the purpose of funding construction of school facilities.

The Project will pay applicable school impact fees.

3.10.5.3 Local

Los Angeles County General Plan

The Economic Development Element of the Los Angeles County General Plan (Chapter 14) outlines the County's economic development goals, and provides strategies that contribute to the economic well-being of Los Angeles County (County of Los Angeles 2022). The following policies are relevant to the Project:

Policy ED 1.1: Encourage a diverse mix of industries and services in each Planning Area.

Policy ED 1.2: Encourage and foster the development of the renewable energy economic sectors.

Policy ED 1.3: Encourage public–private partnerships to support the growth of target industries.

Policy ED 2.3: Ensure environmental justice in economic development activities.

Policy ED 2.4: Ensure high standards of development and encourage environmentally sustainable practices in economic development activities.

Policy ED 2.7: Incentivize economic development and growth along existing transportation corridors and in urbanized areas.

Policy ED 3.2: Support the use of public–private partnerships to develop, fund, and deliver critical infrastructure.

Policy ED 4.6: Retrofit and reuse vacant and underutilized industrial and commercial sites in urban and suburban areas for emerging and targeted industries.

Overall, the Project will generate approximately $376 million in public revenue during the construction phase, with $154.9 million accruing to the County (2025-dollar terms). In addition, Project construction is estimated to generate $60.8 million in employee compensation and approximately $145.1 million in total economic output in Los Angeles County. Annual Project operations will provide approximately $5.7 million in employee compensation and $14.5 million in economic output each year during its approximate 40-year lifetime (see above for this analysis).

Antelope Valley Area Plan

Chapter 6, Economic Development Element, of the Antelope Valley Area Plan provides the blueprint for the planning area to build a healthy and sustainable economic base that will drive development and private-sector-led conservation and preservation of open space in the area (County of Los Angeles 2015). The following policies are relevant to the Project:

Policy ED 1.11: Encourage the development of utility-scale renewable energy projects at appropriate locations and with appropriate standards to ensure that any negative impacts to local residents are sufficiently mitigated.

Policy ED 1.12: Adopt regulations that ensure that local residents receive a fair share of the benefits of utility-scale renewable energy projects that are commensurate to their impacts.

Overall, the Project will generate approximately $376 million in public revenue during the construction phase, with $154.9 million accruing to the County (2025-dollar terms). In addition, Project construction is estimated to generate $60.8 million in employee compensation and approximately $145.1 million in total economic output in Los Angeles County. Annual Project operations will provide approximately $5.7 million in employee compensation and $14.5 million in economic output each year during its approximate 40-year lifetime (see above for this analysis).

3.10.6 Agencies and Agency Contacts

Table 3.10-17 provides a list of agencies and contacts of potentially responsible agencies.

Table 3.10-17. Agency Contacts for Socioeconomics

Issue/Approval	Agency	Contact
Law Enforcement	Los Angeles County Sheriff	Sheriff Robert G. Luna 211 West Temple Street Los Angeles, California 90012 213.229.1700
Fire Protection	County of Los Angeles Fire Department	Fire Chief Anthony C. Marrone 1320 N. Eastern Avenue Los Angeles, California 90063 323.881.2411
Emergency Management	Los Angeles County Emergency Medical Services Agency	Director Christina R. Ghaly, M.D. 313 North Figueroa Street Los Angeles, California 90012 562.378.1500

Table 3.10-17. Agency Contacts for Socioeconomics

Issue/Approval	Agency	Contact
Economic Development	County of Los Angeles Department of Economic Opportunity	Director Kelly LoBianco 510 South Vermont Avenue Los Angeles, California 90020 844.777.2059

3.10.7 Permits and Permit Schedule

This evaluation did not identify any required permits related to socioeconomics.

3.10.8 References

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3.11 Soils

This section describes the potential effects the construction and operation that the Prairie Song Reliability Project (Project) may have on soil resources at and in the vicinity of the Project site. The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

The information presented is based on a site-specific geotechnical evaluation and readily available resources provided online. This evaluation of soils resources includes the following elements:

- Section 3.11.1 describes the existing environment that could be affected, including existing soil uses, wetlands, soil mapping, erosion, and other significant soil characteristics.
- Section 3.11.2 identifies potential environmental impacts that may result from Project construction, operation, maintenance, and decommissioning.
- Section 3.11.3 discusses potential cumulative effects.
- Section 3.11.4 identifies project design mitigation measures that will be implemented to avoid or minimize potentially significant impacts during Project construction, operation, and maintenance.
- Section 3.11.5 presents laws, ordinances, regulations, and standards applicable to soils resources.
- Section 3.11.6 identifies regulatory agency contacts.
- Section 3.11.7 describes permits required for the Project related to soils resources.
- Section 3.11.8 provides references used to develop this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical reports, included as appendices to this application:

- Appendix 2A – Site Plan Package
- Appendix 3.4A – Geotechnical Engineering Report
- Appendix 3.5A – Phase I Environmental Site Assessments:
  - Phase I Environmental Site Assessment, dated October 2024 (for Southern Gen-Tie Route parcels)
  - Phase I Environmental Site Assessment, dated November 2024 (for remainder of Project site [BESS Facility and Northern Gen-Tie Route parcels])

The Project's Geotechnical Engineering Report (Appendix 3.4A) provides information and geotechnical engineering recommendations relative to the following:

- Subsurface soil conditions
- Groundwater conditions
- Seismic site classification per the California Building Code (CBC)
- Site preparation and earthwork
- Foundation design and construction

- Access roadway design and construction
- Infiltration design rates

The Geotechnical Engineering Report was supported by test borings, electrical resistivity testing, laboratory testing, and engineering analysis. Specifically, geotechnical analysis included:

- Fifteen (15) soil test borings to approximately 21 to 51.5 feet below ground surface (bgs) in the proposed BESS areas
- Two (2) soil test borings to approximately 51.5 feet bgs in the proposed substation area
- Two (2) soil test borings to approximately 21.5 feet bgs in the proposed O&M building area
- Seven (7) soil test borings to approximately 51.5 feet bgs along the transmission line
- Four (4) percolation tests at approximately 3 and 5 feet bgs in the proposed basin area
- Corrosion testing on soil samples obtained from seven (7) locations
- Field electrical resistivity tests at seven (7) locations
- Lab thermal resistivity testing on soil samples obtained from four (4) locations

A summary of the soils evaluation is provided in the table below.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
1) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
2) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
3) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use?	☐	☐	☒	☐
4) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☒	☐

3.11.1 Affected Environment

This subsection describes on-site soils with respect to U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil map units, potential for soil loss and erosion, and other significant soil characteristics.

3.11.1.1 NRCS Soil Map Units

A description of the surficial soils within the proposed Project site was developed using the USDA NRCS Web Soil Survey (USDA 2025). As illustrated in Figure 3.11-1, Soils, the Project site is underlain primarily by the following: Hanford coarse sandy loam (HbC), 2% to 9% slopes; Vista coarse sandy loam (VsF), 15% to 30% slopes, eroded; Terrace escarpments (TsF); Greenfield sandy loam (GsC), 2% to 9% slopes; and Hanford sandy loam (HcC), 2% to 9% slopes. Several soil map units are present in lesser amounts, including Amargosa rocky coarse sandy loam (AmF2), 9% to 55% slopes, eroded; Hanford coarse sandy loam, 0% to 2% (HbA) and 9% to 15% slopes (HbD); Las Posas-Toomes rocky loams (LdF), 30% to 50% slopes; Vista coarse sandy loam (VsE2), 15% to 30% slopes, eroded; and Wyman gravelly loam (WgC), 2% to 9% slopes.

The Hanford series, which are found on stream bottoms, floodplains, and alluvial fans, are well-drained soils with negligible to low runoff and moderately rapid permeability. These soils formed in moderately coarse textured alluvium dominantly from granite and other quartz bearing rocks of similar texture and are used for growing a wide variety of fruits, vegetables, and general farm crops (USDA 1999). The Hanford series has a land capability rating of 4, which is classified as “having very severe limitations that reduce the choice of plants or that require very careful management” (USDA 2025).

The Vista series are well-drained soils that formed in material weathered from decomposed granitic rocks. Vista soils are found on hills and mountainous uplands. Under irrigation, fruits such as avocados and citrus are grown in these soils in areas of favorable temperature. These soils have slow to rapid runoff and are moderately permeable (USDA 2012). The Vista series has a land capability rating of 6 and 7, which is classified as having very severe limitations that make them generally unsuitable for cultivation and restrict their use mainly to pasture, grazing, forestland, or wildlife habitat (USDA 2025).

The Greenfield series, which are found on alluvial fans and terraces, are well-drained soils with slow to medium runoff and moderately rapid permeability. These soils formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources and are used for a wide range of irrigated field, forage, and fruit crops, and also for growing dryland grain and pasture (USDA 2019). The Greenfield series has a land capability rating of 4.

Terrace escarpments refers to a type of land that consists of short, moderately steep to steep faces or breaks that separate the terraces from the lower-lying alluvial fans. The surface layer is generally coarse sandy loam. Slopes generally are about 35%, but they range from 15% to 45%. Vegetation typically consists of annual grasses and forbs. Runoff is medium to rapid, and the hazard of erosion is moderate to high. Included with this land type are small areas where rill and gully erosion are severe. Terrace escarpments have a land capability rating of 7 (USDA 2025).

All four of these soil units, according to soil survey data from the Natural Resources Conservation Service, have a low potential for linear extensibility, which is an approximation of the potential for exhibiting expansive properties (i.e., volumetric changes that occur with changes in moisture content) (USDA 2025).

3.11.1.2 Potential for Soil Loss and Erosion

Soil loss and erosion potential are greatly affected by the presence of vegetation, slope grades, soil composition and gradation, and weather patterns. Regions with sparse to no vegetation exhibit erosion more readily than areas with grasses, shrubbery, and other plants as they help in slowing the overland flow and holding the soil together. Areas with steeper slopes typically experience higher rates of erosion and soil loss than level slopes due to the

higher flow velocity at which the stormwater runoff will travel. Erosion presents hazards to structures because it removes soils, which can undermine foundational elements, and transports and deposits the eroded material at other locations, which could cover roads, fill in reservoirs, and cause other impairments to infrastructure.

The soil erodibility factor, or K-value, of the Universal Soil Loss Equation and Revised Universal Soil Loss Equation, was used to assess the Project site's vulnerability to erosion by surface water run-off (sheet and rill erosion). The K-value is a measure of the susceptibility of soil particles to detach and transport by rainfall and runoff. K-values range from 0.02 to 0.69, and other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by surface water flows (USDA 2025). Soil erodibility and the associated K-factor ranges are presented in Table 3.11-1 below.

Table 3.11-1. Soil Erodibility and K-Factor Ranges

K-Factor	
0.02 – 0.2	Low
0.25 – 0.4	Moderate
0.45 – 0.69	High

Source: USDA NRCS 2025.

As discussed in Section 3.11.1.1, the Project site is composed of several soil map units, all of which have a K-factor within the low or moderate range. The K-factor for the soils within the Project site range from 0.2 – 0.32, indicating that the on-site soils have a low to moderate erosion potential.

3.11.1.3 Expansive Soils

Expansive soils have the potential to shrink and swell with variations in saturation, which could cause ground instability in the form of differential settlement, which can damage building and structural foundations. Expansive soils are typically clay-rich or clay-dominant soils. Section 1803.5.3 of the California Building Code describes the standards for classifying expansive soils. Soils meeting all four of the following provisions shall be considered to be expansive: If the test prescribed in Item 4 is conducted, tests to show compliance with Items 1, 2, and 3 shall not be required.

1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D4318.
2. More than 10% of the soil particles pass a No.200 sieve (75 micrometers [µm]), determined in accordance with ASTM D422.
3. More than 10% of the soil particles are less than 5 µm in size, determined in accordance with ASTM D422.
4. Expansion index greater than 20, determined in accordance with ASTM D4829.

According to the Geotechnical Engineering Report (Appendix 3.4A) prepared for the proposed Project site, the majority of the site is underlain by medium dense to very dense soils near the surface that are not considered expansive. The proposed O&M area is approximately 5,000 square feet in area, and potentially compressible soils were found to be present in the vicinity. Replacement with engineered fill would be included in site preparation work as part of implementing the geotechnical recommendations in Appendix 3.4A.

3.11.1.4 Liquefaction Risk

Please see the liquefaction discussion included in Section 3.4, Geological Hazards and Resources.

3.11.1.5 Potential for Shallow Groundwater

The borings were completed using a hollow-stem-auger technique that allowed short-term groundwater observations to be made while drilling. Groundwater seepage was not encountered during drilling or for the short duration the boring remained open. These observations represent groundwater conditions at the time of field exploration and may not be indicative of other times, or at other locations.

Groundwater level fluctuations may occur due to seasonal variations in the amount of rainfall, runoff, and other factors not evident at the time the borings are performed. Therefore, as expected, groundwater levels during construction or at other times in the life of the structure may be higher or lower than expected.

According to data collected from the Water Data Library for the State of California from a nearby well, located approximately 0.5 miles north of the site in State Well Number 05N12W28F001S, historic groundwater levels around November 30, 1965, were recorded at greater than 100 feet bgs. Recent publicly available data (within the last 20 years) is not available within a 1-mile radius from the site boundary. As such, groundwater is not anticipated to occur within the depth of excavations or foundation installations at the site.

3.11.1.6 Potential for Shallow Bedrock

Soil borings conducted as part of the Geotechnical Engineering Report were drilled across the Project site in the BESS areas, O&M Building area, and gen-tie areas. The borings were advanced to a maximum depth of 51.5 feet bgs, as shown in Appendix 3.4A. None of these soil borings encountered bedrock.

3.11.1.7 Soil Contamination

A Phase I Environmental Site Assessment (Phase I) was prepared for the proposed Project site (Appendix 3.5A). According to the findings of the Phase I, there was no evidence of recognized environmental conditions (RECs), historical RECs (HRECs), controlled RECs (CRECs), vapor encroachment conditions (VECs), or significant data gaps in connection with the proposed Project site (Appendix 3.5A). While it was noted that the Project site is bisected by a railroad line, which can have associated contaminants with this type of land use (e.g., wood preservatives (arsenic and creosote), heavy metals, and herbicide residues, there is a low likelihood of there being concentrations of these contaminants in concentrations that could have potential adverse effects (Appendix 3.5A).

3.11.2 Impact Analysis

The following sections describe the potential environmental effects on soils near the Project site during the construction and operation of the proposed Project.

3.11.2.1 Methodology

The information presented is based on a site-specific geotechnical evaluation, engineering plans, Phase I Environmental Site Assessments, and readily available resources provided online. Potential direct and indirect

Project impacts related to soils were evaluated against the California Environmental Quality Act (CEQA) significance criteria and are discussed below. The impact analysis evaluates potential Project impacts during Project construction, operation, and decommissioning.

3.11.2.2 Impact Evaluation Criteria

CEQA Guidelines Appendix G is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to make a determination as to whether a project requires an environmental impact report, a Mitigated Negative Declaration, or a Negative Declaration. As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances."

The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Guidelines Appendix G are instructive. With respect to Geology and Soils, Appendix G asks, in part, would the project:

- Result in substantial soil erosion or the loss of topsoil?
- Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code, creating substantial direct or indirect risks to life or property?
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use?
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

3.11.2.3 CEQA Appendix G Assessment Criteria

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

Less-than-Significant Impact. Project construction would include grading and earthwork activities that could expose soils to the effects of wind and water erosion if not managed appropriately. However, the contractor would be required to comply with Los Angeles County grading permit requirements, as well as preparation and implementation of a stormwater pollution prevention plan (SWPPP), in accordance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity and Land Disturbance Activities. The site-specific SWPPP would be prepared prior to earthwork activities and would be implemented during project construction. The SWPPP would include best management practices and erosion control measures to prevent pollution in stormwater discharge, which are also effective in minimizing soil erosion and loss of topsoil.

The California Energy Commission (CEC) would also require the Project applicant to implement a drainage, erosion, and sediment control plan (DESCP) to reduce the potential impact of run-off during construction, operation, maintenance, and decommissioning. Erosion prevention and sediment control facilities would be incorporated into the final grading plan, which would control and contain erosion-induced silt deposits and provide for the safe discharge of silt-free stormwater off site after rough grading has been completed. All erosion control measures would be maintained until disturbed areas are stabilized. Grading would be completed in conformance with the

Los Angeles County Grading Ordinance and recommendations in the Geotechnical Engineering Report (Appendix 3.4A). Site monitoring would involve inspections to ensure that the best management practices required by the Project-specific SWPPP and DESCP are properly maintained to reduce the risk of runoff to an adequate level. Implementation of the Project-specific SWPPP and DESCP would ensure that downstream water bodies are not affected by sediment transport.

Typical best management practices that may be employed during construction include erosion/sediment control measures such as silt fences, fiber rolls, gravel bags, soil stockpile stabilization measures, and dust controls, consistent with the Construction General Permit. The SWPPP would be subject to review and comment by the County and review and approval by the CEC. Through compliance with these existing regulations, the Project would not result in any significant impacts related to soil erosion during the construction phase. Additionally, during operations, the areas that were temporarily disturbed would be revegetated, and drainage control features would be implemented to ensure that there is no contact with bare soil surfaces (see further discussion of drainage control requirements in Section 3.15, Water Resources). Therefore, construction and operations project impacts related to soil erosion or the loss of topsoil are considered **less than significant**.

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

Less-than-Significant Impact. As discussed in Section 3.4, Geological Hazards and Resources, the Project site is underlain primarily by medium dense to very dense sandy soils (Appendix 3.4A). According to soil data from the Natural Resources Conservation Service, the Project site soils are mapped with soil units that are classified as having a low potential for experiencing volumetric changes due to changes in moisture content (USDA 2025). Provided that the recommendations of the report are incorporated into the proposed construction site preparations and site design, which is consistent with building code requirements, the geotechnical investigation that was prepared for the Project site determined that the proposed construction would not be subjected to any hazard from local conditions. These recommendations include replacing surface soils in some areas (e.g., the proposed O&M area) with engineered fills to ensure that the proposed improvements do not result in damage or injury as a result of any geotechnical hazards present, including expansive soils. Any use of imported engineered fill materials would be required to adhere to existing building code requirements, which include specifications for ensuring engineered fills meet minimum low expansion specifications (ASTM D4829). With the implementation of Project-specific geotechnical recommendations pertaining to site preparations and geotechnical characteristics of site soils and fill materials, as well as compliance with Los Angeles County Building Code requirements, the proposed Project would not result in substantial direct or indirect risks to life or property from expansive soils. Impacts would be **less than significant.**

3.11.2.3.3 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?

Less than Significant Impact. The Project site is not currently used for agricultural purposes (i.e., row and/or field crops), and historical resources do not indicate that the Project site was used for agricultural purposes (Appendix 3.4A). The impacts of farmland conversion are considered **less than significant**. Refer to Section 3.6, Land Use, for further information and detailed analysis of this topic.

3.11.2.3.4 Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Less-than-Significant Impact. The Project would include construction and use of septic wastewater system for the sanitary facilities at the O&M area. The State Onsite Wastewater Treatment System (OWTS) Policy, required by Assembly Bill 885, sets standards for wastewater treatment and monitoring requirements. It also authorizes the state, through the Regional Water Boards, to authorize local governments to approve OWTS for domestic wastewater through a Local Area Management Program. The Los Angeles County Code defines the guidelines and regulations for efficient systems to appropriately dispose of waste through OWTS that include ensuring adequate infiltration rates for proposed systems. According to the characterization of underlying materials at the Project site, the site is underlain by loose to very dense silty sands with varying amounts of silt, clay, and gravel to depths of over 50 feet (Appendix 3.4A). In addition, the Preliminary Stormwater Management Report that was prepared for the Project site has determined that onsite stormwater infiltration features are feasible at the site (Appendix 3.15A). Therefore, considering the presence of silty sandy materials to at least 50 feet bgs, the feasibility of on-site stormwater infiltration, and existing regulatory oversight that would ensure that site soils are capable of accommodating wastewater disposal, the potential impact would be **less than significant**.

3.11.3 Cumulative Effects

A cumulative impact refers to a proposed project's incremental effects together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effects of the proposed project (California Public Resources Code 21083; Title 14, California Code of Regulations, 15064(h)], 15065, 15130, and 15355).

Risks related to soils are typically localized in nature because they tend to be related to on-site conditions or conditions caused by a project's construction. Projects that would have the potential to be considered in a cumulative context with the proposed Project's incremental contribution, and that are included in the analysis of cumulative impacts relative to soils resources, are identified in Chapter 3, Environmental Analysis, Table 3-1, Cumulative Projects. Cumulative projects were chosen based on proximity to the proposed Project. These projects include residential, commercial, and industrial development. The majority of the cumulative projects would involve both construction and operational activities. Nearby cumulative projects are appropriate in the context of soils resources cumulative impacts because generally there needs to be a direct nexus and similar soil conditions for a synergistic impact to occur, such as site modifications at nearby projects combining to destabilize soils. Currently, there is not a known existing significant cumulative impact related to soils within this geographic scope.

Although construction and decommissioning activities have the potential to result in erosion on the Project site, adherence to the construction SWPPP, DESCP, recommendations in the Geotechnical Engineering Report (Appendix 3.4A), and Los Angeles County grading and building requirements would mitigate erosion impacts to less-than-significant levels. Other cumulative scenario projects would be required to adhere to similar requirements, thereby minimizing cumulative scenario erosion impacts. Specifically, all planned projects in the vicinity of the proposed Project would be subject to environmental review and would be required to conform to the Los Angeles County grading ordinance. With implementation of avoidance and mitigation measures and other grading and building requirements, the proposed Project would not contribute to cumulative impacts for soils. Impacts of the proposed Project would be cumulatively considerable if the Project, in combination with related projects, would result in significant cumulative impacts. However, the effects of the cumulative projects are not of a nature to cause

cumulatively significant effects from soil resources impacts, because such impacts are site-specific and would only have the potential to combine with impacts of the proposed Project if they occurred in the same location. As a result, cumulative impacts related to soils resources would be **less than significant**.

3.11.4 Mitigation Measures

Because the Project design will avoid or minimize potentially significant effects and will therefore not cause any significant adverse impacts to soils resources, no mitigation measures beyond the Project's design are necessary.

3.11.5 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to soils resources are discussed and summarized in Table 3.11-2.

Table 3.11-2. LORS Applicable to Soils Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	Clean Water Act (CWA)/ Water Pollution Control Act. 1972, amended by Water Quality Act of 1987 P.L. 100-4	Regulates stormwater and non-stormwater discharges from construction and industrial activities	**Yes.** Project grading and construction will be completed in compliance with the NPDES Construction General Permit, which will fulfill CWA requirements with respect to erosion and water quality.	Section 3.11.2.3.1 Section 3.11.5.2
Federal	USDA NRCS National Engineering Handbook, Sections 2 and 3	Provides standards for soil conservation during planning, design, and construction activities	**Yes.** Project grading will include earthwork activities that provide relatively level surfaces for proposed construction of structures and removing any soils unsuitable for construction and may be reused onsite for landscaping. All grading will be done consistent with building code requirements.	Section 3.11.2.3.1 Section 3.11.2.3.2 Section 3.11.5.1
State	Section 1803.5.3 of the California Building Code	Regulations for soils and foundations, including standards for defining expansive soils	**Yes.** Adherence to existing regulatory requirements, which requires testing and structural design with respect to potentially expansive soils, will fulfill the requirements of the California Building Code.	Section 3.11.2.3.2 Section 3.11.5.2
Local	California Building Standards Code (CCR Title 24, Part	Sets the requirements for general building design and construction	**Yes.** All proposed improvements will be required to adhere to the requirements of the California Building Code with local amendments by Los Angeles County, as applicable.	Section 3.11.2.3.2 Section 3.11.5.2

Table 3.11-2. LORS Applicable to Soils Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
	2, Chapters 18 and 18A) (2022)			
Local	Los Angeles County Code of Ordinances, Appendix J – Grading	Standards for grading and water quality, including permit requirements	**Yes.** Project grading and construction will comply with Los Angeles County erosion and sediment control ordinances with respect to erosion control during grading and construction through compliance with the Building and Grading Permit requirements.	Section 3.11.2.3.1 Section 3.11.5.3
Local	Los Angeles County Code of Ordinances, Chapter 12.80 Stormwater and Runoff Pollution Control	Sets requirements for stormwater and runoff pollution control during construction activities	**Yes.** Project grading and construction will be completed in compliance with the NPDES Construction General Permit, and Los Angeles County erosion and sediment control requirements to protect stormwater water quality.	Section 3.11.2.3.1 Section 3.11.5.3
Local	Los Angeles County Code of Ordinances, Chapter 12.84 Low Impact Development Standards	Standards for erosion and stormwater control	**Yes.** Project grading and construction will comply with NPDES Construction General Permit and operationally stormwater drainage control features will comply with Los Angeles County Low Impact Development (LID) ordinances with a LID plan.	Section 3.11.2.3.1 Section 3.11.5.3

3.11.5.1 Federal LORS

NRCS (1983), National Engineering Handbook Sections 2 and 3

Sections 2 and 3 of the USDA NRCS National Engineering Handbook provide standards for soil conservation during planning, design, and construction activities. Section 2 describes soil properties, including derivation of sediments, particle characteristics, size distribution of sediments, bulk properties, and texture. Section 3 describes problems affecting the evaluation of erosion and sediment-storage damages, formulation of programs for reducing these damages, and sediment-storage design criteria for structural works of improvement for the beneficial use, control, and conservation of soil and water resources.

Project grading will include earthwork activities that provide relatively level surfaces for proposed construction of structures, and any soils removed as unsuitable for construction and may be reused on site for landscaping. All grading will be done consistent with building code requirements.

3.11.5.2 State LORS

California Environmental Quality Act

CEQA requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce environmental impacts to the extent feasible. CEQA Guidelines Appendix G includes criteria for evaluating potential impacts related to soils.

Stormwater Construction General Permit

The five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters. Effective September 1, 2023, Construction Stormwater General Permit Order 2022-0057-DWQ, also known as the Construction General Permit, supersedes SWRCB Order No. 2009-009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ. The order requires that, prior to beginning any construction activity, the permit applicant obtain coverage under the Construction General Permit by preparing and submitting to the SWRCB a Permit Registration Document that includes a Notice of Intent, SWPPP, and other compliance related documents required by the Construction General Permit. Regulating many stormwater discharges under one general permit greatly reduces the administrative burden associated with permitting individual stormwater discharges. Construction activities subject to the NPDES Construction General Permit include clearing, grading, and disturbances to the ground (e.g., stockpiling or excavating), which result in soil disturbances of at least 1 or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface.

Project grading and construction will be completed in compliance with the NPDES Construction General Permit, which will fulfill Clean Water Act requirements with respect to erosion and water quality.

Table 18-1-B of the Uniform Building Code (International Code Council, 1994)

Chapter 18 of the International Building Code and Table 18-1-B of the Uniform Building Code describe the allowable soil-bearing capacity of different types of soils, including expansive soils. However, the Uniform Building Code has been superseded by the CBC, which establishes minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code published by the International Code Conference. The CBC contains California amendments based on the American Society of Civil Engineers Minimum Design Standards 7-05. Expansive soils are addressed in CBC Chapter 18, Soils and Foundations.

Project adherence to existing regulatory requirements, which requires testing and structural design with respect to potentially expansive soils, will fulfill CBC requirements.

California Building Standards Code

The California Building Standards Code (CCR Title 24, Part 2, Chapters 18 and 18A) sets the requirements for general building design and construction. State regulations protecting structures from geo-seismic hazards are

contained in the California Code of Regulations, Title 24, Part 2 (the CBC). The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within its jurisdiction. CBC provisions apply to the construction, alteration, movement, replacement, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California.

Project adherence to existing regulatory requirements will fulfill CBC requirements.

3.11.5.3 Local LORS

Los Angeles County Code of Ordinances

The Los Angeles County Code of Ordinances, Chapter 12.80 – Stormwater and Runoff Pollution Control, sets requirements for stormwater and runoff pollution control during construction activities. Chapter 12.84 – Low Impact Development Standards, and Appendix J – Grading, establishes standards for grading, excavation, and earthwork construction, water quality, and the control of runoff from graded sites, including erosion sediments and construction-related pollutants, and plan and permit requirements for development projects within unincorporated Los Angeles County.

Project grading and construction will comply with Los Angeles County erosion and sediment control ordinances with respect to erosion control during grading and construction through compliance with the Building and Grading Permit requirements. Project grading and construction will also comply with NPDES Construction General Permit, and operational stormwater drainage control features will comply with Los Angeles County Low Impact Development (LID) ordinances with a LID plan.

3.11.6 Agencies and Agency Contacts

Applicable permits and agency contacts for soils resources are shown in Table 3.11-3. Building and grading permits from Los Angeles County Public Works would be superseded by CEC approval of the Project under the Opt-In Program.

Table 3.11-3. Permits and Agency Contacts for Soils Resources

Permit or Approval	Agency Contact	Applicability
Los Angeles County Public Works Agency*	Los Angeles County Public Works Agency 900 S. Fremont Avenue Alhambra, California 91803	Building and Grading Permits

Note:

* Building and grading permits from Los Angeles County Public Works would be superseded by CEC approval of the Project under the opt-in program.

3.11.7 Permits and Permit Schedule

The NPDES permit is evaluated in Section 3.15, Water Resources.

3.11.8 References

USDA (U.S. Department of Agriculture). 1999. "Hanford Series." Official Soil Series Descriptions and Series Classifications. Accessed January 31, 2025. https://soilseries.sc.egov.usda.gov/.

USDA. 2012. "Vista Series." Official Soil Series Descriptions and Series Classifications. Accessed January 31, 2025. https://soilseries.sc.egov.usda.gov/.

USDA. 2019. "Greenfield Series." Official Soil Series Descriptions and Series Classifications. Accessed January 31, 2025. https://soilseries.sc.egov.usda.gov/.

USDA. 2025. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed January 31, 2025. https://websoilsurvey.nrcs.usda.gov/app/.

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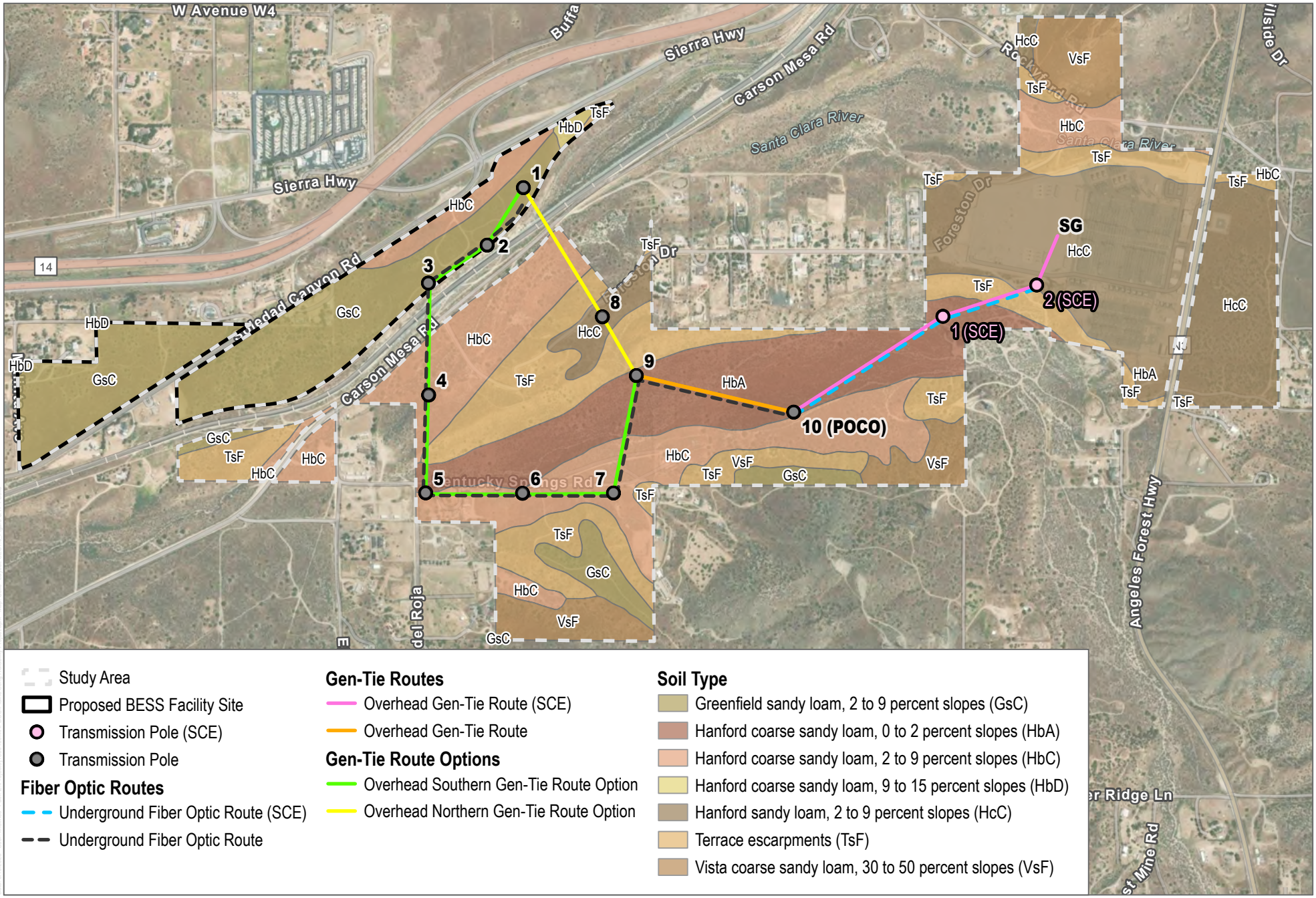

SOURCE: World Imagery; USDA

DUDEK

0 500 1,000 Feet

FIGURE 3.11-1

Soils

Prairie Song Reliability Project

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3.12 Traffic and Transportation

This section discusses the potential effect on traffic and transportation from the Prairie Song Reliability Project (Project), The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This evaluation of traffic and transportation includes the following elements:

- Section 3.12.1 describes nearby transportation facilities that might be affected by the Project, including roads, public transportation, rail, air, bicycle, and pedestrian facilities.
- Section 3.12.2 presents the impact analysis.
- Section 3.12.3 presents the cumulative impacts of the Project with respect to traffic and transportation;
- Section 3.12.4 presents the mitigation measures.
- Section 3.12.5 describes the laws, ordinances, regulations, and standards (LORS) applicable to traffic and transportation for the Project.
- Section 3.12.6 presents the agencies that have jurisdiction over traffic and transportation and specifies the relevant agency contacts.
- Section 3.12.7 describes the permits required for traffic and transportation and a schedule for obtaining the permits.
- Section 3.12.8 provides the references used to prepare this subsection.

A summary of the traffic and transportation evaluation is provided in the table below.

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
1	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
2	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☒	☐	☐
3	Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
4	Result in inadequate emergency access?	☐	☒	☐	☐
5	Result in potential impacts to an airport if the proposed project including any linear facility is to be located within four miles of an airport, a	☐	☐	☒	☐

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
	planned or proposed airport runway, or an airport runway under construction?				
6	Exceed current and projected roadway and intersection level of service before project development, during construction, and during project operation?	☐	☐	☒	☐
7	Result in significantly increased hazards associated with Project related hazardous materials to be transported to or from the Project site?	☐	☐	☒	☐

3.12.1 Affected Environment

The Project will be located in unincorporated Los Angeles County (County), California, south of State Route (SR) 14 approximately 3 miles northeast of the unincorporated community of Acton. Development of the BESS facility will occur on an area of land situated between two (2) existing transportation corridors, the Antelope Valley Freeway (State Route 14) to the north and Southern Pacific Railroad lines and Carson Mesa Road to the south, that are approximately 1,200 feet apart. The Northern Gen-Tie Route will extend approximately 1.1 mile southeast from the Project substation, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceed east and northeast to the Point of Interconnection (POI) at the Vincent Substation. The Southern Gen-Tie Route will run approximately 1.8 miles extending south and east from the Project substation, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceeding northeast to the POI at the Vincent Substation.

Access to the Project site will be provided via five (5) driveways from Soledad Canyon Road. However, two (2) driveways will be used predominantly during construction and operation: driveway to the construction laydown area near the sub-station yard and driveway to the O&M yard near BESS array. The gen-tie corridor and its construction laydown area will be accessed from Carson Mesa Road via Aliso Canyon Road.

Figure 3.12-1, Major Transportation Facilities within 5-mile Radius of the Project, and Figure 3.12-2, Major Transportation Facilities within 1-mile Radius of the Project illustrate the transportation facilities in the vicinity of the Project.

3.12.1.1 Roadways

Characteristics of the existing street system in the study are described below.

State Route (SR) 14 is the major route that is used for passenger and goods movement in the region. It is generally a north–south state highway that connects Los Angeles to the northern Mojave Desert. The southern portion of the highway is known as the Antelope Valley Freeway and is aligned in east-west direction near the project. It provides regional access to the Project site via the interchanges of Sierra Highway from the east and Soledad Canyon Road-Sierra Highway from the west. Between these roadways, SR-14 is constructed with seven (7) lanes: four (4) in the eastbound/northbound direction and three (3) in the westbound/southbound direction. The average daily traffic

along this segment of SR-14 near Sierra Highway, per California Department of Transportation (Caltrans) 2022 traffic census, is approximately 105,000 vehicles.

Sierra Highway is classified as a Major Highway in the Los Angeles County General Plan. West of Soledad Canyon Road in the vicinity of the Project, this roadway is a two-lane roadway with yellow centerlines. East of Soledad Canyon Road, this roadway is a four-lane roadway with yellow centerlines for approximately 3,800 feet and then transitions to a three-lane and two-lane roadway. The posted speed limit is 45 mph west of Soledad Canyon Road and 55 mph east of Soledad Canyon Road.

Soledad Canyon Road. is classified as a Major Highway in the Los Angeles County General. Along Project frontage, Soledad Canyon Road is a two-lane roadway with yellow striped median that divides the roadway. East of Soledad Canyon Road, it is a four-lane roadway with yellow striped median. The posted speed limit is 45 mph west of Soledad Canyon Road and 55 mph east of Soledad Canyon Road.

Aliso Canyon Road is classified as a Secondary Highway in the Los Angeles County General Plan. It is a two-lane roadway with yellow centerlines. The posted speed limit is 45 mph, south of its intersection with Soledad Canyon Road. The roadway has a wide shoulder on both sides and there are driveways that provide access to homes along this roadway.

Carson Mesa Road is a two-lane roadway with yellow centerlines. It is an unclassified roadway in the Los Angeles County General Plan. The posted speed limit is 40 mph along some parts of the roadway, east of its intersection with Aliso Canyon Road.

3.12.1.2 Pedestrian and Bicycle Facilities

There are no paved sidewalks or marked bicycle facilities along the roadways near the site along Soledad Canyon Road.

3.12.1.3 Public Transportation

Los Angeles County is served by a large public transit system that includes rail systems and various bus service options, such as transitways and bus rapid transit systems. Metro operates the Metro rail system within Los Angeles County and has six (6) lines, including two (2) subway (heavy rail rapid transit) lines (the B and D lines) and four (4) light rail lines (the A, C, L, and E lines) and 93 stations. Metro rails system connects with the Metro Busway bus rapid transit system (the G and J lines) and also with the Metrolink commuter rail system. The hub of the system is in Downtown Los Angeles at Union Station. Two (2) additional rail service operators that provide services in Los Angeles County are Amtrak and Metrolink.

Amtrak provides interstate service from points around the country to Union Station, as well as regional service between major cities throughout California. The Southern California Regional Rail Authority (SCRRA) operates the 416-mile Metrolink commuter rail system, which has its hub in Downtown Los Angeles at Union Station and extends to Ventura, San Bernardino, Riverside, Orange, and San Diego counties, and serves some of the unincorporated areas. There is one (1) Metrolink station located in the unincorporated community of Acton, on the Antelope Valley Line. The Vincent Grade/Acton Metrolink Station is located approximately 1.5 miles north of the project along Sierra Highway.

Buses provide the majority of public transit service in Los Angeles County. Examples of these operators include Torrance Transit, Foothill Transit, Santa Clarita Transit, and the Antelope Valley Transit Authority. The Metro bus system is the largest in Los Angeles County. The Los Angeles County Department of Public Works (DPW) operates fixed route shuttle services in some of the unincorporated areas. Acton/Agua Dulce Shuttle service operates in the Acton community Acton/Agua Dulce Shuttle service in Acton and Agua Dulce that connects to Santa Clara Transit Station and Newhall Metrolink Station. The nearest bus stop for the Acton/Agua Dulce shuttle is approximately 3.8 miles west of the project, north of the intersection of Crown Valley Road and Sierra Highway. This shuttle service connects the community to the Santa Clarita Metrolink Station and operates between 8:00 a.m. to 5 p.m. on Monday, Wednesday and Saturday. The Antelope Valley Transit Authority operates bus service in the City of Palmdale. The bus stop for Antelope Valley Transit Authority Route 3 East/West Palmdale via Avenue S is located approximately 7 miles from the project site in the City of Palmdale. There are no bus stops or bus service along Soledad Canyon Road or within 1 mile of the project.

3.12.1.4 Air Traffic

There are 15 public-use airports located in Los Angeles County. There are no airports, planned or proposed airport runways, or runways under construction within 4 miles of either the Project or Project linears. The nearest airport facility is the Agua Dulce Airport, a private airport located approximately 14 miles from the project site. The Palmdale Regional Airport is located approximately 18 miles from the Project site.

3.12.1.5 Truck Routes – Weight and Load Limitations

The Surface Transportation Assistance Act allows large trucks to operate on the Interstate and certain primary routes collectively called the National Network. I-5 and SR-14 are part of the National Network of Surface Transportation Assistance Act. The construction project will include truck traffic for all phases of construction and some of the operations and maintenance requirements. Large and heavy components such as the main power transformers will be transported to the site by large trucks. Near the proposed Project, the trucks would primarily use SR-14 and its interchanges at Sierra Highway and Sierra Highway-Soledad Canyon Road to access the Project.

California Vehicle Code Sections 35550–35796 regulate the use of trucks on state facilities (see Section 3.12.5). Transportation permits will be obtained for all heavy and oversize loads, as required by law. Figure 3.12-3, Truck Routes within 1-mile radius of the Project, illustrates that SR-14 is a truck route.

3.12.1.6 Rail

The closest railway is operated by Metrolink and crosses the study area intersection with an at-grade crossing at the Aliso Canyon Road and Soledad Canyon Road intersection. The Vincent Grade/Acton Metrolink Station is located approximately 1.5 miles north of the project along Sierra Highway.

The Antelope Valley Line provides service in the County between Lancaster and LA Union Station. The route operates on weekdays from 4:11 a.m. to 12:20 a.m. with 60-minute headways, from 4:32 a.m. to 9:32 a.m., and with 120-minute headways from 12:32 p.m. to 9:32 p.m. at the Vincent Grade/Acton Metrolink Station. On weekends, the route operates from 6:11 a.m. to 11:20 p.m. with 2-hour to 4-hour headways at the Vincent Grade/Acton Metrolink Station.

3.12.1.7 Vehicle Miles Traveled

CEQA Section 15064.3(a), Purpose, provides that Vehicle miles traveled (VMT) is generally the most appropriate measure of transportation impacts. Subdivision 15064.3(a) defines VMT as "the amount and distance of automobile travel attributable to a project." The term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. For land use projects, the VMT efficiency metrics (i.e. workers or residents) and appropriate method of estimation are used based on the predominant use. The County has used the regional Southern California Association of Government Model to estimate the average baseline VMT for the for North and South Los Angeles County. The proposed Project is located in North Los Angeles County. The baseline worker VMT for North Los Angeles County is 19.0 worker VMT (LACPW 2020).

3.12.1.8 Traffic Operations and Site Access

To address the operation of traffic and to facilitate access and circulation needs of vehicles, an analysis of operational characteristics of roadway segments, unsignalized and signalized intersections in the vicinity of the project site is provided using the level of service (LOS) metric. Existing vehicular delay and queuing at the intersections and roadway segment LOS were evaluated for study area identified for the Project. Refer to Section 3.12-6 for detailed discussion of traffic operations and access near the Project site.

3.12.2 Impact Analysis

The following subsections discuss the potential direct and indirect impacts related to traffic and transportation from construction and operation of the Project. The County's adopted Transportation Impact Analysis (TIA) Guidelines (Public Works 2020), Caltrans requirements and CEQA Guidelines were used to evaluate the Project's transportation impacts.

3.12.2.1 Methodology and Significance Criteria

VMT Assessment

On September 27, 2013, Senate Bill (SB) 743 was signed into law, which created a process to change the way that transportation impacts are analyzed under CEQA. SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Under the new transportation guidelines, LOS, or vehicle delay, is no longer considered an environmental impact under CEQA. OPR recommended VMT as the most appropriate measure of project transportation impacts for land use projects and land use plans. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. Under the new guidelines, VMT has been adopted as the most appropriate measure of transportation impacts under CEQA. The OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020.

CEQA Guidelines Section 15064.3(b) is further divided into four (4) subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. The Updated CEQA Guidelines state that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts," and define VMT as "the amount and distance of automobile travel attributable to a project." "Automobile" refers to on-road passenger

vehicles, specifically cars and light trucks. The Governor's Office of Planning and Research (OPR)[1] clarified in its Technical Advisory (OPR 2018) that heavy-duty truck VMT is not required to be included in the estimation of a project's VMT. Other relevant considerations may include the effects of a project on transit and non-motorized travel. The CEQA Guidelines are accompanied by an OPR Technical Advisory, which includes specifications for how to estimate and forecast VMT for these subdivisions. The County has adopted its own SB 743 guidelines which provide applicable screening criteria, threshold and VMT analysis methodology for land use and transportation projects. If the project does not meet the applicable screening criteria, then further analysis is required to evaluate potential transportation impacts.

VMT Screening, Analysis and Impact Criteria

Most land use and transportation projects have two (2) phases: construction and operation. It should be noted that there is no significance threshold for construction. The guidance from the OPR and the County does not require a VMT analysis for construction projects or construction phase of a project because the VMT generated by the construction of a project would be short-term and temporary. Per OPR's 2018 Technical Advisory Guidance a quantitative VMT analysis for truck traffic (i.e., heavy-duty trucks) is not required per SB 743. However, to account for workers that are anticipated to travel to the Project site from distant locations such as Long Beach, the VMT analysis for the project's construction phase has been evaluated quantitatively to estimate worker VMT for construction phase of the Project. The worker VMT (estimated over the 40-year project life) has been provided for informational purposes.

The County's screening criteria for land use projects or non-retail projects were used to determine whether long-term operation of the Project can be screened out of conducting a detailed VMT analysis. The following VMT screening criteria are used by the County for non-retail projects (which includes residential, office, manufacturing or industrial land uses):

- Projects that generate 110 daily trips[2] or less weekday daily trips;
- Projects that are located within one-half mile or either an existing major transit stop[3] or a stop along an existing high-quality transit corridor[4].

If a project meets any one of the above-mentioned criteria, it can be screened out of VMT analysis and presumed to result in less than significant impacts. The County's TIA guidelines provide four (4) impact criteria that may be selected as thresholds for determining significance. The impact criteria are as follows:

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1 Effective July 1, 2024, the Governor's Office of Planning and Research was renamed the Governor's Office of Land Use and Climate Innovation (LCI).

2 Technical Advisory, p. 12: CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, Section 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

3 Technical Advisory p. 13: Pub. Resources Code, Section 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

4 Technical Advisory p. 14: Pub. Resources Code, Section 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").
It should be noted that this interval for headways for major transit stop was recently amended from 15 to 20 minutes per AB 2553.

- Residential Projects: The project's residential VMT per capita would not be 16.8% below the existing residential VMT per capita for the Baseline Area
- Office Projects: The project's employment VMT per employee exceeding would not be 16.8% below the existing employment VMT per employee for the Baseline Area
- Regional Serving Retail Projects: The project would result in a net increase in existing total VMT
- Land Use Plans: The plan total VMT per service population (residents and employees) would not be 16.8% below the existing VMT per service population for the Baseline Area

Because there are no thresholds for the construction (and decommissioning) phase of any project, a detailed, quantitative VMT analysis per SB 743 is generally not required for the construction (and decommissioning) phase of a project. Therefore, CEQA Guidelines Section 15064.3, subdivision (b)(3) Qualitative Analysis has been used for the construction phase of the Project. Additionally, the Project's air quality analysis provides a detailed construction phase analysis of the Project's trips and VMT. The VMT generated by the operation of the proposed project would be less than 110 average daily trips and hence would be screened out using the County's Guidelines.

Traffic Operations/Site Access Assessment

LOS is a metric used to describe the operating characteristics of the street system in terms of the level of congestion or delay experienced by vehicles with service levels range from LOS A through LOS F. It is also assessed using queuing at intersections. The County and Caltrans criteria used in assessing traffic operations are described below.

Los Angeles County Criteria

The County focuses on a quantitative evaluation of the project's expected access and circulation operations. Project access is considered constrained if the project's traffic would contribute to unacceptable queuing at nearby signalized intersections. Unacceptable or extended queuing may be defined as follows:

- Spill over from turn pockets into through lanes,
- Spill over into intersections.

The County's TIA guidelines do not provide specific criteria for traffic or LOS[5] analysis of intersections and roadway segments. According County's to Local Residential Street Analysis methodology, intersection impacts are considered measurable in the following scenarios:

- The project is located along a current Limited Secondary, Secondary, Major, Parkway, Expressway per the County's General Plan and the study intersections under project build-out conditions operate at a peak hour LOS E or LOS F.
- The project has a potential, based on connectivity to the roadway network, to add automobile traffic to the alternative local residential street route(s) during peak hours,
- An alternative local residential street route (defined as local streets as designated in the County's General Plan passing through a residential neighborhood) provide motorists with a viable alternative route.

[5] It should be noted that under updated CEQA guidelines, LOS, or vehicle delay, is no longer considered an environmental impact.

Additionally, activities associated with project construction and major in-street construction may need to evaluate the following:

- For projects that require construction activities to take place within the right-of-way of a highway, would it be necessary to close any temporary lanes, alleys, or streets for more than 1 day (including day and evening hours, and overnight closures if on a residential street)?
- For projects that require construction activities to take place within the right-of-way of a Local Street, would it be necessary to temporarily close any lanes, alleys, or streets for more than seven days (including day and evening hours, and including overnight closures if on a residential street)?
- Would in-street construction activities result in the loss of any vehicle, bicycle, or pedestrian access, including loss of existing bicycle parking to an existing land use for more than 1 day, including day and evening hours and overnight closures if access is lost to residential units?
- Would in-street construction activities result in the loss of any ADA access to an existing transit station, stop, or facility (e.g., layover zone)?
- Would in-street construction activities restrict access to any bus stops for more than 1 day, or necessitate any rerouting of a bus route?
- Would construction of a project interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas?

Caltrans Freeway Off-Ramp Queuing

The Local Development Review Safety Review Practitioner's Guidance (Caltrans 2024) provides guidance for analyzing Caltrans facilities near land development projects. If a Project adds two (2) or more car lengths to the ramp queue that will extend into the freeway mainline, then the location must be reviewed for traffic safety impacts. This review must evaluate speed differential between the off-ramp queue and the mainline of the freeway during the same period. The review for traffic safety impacts is needed to determine if traffic safety mitigation is necessary. Not all instances of freeway off-ramp queueing require traffic safety mitigation. Traffic safety mitigation shall not be requested under conditions where queuing already exists on a freeway exit ramp. This includes the following:

- Conditions where freeway exit-ramp queuing currently extends onto the mainline;
- Where queuing currently exceeds the length of a freeway auxiliary lane; or
- Where freeway traffic volumes currently cause freeway exit ramp turning lanes to exceed capacity.

Traffic safety mitigation may be requested by Caltrans if freeway exit ramp queuing does not occur under the existing condition, but project-generated traffic volumes will cause a queue to extend onto the freeway mainline, creating a speed differential of 30 mph or greater.

3.12.2.2 CEQA and CEC's Opt-In Regulations Impact Evaluation Criteria

The potential for impacts to traffic and transportation were evaluated using the criteria described in the CEQA Environmental Checklist (Appendix G of the CEQA Guidelines). Specific to traffic and transportation, the CEQA Checklist asks, would the project:

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; and/or

- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
- Result in inadequate emergency access.

In addition, Appendix B of the CEC's Siting Regulations require evaluation of the following:

- Potential impacts to an airport if the proposed project including any linear facility is to be located within four miles of an airport, a planned or proposed airport runway, or an airport runway under construction,
- Current and projected roadway and intersection level of service before project development, during construction, and during project operation
- Project-related hazardous materials to be transported to or from the Project site during construction and operation.

Although CEQA no longer requires an analysis of vehicular delay, an LOS and queuing analysis is included under Section 3.12.3 to comply with the CEC requirements for Opt-In Applications (Title 20, California Code of Regulations, Section 1704, Appendix B).

Project Trip Generation

The potential of a project's traffic and transportation related impacts are based on the project's trip generation. Therefore, a detailed discussion of the project's construction and operational phase trip generation is provided in this section. Construction-related trip generation for the proposed Project is primarily based on the number of construction employees or workers as well as the quantity of material and equipment delivery-related truck estimate provided by the applicant and used in the proposed project's Air Quality analysis. Operational trip generation is based on the number of permanent employees and frequency of maintenance activities.

Construction Trip Generation

Trip generation estimates for construction projects are based on average or peak number of workers and trucks that would be required for the proposed construction activities. Construction traffic includes the number of workers and the amount of truck traffic that would be generated to and from the site daily and during the AM and PM peak commuting hours. The maximum number of construction-related trips is expected to occur over a series of construction phases that would overlap or occur concurrently. Therefore, the overall peak construction period was utilized to calculate the estimated trip generation for the Project.

Construction of the project is anticipated to commence in the beginning of March 2027 and last approximately 26 months, concluding in April 2029. There are 12 construction phases and one (1) decommissioning phase that each have representative start and end dates, with some overlapping days of construction. Construction activities, schedule, and an estimate of related worker and truck trips for the construction and decommissioning phases of the proposed Project are shown in Table 3.12-1.

Table 3.12-1. Phasing and Schedule – Construction and Decommissioning

No.	Phase	Start	End	Daily Trips			Total Trips	Total Trips (PCE)
				Workers	Vendor Trucks	Haul Trucks		
Construction								
1	Demolition	3/1/2027	3/12/2027	10	4	6	20	36
2	Site Preparation	3/1/2027	4/15/2027	242	12	24	278	338
3	Substation Site Preparation	4/16/2027	4/30/2027	242	12	100	354	566
4	Grading	5/1/2027	8/31/2027	242	12	524	778	1838
5	Paving	8/15/2027	9/30/2027	16	4	0	20	24
6	Substation Site Grading	9/1/2027	9/30/2027	242	12	486	740	1724
7	Battery/Container Installation	10/1/2027	10/1/2028	242	12	20	274	326
8	Substation Installation	2/1/2028	10/1/2028	121	12	4	137	157
9	Gen-Tie Foundation and Tower Erection	2/1/2028	5/31/2028	121	12	0	133	145
10	Gen-Tie Stringing and Pulling	6/1/2028	7/1/2028	121	12	0	133	145
11	SCE Interconnection Facility Upgrades	4/1/2028	10/1/2028	121	12	0	133	145
12	Commissioning	10/2/2028	4/1/2029	242	12	0	254	266
Peak Phases for Construction (assuming overlap of Phases 4 and 5) [1]				258	16	524	798	1,862
Decommissioning								
13	Decommissioning	1/1/2069	12/31/2069	242	12	20	274	326

Notes: Dates shown are illustrative only.
PCE = Passenger car equivalent.
[1] Indicates the peak scenario during which construction of the Project is occurring simultaneously.

Based on the analysis of the construction schedule and phases, it has been determined that construction of Phases 4 and 5 would generate peak construction worker and truck traffic (i.e., 798 daily trips), thereby representing the peak construction period. This overlap is anticipated to occur only for 16 workdays; however, Phase 4 Grading and Phase 6 Substation Site Grading, also generate high volume of construction trips, i.e., 778 daily trips for 106 days and 740 daily trips for 29 days, respectively. For all other subphases of construction, the amount of vehicular traffic is estimated to be less than these phases. All construction-related traffic would be temporary and short term and would cease upon completion of the Project.

Construction traffic includes both cars and trucks or heavy vehicles. Passenger car equivalency (PCE) factors were applied to the trip generation estimates to account for truck traffic associated with construction activity. A 1.0 PCE factor was applied to passenger vehicles, 2.0 PCE for vendor trucks, and 3.0 for haul trucks. It should be noted that PCE conversion is provided for informational purposes only. The intersection and roadway analysis use non-PCE trips with heavy vehicle percentage to represent operating conditions.

A 10-hour workday for all construction activities was assumed, with 80% of construction workers arriving to the site prior to the AM peak hour (7:00 – 9:00 AM), and all construction workers departing the site in the PM peak hour (4:00 – 6:00 PM). Vendor and haul trucks were estimated to arrive and depart the site evenly throughout the workday.

The trip generation estimates during the peak construction period for Phases 4 and 5 are summarized in Table 3.12-2 below.

Table 3.12-2. Peak Construction Trip Generation Estimates

Vehicle Type	Daily Quantity		Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Non-PCE Adjusted Trip Generation									
Construction Workers	129	workers	258	26	0	26	0	129	129
Vendor Trucks	8	trucks	16	1	1	2	1	1	2
Haul Trucks	262	trucks	524	27	26	53	26	27	53
Total Trip Generation (Non-PCE)			**798**	**54**	**27**	**81**	**27**	**157**	**184**
PCE Adjusted Trip Generation									
Construction Workers	129	workers	258	26	0	26	0	129	129
Vendor Trucks	8	trucks	32	2	2	4	2	2	4
Haul Trucks	262	trucks	1,572	81	78	159	78	81	159
Total Trip Generation (PCE)			**1,862**	**109**	**80**	**189**	**80**	**212**	**292**

As shown in Table 3.12-2, the peak day of construction for the Project would generate approximately 798 daily trips, 81 AM peak hour trips (54 inbound and 27 outbound), and 184 PM peak hour trips (27 inbound and 157 outbound) during construction of Phases 4 and 5. After trip generation estimates were adjusted utilizing PCE factors, the peak day of construction for the Project would generate approximately 1,862 daily PCE trips, 189 AM PCE peak hour trips (109 inbound and 80 outbound), and 292 PM PCE peak hour trips (80 inbound and 212 outbound).

Operation Trip Generation

Operation of the project would require 16 employees and assuming two (2) daily trips per employee, the proposed Project would generate 32 daily trips. Because the operational trips are less than 110 daily trips, the operation of the project would not be considered significant to warrant a detailed transportation analysis per County's Guidelines.

3.12.2.3 CEQA Appendix G / CEC Appendix B Assessment Criteria

The following sections present the potential effects from the construction and operation of the proposed Project on transportation resources utilizing the criteria described in Appendix G of the CEQA Guidelines and addressing the informational requirements of Appendix B of the CEC's Siting Regulations.

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

Less than Significant with Mitigation. A detailed discussion of applicable plans and policies is provided under Section 3.12.5. The project would not impede the implementation of any plans or policies regarding proposed transit, roadway, bicycle or pedestrian facilities. The following discussion provides a summary of project's construction and operation to assess the potential impacts to the circulation system.

Construction of the project would generate temporary trips for a period of 26 months in the study area. The effect of construction traffic has been evaluated at the traffic study area intersections and roadway segments and is provided under Section 3.12.2.3.6. However, construction of the proposed Project would not result in a permanent change to the existing or planned circulation system near the Project. The majority of the construction activities would occur on site and not affect the public right-of-way. However, installation of conductors for the MV collection system, site power, communications, and waterline using trenching may affect a short segment of Soledad Canyon Road and Carson Mesa Road for a brief period of time. One travel lane of Soledad Canyon Road, along the project frontage, may be closed for a period of 24 hours a day for up to 2 weeks during construction; however, two-way traffic movement will be maintained at all times, with the help of flaggers and appropriate signage. Communication lines will need to be bored under the rail line south of the BESS yards and across Caron Mesa Road. During the horizontal directional drilling, the project may post signs on Carson Mesa Road noting the nature of construction work and temporarily slowing speeds; however, no lane closures or other traffic management measure such as routing of traffic would be required along Carson Road. There are no bus stops or marked bike and pedestrian facilities or users in the vicinity of the project site. As such, there would no impact to pedestrian, transit or bike facilities along Soledad Canyon Road or Carson Mesa Road. As described in Section 3.12.4, to facilitate movement of workers and trucks and traffic flow and access to all road users during the construction period, the proposed Project will implement **MM-TRA-1 Construction Traffic Management Plan** which includes a Transportation Demand Management Plan and a Traffic Control Plan.

Operation of the project would require 16 employees and generate 32 daily trips. Therefore, the Project would result in a nominal increase in permanent traffic which would not result in a measurable effect to the circulation system or increase VMT. The Project would be served by existing roadway facilities and would not obstruct the public right-of-way or interfere with public transit, bicycle, or pedestrian facilities. It should be noted that there are no bus transit, bicycle or pedestrian facilities in the vicinity of the Project.

As such, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and impacts would be **less than significant with mitigation**.

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

The following discusses the proposed Project's VMT impacts and its consistency with CEQA Guidelines section 15064.3, subdivision (b).

Construction VMT

Less than Significant. For the purposes of this Application a qualitative analysis for construction VMT has been prepared.

Vehicle-trip generation (for workers and trucks) as a result of project construction has been summarized in Tables 3.12-1 and 3.12-2. Based on the peak construction trip generation estimates, construction of the Project would generate approximately 798 non-PCE daily vehicle trips. Based on the route-specific information for construction workers and materials, such as locations of potential labor unions to estimate worker trip lengths; locations of factories that would supply BESS equipment (batteries, High Voltage breakers, Main Power Transformer and Medium Voltage Transformer); and locations of distribution hubs where equipment would be collected, including the Port of Long Beach. This information was used to estimate truck trip lengths associated with Project construction. At this time, it is expected that a majority of the workforce are expected to commute daily from the Long Beach area. The Ports of Los Angeles and Long Beach are within 75 miles from the Project site. Accordingly, the Project's air quality analysis accounts for appropriate trip lengths for workers and trucks.

To estimate the worker VMT for construction phase of the Project for informational purposes, daily worker trips and trip lengths were multiplied for each phase of the Project to estimate worker VMT for the duration of each phase. The total worker VMT was then normalized over the 40-year project life, which was estimated as 10,400 days (assuming 260 working days per year when construction would occur). The daily VMT per worker of 11.6 average VMT per worker was estimated by dividing the daily worker VMT by average number of daily workers (See Table 1 in Appendix 3.12A for detailed calculation). As shown in Table 3.12-3, the Project's daily VMT per worker during construction is estimated to be 20.2.

However, estimates for construction trips and VMT of the Project are based on temporary, short-term vehicular trips. Once construction for the peak construction phase is complete, vehicular trips would be reduced, and once construction of the Project is completed, all construction trips would be eliminated from the study area. The VMT from construction (and decommissioning) is not required to be quantified per SB 743 requirements. Per OPR, heavy vehicle traffic is not required to be included in the estimation of a project's VMT. Measures to reduce the VMT generated by workers and trucks are limited, and there are no thresholds or significance criteria for temporary, construction-related VMT. Further, it should be noted that OPR and County does not require quantitative assessment of temporary construction traffic.

Further, the project construction would be generally consistent with construction activities in terms of the temporary nature of activities, trip generation characteristics, and the types of vehicles and equipment required. Even though it is anticipated that some of the workers would carpool to the site, managing worker and vendor trip lengths for the construction projects is not feasible because of the remote location and duration of individual activities. Accessibility to alternative modes of transportation is also not available for workers. However, as noted in **MM-TRA-1 Construction Traffic Management Plan,** the Project applicant will implement a **Transportation Demand Management Plan** to encourage carpooling among construction workers to reduce trips and VMT.

Therefore, construction of the proposed Project would not conflict or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be **less than significant**.

Operation and Maintenance VMT

Less than Significant. As shown in the screening analysis below, the long-term operation of the Project would be screened out using the criteria noted below and therefore would not require further VMT analysis under the County's TIA Guidelines. The County's TIA Guidelines suggest that non retail projects may screen out of VMT impacts using a variety of factors such as low weekday daily trip generation, proximity to an existing major transit stop or a stop along an existing high quality transit corridor, map base screening or 100% affordable housing. The following criteria has been used in screening the project's VMT, consistent with the County's TIA Guidelines for SB 743 compliance:

Non-Retail Project Trip Generation Screening: If a development project generates a net increase of 110 or more daily vehicle trips[6], then further VMT analysis is required. Therefore, a project with less than 110 daily net trip generation would screen out of conducted further VMT analysis and a less than significant determination can be made.

During the operations and maintenance phase, approximately 16 workers or employees would be required for the facility. Therefore, the project would generate 32 daily trips and nominal peak hour trips. Since the project would generate fewer than 110 daily trips, the project impacts due to operations would be less than significant. Therefore, a detailed VMT analysis is not required, and the operation proposed Project would not conflict or be inconsistent with CEQA Guidelines Sections 15064.3(b). Impacts would be **less than significant.**

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

Less than Significant with Mitigation. The Project is not expected to pose any unusual safety hazard to the public. The transportation of hazardous materials will be conducted by a transporter required to obtain a Hazardous Material Transportation License in accordance with CVC Section 32105 and follow proper safety procedures. There are no schools, day care centers, or other generators of pedestrian traffic in the immediate vicinity of the project site along Soledad Canyon Road. There are no transit routes or bus stops along Soledad Canyon Road or Sierra Highway.

During Project construction, construction activities would necessitate the movement of workers and trucks to and from access the staging areas and travel between the project areas. Temporary lane closures could result in short-term disruptions to vehicle circulation as workers and trucks access the proposed Project from Soledad Canyon Road. The applicant will implement **a Traffic Control Plan** as part of **MM-TRA-1 Construction Traffic Management Plan** to minimize these disruptions and to ensure adequate access, including access for emergency vehicles. Typical traffic control measures may include, but are not limited to, lane closures; the use of warning signs, cones, crossing structures, flaggers, lights, and barricades; and cleaning up roadways upon the completion of work. All temporary street closures, detours, lane closures, signs, lights and other traffic control devices will conform to the California Manual on Uniform Traffic Control Devices. Transit providers, emergency service personnel, and local businesses and residents would also be notified in advance of construction activities. See Section 3.12.4 for description of construction traffic management plan and MM-TRA-1.

Once constructed, the proposed Project will be designed to meet the current Los Angeles County roadway design standards, including frontage improvements, which will take place within the existing Soledad Canyon Road ROW.

Therefore, the Project would not substantially increase hazards due to a geometric design feature or incompatible uses and impacts would be **less than significant with mitigation**.

[6] OPR's Technical Advisory, 2018: CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, Section 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

3.12.2.3.4 Would the project result in inadequate emergency access?

Less than Significant with Mitigation. Emergency services within the County are provided by the LACoFD and Los Angeles County Sheriff's Department, in cooperation with local agencies. Emergency access to Project will be through the project access driveways on Soledad Canyon Road. Construction and operation of Project is not anticipated to require long-term road closures and will have no effect on the operations of emergency vehicles. During construction, a **Traffic Control Plan** will be implemented as part of **MM-TRA-1 Construction Traffic Management Plan** so that through traffic and emergency access is maintained at all times. Construction or operation of the proposed Project would not result in inadequate emergency access and impacts would be **less than significant with mitigation.**

3.12.2.3.5 Would the project result in potential impacts to an airport if the proposed project including any linear facility is to be located within four miles of an airport, a planned or proposed airport runway, or an airport runway under construction.

Less than Significant. The Project, including linears, is approximately 14 miles from the nearest airport. The Project is not expected to have any effect on the operations of any air facility. Impacts would be **less than significant.**

3.12.2.3.6 Would the project exceed current and projected roadway and intersection level of service before project development, during construction, and during project operation.

Existing Traffic Conditions and Level of Service

The study area for traffic analysis of the Project was determined based on the location of the site along Soledad Canyon Road and the route of construction traffic. Existing weekday peak hour turning movement counts at study intersections and 24-hour average daily traffic volumes were collected in November 2024 and April 2025, on a typical non-holiday week while area schools were in-session. An analysis of the existing LOS conditions is provided below.

Existing Intersection Conditions

The County uses the Highway Capacity Manual (HCM) intersection analysis methodology to analyze the operation intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS, from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding control delay experienced per vehicle for intersections.

At the study area intersections, LOS was calculated using the HCM methodology for signalized intersection and unsignalized intersection. The Synchro 12 LOS software was used to determine intersection LOS for all study scenarios. Synchro is consistent with the latest version of the HCM that uses the 7th Edition methodology (TRB 2022). Table 3.12-4 shows the LOS values and signalized and unsignalized intersections under the HCM methodology.

Table 3.12-4. Levels of Service for Intersections Using HCM Methodology

Level of Service	HCM Average Delay (seconds per vehicle) Unsignalized Intersections	HCM Average Delay (seconds per vehicle) Signalized Intersections
A	< 10.0	< 10.0
B	> 10.0 to < 15.0	> 10.0 to < 20.0
C	> 15.0 to < 25.0	> 20.0 to < 35.0
D	> 25.0 to < 35.0	> 35.0 to < 55.0
E	> 35.0 to < 50.0	> 55.0 to < 80.0
F	> 50.0	> 80.0

Source: TRB 2022.
Note: HCM = Highway Capacity Manual.

This analysis focuses on the weekday daily, AM (7:00 a.m. to 9:00 a.m.) and the PM (4:00 p.m. to 6:00 p.m.) peak periods. The peak periods represent the highest volume of traffic for the adjacent street system. Raw traffic count worksheets are provided in Appendix 3.12A.

All the study area intersections are unsignalized. Nominal pedestrians and few bicyclists were observed during AM or PM peak hours at the study area intersections.

There is a gated railroad crossing along Aliso Canyon Road, approximately 70 feet south of its intersection with Soledad Canyon Road. The railroad crossing was observed to be closed once for approximately 45 seconds every hour of the day and during the AM and PM peak hours during the passing of the train. During the 24-hour period, the railroad crossing was closed for a longer duration, i.e., 2 minutes and 33 seconds and 2 minutes and 46 seconds, during early morning and in the afternoon, respectively. For majority of the day, only one (1) vehicle was observed to be waiting at the railroad crossing in the northbound or southbound direction along Aliso Canyon Road when it was closed for Metrolink train to pass for approximately 45 seconds each hour of the day. A maximum of four (4) vehicles were observed to be queued in the northbound direction along Aliso Canyon Road around noon when the railroad crossing was closed for 2 minutes and 46 seconds. No pedestrians or bicyclists were observed during the AM or PM peak hours near the crossing or the nearby intersection.

Existing intersection geometrics for study area intersections are shown on Figure 3.12-4, and the weekday AM and PM peak hour volumes are shown on Figure 3.12-5.

An intersection LOS analysis was prepared for the existing conditions using HCM 7th Edition methodology via the Synchro Version 12 software. Table 3.12-5 shows the results of the existing conditions level of service analysis. LOS worksheets are provided in Appendix 3.12A.

Table 3.12-5. Existing Peak Hour Intersection Level of Service

No.	Intersection	Control	Existing Conditions			
			AM Peak		PM Peak	
			Delay[1]	LOS	Delay[1]	LOS
1	SR-14 westbound ramps/Sierra Hwy	Stop	10.8	B	12.9	B
2	Old Sierra Hwy/Sierra Hwy	Stop	10.0	B	12.7	B
3	SR-14 eastbound ramps/Sierra Hwy	Stop	12.7	B	38.1	E
4	Malinta Ave/Soledad Canyon Rd	Yield	8.9	A	8.8	A
5	Santiago Rd/Soledad Canyon Rd	Stop	9.3	A	11.0	B

Table 3.12-5. Existing Peak Hour Intersection Level of Service

No.	Intersection	Control	Existing Conditions			
			AM Peak		PM Peak	
			Delay[1]	LOS	Delay[1]	LOS
6	Aliso Canyon Rd/Soledad Canyon Rd	Stop	12.5	B	11.2	B
7	Aliso Canyon Rd/Carson Mesa Rd	Stop	8.8	A	8.8	A

Notes: LOS = Level of Service.

[1] Delay in seconds per vehicle.

Table 3.12-2 provides the LOS of the study area intersections. As Table 3.12-2 indicates, with the exception of SR-14 eastbound ramps/Sierra Highway intersection, all the study area intersections currently operate at satisfactory LOS B or better during both peak hours. The SR-14 eastbound ramps/Sierra Highway intersection currently operates at LOS B in the AM peak hour and LOS E in the PM peak hour.

Existing Roadway Conditions

Roadway segment volume to capacity (v/c) ratios were determined using the daily capacities contained in the Transportation and Circulation Analysis for the County of Los Angeles General Plan Update (Adopted October 6, 2015). Table 3.12-6 illustrates daily capacities for roadways per facility type and number of lanes.

Table 3.12-6. Capacity for Roadway Segments

Facility Type	Number of Lanes	Design Capacity
Major Highway	6–8 Lane Roadway	54,000–72,000
Secondary Highway	4 Lane Roadway	36,000
Limited Secondary Highway	2–4 Lane Roadway	18,000–36,000
Parkway	2+ Lane Roadway	Varies
Collector Street	2 Lane Roadway	15,000
Local Street	2 Lane Roadway	2,500
Expressway	4–8 Lane Roadway	44,000–88,000

Source: Table 4 Roadway Classifications, County of Los Angeles General Plan Update, Transportation and Circulation Analysis.

Existing roadway segment average daily traffic and heavy vehicle percentage is provided in Table 3.12-7.

Table 3.12-7. Existing Daily Traffic Volumes

No.	Roadway Segment	Average Daily Traffic (ADT)	Heavy Vehicle (%)
1	Sierra Hwy between Old Sierra Hwy & SR-14 WB Ramps	5,456	0.5%
2	Soledad Canyon Rd along Project Frontage	2,952	1.1%
3	Soledad Canyon btw Aliso Canyon Rd and Santiago Rd	5,726	0.8%
4	Aliso Canyon Rd, south of Soledad Canyon Rd	2,008	1.1%

Source: Appendix 3.12A, Traffic Counts, 2024 and 2025.
Note: SR = State Route.

Table 3.12-8 provides the volumes, v/c ratio and LOS of the study area roadway segments. As Table 3.12-8 indicates, the study area roadway segments currently operate at satisfactory LOS A.

Table 3.12-8. Existing Roadway Segment Level of Service Analysis

No.	Roadway Segment	Lane Classification	Design Capacity	Existing		
				Volume	V/C	LOS
1	Sierra Hwy between Old Sierra Hwy & SR-14 WB Ramps	2L Highway	18,000	5,456	0.30	A
2	Soledad Canyon Rd along Project Frontage	2L Highway	18,000	2,952	0.16	A
3	Soledad Canyon btw Aliso Canyon Rd and Santiago Rd	2L Highway	18,000	5,726	0.32	A
4	Aliso Canyon Rd, south of Soledad Canyon Rd	2L Highway	18,000	2,008	0.11	A

Notes: V/C = volume to capacity ratio; LOS = level of service; SR = State Route.

Collision Data

A review of collision data was performed to disclose the collision history in the study area. Collision data from January 2020 to December 2024, was obtained from the California Highway Patrol's (CHP) Statewide Integrated Traffic Records System using the Transportation Injury Mapping System. It is important to note that it may take up to 6 months for a collision to appear within the database; therefore, data for 2024 may be incomplete.

The Statewide Integrated Traffic Records System database is a public system that processes and collects data from CHP and other police agencies. The database was queried for all collisions occurring within the jurisdiction of unincorporated areas of Los Angeles County and then narrowed down to the study area intersections. Most "rear-end" type of collisions were not considered in this analysis since these types of collisions are considered to be by fault of the driver and not because of the intersection or roadway layout, or lack of signalization.

Table 3.12-9. Collision Summary

Nearest Study Intersection	Total No. of Collisions	Total No. of Injured[1]	Total No. of Pedestrians Injured	Total No. of Bicyclists Injured	Primary Cause
1. SR-14 westbound ramps/Sierra Hwy	1	1	0	0	Driving under the influence
2. Old Sierra Hwy/Sierra Hwy	2	4	0	0	Left turn and right-of-way conflicts
3. SR-14 eastbound ramps/Sierra Hwy	1	1	0	0	Automobile Right of Way violation
4. Aliso Canyon Rd/Soledad Canyon Rd	3	5	0	0	Driving on the wrong side of road, driving under the influence, unsafe speed

Notes: TIMS - SWITRS Database Query conducted April 21, 2025.
[1] Consists of all injured parties (motorists, pedestrians, and bicyclists.

As the table shows, the total number of people injured within the seven (7) reported collisions is 11 people, all of which involved drivers and passengers. The intersection of Aliso Canyon Road/Soledad Canyon Road had the highest number of total collisions recorded. These collisions may be attributed to driving on the wrong side of the road, driving under the influence, and unsafe speed. No fatalities were reported.

Cumulative Projects

The cumulative projects list included in Section 3.0 were reviewed to determine if any approved or pending projects in the vicinity would have the potential to add traffic to the study area intersection. Based on review of the projects (including the Humidor BESS), none of the projects were determined to add traffic to the study area or affect the operations of the study area intersections during the peak construction period. An analysis of traffic under cumulative conditions is not warranted and the peak construction period traffic analysis for Existing plus Project conditions provides the most conservative scenario.

Project Trip Distribution

Construction workers and construction material would mostly travel to the site from the west, i.e., from the City and Port of Long Beach. Based on the information provided by the applicant, 90 percent of the construction workers and trucks would travel to the site from the west, traveling approximately 75 miles. Some workers and trucks (approximately 10%) are anticipated to travel from the east, i.e., City of Palmdale.

Project trips were assigned to the study area intersections and roadway segments by applying the trip distribution percentages to above-referenced project trip generation estimates. The number of workers and trucks were assigned to each construction zone and staging area based on the construction activities that would occur during the grading phase.

Figure 3.12-6 illustrates the trip distribution and assignment for workers trips. Figure 3.12-7 illustrates the trip distribution and assignment for truck trips. Figure 3.12-8 illustrates the trip distribution and assignment for total project trips.

Existing Plus Project Traffic Conditions and Level of Service

This section details the existing intersection and roadway operations within the study area, with the peak construction traffic. Project trips shown on Figure 3.12-8 were added to Existing peak hour traffic shown on Figure 3.12-5 and Figure 3.12-9 illustrates the Existing plus Project peak hour traffic volumes.

Two (2) driveways that will be used predominantly during construction and operation: driveway to the construction laydown area near the sub-station yard and driveway to the O&M yard near BESS array were included in the intersection analysis.

Roadway LOS with Construction Traffic

Less than Significant. Table 3.12-10 shows the results of the roadway segment LOS analysis with and without the project-added traffic. As shown below, the study area roadway segments are operating at an acceptable LOS A under Existing conditions, with and without the project-added traffic. The impact would be **less than significant**.

Table 3.12-10. Existing Roadway Segment Level of Service Analysis

No.	Segment	Lanes	Design Capacity	Existing			Existing plus Project		
				Volume	V/C	LOS	Volume	V/C	LOS
1	Sierra Hwy between Old Sierra Hwy & SR-14 WB Ramps	2L	18,000	5,456	0.30	A	5,748	0.32	A

Table 3.12-10. Existing Roadway Segment Level of Service Analysis

No.	Segment	Lanes	Design Capacity	Existing			Existing plus Project		
				Volume	V/C	LOS	Volume	V/C	LOS
2	Soledad Canyon Rd (Project Frontage)	2L	18,000	2,952	0.16	A	3,538	0.20	A
3	Soledad Canyon between Aliso Canyon Rd and Santiago Rd	2L	18,000	5,726	0.32	A	5,840	0.32	A
4	Aliso Canyon Road, south of Soledad Canyon Road	2L	18,000	2,008	0.11	A	2,122	0.12	A

Notes: V/C = volume to capacity ratio; LOS = level of service; SR = State Route.

Intersection LOS with Construction Traffic

Less than Significant. An intersection LOS analysis was prepared using HCM 7th Edition using Synchro 12 LOS software. LOS worksheets are provided in Appendix 3.12A.

Table 3.12-11 shows the results of the intersection LOS analysis during the Project's peak construction phase. As shown below, all intersections except SR-14 westbound ramps/Sierra Highway and SR-14 eastbound ramps/Sierra Highway would operate at LOS B or better. The SR-14 westbound ramps/Sierra Highway intersection would operate at LOS F in the PM peak hour under Existing plus Project conditions. The SR-14 eastbound ramps/Sierra Highway intersection or better under Existing conditions, with project-added traffic conditions. The impact would be **less than significant**.

With the exception of residential street analysis, the County does not use LOS threshold in assessing operational conditions. The County requires a queuing analysis of signalized intersections to determine if any queues would spill over from turn pockets into through lanes or spill over into intersection. Even though the study area intersections are not signalized, a queuing analysis has been provided to show the extent of vehicular queues into through lanes and to determine if the project traffic would impact SR-14 mainline per Caltrans criteria.

Table 3.12-11. Existing Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Control	Existing				Existing plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1	SR-14 westbound ramps/Sierra Hwy	Stop	10.8	B	12.9	B	11.4	B	>300.0	**F**
2	Old Sierra Hwy/Sierra Hwy	Stop	10.0	B	12.7	B	10.3	B	13.8	B
3	SR-14 eastbound ramps/Sierra Hwy	Stop	12.7	B	38.1	**E**	14.3	B	86.7	**F**
4	Malinta Ave/Soledad Canyon Rd	Yield	8.9	A	8.8	A	8.9	A	8.8	A
5	Santiago Rd/Soledad Canyon Rd	Stop	9.3	A	11.0	B	9.3	A	12.4	B

Table 3.12-11. Existing Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Control	Existing				Existing plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
6	Aliso Canyon Rd/Soledad Canyon Rd	Stop	12.5	B	11.2	B	12.8	B	11.5	B
7	Aliso Canyon Rd/Carson Mesa Rd	Stop	8.8	A	8.8	A	8.8	A	9.0	A
8	Project Dwy-Sub Station/ Soledad Canyon Rd	Stop	Does not exist				9.8	A	11.2	B
9	Project Dwy-BESS O&M /Soledad Canyon Rd	Stop	Does not exist				10.4	B	11.0	B

Notes: LOS = level of service; SR = State Route.
[1] Delay in seconds per vehicle

Queuing Analysis

An intersection lane queuing analysis, using SimTraffic 12 software, was conducted to determine the 95th percentile (design) queue of the existing storage lanes at the following Caltrans off-ramp intersections in the study area:

- Int No. 1. SR-14 westbound ramps/Sierra Highway
- Int No. 3. SR-14 eastbound ramps/Sierra Highway

The intersection's queues were calculated for the Existing and Existing plus Project conditions. To account for actual vehicular volume with mix of traffic (cars and trucks) observed in the field, queuing analysis was conducted using non-PCE traffic volumes and heavy vehicle percentage for each turn movement. The SimTraffic queuing reports are provided in Appendix 3.12A. This analysis determined whether potential queuing and spillback would impact the SR-14 mainline as well as arterials of Sierra Highway and Soledad Canyon in the study area.

Table 3.12-12 summarizes the 95th percentile queuing analysis conducted for the intersections under Existing and Existing plus Project conditions. As shown in Table 3.12-12, under Existing conditions, there are no movements where the 95th percentile queues would exceed their storage lengths during the weekday AM or weekday PM peak hours at the SR-14 westbound ramps/Sierra Highway and SR-14 eastbound ramps/Sierra Highway intersections.

Under Existing plus Project conditions, all movements at the intersections would experience an increase in vehicular queues; however, most queues would be accommodated in the storage length available except for the shared westbound left-through turn lane (during PM peak hour) at the SR-14 westbound ramps/Sierra Highway intersection. There is no left turn pocket at this intersection; however, the queue of the westbound left turn vehicles could extend to the Old Sierra Highway/Sierra Highway intersection and potentially block the driveways of the California RV Park and the Los Angeles County Fire Station along Sierra Highway as well as impact westbound-through traffic along Sierra Highway. See Section 3.12.4 for proposed measures to be implemented during the peak construction phase. It should be noted that SR-14 westbound off-ramp would not have queues that would affect the SR-14 mainline operation.

No queuing impacts are noted at the SR-14 eastbound Ramps/Sierra Highway intersection. However, the intersection would continue to operate at LOS E and F during the PM peak hours under Existing and Existing plus Project conditions, respectively. The proposed Project would add northbound vehicles along Soledad Canyon Road during the PM peak which would result in degraded LOS and impact northbound traffic along Soledad Canyon Road. See Section 3.12.4 for proposed measures to be implemented during the peak construction phase. It should be noted that SR-14 eastbound ramp would not have queues that would affect the mainline operation.

Therefore, the construction-related traffic from the Project would not result in queuing impacts to the Caltrans off-ramp facilities in the study area which could impact the operation of SR-14 mainline. No impact would occur to Caltrans facilities. The spill over from turn pockets into through lanes or spill over into intersection along Sierra Highway during construction will be addressed by installing permanent “KEEP CLEAR’” pavement markings to maintain vehicular ingress and egress to/from the RV Park and Fire Station to Sierra Highway. See Section 3.12.4 for MM-TRA-1 Traffic Control Plan.

Table 3.12-12. Caltrans Facilities Analysis

Intersection	Movement	Storage Length[1]	Existing Conditions				Existing plus Project Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			95th Percentile Queue[2]	Exceeds Storage Length	95th Percentile Queue[2]	Exceeds Storage Length	95th Percentile Queue[2]	Exceeds Storage Length	95th Percentile Queue[2]	Exceeds Storage Length
1. SR-14 westbound ramps/Sierra Hwy	WBLT[3]	325	13	No	34	No	24	No	722	**Yes**
	NBL[4]	1068	29	No	26	No	32	No	730	No
	NBR[4]	1068	48	No	56	No	59	No	76	No
3. SR-14 eastbound ramps/Sierra Hwy	EBL[5]	85	7	No	18	No	13	No	21	No
	WBL[5]	105	10	No	19	No	18	No	19	No
	NBLTR[3]	1600	63	No	111	No	74	No	696	No
	SBL[4]	892	30	No	47	No	39	No	58	No
	SBT[4]	892	N/A	No	N/A	No	78	No	99	No
	SBR[4]	892	18	No	13	No	18	No	36	No

Notes: SR = State Route; WBLT = Westbound Left-Through; NBL = Northbound Left; NBR = Northbound Right; EBL = Eastbound left; WBL = Westbound Left; NBLTR = Shared Northbound Left-Through-Right; SBL = Southbound Left; SBT = Shared Southbound Through; N/A = not applicable; SBR = Southbound Right.

1 Storage length is exceeded if the calculated distance is less than or equal to the storage length provided.
2 Based on 95th percentile queue length in SimTraffic 12.
3 Length measured from nearest driveway or intersection.
4 Length measured from the gore point of SR-14.
5 Turn pocket length at the intersection.

Operation

Less than Significant. Operation of the project would require 16 employees and generate 32 daily trips. Therefore, the Project would result in a nominal increase in permanent traffic. It is considered a small project which would not result in a measurable effect to the circulation system or warrant a detailed analysis. The level of service at the roadway segments and intersections in the study area would be same as Existing Conditions discussed above. With the exception of SR-14 eastbound ramps/Sierra Highway intersection, all the study area intersections currently operate at satisfactory LOS B or better during both peak hours. The study area roadway segments currently operate at satisfactory LOS A. The impact would be **less than significant**.

3.12.2.3.7 Would the project result in significantly increased hazards associated with Project related hazardous materials to be transported to or from the Project site?

Less than Significant. As noted in Section 3.5, Hazardous Material Handling, transportation of hazardous materials will be required once the project is operating. All transportation of hazardous materials will comply with:

- U.S. Environmental Protection Agency (EPA)
- California Department of Transportation (Caltrans)
- California Department of Toxic Substance Control (DTSC)
- California Highway Patrol (CHP)
- California State Fire Marshal Regulations

To manage and prevent potential impacts caused by transporting hazardous materials, contractors will adhere to EPA Caltrans, DTSC, CHP, and California State Fire Marshal regulations. Materials will only be mobilized along approved transportation routes, thereby avoiding sensitive receptors to the extent practicable.

Division 13, Section 31303 of the California Vehicle Code stipulates that the transportation of regulated substances and hazardous materials are required to be carried out via the most direct route, using State or interstate highways whenever possible. In accordance with this policy, subject to Caltrans approval, the recommended route for delivery of regulated or hazardous materials would primarily be via I-5 and SR 14. The SR-14 westbound and eastbound ramps at Sierra Highway would be used by the truck traffic destined to the site.

The Project will also follow the transportation safety guidance provided by the manufacturer in the ST501UX-2H-US Product User Manual Section 3. Transportation and Storage for Battery Energy Storage System. Per the user manual the following safety measures will be employed before and during transportation:

- Before transport, inspect the transport route in advance, particularly for obstructions, to ensure the vehicle can travel safely and smoothly along the route. Pre-transport route inspection should cover the following items: road conditions, height limits, actual heights, width limits, actual widths, weight limits, traffic restrictions, potential obstructions, and particularly vehicle weight limits on bridges.

- In most cases, the total weight of the truck and the cargo exceeds the limits allowed by general roads. In such cases, an overweight permit from the country or region of transport may be required based on LA County[7] and Caltrans[8] requirements.
- Do not transport the battery container when the temperature is below -30℃.
- The following conditions should be met for the transportation of battery container:
  - All cabinet doors are locked.
  - Select appropriate crane or lifting tool according to the site conditions. The lifting tool used shall have sufficient load bearing capacity, boom length and radius of rotation.
  - Additional traction may be required if battery containers needs to be transported on slopes.
  - Remove all obstacles that exist or may exist on the way, such as tree branches, cables, etc.
  - The battery container should be transported and moved under good weather conditions.
  - Be sure to set up warning signs or warning area to prevent non-staff from entering the lifting area to avoid accidents.
  - The battery container must stand upright during transport.
  - Lay the battery container down horizontally during transport. Ensure the tilt is ≤15° during the whole transport process.
  - Transport battery units at < 30% SOC state of charge (SOC)
  - If PACKs are transported separately, do not stack them in more than 4 layers.
  - Avoid collision or strong shock during transport.
  - For land transportation, it is recommended to give priority to the transportation vehicle equipped with "mushroom head" locking device; if the transportation vehicle does not have "mushroom head" locking device, the product needs to be fixed with ropes. Be sure to use ropes to secure the top and bottom of the product to the transportation vehicle so that the tilt angle is not too large during transportation, resulting in the product sliding and tipping.

With the implementation of the measures described above, the Project would not result in significantly increased hazards associated with hazardous materials to be transported to or from the Project site. Impacts would be **less than significant.**

3.12.3 Cumulative Effects

Once the Project is constructed, the operation of the project would generate only 32 trips per day. A traffic analysis of study intersections and roadway segments or a VMT analysis would not be warranted for the operational phase,

7 Based on LA County Department of Public Works Transportation Permit requirements (accessed at https://dpw.lacounty.gov/SPATS/public/spatsfaq/forms/TRANSPORTATION%20PERMIT%20REQUIREMENTS.pdf) any truck exceeding length of 75 feet will require a transportation permit. Types of permits that maybe required include annual permits, single trip permits and night inspection permits.

8 Caltrans will issue transportation permits for oversize-overweight loads traversing the Gerald Desmond Bridge on Route 710.

In California, the truck weight limits can be accessed at https://ops.fhwa.dot.gov/freight/policy/rpt_congress/truck_sw_laws/app_a.htm#ca). The limit is based on the axle, however, the maximum is 80,000 lbs.

as the project will generate fewer than 110 daily during this phase. The cumulative effect of the project would not be measurable and can be presumed to be less than significant.

3.12.4 Mitigation Measures

Although all construction related trips would be temporary for the duration of construction and traffic would return to pre-construction conditions upon the completion of construction, the Project will implement a construction traffic management plan. The plan will include two (2) measures: a transportation demand management plan to reduce construction trips and a traffic control plan to facilitate vehicular access at the project access driveways; and along the roadway segments of Soledad Canyon Road and Sierra Highway during the construction phase.

MM-TRA-1 Construction Traffic Management Plan: Prior to initiation of construction activities, a construction traffic management plan will be prepared. The plan will include the following components:

Transportation Demand Management Plan: The transportation demand management (TDM) plan will include:

- Measures to encourage and facilitate carpooling among construction workers to reduce use of single occupancy vehicles for commuting to the project site.
- Measures to limit worker and truck traffic during the PM peak hour, i.e., between 4 p.m. – 6 p.m. to reduce westbound queues along Sierra Highway near California RV Park and the Los Angeles County Fire Station. This can be achieved by encouraging car-pooling as mentioned above and also by:
  - Staggering construction work shifts to reduce PM peak hour traffic to and from the proposed project;
  - Scheduling truck deliveries during off-peak hours.

Traffic Control Plan: A traffic control plan (TCP) will be prepared for the roadway segments of Soledad Canyon Road, Carson Mesa Road, and Sierra Highway, and will include the following:

- Use of appropriate temporary signage, temporary traffic control measures (such as lane closures; the use of warning signs, cones, crossing structures, lights, and barricades) and flaggers to facilitate truck turn maneuvers in and out of the project driveways and to warn all road users of construction in the vicinity along Soledad Canyon Road.
- Flaggers that serve to alert motorists and pedestrians to slow moving trucks and to guide trucks to maneuver turn movement at the project access intersection and prioritize movement of traffic at SR-14 westbound ramps/Sierra Highway and SR-14 eastbound ramps/Sierra Highway intersections to access on-ramps and reduce queuing along westbound Sierra Highway and northbound Soledad Canyon Road, respectively.
- Ensure access to California RV Park and the Los Angeles County Fire Station is not impacted by construction traffic or equipment. It is recommended that permanent “KEEP CLEAR’” pavement markings be installed to maintain vehicular ingress and egress to/from the California RV Park and the Los Angeles County Fire Station from Sierra Highway.

- All temporary street closures, detours, lane closures, signs, lights and other traffic control devices will conform to the CA MUTCD.
- Provide notification to transit providers, emergency service personnel, and local businesses and residents in advance of construction activities.
- Coordination with Caltrans and Los Angeles County in order to secure the necessary encroachment and trip permits necessary for any oversized haul trucks.

3.12.5 Laws, Ordinances, Regulations, and Standards

Federal, state, and local Laws, Ordinances, Regulations, and Standards (LORS) applicable to transportation are discussed below and summarized in Table 3.12-13.

Table 3.12-13. LORS Applicable to Transportation

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	Code of Federal Regulations (CFR)	Provides standards for labels, placards, and markings on hazardous materials shipments by truck (Part 172), standards for packaging hazardous materials (Parts 173), and for transporting hazardous materials in tank cars (Part 179).	**Yes**. The Project will be consistent with the CFR regulations by using applicable standards for labeling and packaging hazardous materials.	Section 3.12.5.1
State	California Environmental Quality Act (CEQA)	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects and to reduce those environmental impacts to the extent feasible.	**Yes**. The Project's impact analysis provided, specifically, the VMT analysis has been prepared per CEQA requirements for transportation impact analysis.	Section 3.12.2.3 Section 3.12.5.2
State	California Vehicle Code	A rulebook containing information about traffic laws in California	**Yes**. The Project will comply with the applicable provision of the CVC and apply for required transportation and encroachment permits from the agencies.	Section 3.12.5.2 Section 3.12.6 Section 3.12.7
Local	Los Angeles County General Plan	Contains goals designed to further the County's mobility strategy pursuant to California Complete Streets Act of 2007. The Mobility Element addresses this requirement with policies	**Yes**. The project would not conflict nor impede the implementation of any plans or policies regarding proposed transit, roadway, bicycle or pedestrian facilities including the	Section 3.12.2.3 Section 3.12.5.3

Table 3.12-13. LORS Applicable to Transportation

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		and programs that consider all modes of travel, with the goal of making streets safer, accessible and more convenient to walk, ride a bicycle, or take transit.	County's General Plan and its applicable elements.	
Local	Antelope Valley Area Plan	Refines the countywide goals and policies in the General Plan by addressing specific issues relevant to the Antelope Valley, and its Mobility Element outlines the improvements needed to ensure current and future mobility between land uses	**Yes**. The project would not conflict nor impede the implementation of any plans or policies regarding proposed transit, roadway, bicycle or pedestrian facilities including the Antelope Valley Area Plan.	Section 3.12.2.3 Section 3.12.5.3
Local	Los Angeles County Municipal Code	Consists of the regulatory, penal and administrative ordinances related to Planning and Zoning (Title 22), Vehicles and Traffic (Title 15), Highways (Title 16), and Fire Code (Title 32).	**Yes**. The Project will be consistent with County's Code and implement a traffic control plan as discussed in MM-TRA-1 Construction Traffic Management Plan and ensure emergency access is maintained at all times per LACoFD requirements.	Section 3.12.2.3.3 Section 3.12.5.3
Local	Transportation Impact Analysis (TIA) Guidelines, Traffic Control Requirements	Includes guidance and requirements for VMT analysis of development and transportation projects, including project screening, analysis methodology, significance criteria, impact assessment, and mitigation strategies.	**Yes**. The Project's impact analysis addresses the VMT and operational analysis and criteria detailed in the County's TIA Guidelines, as they apply to the proposed Project.	Section 3.12.2.3 Section 3.12.5.3
Local	Requirements for Temporary Controls for Lane Closures, Street Closures, and Detours	Provides the requirements for temporary traffic controls and access for any permitted activity within the County public rights-of-way when temporary disruption of traffic is implemented.	**Yes**. The Project will be consistent and implement a traffic control plan as discussed in MM-TRA-1 Construction Traffic Management Plan per County's requirements for any construction in the County public rights-of-way.	Section 3.12.2.3 Section 3.12.5.3

Table 3.12-13. LORS Applicable to Transportation

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Local	Vision Zero Los Angeles County: A Plan for Safer Roadways	A traffic safety initiative intended to guide the County's efforts on reducing traffic deaths and severe injuries on unincorporated County roadways through 2025. Creates the vision for the future and sets goals and actions to enhance traffic safety in collaboration with agencies and community partners	**Yes**. The project would not conflict nor impede the implementation of any plans or policies addressing safety per the Vision Zero Action Plan. The Project would implement a traffic control plan as discussed in MM-TRA-1 Construction Traffic Management Plan to ensure safe movement of all road users during the construction period.	Section 3.12.2.3 Section 3.12.5.3

Federal, state, and local laws, ordinances, regulations, and standards (LORS) related to transportation resources were reviewed for applicability to the Project. These are detailed below, Laws, Ordinances, Regulations, and Standards.

3.12.5.1 Federal LORS

The Code of Federal Regulations (CFR) Hazardous Material Regulations (HMR: 49 CFR Parts 171-180) apply to any person who offers transportation HM in commerce.

- 49 CFR 172, 173, and 173. These regulations provide standards for labels, placards, and markings on hazardous materials shipments by truck (Part 172), standards for packaging hazardous materials (Parts 173), and for transporting hazardous materials in tank cars (Part 179). The administering agencies for the above authority are the CHP and U.S. Department of Transportation.

The Project will be consistent with the CFR regulations by using applicable standards for labeling and packaging hazardous materials.

3.12.5.2 State LORS

California Environmental Quality Act

CEQA generally requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects and to reduce those environmental impacts to the extent feasible.

The laws and rules governing the CEQA process are contained in the CEQA statute (California Public Resources Code, Section 21000 et seq.), the CEQA Guidelines (14 CCR 15000 et seq.), published court decisions interpreting CEQA, and locally adopted CEQA procedures.

The Project's impact analysis provided in Section 3.12.2, specifically, the VMT analysis has been prepared per CEQA requirements for transportation impact analysis.

Caltrans

As the owner and operator of the State Highway System, Caltrans implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact state highway facilities. Pursuant to Section 21092.4 of the Public Resources Code, for projects of statewide, regional, or area-wide significance, the lead agency shall consult with transportation planning agencies and public agencies that have transportation facilities which could be affected by the project.

Caltrans Draft Transportation Impact Study Guide and Safety Review (February 2020) replaced the Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Per the 2020 Transportation Impact Study Guide, Caltrans' primary review focus is VMT, replacing LOS as the metric used in CEQA transportation analyses (Caltrans 2020). Caltrans recommends use of OPR's recommended thresholds and guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018) for land use projects. In addition to VMT, the 2020 Transportation Impact Study Guide states that it may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System. The Local Development Review Safety Review Practitioner's Guidance (February 2024) provides guidance for analyzing Caltrans facilities near land development projects.

The Project's impact analysis provided in Section 3.12.2, specifically, the VMT analysis and Caltrans off-ramp analyses have been prepared per Caltrans requirements for TIA.

California Vehicle Code

The California Vehicle Code (CVC) is a rulebook containing information about traffic laws in California. The following sections would apply to the proposed Project:

- CVC Sections 13369, 15275, and 15278 address the licensing of drivers and classifications of licenses required to operate particular types of vehicles.
- CVC Sections 32100.5 addresses the transportation of hazardous materials that pose an inhalation hazard.
- CVC, 13 CCR 1160, et seq. provides the CHP with authority to adopt regulations for the transportation of hazardous materials in California. The CHP can issue permits and specify the route for hazardous material delivery.
- CVC Section 31303 stipulates that the transportation of regulated substances and hazardous materials are required to be carried out via the most direct route, using State or interstate highways whenever possible.
- California Streets and Highway Code (S&HC), Sections 660, 670, 1450, 1460 et seq. 1470, and 1480, regulate right-of-way encroachment and granting of permits for encroachments on state and county roads.
- S&HC Sections 117 and 660–711 and CVC Sections 35780 et seq., require permits to transport oversized loads on county roads. S&HC Sections 117 and 660 to 711 require permits for any construction, maintenance, or repair involving encroachment on state highway rights-of-way. CVC Section 35780 requires approval for a permit to transport oversized or excessive loads over state highways.

- Caltrans weight and load limitations for state highways apply to all state and local roadways. The weight and load limitations are specified in CVC Sections 35550 to 35559. The following provisions, from the CVC, apply to all roadways and are therefore applicable to this project.
  - General Provisions: The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.
  - The maximum wheel load is the lesser of the following: (a) the load limit established by the tire manufacturer, or (b) a load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width.
  - Vehicles with Trailers or Semi-trailers: The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds.

As discussed in Sections 3.12.6 and 3.12.7, the Project will comply with the applicable provision of the CVC and apply for required transportation and encroachment permits from the agencies.

3.12.5.3 Local LORS

This section reviews compliance with all relevant local LORS without regard to their applicability as a matter of law. These LORS include the following:

Los Angeles County General Plan

Los Angeles County General Plan Mobility Element. The Mobility Element of the General Plan contains goals designed to further the County's mobility strategy pursuant to California Complete Streets Act of 2007. The Mobility Element addresses this requirement with policies and programs that consider all modes of travel, with the goal of making streets safer, accessible and more convenient to walk, ride a bicycle, or take transit (County of Los Angeles 2015). The goals within the Mobility Element are presented below.

Goal M 1 Street designs that incorporate the needs of all users. (Complete Streets)

Goal M 2 Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths and trails that promote active transportation and transit use. (Active Transportation Design)

Goal M-3 Streets that incorporate innovative designs. (Innovative Street Design)

Goal M 4 An efficient multimodal transportation system that serves the needs of all residents.

Goal M 5 Land use planning and transportation management that facilitates the use of transit.

Goal M 6 The safe and efficient movement of goods.

Goal M 7 Transportation networks that minimizes negative impacts to the environment and communities.

Los Angeles County General Plan Safety Element. The purpose of the Safety Element, (a chapter of the General Plan), is to reduce the potential risk of death, injuries, property damage, economic loss, and social dislocation resulting from natural and human-made hazards (County of Los Angeles 2025). The Safety Element also includes policies for emergency response within Los Angeles County. Emergency services within the County are provided by the LACoFD and Los Angeles County Sheriff's Department, in cooperation with local agencies.

The Project's impact analysis is provided in Section 3.12.2. The project would not conflict with or impede the implementation of any plans or policies regarding proposed transit, roadway, bicycle or pedestrian facilities including the County's General Plan and its applicable elements.

Antelope Valley Area Plan

Mobility Element. As a component of the Los Angeles County General Plan, the Antelope Valley Area Plan refines the countywide goals and policies in the General Plan by addressing specific issues relevant to the Antelope Valley, and its Mobility Element outlines the improvements needed to ensure current and future mobility between land uses. This Element creates the framework for a balanced, multi-modal transportation system across the Antelope Valley through Goals and Policies that address three (3) topics: regional movement of services and goods, local transportation meeting the needs of residents, and the balance required to meet the demands of both.

The following goals are included in the Mobility Element related to this section:

Goal M 1 Land use patterns that promote alternatives to automobile travel

Goal M 2 Reduction of vehicle trips and emissions through effective management of travel demand, transportation systems, and parking

Goal M 3 An efficient network of major, secondary, and limited secondary highways to serve the Antelope Valley

Goal M 4 A network of local streets that support the rural character of the unincorporated Antelope Valley without compromising public safety

Goal M 5 Long-haul truck traffic is separated from local traffic, reducing the impacts of truck traffic on local streets and residential areas

Goal M 6 A range of transportation options to connect the Antelope Valley to other region

Goal M 7 Bus service is maintained and enhanced throughout the Antelope Valley

Policy M 8 Alternative transit options in areas not reached by bus service

Goal M 9 A unified and well-maintained bicycle transportation system throughout the Antelope Valley with safe and convenient routes for commuting, recreation, and daily travel

Goal M 10 A unified and well-maintained multi-use (equestrian, hiking, and mountain bicycling) trail system that links destinations such as rural town centers and recreation areas throughout the Antelope Valley

Goal M 11 A continuous, integrated system of safe and attractive pedestrian routes linking residents to rural town center areas, schools, services, transit, parks, and open space areas

The Project's impact analysis is provided in Section 3.12.2. The project would not conflict with or impede the implementation of any plans or policies regarding proposed transit, roadway, bicycle or pedestrian facilities including the Antelope Valley Area Plan.

Los Angeles County Transportation Analysis Guidelines

The County's Public Works Department (Public Works) adopted their Transportation Impact Analysis (TIA) Guidelines on July 23, 2020. The Transportation Impact Guidelines include guidance and requirements for VMT analysis of development and transportation projects, including project screening, analysis methodology, significance criteria, impact assessment, and mitigation strategies. A project's effect on automobile delay is no longer a consideration when identifying a significant impact under CEQA; however, the County requires operational analysis to include site access and circulation constraints related to the provision of access to and from the project site as part of a project's environmental review.

The Project's impact analysis is provided in Section 3.12.2 and addresses the VMT and operational analysis and criteria detailed in the County's TIA Guidelines, as they apply to the proposed Project.

Los Angeles County Code

The Los Angeles County Code consists of the regulatory, penal and administrative ordinances of a general nature of Los Angeles County. It is codified pursuant to California Government Code Sections 50022.1 et seq, and is organized by chapters, articles, divisions, and sections. The Los Angeles County Code is updated as new ordinances are adopted by the County Board of Supervisors. Sections of the code applicable to transportation include the following:

- **Title 22, Planning and Zoning.** The Zoning Code includes regulations concerning where and under what conditions various land uses may occur in the in the County's unincorporated areas. It also establishes zone-specific height limits, setback requirements, and other development standards, for residential, mixed-use, commercial, industrial, and all other types of sites. The Zoning Code is a primary tool for implementing the County's General Plan. The purpose of the Zoning Code is to encourage, classify, designate, regulate, and restrict the highest and best locations and uses of buildings and structures, for residential, commercial, and industrial or other purposes.
- ***Division 9, Administration.*** Division 9 of the Zoning Code identifies the powers and duties of the officials responsible for administering the Zoning Code, as well as common procedures for administering permits, reviews, and legislative actions. Section 2.222.070 (Application Filing) states that the Director of Regional Planning shall prepare a checklist that indicates the forms, information, and materials necessary for processing each permit or review application. This includes requirements pursuant to the evaluation of permit applications, development, traffic control, and emergency access plans, and all other materials required prior to issuance of a building or construction permit in the County. For each permit or review requested by the applicant, the application submittal shall include forms, information, and materials required by the checklist, which ensures compliance with existing regulations.
- **Title 15, Vehicles and Traffic.** Title 15 regulates the moving, parking, and standing of vehicles in the unincorporated areas of the County and includes Section 15.76.170, which establishes that whenever the

road commissioner finds that the regulation of traffic is necessary at the site of road or street construction or maintenance, traffic may be regulated by means of persons authorized for such duty (i.e., flagmen).

- **Title 16, Highways.** Chapter 16.16, Construction work, of Title 16 contains provisions that apply to permits for the laying, constructing, reconstructing or repairing of curbs, sidewalks, gutters, driveways, highway surfaces, retaining walls, storm drains, culverts, highway lights or lighting system, or other appurtenant structures in the County.
- **Title 32, Fire Code.** Emergency services within the urban areas of the County are provided by the Los Angeles County Fire Department (LACoFD). Pursuant to Section 105.7.26.2 of the Fire Code, when required by law or other agencies, LACoFD fire code official review and approval is required prior to final approval of the following applications: tract maps, parcel maps, final maps, planned unit developments, conditional use permits, design overlay reviews, environmental impact reviews, road vacations, zone changes, water plan reviews, and gate design review for land development projects. Further, Section 4811.9, Fire department access, requires that emergency vehicle access, fire lanes, and access roads be maintained at all times, pursuant to Section 503 of the Fire Code. Any deviations are subject to approval by the LACoFD fire code official.

The Project will be consistent with County's Code through implementation of a traffic control plan as discussed in **MM-TRA-1 Construction Traffic Management Plan** and ensure emergency access is maintained at all times per LACoFD requirements, as discussed under Threshold 3.12.2.3.3.

Requirements for Temporary Controls for Lane Closures, Street Closures, and Detours

The Requirements for Temporary Controls for Lane Closures, Street Closures, and Detours (Traffic Control Requirements) provides the requirements for temporary traffic controls and access for any permitted activity within the County public rights-of-way when temporary disruption of traffic is implemented. The provisions are supplemental to Part 6 of the "Greenbook" Standard Specifications for Public Works Construction. As a general provision, the Traffic Control Requirements state that temporary street closures, detours, lane closures, signs, lights and other traffic control devices shall conform to the latest California Manual on Uniform Traffic Control Devices (California MUTCD). The Traffic Control Requirements also include provisions pertaining to emergency access, preparation of Traffic Control Plans, traffic lanes and clearances, emergency traffic controls, and notifications related to roadway closures (County of Los Angeles 2016).

The Project will be consistent with the County's Code through implementation of a traffic control plan as discussed in **MM-TRA-1 Construction Traffic Management Plan** per County's requirements for any construction in the County public rights-of-way.

Vision Zero Los Angeles County: A Plan for Safer Roadways

Traffic fatalities and severe injuries are a serious public health threat in the County (County of Los Angeles 2019). Vision Zero Los Angeles County: A Plan for Safer Roadways (referred to as "Vision Zero" or "the Action Plan") is a traffic safety initiative intended to guide the County's efforts on reducing traffic deaths and severe injuries on unincorporated County roadways through 2025 (County of Los Angeles 2019). The Action Plan creates the vision for the future and sets goals and actions to enhance traffic safety in collaboration with agencies and community partners. The Action Plan's three (3) guiding principles are as follows:

- **Health Equity:** Reduce gaps in health outcomes by addressing the practices that disadvantage some populations over others and lead to health inequities.

- **Data-driven process:** Identify where and why traffic collisions are happening and prioritize projects and programs in these areas.
- **Transparency:** Maintain regular communication with the public about progress, and how the County is working to enhance traffic safety.

The County has committed to working closely with residents and other stakeholders to identify challenges and develop enhancements aimed at eliminating fatal collisions in unincorporated County communities. Based on meetings with community members, County departments, and partner agencies, a clear set of actions has been developed for the next 5 years to move closer to the goal of eliminating traffic fatalities and severe injuries. These actions include efforts to update, expand, and establish new processes, policies, trainings, projects, and programs, (County of Los Angeles 2019). According to the Action Plan, agencies that adopt a Vision Zero initiative commit to the systematic elimination of traffic deaths and severe injuries for all roadway users (County of Los Angeles 2019).

The Project's impact analysis is provided in Section 3.12.2. The project would not conflict nor impede the implementation of any plans or policies addressing safety per the Vision Zero Action Plan. The Project would implement a traffic control plan as discussed in **MM-TRA-1 Construction Traffic Management Plan** to ensure safe movement of all road users during the construction period.

3.12.6 Agencies and Agency Contacts

Several agencies regulate traffic and transportation and would be involved in regulating transportation, including transportation of hazardous materials, to and from the Project site. Regulatory agency contacts are shown in Table 3.12-14.

Table 3.12-14. Permits and Agency Contacts

Permit or Approval	Agency Contact	Applicability
Transportation Permit for Oversized Loads	Caltrans Permit Officer on Duty Caltrans, Transportation Permits Issuance Branch 916.322.1297 LA County Department of Public Works, Transportation Permits Tiffany Nguyen, 626.458.4948 tnguyen@dpw.lacounty.go	Yes
Hazardous Materials Transportation License	California Highway Patrol Hazardous Material Licensing Program (916) 327-5039	Yes
LA County Haul Route – Encroachment Permit	LA County Department of Public Works, Road Permit Application, Land Development Division 900 South Fremont Ave, 3rd FL Alhambra, CA 91803 626.458.6959	Yes

Table 3.12-14. Permits and Agency Contacts

Permit or Approval	Agency Contact	Applicability
Right of Entry Permit or Railroad Encroachment Permit	Southern California Regional Rail Authority (SCRRA) 2700 Melbourne Ave Pomona, California 91767 Attn: Eric Reese – ROW Encroachments Coordinator Email: rightofentry@scrra.net 909.667.8108	Yes

3.12.7 Permits and Permit Schedule

Table 3.12-15 lists the permits related to traffic and transportation and the permit schedule. The vehicles used to transport heavy equipment and construction materials will require transportation permits when they exceed the size, weight, width, or length thresholds set forth in Section 35780 of the CVC, Sections 117 and 660-711 of the California Streets and Highways Code, and Sections 1411.1 to 1411.6 of the CCRs. Affected vehicles will be required to obtain transportation permits from County, Caltrans, or from any other affected agency. Transport route arrangements would be required with Caltrans and CHP officials for permitting and escort, as applicable. Transportation of hazardous materials to and from the Project will be conducted in accordance with CVC Section 31303.

Table 3.12-15. Permits and Permit Schedule for Transportation

Permit	Schedule	Status
Single/annual-trip transportation permit for oversized loads and oversized vehicles	Obtain when necessary, 2-hour processing time (single trip) to 2 weeks (annual trip).	Will be obtained prior to construction
Hazardous Materials Transportation License	Obtain when necessary, approximately 2-week processing time	Will be obtained prior to construction
LA County Haul Route – Encroachment Permit	Prior to permit issuance, applicable permit fees including Traffic Control plan. Transportation Management Plan review if necessary.	Will be obtained prior to construction
Right of Entry Permit or Railroad Encroachment Permit	Metrolink/SCRRA	Will be obtained prior to construction

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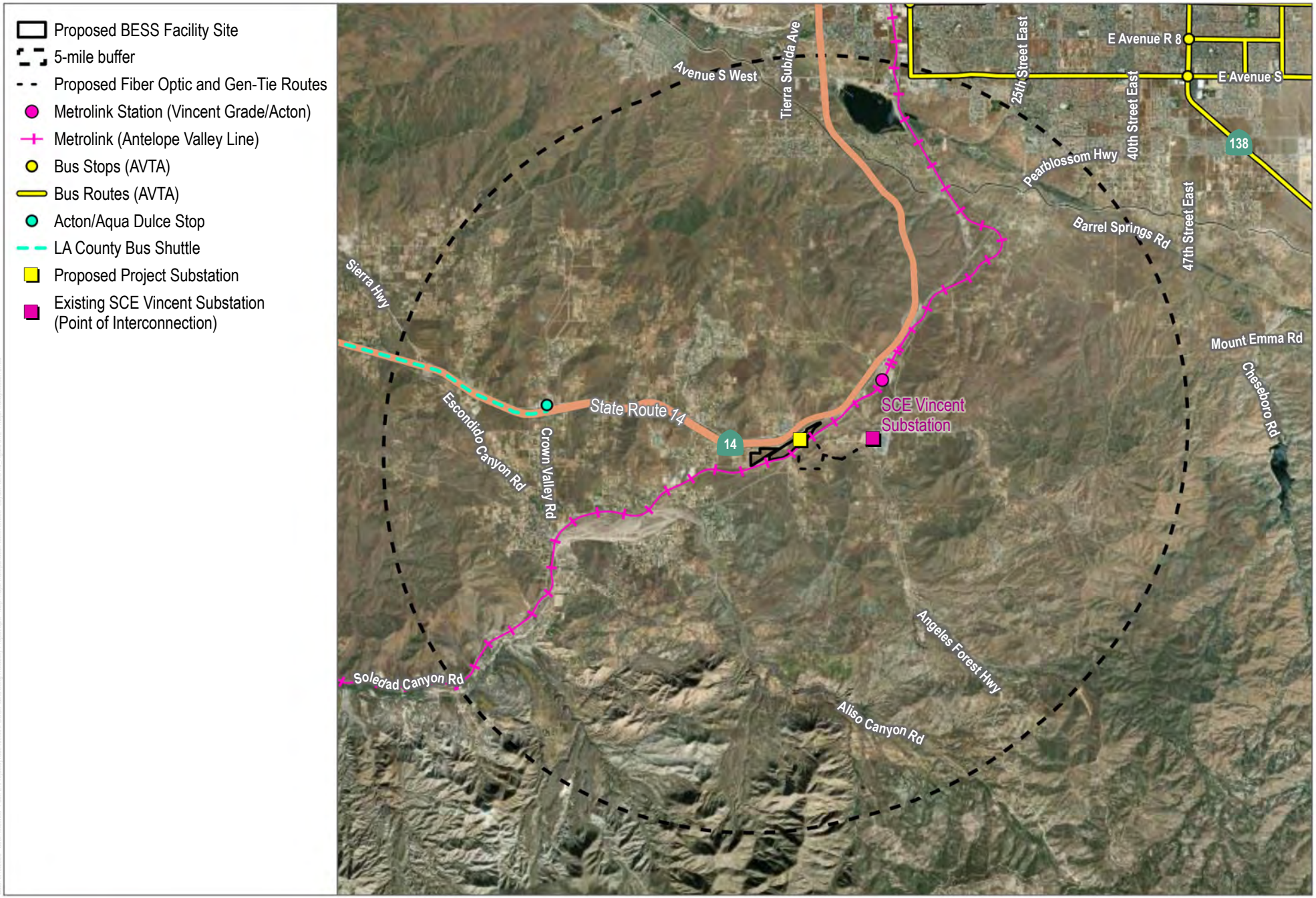

SOURCE: Caltrans; SCAG; World Imagery; Antelope Valley Transit Authority; Open Streets

DUDEK

0 4,500 9,000 Feet

FIGURE 3.12-1

Major Transportation Facilities within 5-mile Radius of Project

Prairie Song Reliability Project

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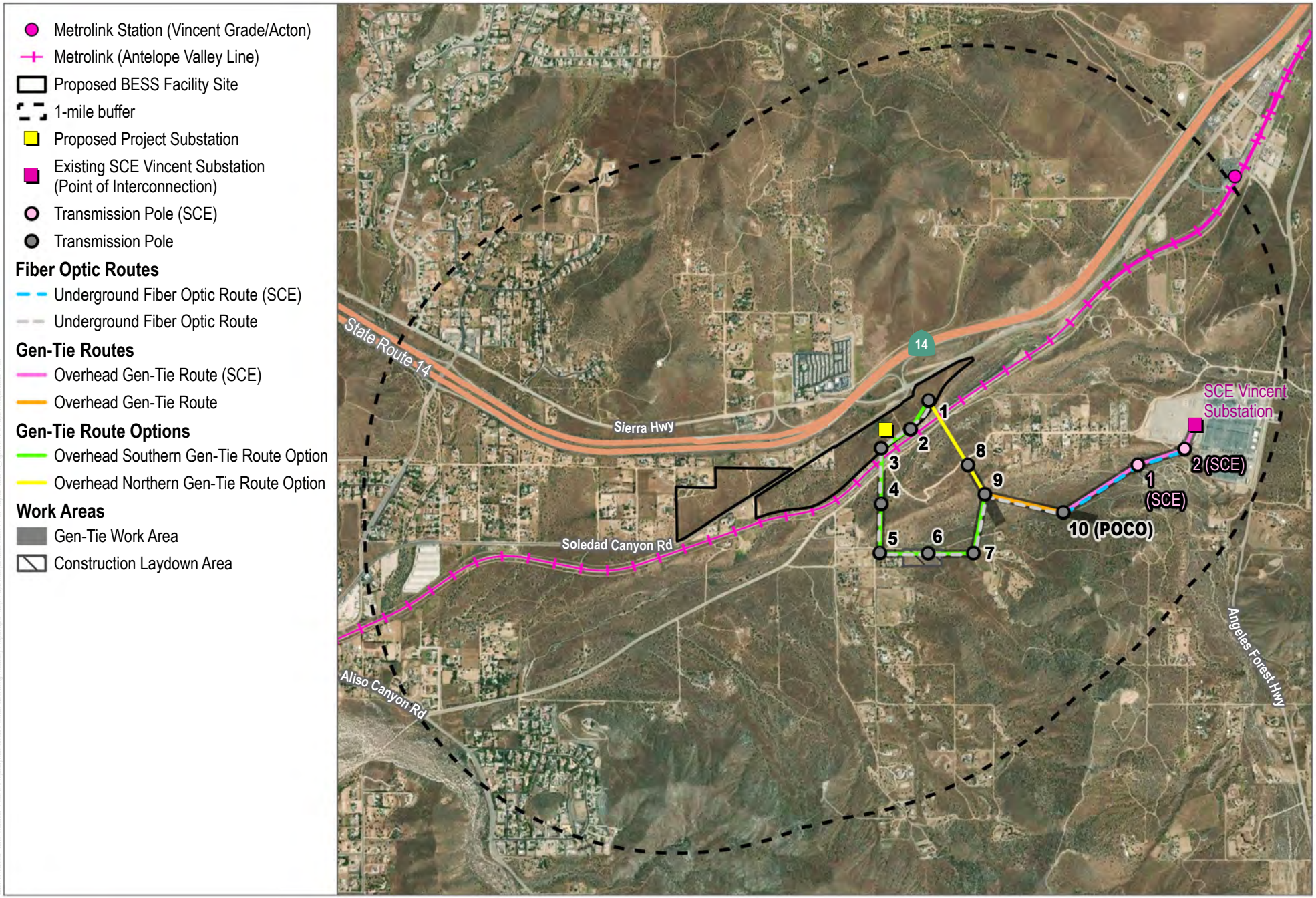

SOURCE: Caltrans; SCAG; World Imagery; Open Streets

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0 1,000 2,000 Feet

FIGURE 3.12-2

Major Transportation Facilities within 1-mile Radius of Project

Prairie Song Reliability Project

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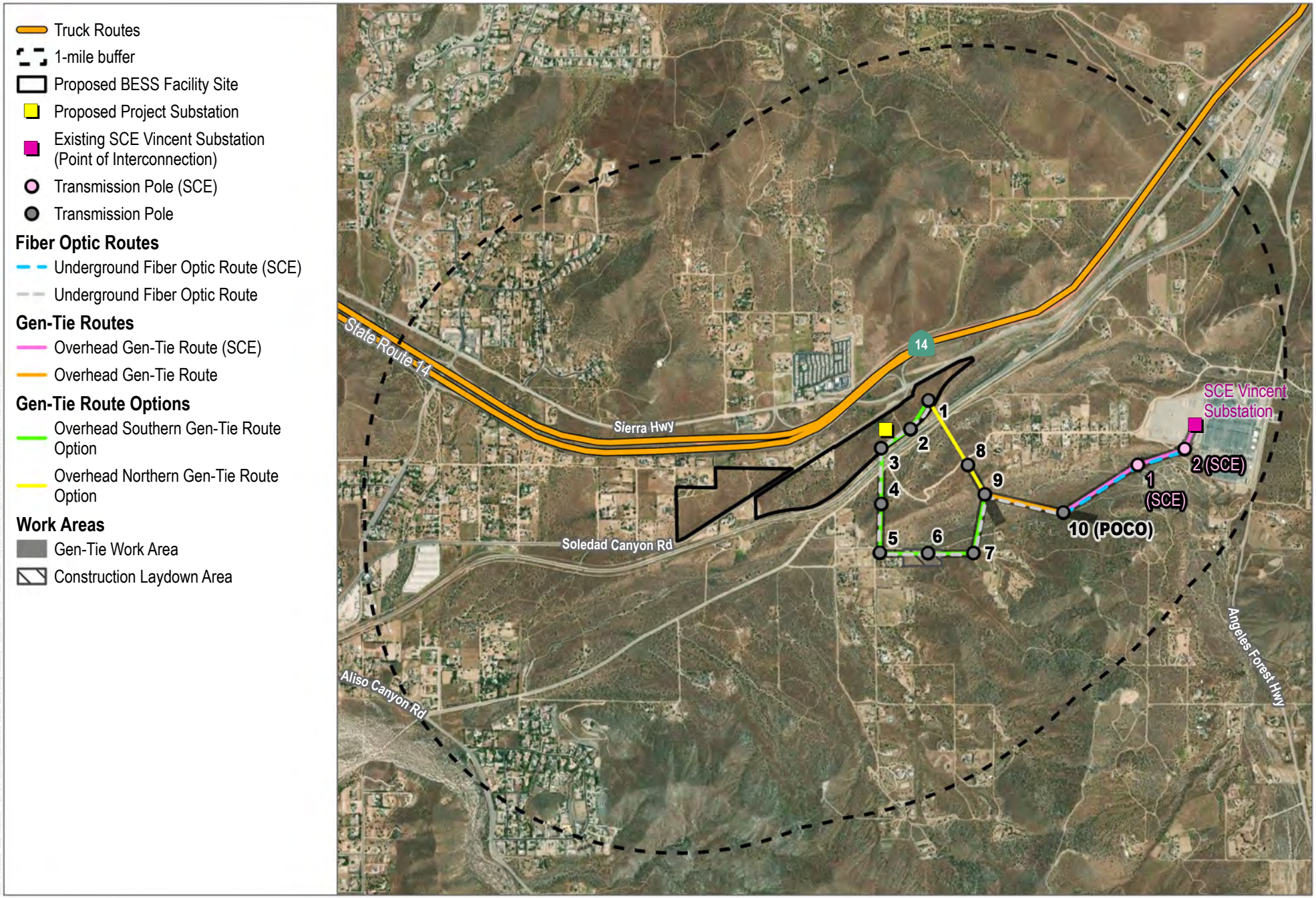

SOURCE: City of Palmdale Ordinance Codes 2024; World Imagery; Open Streets

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0 1,000 2,000 Feet

FIGURE 3.12-3

Truck Routes within 1-mile Radius of Project

Prairie Song Reliability Project

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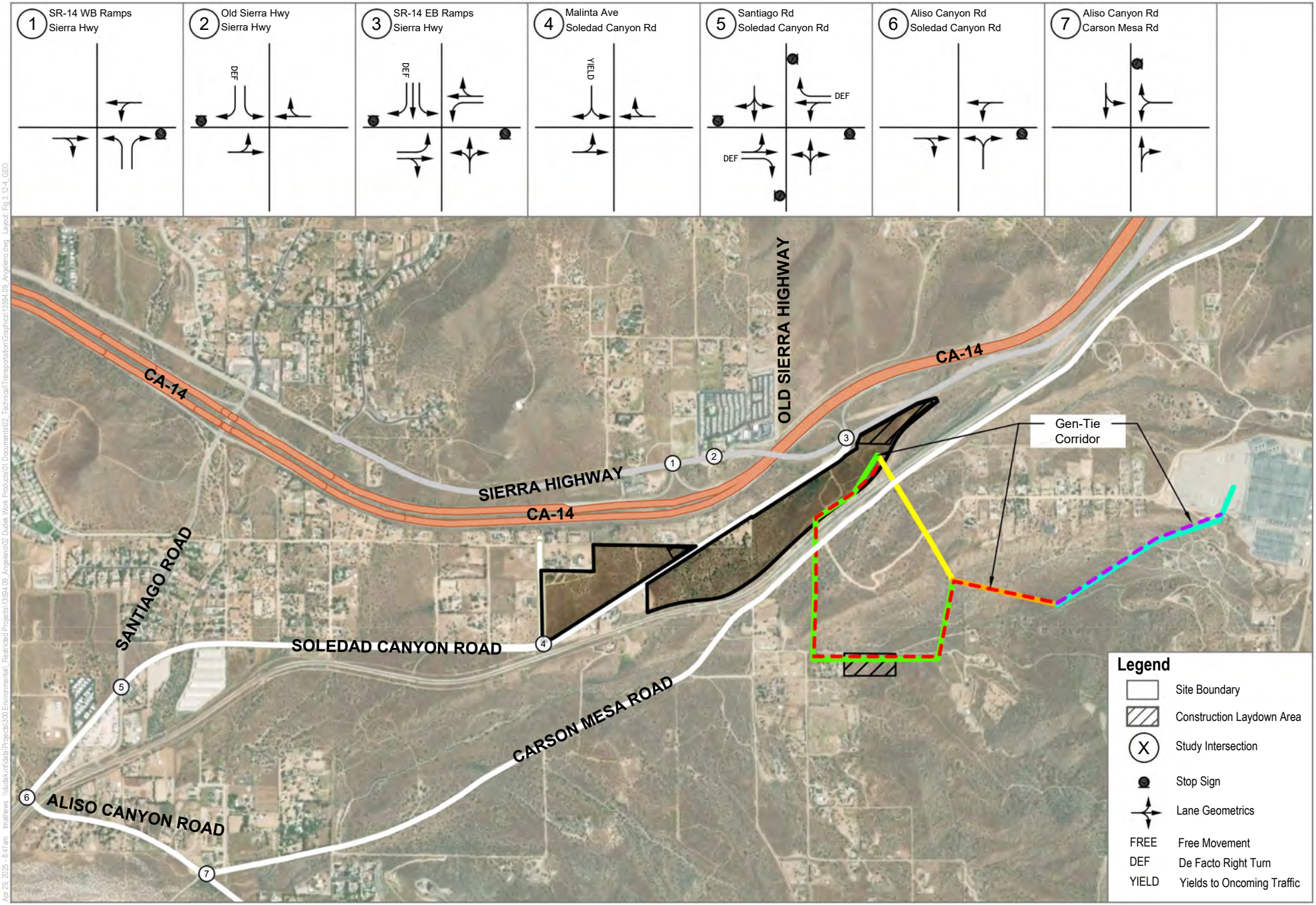

SOURCE: World Imagery, Los Angeles County, Caltrans, 2024.

FIGURE 3.12-4

Existing Intersection Geometrics

Prairie Song Reliability Project

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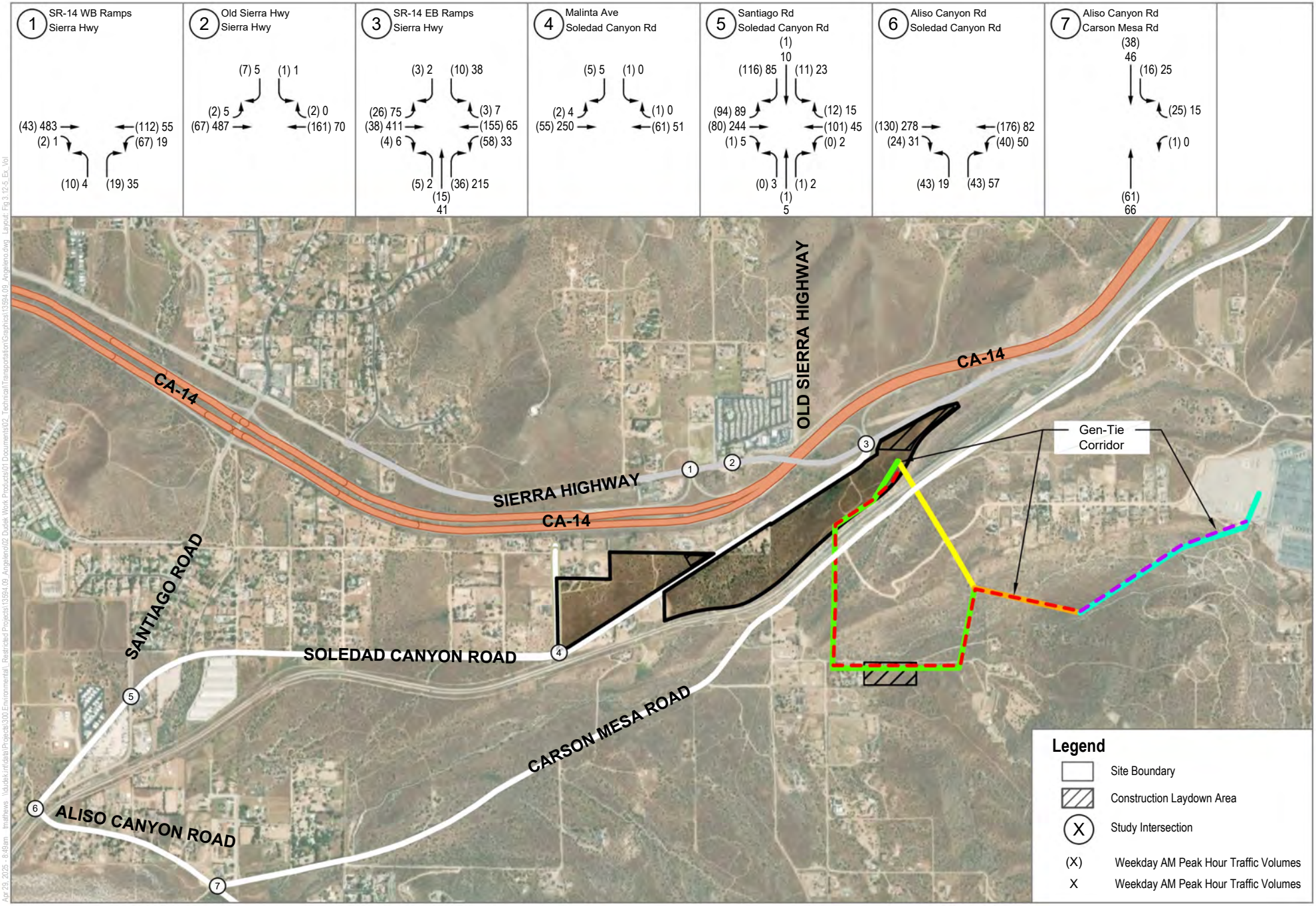

SOURCE: World Imagery, Los Angeles County, Caltrans, 2024.

FIGURE 3.12-5

Existing Peak Hour Traffic Volumes

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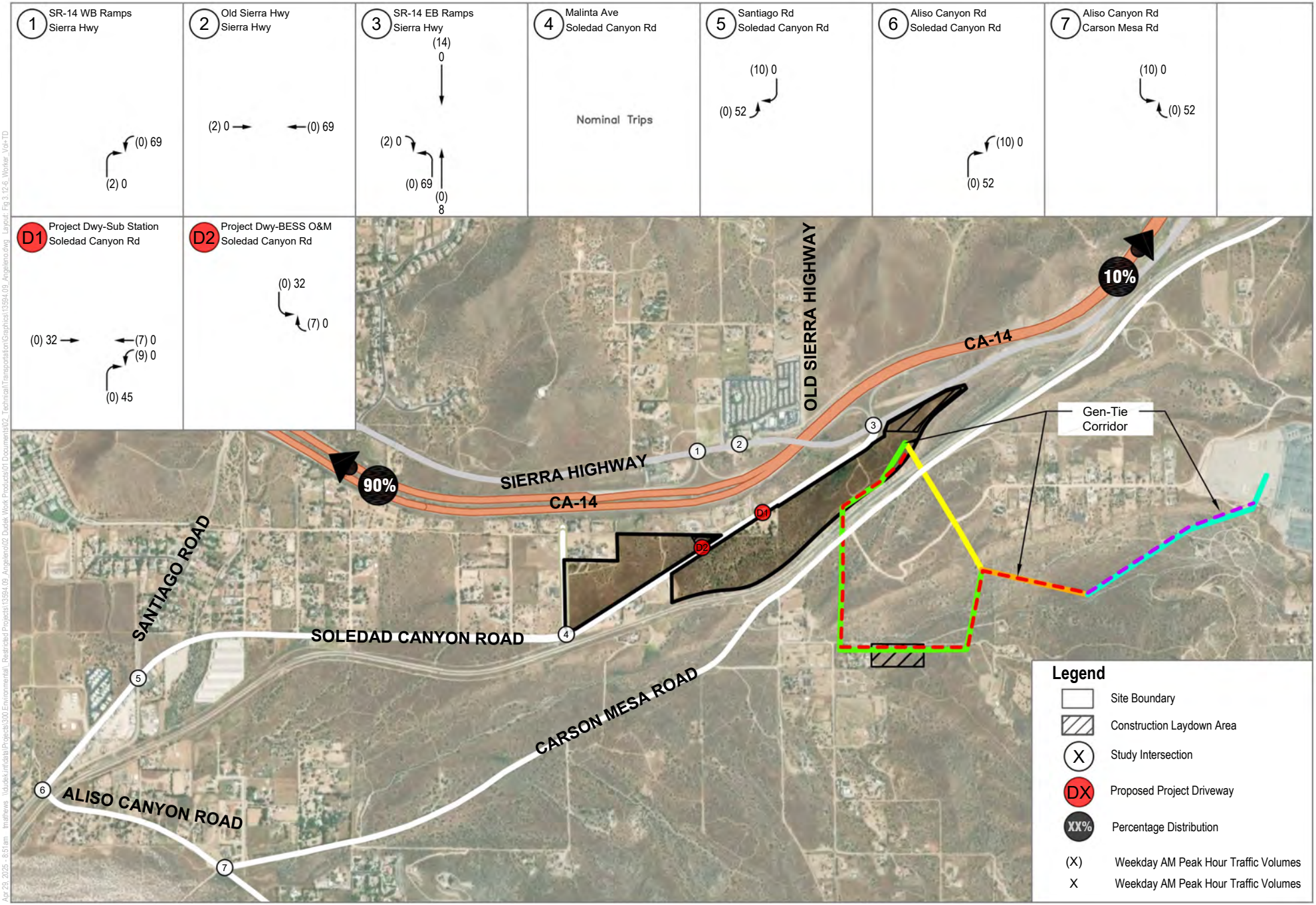

SOURCE: World Imagery, Los Angeles County, Caltrans, 2024.

FIGURE 3.12-6

Project Trip Assignment and Distribution - Workers

Prairie Song Reliability Project

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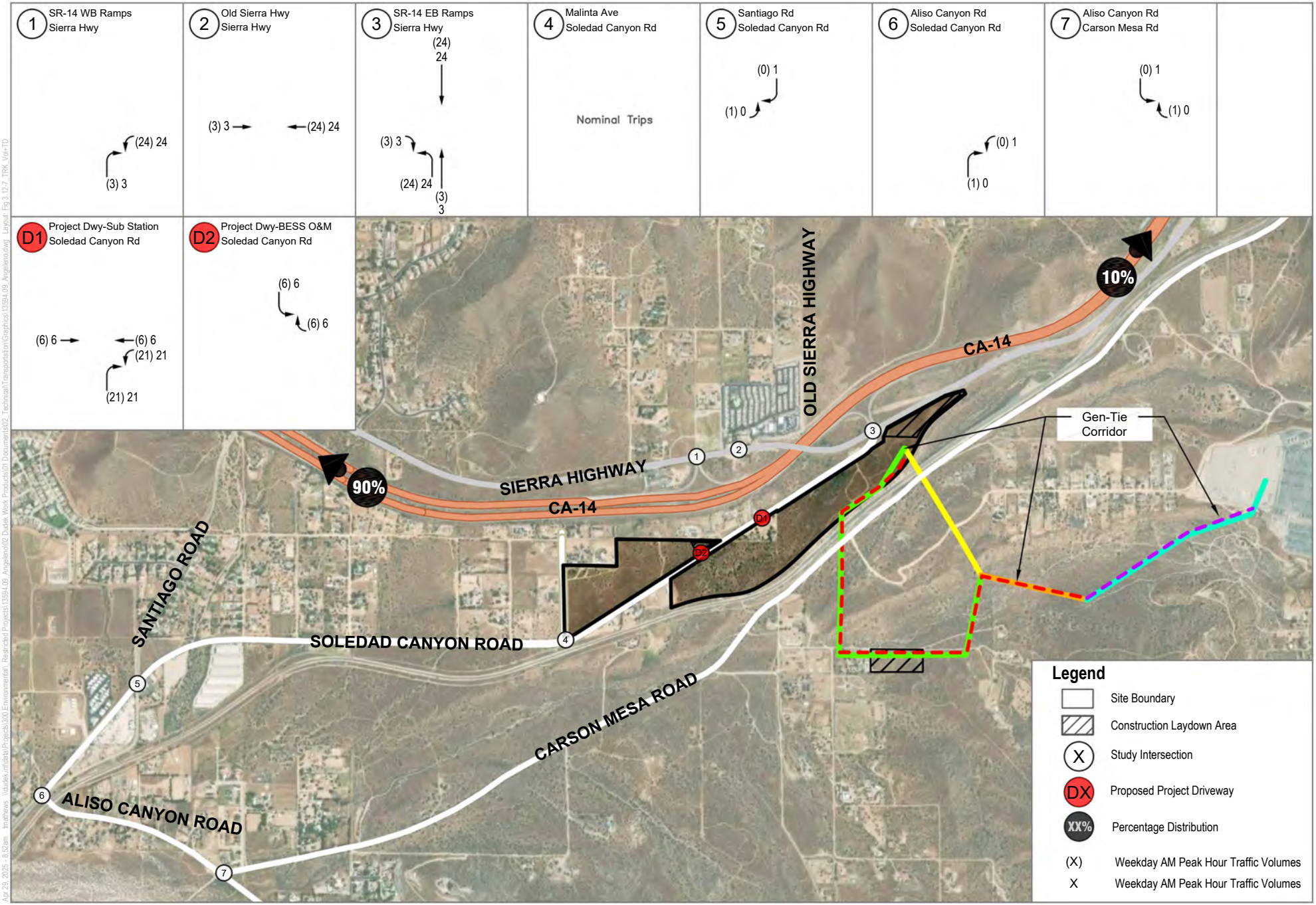

SOURCE: World Imagery, Los Angeles County, Caltrans, 2024.

FIGURE 3.12-7

Project Trip Assignment and Distribution - Trucks (Non-PCE)

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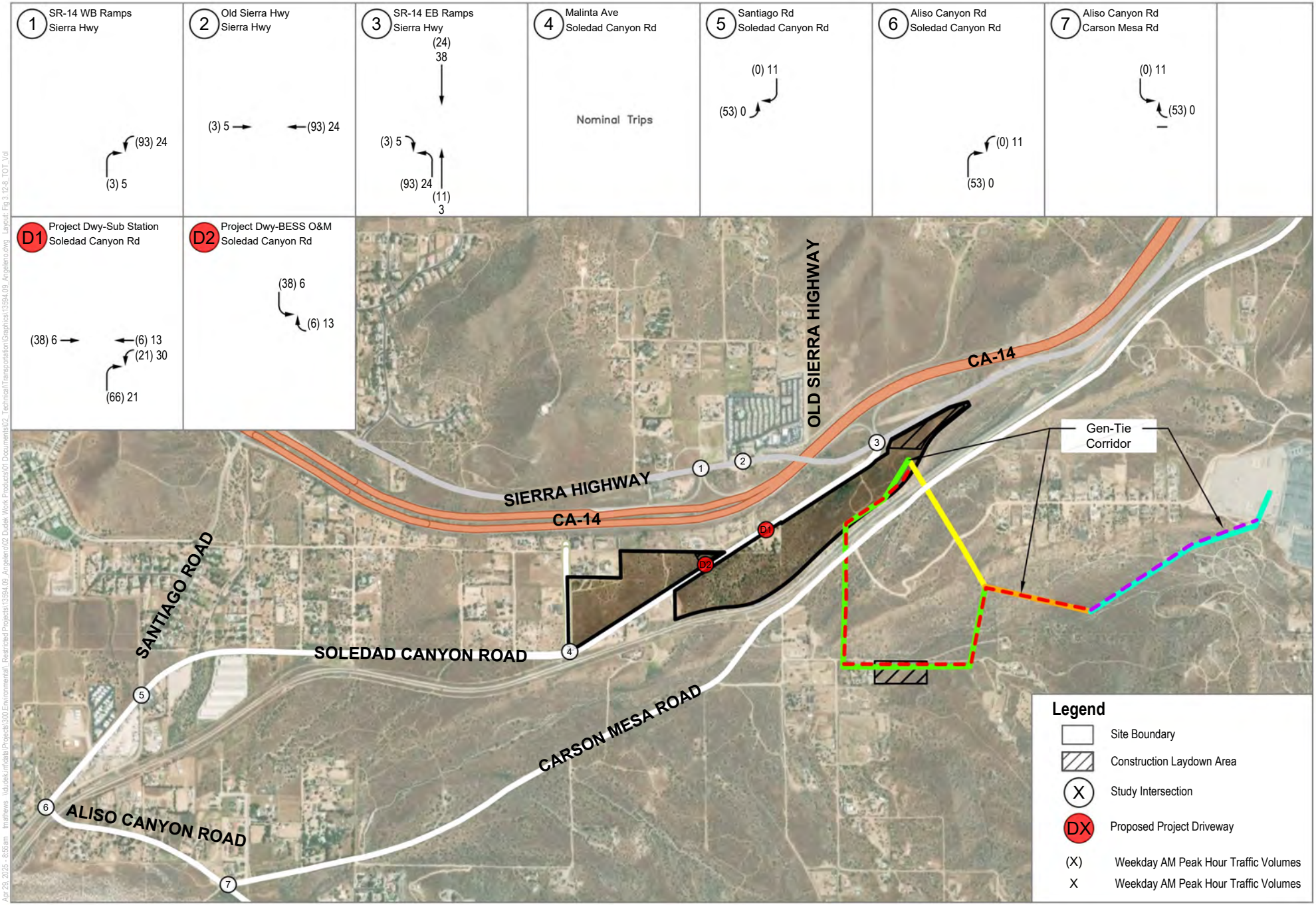

SOURCE: World Imagery, Los Angeles County, Caltrans, 2024.

FIGURE 3.12-8

Project Trip Assignment - Total (Non-PCE)

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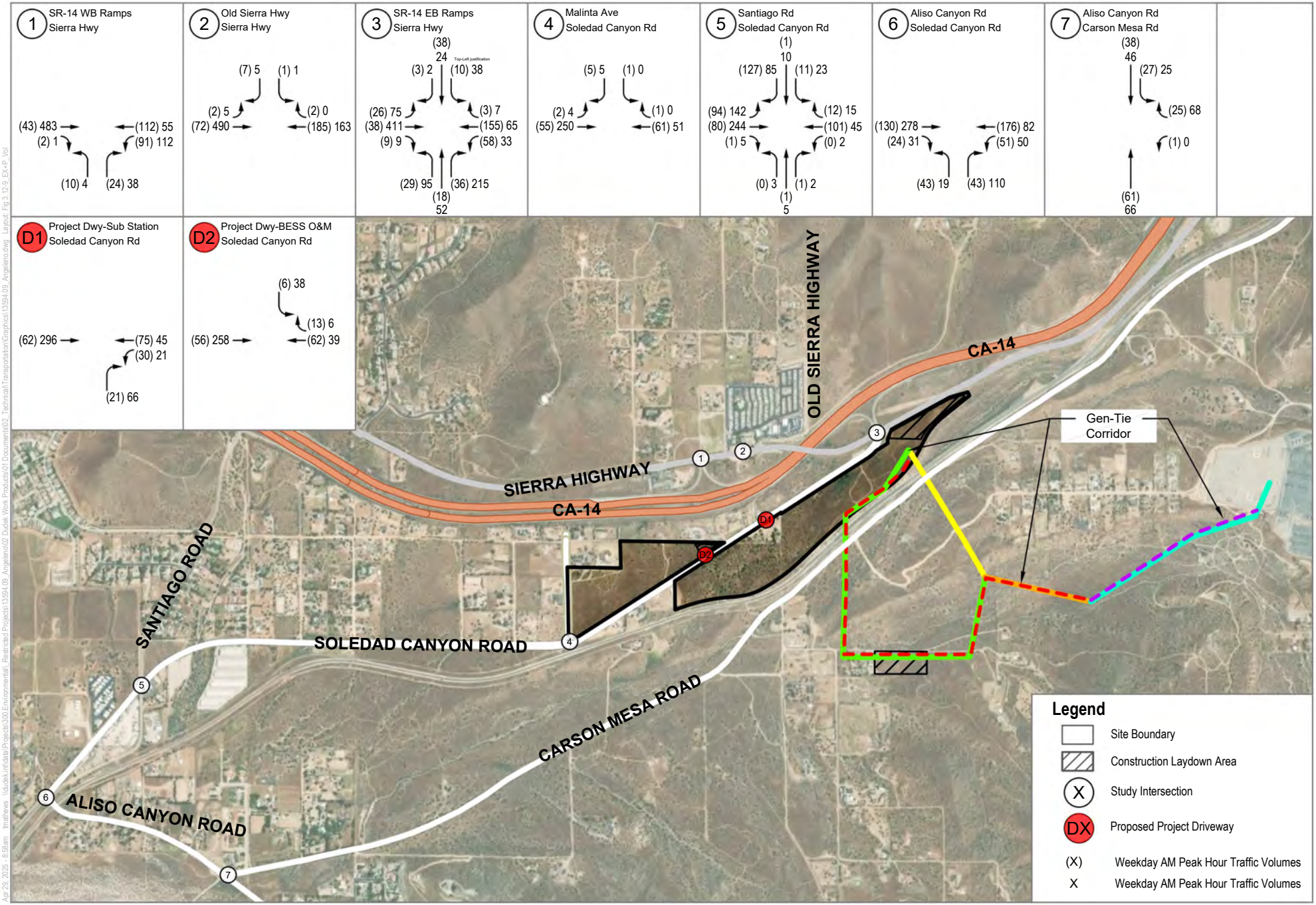

SOURCE: World Imagery, Los Angeles County, Caltrans, 2024.

FIGURE 3.12-9

Existing plus Project Peak Hour Traffic Volumes (Non-PCE)

DUDEK

Prairie Song Reliability Project

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3.13 Visual Resources

This section discusses the existing landscape (built and natural) surrounding the Prairie Song Reliability Project (Project) facility and the potential visual impacts associated with its construction and operation. The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility using lithium-iron phosphate cells or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This evaluation of visual resources includes the following elements:

- Section 3.13.1 describes the existing environment that could be affected, including regional and local visual resources.
- Section 3.13.2 identifies potential environmental impacts that may result from Project construction, O&M, and decommissioning.
- Section 3.13.3 discusses potential cumulative effects.
- Section 3.13.4 describes Project design and mitigation measures that will be implemented to avoid or minimize potentially significant impacts.
- Section 3.13.5 presents laws, ordinances, regulations, and standards (LORS) applicable to visual resources.
- Section 3.13.6 identifies regulatory agencies and agency contacts.
- Section 3.13.7 describes permits required for the Project related to visual resources.
- Section 3.13.8 provides references used to develop this section.

For the purposes of this analysis, visual resources refer to the natural and cultural landscape features that compose the landscape surrounding the Project site and their qualities and contribution to landscape character. Natural landscape features include landforms, water features, and vegetation. Cultural landscape features include buildings, roadways, structures, and artificial lighting related to human land uses. The quality of the visual environment has a value to individuals and, more generally, communities.

In accordance with the California Energy Commission's (CEC) Appendix B, Information Requirements – for an Application for Certification (see Section 20 California Code of Regulations, Division 2, Chapter 5, Appendix B[g][6] Visual Resources), this section provides a visual assessment for the Project, including an evaluation of whether the Project will conflict with applicable zoning and other local regulations governing scenic quality. As such, this section includes an investigation of scenic resources (e.g., scenic vistas, highways, overlooks, parks, trails) within a 5-mile radius centered on the Project site. Identified resources—including sensitive built environment resources/structures, scenic vistas, state designated scenic highways, locally designated scenic roads, scenic overlooks, waterbodies, and public trails and parks—were mapped and presented in a table format (see Appendix 3.13A, Scenic Resources Within 5 Miles of the Project Site). This analysis conforms with the documentation requirements of the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Section 21000 et seq.). This section focuses on resources (i.e., views and existing visual character) located in proximity to the Project site that have the potential to be affected by implementation of the Project.

A summary of the visual resources evaluation is provided in the table below.

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
1	Have a substantial adverse effect on a scenic vista.	☐	☐	☒	☐
2	Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	☐	☐	☐	☒
3	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, conflict with applicable zoning and other regulations governing scenic quality.	☐	☐	☒	☐
4	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	☐	☐	☒	☐

3.13.1 Environmental Setting

3.13.1.1 Regional Setting

The Project site is in unincorporated Los Angeles County, California, south of State Route (SR) 14 and approximately 3 miles northeast of the unincorporated community of Acton. Acton is a census designated place in the southwestern portion of Antelope Valley, along SR-14 and nestled between the Sierra Pelona Mountains and the San Gabriel Mountains. The area is characterized by its open landscapes, rolling hills, clustered residential developments, limited commercial uses, and a mix of desert and mountainous terrain. The vegetation includes scrubby shrubs, cacti, and generally clustered trees that are reflective of the semi-arid climate. The community is adjacent to the Angeles National Forest, and natural hillsides and rugged ridgelines separate the community from the City of Palmdale and the remainder of Antelope Valley. The community has a rural town center area along Crown Valley Road between Gillespie Avenue and Soledad Canyon Road, approximately 3.5 miles southwest of the Project site. The community presents an old-western aesthetic and includes ranch-style homes and equestrian facilities.

The Project site lies south of Antelope Valley Freeway, west of Angeles Forest Highway, and north and south of Soledad Canyon Road (see Figure 1-1, Regional Map, in Chapter 1, Executive Summary).

The area surrounding the Project site encompasses a semi-arid landscape characterized by rural residences (some featuring equestrian facilities), small local roads (some of which are designated by the Antelope Valley Area Plan as "Scenic Drives") (County of Los Angeles 2015a), open spaces, rolling hills, and rugged mountainous terrain. The terrain includes dry grasses, shrubs, and scattered trees, typical of the Southern California high desert. In addition to residential uses, the surrounding area includes multiple high-voltage electrical transmission lines, local electrical

distribution lines, and the existing SCE Vincent Substation. The substation is approximately 1 mile east of the proposed BESS facility site (see Figure 1-3, Site Layout, in Chapter 1).

3.13.1.2 Project Site

The BESS facility site is in a relatively flat area and covered in a variety of typically low shrubs and grasses, including cheesebush, rabbitbrush, brome, sagebrush, and buckwheat. Taller juniper shrubs also occur on the proposed BESS facility site (in particular, the portion of the site south of Soledad Canyon Road). Locally, the Metrolink light rail line runs parallel to the southern boundary of the proposed BESS facility site, and Soledad Canyon Road splits the northern and southern BESS sites from one another. Dirt roads and drainages are scattered throughout the local area. The Project will include overhead gen-tie routes and underground fiber-optic routes (see Figure 1-3 in Chapter 1), and these features will extend south and east of the proposed BESS facility site, crossing over the Metrolink rail lines, Carson Mesa Road, and Foreston Road, and traversing a landscape featuring scattered rural residences, equestrian facilities, and undeveloped desert terrain. The gen-tie routes and fiber-optic routes are proposed to tie into the existing SCE Vincent Substation.

3.13.2 Impact Analysis

3.13.2.1 Methodology

Photographic Survey

A photographic field survey was conducted to obtain on-the-ground familiarity with the local landscape and general visibility of the Project site, and to gather photographic images (and related geographic data) that help illustrate the existing visual character and quality of views to the Project site. The photographic field surveys also provided an opportunity to obtain photographs that characterize views to the Project site from selected viewpoints (or Key Observation Points). The photographic field survey conducted by Dudek occurred in March 2025; local conditions were sunny and visibility was clear.

Viewers and Exposure

Understanding the types of viewers and their exposure to potential Project-related visual effects helps to predict response to visual change in the landscape. View exposure describes the degree to which views of the landscape and the Project are available to viewers. Viewer exposure considers viewing distance (proximity of viewers to the Project), frequency (the number of times the Project may be seen), and the duration (the length of time the Project may be seen) of the available view. The primary groups provided views to the Project will consist of the following:

- **Residential viewers:** Residential viewers consist of owners and renters of nearby residential properties who are provided views to the Project and surrounding landscape. There are a handful of ridgeline residents west of the Project site who may have views of the Project; however, those views may be partially screened or blocked by intervening private yard landscaping. Although residential views are available from private yards/properties, viewing conditions and views from private residential properties were not verified during photographic field surveys due to lack of access to private property.
- **Motorists:** Motorists experience views of the passing landscape from vehicles while on the roadway. Within the Project area, this group includes motorists on local roads, including SR-14 motorists passing through the region, and motorists on local roads, including Soledad Canyon Road and Sierra Highway.

Lighting and Glare

To establish a baseline of pre-Project lighting conditions, existing sources of nighttime lighting were documented during the desktop-level review of the Project site and surrounding area. This review was then supplemented by observations made during photographic field investigations. Lighting conditions in the Project landscape were documented qualitatively. No quantitative measurement of light or skyglow levels occurred during preparation of the lighting assessment.

Lighting conditions are classified based on definitions and descriptions from established international lighting guidelines, which consist of a set of established environmental lighting zones for classifying exterior light levels (CIE 2017). Environmental lighting zones and related quantitative thresholds are shown in Table 3.13-1.

Table 3.13-1. Environmental Lighting Zone Classifications

Zone	Lighting Environment	Examples of Lighting Conditions
E0	Intrinsically dark	UNESCO Starlight Reserves, DarkSky International Dark Sky Parks, major optical observatories
E1	Dark	Relatively uninhabited rural areas
E2	Low district brightness	Sparsely inhabited rural areas
E3	Medium district brightness	Well-inhabited rural and urban settlements
E4	High district brightness	Town and city centers and other commercial areas

Source: CIE 2017.

The assessment of Project-related lighting involved a review of available Project information, including design files, the Project description presented in this document, and the Project's photometric plan. This information provided insight into the incremental increase in lighting associated with the Project, and was considered in a qualitative assessment as to whether anticipated light levels will exceed thresholds for environmental lighting zone classifications and result in the local area being classified as a less-restrictive environmental lighting zone.

For purposes of this analysis and based on the description of environmental lighting zones, the Project site is within the E1/E2 environmental lighting zone (CIE 2017). A change in an environmental lighting zone classification will signal a noticeable change in the perceived lighting conditions experienced by viewers during the nighttime.

3.13.2.2 Project Appearance

3.13.2.2.1 Project Structures, Dimensions, and Materials

The primary Project proponents are described in Chapter 2, Project Description. Figure 2-1 in Chapter 2 depicts the site plan and general layout of Project components. Table 3.13-2 identifies the aesthetic characteristics of the primary Project components, with emphasis on dimensions, materials, and finishes.

Table 3.13-2. Characteristics of Primary Project Components

Component	Dimensions/Size	Materials	Finishes
Battery energy storage system (containers/enclosures)	20 feet × 8 feet × 9.5 feet (L x W x H)	Prefabricated metal material	Tan/beige
Project substation (includes open rack air insulated switch gear, main power transformer, and pole to connect substation to San Diego Gas & Electric switchyard)	2,545 feet x 440 feet (L x W); seven 150 feet (H) (lightning masts)	Prefabricated metal material	Light to dark gray
Gen-tie structures, 11 monopole, H-frame or steel lattice tower	155 to 243 feet tall	Tubular steel	Tan/beige
Power Conversion System	20 feet × 8 feet × 9.5 feet (L x W x H)	Concrete foundations or steel piles	Light to dark gray
Control building	27-foot W x 95-foot L x 10-foot H (to ceiling)	Prefabricated metal	Tan/beige
Operations and maintenance building	20 feet x 60 feet x 15 feet (L x W x H)	Prefabricated metal	Light to dark gray
Fire water tanks	33 feet in diameter x 16 feet in height	Bolted steel and/or corrugated metal	Tan/beige
Security wall*	10,000 linear feet 12-foot-tall block wall topped with 1 foot of barbed/razor wire	Prefabricated/precast concrete block decorative wall	Tan/beige
Controlled security lighting	Up to 28 feet in height (switchyard lighting); BESS yard area lighting will be approximately 15 feet in height	Metal poles with attached lighting elements	Light to dark gray
Access gates	24 feet wide, 6 each	Chain-link with three strands of barbed wire	Light gray
Internal road	24 feet wide, 307,175 square feet total	Asphalt	Dark gray
Landscaping	Varies	Not applicable	Color varies by species

Notes: L = length; W =width; H = height
* See Figure 2-1 in Chapter 2 for location of security fencing and screening trellis.

3.13.2.2.2 Laydown Yards

The Project will include up to three laydown yards for equipment and material staging and storage during construction. The primary laydown yard will be in the northernmost portion of the BESS site. The primary laydown yard will be bladed, compacted, and surfaced with aggregate, and additional laydown yard to facilitate construction of the gen-tie line will be cleared of vegetation and surfaced with aggregate or other soil-stabilizing materials (the gen-tie line laydown yard will be along the proposed gen-tie line alignment; see Figure 2-1 in Chapter 2). If required to comply with fire prevention standards, landscape fabric may also be installed under the surface of all laydown yards to prevent vegetation growth. The O&M buildings and required number of parking spaces for O&M staff will be constructed within the primary laydown area following construction of the BESS facility components.

3.13.2.2.3 Perimeter Wall

A minimum 8-foot-tall block wall topped with 1 foot of three-strand barbed wire or razor wire will be constructed and installed on the outside of the perimeter roads. Wall heights will vary from 8 to 14 feet. Gates will be installed at various access points along the wall and equipped with locks and knox boxes.

3.13.2.2.4 Landscaping

Landscaping, including mature trees, shrubs, and decomposed granite, will be installed with the intention of softening the site's perimeter wall. The landscape area between the wall and the property line will be at least 10 feet wide and feature decomposed granite "mulch." Where the Project boundary parallels Soledad Canyon Road, the landscape area will be planted with trees and shrubs. Table 3.13-3 provides a description of the appearance of each plant included in the site's landscaping. All plants specified in the table are native to the region or well adapted to the local climate. The plants will be irrigated for 3 to 5 years immediately following installation. A conceptual landscaping plan is included in Appendix 2B.

Table 3.13-3. Landscaping Visual Character

Vegetation	Appearance (Heights at Maturity)
Trees	
Western redbud *(Cercis occidentalis)*	Western redbud reaches heights of 10 to 20 feet with a rounded, bushy form. The plant features clusters of vivid magenta or pink pea-shaped flowers that bloom in early spring. The branches have a reddish-brown hue and a smooth texture, growing in a somewhat zigzag pattern.
Desert museum *(Parkinsonia x "desert museum")*	Desert museum reaches heights of 15 to 30 feet with a broad, spreading canopy. Its small, delicate, bright-green leaves give it a lush appearance, and its abundant clusters of bright yellow flowers bloom in spring and summer. The tree's branches and trunk are distinctive with smooth, green bark.
Pinon pine *(Pinus monophyla)*	Pinon pines reach a height of 10 to 30 feet with a rounded, bushy form. Its needles are short, stiff, and dark green, giving the tree a dense, textured appearance. The tree produces small, brown cones that contain edible seeds, known as pine nuts. The bark is rough and grayish-brown.
Engelmann oak *(Quercus engelmannii)*	Engelmann oak reaches heights of 30 to 60 feet with a broad, spreading canopy. Its leaves are oval-shaped, leathery, and dark green, providing a dense, textured appearance. The bark is rough and grayish.
Interior live oak *(Quercus wislizeni)*	Interior live oak reaches heights of 20 to 60 feet with a dense, rounded canopy. Its leaves are small, oval-shaped, and dark green, with a leathery texture. The bark is rough and grayish.
Shrubs	
Desert ceanothus *(Ceanothus greggii)*	Desert ceanothus is 3 to 6 feet high with a rounded, bushy form. Its leaves are small, oval-shaped, and dark green, with a slightly glossy texture. The shrub produces clusters of tiny, bright blue or purple flowers that bloom in spring, adding vibrant color to the landscape. The branches are slender and grayish-brown.
St. Catherine's lace *(Eriogonum giganteum)*	St. Catherine's lace is a large, bushy shrub, 3 to 5 feet high with a broad, spreading form. Its leaves are gray-green, finely divided, and have a soft, feathery texture. The shrub produces large, flat clusters of tiny white flowers that bloom in summer, creating a lace-like appearance. The branches are sturdy and grayish-brown.

Table 3.13-3. Landscaping Visual Character

Vegetation	Appearance (Heights at Maturity)
Ocotillo *(Fouquieria splendens)*	Ocotillo is 10 to 20 feet high with tall, slender, spiny stems that grow in clusters. Its leaves are small, oval-shaped, and bright green. The shrub produces vibrant red tubular flowers at the tips of its stems, which bloom in spring and summer. The stems are grayish-brown and covered in thorns.
Creosote bush *(Larrea tridentata)*	Creosote bush is a hardy desert shrub, 3 to 10 feet high with a rounded, bushy form. Its leaves are small, dark green, and coated with a resin that gives them a glossy appearance and a distinctive smell. The shrub produces small, yellow flowers that bloom in spring and summer, followed by fuzzy white seed pods. The branches are slender and grayish-brown.
White sage *(Salvia apiana)*	White sage is 2 to 5 feet high with a rounded, bushy form. Its leaves are long, narrow, and silvery-gray, covered in fine hairs that give them a soft, velvety texture. The shrub produces spikes of small, white to pale lavender flowers that bloom in late spring to early summer. The stems are sturdy and grayish.
Parry's agave *(Agave parryi)*	Parry's agave is 2 to 3 feet high with a rosette form. Its leaves are thick, fleshy, and bluish-gray, with sharp spines along the edges and a pointed tip. The plant produces a tall flower stalk, up to 20 feet high, with clusters of yellow flowers that bloom once before the plant dies. The leaves have a smooth, waxy texture.
Compass barrel cactus *(Ferocactus cylindraceus)*	Compass barrel cactus is 2 to 4 feet high with a cylindrical form. Its thick, ribbed stem is covered in dense clusters of sharp spines, which can be yellow, red, or brown. The cactus produces large, bright-yellow flowers that bloom at the top of the stem in spring and summer. The stem has a smooth, waxy texture.
Chaparral yucca *(Hesperoyucca whipplei)*	Chaparral yucca is 3 to 10 feet high with a rosette form. Its leaves are long, narrow, and sword-shaped, with sharp tips and edges, and a bluish-green color. The plant produces a tall flower stalk, up to 15 feet high, with clusters of creamy white, bell-shaped flowers that bloom in late spring to early summer. The leaves have a tough, fibrous texture.
Beavertail prickly pear *(Opuntia basilaris)*	Beavertail prickly pear is 1 to 2 feet high with a sprawling, low-growing form. Its pads are oval-shaped, flat, and bluish-green, covered in tiny, hair-like spines called glochids. The cactus produces vibrant magenta or pink flowers that bloom in spring. The pads have a smooth, waxy texture.
Mountain mahogany *(Cercocarpus betuloides)*	Mountain mahogany is a hardy shrub or small tree, approximately 6 to 20 feet high with a rounded, bushy form. Its leaves are small, narrow, and dark green, with a leathery texture. The shrub produces clusters of small, white to pale yellow flowers that bloom in spring. The branches are slender and grayish-brown.
California flannel bush *(Fremontodendron californicum)*	California flannel bush is 10 to 20 feet high with a broad, spreading form. Its leaves are large, oval-shaped, and bright green, covered in fine hairs that give them a soft, velvety texture. The shrub produces abundant clusters of large, bright-yellow flowers that bloom in spring. The branches are sturdy and grayish-brown.
California juniper *(Juniperus californica)*	California juniper is 10 to 25 feet high with a dense, rounded form. Its leaves are scale-like, bluish-green and have a slightly rough texture. The tree produces small, berry-like cones that mature to a bluish-gray color. The bark is fibrous and reddish-brown.

Source: Calscape 2025

3.13.2.3 Visual Impact Assessment

Key observation points (KOPs) were identified through review of the Project's conceptual site plan/layout; proposed alignments for the gen-tie lines; satellite imagery of the local landscape; and individual visibility analyses prepared

by Dudek for proposed BESS components, Project substation, and gen-tie lines. Although the local valley and ridge terrain in the surrounding area presents numerous potential public vantage points providing available views to proposed Project components, most of the ridge terrain is assumed to either be inaccessible to the public and/or accessible but receiving very limited use by the public. As such, KOPs are located on public trails or roads, with the exception of KOP 5 that was sited at the Vincent Grade/Acton Metrolink station, approximately 1.4 miles northeast of the center of the proposed BESS facility site.

Pursuant to CEC and CEQA requirements directing aesthetic/visual analyses to focus on changes to "objects of historic or aesthetic significance," the selected KOPs offer views of the natural silhouette of local hillsides and mountain ridgelines, native vegetation on the Project site, and the predominantly rural character and design theme of the area as exemplified by rural residential development adjacent to and south of the Project site (i.e., south of SR-14 and existing railroad track south of the Project site) and the western theme Metrolink station buildings. In addition to local planning documents and review of aerial and street view imagery of the local area, resources investigated for the siting of potential KOPs and identification of local objects of historic or aesthetic significance included source documents referenced and linked in public websites such as Wikipedia and alltrails.com, and road guides prepared by the American Automobile Association. For further details, refer to Table 3.13-4, which outlines viewer categories and their characteristics, along with location and proximity to the Project site at each KOP. Anticipated changes to identified views at each KOP are also presented in Table 3.13-4. The locations of the KOPs in relation to the Project site are depicted in Figure 3.13-1, Key Observation Points.

3.13.2.4 Impact Evaluation Criteria

CEQA Guidelines Appendix G is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to make a determination as to whether a project requires an Environmental Impact Report, Mitigated Negative Declaration, or Negative Declaration. As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances." The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Appendix G are instructive. With respect to visual resources/aesthetics, CEQA Appendix G asks, in part, would the project:

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

3.13.2.5 CEQA Appendix G Assessment Criteria

3.13.2.5.1 Would the Project have a substantial adverse effect on a scenic vista?

Less-than-Significant Impact. There are no designated public scenic vistas identified in the Los Angeles County General Plan (County of Los Angeles 2015b), and there are no known or recognized public scenic vistas in the surrounding area. Although not specifically referenced as objects of aesthetic significance in either the applicable area plan's local development standards, terrain and vegetation are among the most important natural features of the local community, and both the natural silhouette of significant ridgelines and native vegetation will be preserved.

The Project site is not considered a scenic resource by the County of Los Angeles (County) and it is not within an area plan designated as a scenic resource area or significant area. The Project site is also relatively flat and does not encompass steep hillsides designated by the County as Hillside Management Areas or Significant Ridgelines. The Project site supports various native vegetation communities (see Figure 3.2-7, Vegetation Communities and Land Cover, in Section 3.2, Biological Resources).

Construction

Although Project construction activities will alter views across portions of the Project site from surrounding locations, construction activities will not block or substantially interrupt public views to the Santa Clara River, nor to hilly and mountainous terrain in the surrounding area. During construction, graded surfaces, construction materials, equipment, and truck traffic will be visible, mostly from viewpoints proximate to the Project site, including SR-14, Sierra Highway, Soledad Canyon Road, Carson Mesa Road, Foreston Drive, and other local roads. As needed, soil will be stockpiled and equipment for grading activities will be staged at various locations throughout the Project site, which will be removed as activities in specific areas are completed. Although landscape changes associated with development of the currently vacant and vegetated site will be detectable from nearby public (and private) vantage points in the surrounding area, instances of partially blocked views to background mountainous terrain will be temporary and fleeting. Further, increased activity and landform alteration occurring on the Project site will not substantially degrade the composition or quality of existing public views across the site and to scenic mountainous terrain beyond. As such, impacts will be **less than significant** and no mitigation is required.

Operations

To evaluate potential impacts to select views during the operational phase of the Project, visual simulations of Project components were prepared from six public KOPs in the area surrounding the Project site. A discussion of anticipated Project visibility, contrasts, and impacts at each selected public vantage point is presented in Table 3.13-4, Summary of Changes to Identified Views During Operations. The table also provides the camera type, lens focal length, viewing angle, date and time the photograph was taken, and the distance to the Project site for each KOP photograph. Existing condition photographs and visual simulations of the Project with the Northern and Southern Gen-Tie Routes depicted are provided in Figures 3.13-2a through 3.13-7c. Consistent with CEC requirements, simulations of the Project showing proposed landscaping at 1 year post-installation have been prepared for KOPs 1, 2, and 3 (simulations showing proposed landscaping at 10 years post-installation have also been prepared from these KOPs). At KOPs 4 through 6, proposed landscaping is not anticipated to be visible based on KOP location relative to proposed landscaping on the Project site, distance, and/or the presence of intervening features that will block Project features (including landscaping) from view. For KOPs 4 through 6, there will be no

discernable difference in the landscaping scenarios of the Project at either 1 year post-installation or 10 years post-installation, and therefore, only the 10-year post-installation scenario is shown in simulations prepared for KOPs 4 through 6.

Table 3.13-4. Summary of Changes to Identified Views During Operations

View	Viewers	Visual Contrast	Visual Impact
KOP 1 – State Route (SR) 14 ▪ Camera type: iPhone 14 Pro ▪ Lens focal length: 24 (35 mm focal length) ▪ Viewing angle: southwest ▪ Date and time: November 19, 2024 ▪ Distance to Project site: 475 feet (to BESS facility site)	Represents views of passing eastbound motorists from slightly elevated vantage point (in comparison to Project site) to proposed BESS facility site.	▪ Rating: **Low to Moderate** ▪ Form, scale, and straight, regular lines of perimeter wall visible; color contrasts reduced by tan finish of wall materials that helps this feature blend into the surrounding landscape. ▪ Scale and line contrasts of BESS enclosures minimized by visual screening associated with perimeter wall; consistent tan color/finish of enclosures reduces color contrasts with landscape (the tan finish also obscures the boxy form and spatial distribution of BESS enclosures across the Project site) (see Figures 3.13-2b through 3.13-2e). ▪ Installation of perimeter landscaping is detectable; at 1 year post-installation, new trees and shrubs will have limited perimeter wall screening benefits, but will help the Project to visually tie into the existing landscape through the introduction of familiar elements (i.e., vegetation) (Figures 3.13-2b and 3.13-2d). ▪ At 10 years post-installation, perimeter wall of facility is partially screened and obscured by maturing oak and pine trees. Project landscaping adds an element of visual interest that pulls attention from BESS enclosures beyond the perimeter wall (Figures 3.13-2c and 3.13-2e). ▪ Elements of the Southern and Northern Gen-Tie Routes will be visible; however, the thin, tall, and greyish gen-tie poles will be relatively distant from KOP 1 and will tend to blend with the existing transmission line poles and towers in the landscape.	▪ Rating: **Low to Moderate** ▪ High volume of viewers on SR-14. ▪ Footprint of the BESS facility is obscured by a 12-foot-high, tan wall along the northern boundary. Proposed landscaping will gradually aid in screening the regular form of the perimeter wall and further obscure BESS enclosures. ▪ Low to moderate contrasts between the BESS facility and the open, lightly developed nature of the visible landscape. ▪ No blockage of views to local hillsides or prominent mountainous terrain. ▪ Duration of mobile view exposure to perimeter wall and more generally, the BESS facility, is limited/temporary for SR-14 motorists. Views to the BESS facility are anticipated to be available over an approximate 0.75-mile-long segment of eastbound SR-14; at a prevailing travel speed of 70 miles per hour, views are available for approximately 38 seconds.

Table 3.13-4. Summary of Changes to Identified Views During Operations

View	Viewers	Visual Contrast	Visual Impact
KOP 2 – Soledad Canyon Road ▪ Camera type: iPhone 14 Pro ▪ Lens focal length: 24 (35 mm focal length) ▪ Viewing angle: northeast ▪ Date and time: November 19, 2024 ▪ Distance to Project site: adjacent to BESS facility site	Represents views of passing eastbound motorists as they travel adjacent to the proposed BESS facility site.	▪ Rating: **Low to Moderate** ▪ Form, scale, and texture of perimeter block wall is prominent in the foreground (wall will be constructed along the Project site boundaries north and south of Soledad Canyon Road) (see Figures 3.13-3b through 3.13-3e). Wall contrasts are moderate and will gradually reduce to a low level as landscaping matures (see discussion below). ▪ BESS enclosures and other interior site components are blocked from view by BESS facility's perimeter wall. ▪ Vertical substation components (and poles of the Southern Gen-Tie Route) are detectable above the proposed facility perimeter wall to the east; scale of substation components is visibly larger than existing wood poles in the foreground. ▪ At 1 year post-installation, proposed landscaping (shrubs) are low but somewhat soften the introduction of the perimeter wall to the landscape (see Figures 3.13-3b and 3.13-3d). ▪ At 10 years post-installation, landscaping appears dense and tall. Landscaping successfully screens sections of the perimeter wall from view, adds visual interest, and obscures Project components (see Figures 3.13-3c and 3.13-3e).	▪ Rating: **Low to Moderate** ▪ Clear, unimpeded views of Project components (perimeter wall, landscaping, and taller substation components). ▪ Continuous perimeter wall blocks views to local, off-site vegetation; however, views to local prominent terrain mostly preserved. ▪ Visual impact of BESS facility perimeter wall will gradually decrease following installation as proposed landscaping matures and screens/obscures the scale, line, and texture of the wall (see Figures 3.13-3b through 3.13-3e). ▪ Duration of mobile view exposure to perimeter wall is limited/temporary for Soledad Canyon Road motorists. Soledad Canyon Road parallels the proposed BESS facility over an approximate distance of 3,000 feet (0.59 miles), and the visual effect of new walls north and south of the road will be experienced by motorists over a distance of approximately 775 feet (at 40 miles per hour, this distance will be covered in approximately 13 seconds). Total anticipated duration of views to perimeter walls as Soledad Canyon Road motorists parallel the BESS facility is approximately 58 seconds.
KOP 3 – Sierra Highway ▪ Camera type: iPhone 14 Pro	Represents views of passing motorists from elevated vantage	▪ Rating: **Moderate**	▪ Rating: **Moderate** ▪ Clear, unimpeded views of Project components (substation and poles of the Southern Gen-Tie Route).

Table 3.13-4. Summary of Changes to Identified Views During Operations

View	Viewers	Visual Contrast	Visual Impact
▪ Lens focal length: 24 (35 mm focal length) ▪ Viewing angle: southeast ▪ Date and time: November 19, 2024 ▪ Distance to Project site: 980 feet (to substation site)	point (in comparison to Project site) to Project substation site and gen-tie routes.	▪ Perimeter wall, landscaping, tan/paved surface of substation facility, and various vertical and metallic substation structures visible and create landscape contrasts (Figures 3.13-4b through 3.13-4e). ▪ Vertical scale of substation components interrupt views of the local hillsides and mountains, but this effect is moderated by the thin form and line of vertical H-frame components and tan/Natina finish of structures. ▪ Portions of poles of the Southern Gen-Tie Route are skylined (visible above distant ridgelines and against background sky).	▪ Scale of substation and vertical nature of H-frame structures present contrasts with undeveloped site and limited development in the foreground. ▪ Scale of substation H-frame components are visually prominent, and substation facility extends across a sizeable portion of the foreground south of SR-14. ▪ Duration of mobile view exposure to substation facility is limited/temporary for Sierra Highway motorists. Views to the substation are anticipated to be available to Sierra Highway motorists (eastbound) over an approximate distance of 0.58 miles that, at 40 miles per hour, will be covered in approximately 52 seconds.
KOP 4 – Foreston Drive ▪ Camera type: iPhone 14 Pro ▪ Lens focal length: 24 (35 mm focal length) ▪ Viewing angle: west ▪ Date and time: November 19, 2024 ▪ Distance to Project site: 1,130 feet (to substation site)	Represents views of residents and motorists traveling west from the approximately 30 homes/lots neighborhood on Foreston Drive.	▪ Rating: **Moderate** ▪ Form and scale of perimeter wall, BESS enclosures, tall metallic substation structures, and gen-tie lines visible and interrupt background views of the local hillsides (Figures 3.13-5b and 3.13-5c). ▪ Implementation of the Project (specifically, the Project substation) introduces a swath of greys and whites in a desert landscape featuring mostly tans and darker greens of soils and vegetation. ▪ Tan/Natina finish of substation H-frame structures and tan finish of substation buildings will help to blend these features into the landscape and reduce overall color contrasts associated with the Project.	▪ Rating: **Moderate** ▪ Clear, unimpeded views of Project components. ▪ Powerlines of the Northern Gen-Tie Route visible across the center of the middle-ground of the view, and poles of the Southern Gen-Tie Route are visible across the railroad in the middle-ground to background. More distant poles are visible to the west (south of the railroad), but are viewed in front of distant mountain terrain.

Table 3.13-4. Summary of Changes to Identified Views During Operations

View	Viewers	Visual Contrast	Visual Impact
		▪ Wide footprint of substation and BESS facility, and scale and color of substation components, produces moderate form, line, and color contrasts.	▪ Scale of substation and vertical nature of H-frame structures (and more broadly, the wide footprint of the BESS facility) presents visible contrasts with undeveloped site and limited development in the foreground. ▪ Duration of mobile view exposure to substation and BESS facility is limited/temporary for Foreston Drive motorists.
KOP 5 – Metrolink Train Station ▪ Camera type: iPhone 13 ▪ Lens focal length: 24 (35 mm focal length) ▪ Viewing angle: southwest ▪ Date and time: February 18, 2025 ▪ Distance to Project site: 1.2 miles (to substation site)	Represents views of public transit users at the Metrolink station.	▪ Rating: **None** ▪ No clear views to the proposed Northern and Southern Gen-Tie Routes (poles are blocked by intervening trees and obscured from view by distance), and no views to Project substation or BESS components (Figures 3.13-6b and 3.13-6c).	▪ Rating: **No Impact** ▪ Lack of clear views to Project components. ▪ Changes to landscape associated with Project implementation not perceptible.
KOP 6 – Mt. Emma Trail ▪ Camera type: iPhone 13 ▪ Lens focal length: 24 (35 mm focal length) ▪ Viewing angle: northwest ▪ Date and time: February 18, 2025 ▪ Distance to Project site: 4.2 miles (to substation site)	Represents views of trail users from elevated vantage point (in comparison to Project site).	▪ Rating: **Low** ▪ Darkening of a small portion of the distant valley floor over 4 miles away. Introduction of thin indeterminant structures near SR-14 (see Figures 3.13-7b and 3.13-7c).	▪ Rating: **Low** ▪ Unclear views of Project components that generally blend into existing landscape in the vast valley below. ▪ Visual change associated with Project development not prominent at KOP 6.

Notes: KOP = key observation point; BESS = battery energy storage system; mm = millimeter.

Summary

As presented in referenced figures/simulations and described in Table 3.13-4, during operations, the Project will result in alterations to the foreground and middle-ground views available from public roads in the surrounding area. However, views of scenic resources (Santa Clara River local hills and regional mountains) will mostly remain intact. Where view blockage and/or interruption of hills and mountains is anticipated (for example, at KOPs 2, 3, and 4), the duration of view blockage and/or interruption will be brief, and scenic landform resources will be returned to views upon passing the Project site. At SR-14, which supports the largest volume of potential viewers to landscape alteration attributed to the Project, the removal of on-site vegetation and installation of Project components, including numerous BESS containers and a continuous perimeter wall, will be visible; however, neither BESS containers nor the perimeter wall will block prominent mountain terrain from view. Further, because the BESS container and perimeter wall will both have tan/sandy finishes, the presence of these components will not substantially detract from available views of the landscape (see Figures 3.13-2b through 3.13-2e). Along Sierra Highway near the Project site, the introduction of the Project substation and, more specifically, the installation of numerous tall, vertical, and metallic H-frame structures, will attract attention and detract from the quality of existing views. However, the tan/Natina finish of H-frame structures will help these features to recede into the background landscape (see Figures 3.13-3b through 3.13-3e), and as viewed from eastbound Sierra Highway, instances of view interruption will be relatively brief. Despite the change and visibility of Project components, the introduction of Project components to existing views from public vantage points will not constitute a substantial alteration of a scenic vista associated with either view blockage or view degradation. Therefore, impacts will be **less than significant.**

3.13.2.5.2 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. There are no state scenic highways in the surrounding area from which views of the Project site and proposed Project components will be available. The nearest officially designated state scenic highway, SR-2 through the San Gabriel Mountains, is more than 12 miles southeast of the Project site (Caltrans 2008), and views to the Project site from the state route are not available due to intervening vegetation (including mature trees) and mountainous terrain. Similarly, the nearest eligible state scenic highways, Interstate 210 near Sylmar and SR-2 near the Los Angeles County/San Bernardino County, are more than 18 miles away (Caltrans 2008) and do not offer motorists views to the Project site (intervening terrain, vegetation, and development block the Project site and surrounding Acton area from views of motorists on the interstate and state route). Because the Project will not substantially damage scenic resources within a state scenic highway, **no impact** will occur.

3.13.2.5.3 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 in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact. CEQA, through the Public Resources Code, defines an "urbanized area" as an incorporated area that has a population of at least 100,000 people, either by itself or by adding the population of the city with no more than two contiguous incorporated cities (PRC Section 21071[a][1]–[2)]). For unincorporated areas, the area must be completely surrounded by one or more incorporated cities with populations no less than

100,000 people to be considered urbanized. Because the Project site and surrounding area are not surrounded by one or more incorporated cities, the area is not considered to be "urbanized" pursuant to PRC Section 21071(b).

As examined in Table 3.13-4, anticipated contrasts and impacts associated with development of the Project will vary based on a variety of factors, including proximity and viewing angle to the Project site, elevation relative to the Project site, presence of intervening screening features, and duration of views to Project components. The development of the Project, including construction, operation, repowering, or decommissioning of an up to 1,150 MW BESS facility across an up to approximately 100-acre site in unincorporated Los Angeles County will result in a substantial change to the existing visual appearance/character of the currently vacant and developed site. Existing condition photographs and visual simulations of the Project from public vantage points in the surrounding area were prepared and are shown in Figures 3.13-2a through 3.13-7c. At select public vantage points near the Project site and offering a slightly elevated or normal viewing angle (i.e., elevated relative to the Project site), aesthetic impacts and perceptible visual change and contrast will be heightened. See visual simulations for KOPs 1 through 4 (Figures 3.13-2a through 3.13-5c) and refer to Table 3.13-4 for qualitative assessments of anticipated visual contrasts and determinations of impact changes to identified views at these KOPs. As presented in Table 3.13-4, visual impacts are anticipated at KOP 3 (Sierra Highway) and KOP 4 (Foreston Drive) due to the perceptible contrasts in scale associated with vertical Project substation components, such as the broad, horizontal footprint of the substation that will occupy a sizeable portion of the foreground landscape. However, these anticipated contrasts (and color contrasts) will be moderated by the application of a tan/Natina finish to H-frame structures at the Project substation that will help to blend these features into the background landscape to the extent feasible (see Figures 3.13-4b through 3.13-4e), and the application of a tan finish to BESS structures and the facility's perimeter wall (see Figures 3.13-5b and 3.13-5c). Further, the severity of impacts at KOPs 3 and 4 will be further lessened by the limited/brief exposure of motorists at these KOPs to views of Project components. See Table 3.13-4 for additional view exposure analysis.

Although the introduction of the proposed BESS facility will be visible from SR-14 (KOP 1) and Soledad Canyon Road (KOP 2), contrasts and visual impacts are anticipated to be of a low to moderate level. At these KOPs, the proposed perimeter wall lining the BESS facility will be apparent; however, this feature (combining with the application of a tan finish on BESS enclosures) will screen or obscure the form, scale, and line of the numerous BESS enclosures across the facility from view (see Figures 3.13-2b through 3.13-2e). At KOP 1, the Project site (visible elements of the BESS facility) will present as a consistent tan-colored feature sitting low in the foreground landscape. Although the regular and straight form and line of the proposed perimeter wall will be atypical in the existing view, the tan coloring of the wall and the installation of perimeter landscaping will, over time, lessen overall wall visibility and distract from views of the BESS facility. At KOP 2 (Soledad Canyon Road), the existing openness of the view and visible landscape will be broken by the installation of continuous walls (see Figures 3.13-3b through 3.13-3d). However, the duration of views to walls provided to passing motorists will be brief, and view effects will be gradually soften by maturing landscaping that, over time, will block the wall from view. See Figures 3.13-3c and 3.13-3e that depict operation of the Project with proposed landscaping at 10 years post-installation.

Weak contrasts and impacts are anticipated at more distant vantage points selected for analysis (i.e., KOPs 5 and 6) because Project components will be mostly blocked from view (as at KOP 5; see Figures 3.13-6a through 3.13-6c) or will lack spatial dominance and will present weak color and line contrasts in the broad visible landscape (as at KOP 6; see Figures 3.13-7a through 3.13-7c).

As depicted in the visual simulations of the Project prepared from public KOPs in proximity to the Project site, the existing visual character of the Project site will undergo noticeable change because approximately 100 acres of vacant land will be developed with numerous BESS structures and a spatially large and broad electrical substation.

However, with implementation of tan finishes (colorization of visible and visually prominent equipment), installation of a tan screening wall around the BESS facility, and installation and maintenance of landscaping along segments of the BESS facility perimeter wall, visibility of BESS structures will be screened and/or obscured in views, prominent substation components will somewhat recede into the background landscape, and the introduction of the hard, continuous perimeter wall will be softened over time. The presence of the BESS facility and substation will visibly alter existing visual character, and the BESS facility will also be dissimilar in use, form, and function to the predominant development in the local area (i.e., single-family residential homes); however, overall changes to visual quality will be lessened by the proposed design features described above. In regard to Project landscaping, anticipated contrasts will be at their highest immediately following completion of construction, but over time, contrasts in line, form, and color will be softened by the maturing trees and shrubs planted along portions of the BESS facility perimeter. In addition, impact severity will be moderated by the typical brief/temporary duration of views to Project components available from local roads and SR-14. As such, impacts to existing visual quality and character will be **less than significant.**

Although not required by CEQA, due to the Project's location in a non-urbanized area, an analysis of consistency with applicable local regulations was conducted and is presented in Table 3.13-5. As shown in the table, the Project will be consistent with all scenic quality policies.

Table 3.13-5. Scenic Quality Regulations Consistency Analysis

Policy	Consistency Analysis
County of Los Angeles General Plan Conservation and Natural Resources Element	
Policy 1.1: Protect and enhance the scenic quality of natural and built environments in unincorporated areas.	**Consistent.** The Project site is on undeveloped lands near Acton, a small, unincorporated residential community characterized by its open landscapes, rolling hills, clustered residential developments, limited commercial uses, and a mix of desert and mountainous terrain. The Project site is not in proximity to any County designated scenic vistas, and development of the Project as proposed will not result in significant effects to views from designated or known scenic vistas. Although development of the Project will alter the open and undeveloped character of the Project site, impacts to existing scenic quality will be minimized through screening of the BESS facility by a perimeter block wall and site landscaping, and by the colorization of BESS enclosures and Project substation H-frame structures. Further and as analyzed above, the introduction of the Project to the local landscape was determined to result in less-than-significant impacts to vistas and views of scenic landscape features, including the Santa Clara River, hills, and mountains.
Policy 1.2: Ensure that new development is designed to minimize visual impacts on scenic resources, including views of mountains, valleys, and other natural features.	**Consistent.** As demonstrated in visual simulations prepared for the Project, the proposed BESS facility will not substantially block or interrupt views to local mountains or hillsides. The BESS enclosures will not exceed 15 feet in height, and from public KOPs in the area, enclosures will not significantly impact views to mountains, valleys, or other features. Operation of the substation will result in some view interruption to local mountains as experienced from eastbound Sierra Highway (gen-tie and substation structures will include features 155 feet to 243 feet tall; see Figures 3.13-4b through 3.13-4e); however, the view interruption will be temporary, the application of a tan/Natina finish to tall H-frame substation components will reduce color contrasts and enhance post-Project installation view intactness,

Table 3.13-5. Scenic Quality Regulations Consistency Analysis

Policy	Consistency Analysis
	and tall lattice towers supporting high-voltage electrical lines are already present in the landscape (and tend to lessen overall visual impacts associated with the introduction of taller features to the landscape) (see Figures 3.13-4a through 3.13-4e).
Policy 2.1: Identify and protect scenic corridors and vistas that contribute to the visual quality of the county.	**Consistent**. There are no designated public scenic vistas identified in the County's General Plan (County of Los Angeles 2015b), and there are no known or recognized public scenic vistas in the surrounding area. Based on proximity, the Project will be visible from SR-14, Soledad Canyon Road, and Angeles Forest Highway, all of which are mapped as Scenic Drives pursuant to the Antelope Valley Area Plan (County of Los Angeles 2015a). Visual simulations were prepared from SR-14 and Soledad Canyon Road (see Figures 3.13-2a through 3.13-3c), and the Project's gen-tie support poles will likely be visible from Angeles Forest Highway near the SCE Vincent Substation. Views to scenic hillsides and mountains from Scenic Drives will be protected to the extent feasible (substantial view interruption to hillsides and mountains from SR-14 is not anticipated), but views from Soledad Canyon Road where the road parallels the BESS facility site will be visibly altered by the installation of a proposed perimeter wall that will be north and south of the road. Although the anticipated contrasts associated with the wall immediately following completion of construction will be moderate, visual contrasts and impacts as viewed from Soledad Canyon Road will be gradually reduced by proposed landscaping that will screen portions of the wall from view and soften its introduction to the local environment.
Policy 2.2: Implement measures to preserve and enhance scenic resources, such as limiting the height and bulk of structures, and requiring landscaping and screening.	**Consistent.** Refer to the consistency analysis for Policy 1.2, above.
Policy 3.1: Preserve natural landforms and minimize grading in hillside areas to maintain the visual integrity of the landscape.	**Consistent.** Conventional grading will be performed throughout the Project site, but minimized to the maximum extent feasible. Development of the Project will not entail grading in County-designated Hillside Management Areas (25% + slope).
Policy 3.2: Encourage the use of vegetation and natural materials to blend structures with the surrounding environment.	**Consistent.** The Project includes a landscape plan that will encourage the use of vegetation and natural materials that blend the proposed structures with the surrounding environment to the extent feasible.
County of Los Angeles General Plan Land Use Element	
Policy 5.1: Maintain and enhance the unique character of rural communities by ensuring that new development is compatible with existing community character and aesthetics.	**Consistent.** The Project substation will have characteristics and components similar to that of the existing, nearby SCE Vincent Substation. Although the BESS facility will be a dissimilar use from that of adjacent rural residences and result in moderate contrasts as viewed from select public KOPs, visual impacts of the BESS facility will be minimized to the extent feasible through the construction of a block perimeter wall and incorporation of perimeter landscaping. The proposed perimeter wall will reduce visibility of BESS enclosures, and landscaping will aid in screening or obscuring the perimeter wall from view and in softening its introduction to the landscape. Further, the

Table 3.13-5. Scenic Quality Regulations Consistency Analysis

Policy	Consistency Analysis
	application of a tan finish to BESS enclosures, substation buildings, and the perimeter wall will help these elements blend in with the surrounding landscape.
Antelope Valley Area Plan Land Use Element	
Policy 5.1: Protect and enhance the scenic quality of natural and built environments in the Antelope Valley.	**Consistent.** The Project site is near Acton, a small, unincorporated residential community characterized by its open landscapes, rolling hills, clustered residential developments, limited commercial uses, and a mix of desert and mountainous terrain. The Project site is not in proximity to any County-designated scenic vistas, and development of the Project will not result in significant effects to views from designated or known scenic vistas. Although development of the Project will alter the open, undeveloped character of the Project site, impacts to existing scenic quality will be minimized to the extent feasible through screening of the BESS facility by a perimeter block wall, implementation of site landscaping along the north site perimeter and along Soledad Canyon Road, and by the strategic application of finishes to specific components (substation H-frame structures, BESS enclosures, perimeter wall, and substation buildings) intended to aid in color compatibility, reduce Project-related contrasts, and create overall visual blending of the Project into the background landscape.
Policy 5.2: Ensure that new development is designed to minimize visual impacts on scenic resources, including views of mountains, valleys, and other natural features.	**Consistent.** As demonstrated in visual simulations prepared for the Project, the proposed BESS facility will not substantially block or interrupt views to local mountains or hillsides. The BESS enclosures will not exceed 15 feet in height and from public KOPs, and enclosures will not significantly impact views. Operation of the substation will result in some view interruption to local mountains as experienced from eastbound Sierra Highway (gen-tie and substation structures will include features 155 feet to 243 feet tall); however, the application of a tan/Natina finish to tall H-frame substation components will reduce color contrasts and enhance post-Project installation view intactness, and tall lattice towers supporting high-voltage electrical lines are already present in the landscape (and tend to lessen overall visual impacts associated with introduction of taller features to the landscape) (see Figures 3.13-4a through 3.13-4e).
Antelope Valley Area Plan Natural Resources Element	
Policy 2.1: Identify and protect scenic corridors and vistas that contribute to the visual quality of the Antelope Valley.	**Consistent.** Refer to analysis for Policy 2.1 of the Los Angeles County General Plan Conservation and Natural Resources Element, above.
Policy 2.2: Implement measures to preserve and enhance scenic resources, such as limiting the height and bulk of structures, and requiring landscaping and screening.	**Consistent.** Refer to analysis for Policy 2.2 of the Los Angeles County General Plan Conservation and Natural Resources Element, above.
Policy 3.1: Preserve natural landforms and minimize grading in hillside areas to maintain the visual integrity of the landscape.	**Consistent.** Conventional grading will be performed throughout the Project site but minimized to the maximum extent feasible. Development of the Project will not entail grading in County-designated Hillside Management Areas (25% + slope).

Table 3.13-5. Scenic Quality Regulations Consistency Analysis

Policy	Consistency Analysis
Policy 3.2: Encourage the use of vegetation and natural materials to blend structures with the surrounding environment.	**Consistent.** Refer to response to County of Los Angeles General Plan Conservation and Natural Resources Element Policy 3.2, above.
Antelope Valley Area Plan Conservation and Open Space Element	
Policy COS 5.7: Ensure that incompatible development is discouraged in designated Scenic Drives by developing and implementing development standards and guidelines for development within identified viewsheds of these routes (Map 4.2: Antelope Valley Scenic Drives).	**Consistent**. Although the Project will be visible from SR-14 and Soledad Canyon Road (both designated Scenic Drives), there are no known development standards and guidelines for development within the viewsheds of these routes.
Policy COS 13.7: Limit the aesthetic impacts of utility-scale renewable energy production facilities to preserve rural character.	**Consistent.** Refer to analysis for Policy 1.2 of the Los Angeles County General Plan Conservation and Natural Resources Element, above.
Policy COS 15.1: Ensure that outdoor lighting, including street lighting, is provided at the lowest possible level while maintaining safety.	**Consistent.** Security lights will be installed to provide adequate illumination around the substation and BESS yards, and points of ingress/egress. All non-task lighting will be shielded and directed downward to minimize the potential for glare, spillover onto adjacent properties, and skyglow. Levels of individual lighting sources will comply with recommendations of the Illuminating Engineering Society, California Energy Commission, and County of Los Angeles Municipal Code Section 93.0117 to ensure that lighting is no brighter than necessary. Non-task lighting will only be in areas where it is required for safety, security, or operations. Controlled security lighting no more than 28 feet tall will be installed at the Project substation and around the BESS yards, in accordance with applicable requirements and regulations. Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around the BESS yards. Manually operated task lighting will be installed in the substation and will point up to illuminate electrical equipment when electrical isolation is required for maintenance at night.
Policy COS 15.2: Prohibit continuous all-night outdoor lighting in rural areas, unless required for land uses with unique security concerns, such as fire stations, hospitals, and prisons.	**Consistent.** Refer to analysis for Policy COS 15.1, above.

Sources: County of Los Angeles 2015a, 2015b.
Notes: BESS = battery energy storage system; County = County of Los Angeles; KOP = key observation point; SCE = Southern California Edison; SR = State Route.

3.13.2.5.4 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. Nighttime construction or maintenance may be required for certain activities, but noisy construction work will occur during the hours permitted by the County's Noise Ordinance (7 a.m. to 7 p.m., Monday through Friday, and 8:00 a.m. to 6:00 p.m., Saturdays). When nighttime construction or maintenance activity is required, all necessary temporary lighting will be directed on work areas and away from sensitive receptors, such as nearby residences and habitat.

County Municipal Code Section 93.0117 establishes regulations for outdoor lighting to protect residential properties. It states that "no person shall install or maintain any exterior luminaire, multi-head luminaire, lamp holder or sign light source" that results in "light intensity in excess of two footcandles (21.5 lux)" on neighboring residential properties. The code also defines direct glare as "resulting from high luminance or insufficiently shielded light sources that is in the field of view," prohibiting it from affecting "exterior glazed windows, sliding glass doors, elevated habitable porches, decks, balconies, or ground surfaces intended for recreational use." These regulations aim to minimize disturbances caused by outdoor lighting. Furthermore, the Acton Community Standards District includes specific lighting regulations designed to preserve the area's rural character and protect dark skies, as outlined in County Municipal Code Chapter 22.302. The guidelines emphasize that "the installation of streetlights and other urban infrastructure" should be minimized to maintain the rural aesthetic and natural environment. Additionally, all outdoor lighting must be "shielded and directed downward" to prevent glare and light spill onto adjacent properties.

Security lights will be installed to provide adequate illumination around the substation and BESS yards, at the substation control house exterior (i.e., above the control house door), and at points of ingress/egress. All non-task lighting installed within the Project site will be shielded and directed downward to minimize the potential for glare, spillover onto adjacent properties, and skyglow. Task-based lighting will be installed at the substation and will point up to illuminate electrical equipment when electrical isolation is required for safety. Task lighting will be manually operated and only used during night-time-based maintenance activities at the substation. Levels of individual lighting sources will comply with recommendations of the Illuminating Engineering Society, CEC, and County Municipal Code Section 93.0117 to ensure lighting is no brighter than necessary. A conceptual lighting and photometric plan is included as Appendix 2A and details the location and intensity of lighting proposed to be installed for the Project.

Lighting will only be in areas where it is required for safety, security, or operations. Lighting will be installed near the entrance to the BESS yard gates and will be pointed downward. These lighting sources installed atop 25-foot poles will be on throughout the day and night. Controlled security lighting no more than 28 feet tall will be installed within the Project substation and BESS yards, in accordance with applicable requirements and regulations. Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around BESS yards. All non-task lighting will be shielded and directed downward to minimize the potential for glare and spillover onto adjacent properties, compliant with applicable codes and regulations. Security cameras will be placed on site and monitored 24/7.

The finishes of materials used as exterior surfaces will include dulled metallic components that are not typically associated with the generation of substantial glare. Further information on the materials used for the exterior of Project components is listed in Table 3.13-2, above.

Based on review of the Project lighting and elements and component materials, implementation of the Project and its associated lighting will not result in the surrounding area being considered or classified as a less restrictive (E3 or E4) environmental lighting zone. Further, the Project will not create a new source of substantial light or glare that will adversely affect day or nighttime views in the area. As such, impacts will be **less than significant**.

3.13.3 Cumulative Impacts

A cumulative impact refers to a proposed project's incremental effect, together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (PRC Section 21083; CCR, Title 14, Sections 15064[h], 15065[c], 15130, and 15355). The CEQA Guidelines further note that the cumulative impact from several projects is the change in the environment that results from the incremental impact of a project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative effects can result from individually minor, but collectively significant, projects taking place over a period of time (CCR Section 15355).

The landscape in the region surrounding the Project demonstrates evidence of past and present visible disturbances related to agriculture, transmission and transportation infrastructure, and residential and commercial development. Based on the changes to identified views depicted in visual simulations and with implementation of Project design features reference above and described in Section 3.13.4, Mitigation Measures, Project effects on existing visual character are not anticipated to substantially degrade existing visual character or quality. There are no known planned or proposed future projects within the local viewshed that will create cumulative visual impacts in combination with the Project. As a result, the Project **will not cause significant cumulative effects** to visual resources.

3.13.4 Mitigation Measures

Project impacts on existing views and visual character will be avoided or minimized to the extent feasible through Project design features, such as the construction of a tan perimeter block wall; targeted installation of site perimeter landscaping; and colorization of BESS enclosures, substation buildings, and substation H-frame structures. During operations, the perimeter block wall will block or partially screen BESS enclosures from view of nearby residents and motorists who are provided with a normal viewing angle (i.e., view from location at a similar elevation as the proposed BESS facility) to the Project. Site landscaping will partially screen from view and soften the introduction of the wall to the local visual landscape. Context and climate appropriate landscaping will also aid in blending lower-profile and perimeter Project elements to the existing surrounding landscape through the installation of familiar vegetative materials. The targeted use and application of tan, sandy, and/or weathering finishes will reduce overall color contrasts and aid in the visual blending of Project components into the background landscape.

No additional mitigation measures beyond those incorporated into Project design have been identified that will further reduce anticipated moderate contrasts or visual impacts as experienced from public KOPs in the immediate surrounding area (i.e., KOPs 1 through 4).

3.13.5 Laws, Ordinances, Regulations, and Standards

This section lists and discusses the visual resources-related LORS that apply to the Project. Table 3.13-6 summarizes the LORS relevant to the Project.

Table 3.13-6. Laws, Ordinances, Regulations, and Standards Applicable to Visual Resources

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
State	California Environmental Quality Act (CEQA)	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects and to reduce, avoid, or minimize potentially significant environmental impacts to the extent feasible.	**Yes**. Refer to Section 3.13.2.5 that presents an aesthetics analysis in accordance with CEQA.	Section 3.13.2.5 Section 3.13.5.2
State	State Scenic Highway Program	The scenic corridor protection program is made up of adopted ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes.	**Yes**. There are no state scenic highways in the surrounding area from which views of the Project site and proposed Project components will be available. See also Section 3.13.2.5 for analysis of potential impacts to scenic resources within the viewshed of a state scenic highway.	Section 3.13.2.5.2 Section 3.13.5.2
Local	Los Angeles County General Plan	Provides a policy framework to guide development and growth in the unincorporated areas of Los Angeles County.	**Yes**. Refer to Section 3.13.2.5 for analysis of Project conformity with applicable policies of the Los Angeles County General Plan.	Section 3.13.2.5.3 Section 3.13.5.3
Local	Antelope Valley Area Plan	Refines the Countywide goals and policies in the General Plan by addressing specific issues relevant to Antelope Valley, such as community maintenance and appearance, and provides more specific guidance on elements already found in the County General Plan.	**Yes**. Refer to Section 3.13.2.5 for analysis of Project conformity with applicable policies of the Antelope Valley Area Plan.	Section 3.13.2.5.3 Section 3.13.5.3

Note:
LORS = Laws, Ordinances, Regulations, and Standards

3.13.5.1 Federal

No federal visual resource–related laws, ordinances, regulations, and standards exist relevant to the Project assessment area.

3.13.5.2 State

California Environmental Quality Act

CEQA generally requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects and to avoid or minimize potentially significant environmental impacts to the extent feasible. The laws and rules governing the CEQA process, discussed above, are contained in the CEQA statute (PRC Section 21000 et seq.), the CEQA Guidelines (14 CCR 15000 et seq.), published court decisions interpreting CEQA, and locally adopted CEQA procedures.

Refer to Section 3.13.2.5 that presents an aesthetics analysis in accordance with CEQA.

State Scenic Highway Program

The California Department of Transportation (Caltrans) manages the State Scenic Highway Program, detailed in Streets and Highways Code Section 260. A highway may be designated as scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. To become an officially designated scenic highway, a local jurisdiction must adopt a scenic corridor protection program for the eligible state scenic highway, apply to Caltrans for scenic highway approval, and receive notification from Caltrans that the highway has been designated as a scenic highway. The Scenic Corridor Protection Program is made up of adopted ordinances to preserve the scenic quality of the corridor or document such regulations that already exists in various portions of local codes. State and county roads can be designated as scenic highways.

There are no highways or roads within 5 miles of the Project site eligible for inclusion in the State Scenic Highway Program (Caltrans 2008). There are no state scenic highways in the surrounding area from which views of the Project site and proposed Project components will be available. See also Section 3.13.2.5 for analysis of potential impacts to scenic resources within the viewshed of a state scenic highway.

3.13.5.3 Local

Los Angeles County General Plan

The Los Angeles County General Plan provides a policy framework to guide development and growth in the unincorporated areas of Los Angeles County. Specifically, the Conservation and Natural Resources Element includes policies aimed at scenic resource preservation, landscape management, and design guidelines to maintain the visual quality of the environment. The Land Use Element includes policies on zoning regulations, design standards, and landscape requirements to ensure visually appealing and harmonious development. For this Project, the following policies are particularly relevant (County of Los Angeles 2015b).

Conservation and Natural Resources Element

Policy C/NR 1.1: Protect and enhance the scenic quality of natural and built environments in unincorporated areas.

Policy C/NR 1.2: Ensure that new development is designed to minimize visual impacts on scenic resources, including views of mountains, valleys, and other natural features.

Policy C/NR 2.1: Identify and protect scenic corridors and vistas that contribute to the visual quality of the county.

Policy C/NR 2.2: Implement measures to preserve and enhance scenic resources, such as limiting the height and bulk of structures, and requiring landscaping and screening.

Policy C/NR 3.1: Preserve natural landforms and minimize grading in hillside areas to maintain the visual integrity of the landscape.

Policy C/NR 3.2: Encourage the use of vegetation and natural materials to blend structures with the surrounding environment.

Land Use Element

Policy LU 5.1: Maintain and enhance the unique character of rural communities by ensuring that new development is compatible with existing community character and aesthetics.

Policy LU 5.2: Encourage the use of design guidelines and standards that promote high-quality, context-sensitive development.

These policies aim to preserve the visual quality and rural character of the land while allowing for responsible development. Ensuring compliance with these guidelines will help mitigate the visual impacts of the Project and maintain the aesthetic appeal of the community.

Refer to Section 3.13.2.5 for analysis of Project conformity with applicable policies of the Los Angeles County General Plan.

Antelope Valley Area Plan

As a component of the Los Angeles County General Plan, the Antelope Valley Area Plan refines the Countywide goals and policies in the General Plan by addressing specific issues relevant to Antelope Valley, such as community maintenance and appearance, and provides more specific guidance on elements already found in the General Plan.

The Antelope Valley planning area is bounded by the Kern County border to the north, the Ventura County border to the west, the Angeles National Forest (inclusive) to the south, and the San Bernardino County border to the east. The Antelope Valley Area Plan includes land in Acton and the Project site (County of Los Angeles 2015a).

The Antelope Valley Area Plan's overarching framework is a Rural Preservation Strategy based on rural town centers, rural town areas, rural preserve areas, and economic opportunity areas. The motion to adopt the Antelope Valley Area Plan directed changes to the Los Angeles County General Plan's Land Use Policy 2.2, which was revised to

read, “Except within Economic Opportunity Areas, limit the amount of potential development within Scenic Resource Areas, including water features, significant ridgelines, and Hillside Management Areas, through appropriate land use designations, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.”

For the Project, the following policies related to this section are relevant (County of Los Angeles 2015a).

Land Use Element

Policy Land Use (LU) 5.1: Protect and enhance the scenic quality of natural and built environments in the Antelope Valley.

Policy LU 5.2: Ensure that new development is designed to minimize visual impacts on scenic resources, including views of mountains, valleys, and other natural features.

Policy LU 6.1: Maintain and enhance the unique character of rural communities by ensuring that new development is compatible with existing community character and aesthetics.

Natural Resources Element

Policy NR 2.1: Identify and protect scenic corridors and vistas that contribute to the visual quality of the Antelope Valley.

Policy NR 2.2: Implement measures to preserve and enhance scenic resources, such as limiting the height and bulk of structures, and requiring landscaping and screening.

Policy NR 3.1: Preserve natural landforms and minimize grading in hillside areas to maintain the visual integrity of the landscape.

Policy NR 3.2: Encourage the use of vegetation and natural materials to blend structures with the surrounding environment.

Conservation and Open Space Element

Policy COS 5.7: Ensure that incompatible development is discouraged in designated Scenic Drives by developing and implementing development standards and guidelines for development within identified viewsheds of these routes (Map 4.2: Antelope Valley Scenic Drives).

Policy COS 13.7: Limit the aesthetic impacts of utility-scale renewable energy production facilities to preserve rural character.

Policy COS 15.1: Ensure that outdoor lighting, including street lighting, is provided at the lowest possible level while maintaining safety.

Policy COS 15.2: Prohibit continuous all-night outdoor lighting in rural areas, unless required for land uses with unique security concerns, such as fire stations, hospitals, and prisons.

In regard to Policy COS 5.7 and more specifically, Scenic Drives in the Antelope Valley Area Plan, based on County mapping, the following roadways are designated as Scenic Drives in the Antelope Valley Area Plan (County of Los Angeles 2015a):

- SR-14
- Soledad Canyon Road
- Angeles Forest Highway

Refer to Section 3.13.2.5 for analysis of Project conformity with applicable policies of the Antelope Valley Area Plan.

Los Angeles County Municipal Code

The County Municipal Code is a collection of laws and regulations that govern various aspects of life in Los Angeles County. It was first enacted by Ordinance No. 77,000, which became effective on November 12, 1936. The Municipal Code is designed to ensure the public peace, health, and safety of residents by providing clear guidelines and standards for behavior, development, and operations. The following regulations from the County Municipal Code are relevant to the Project:

- **Scenic Resource Protection:** Projects must consider the impact on scenic resources, such as views of mountains and valleys. Development should be designed to protect and enhance these views (Chapter 22.302.060[B]).
- **Lighting Regulations:** Outdoor lighting must be designed to minimize light pollution and glare, preserving the night sky and reducing visual impacts on the surrounding area. Outdoor lighting shall be provided in accordance with the applicable provisions of Chapter 22.80 (Rural Outdoor Lighting District). Where outdoor lights are required, light fixtures in keeping with the Western frontier architectural style will be required (Chapter 22.44.1330). Exterior lighting (except traffic lights, navigational lights, and other similar public safety lighting) shall be minimized, restricted to low-intensity features, shielded, and concealed to the maximum feasible extent using the best available dark skies technology to avoid or minimize impacts to biological resources and public views of the natural night sky and stars (Chapter 22.44.1270).
- **Vegetation and Landscaping:** Projects must include landscaping plans that use native or drought-tolerant plants to maintain the natural appearance of the area and reduce water usage (Chapter 22.52.990).

3.13.6 Agencies and Agency Contacts

Staff from the CEC were contacted during preparation of this visual resource evaluation. Specifically, CEC staff reviewed the Project's initial KOPs and provided direction on the overarching scope of the analysis (i.e., effects to objects of aesthetic significance). Subsequent conversations focused on siting of KOPs and CEC application requirements pertaining to visual analyses.

3.13.7 Permits and Permit Schedule

There are no permits related to visual resources that are required to construct the Project. CEC will work with the County on review of this application to ensure compliance with County policies and ordinances related to visual resources, as well as design plans, including the landscape plan.

3.13.8 References

Calscape. 2025. Native Plant database search. A project of the California Native Plant Society. Accessed April 2025. https://calscape.org/search.

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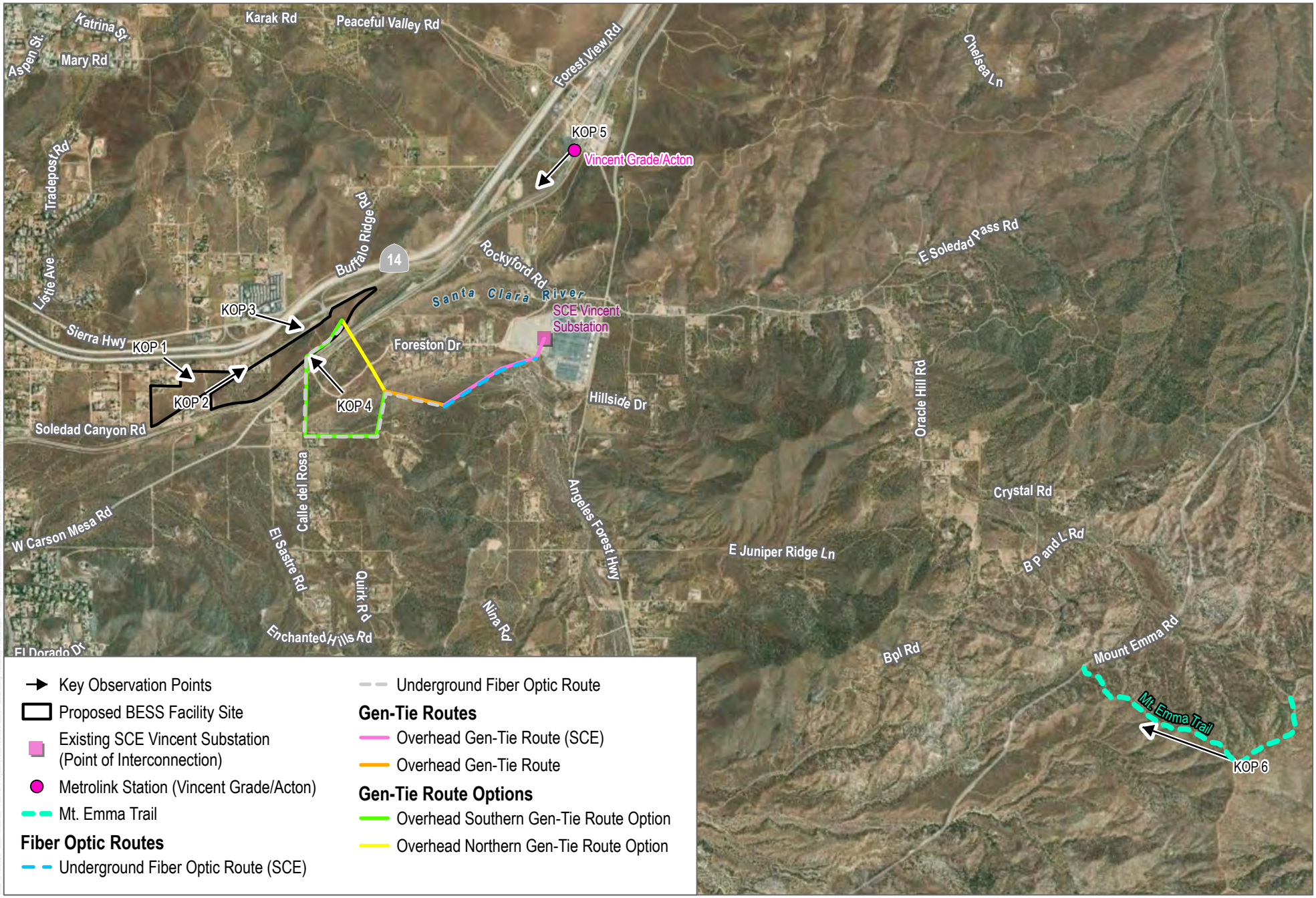
County of Los Angeles. 2015b. *Los Angeles County General Plan 2035*. Adopted October 6, 2015. https://planning.lacounty.gov/wp-content/uploads/2023/03/gp_final-general-plan.pdf.



SOURCE: World Imagery; California State Parks

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0 1,250 2,500 Feet

FIGURE 3.13-1

Key Observation Points

Prairie Song Reliability Project

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View to the southeast from eastbound State Route 14 (approximately 0.10 from Proposed BESS Facility Site)

FIGURE 3.13-2a

KOP 1: State Route 14 (Existing Conditions)

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Visual Simulation of the Project with Landscaping at 1 Year Post-Installation

FIGURE 3.13-2b

KOP 1: State Route 14 (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-2c

KOP 1: State Route 14 (Visual Simulation with Northern Gen-Tie Route Option)

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FIGURE 3.13-2d

KOP 1: State Route 14 (Visual Simulation with Southern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-2e

KOP 1: State Route 14 (Visual Simulation with Southern Gen-Tie Route Option)

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View to the northeast from Soledad Canyon Road (adjacent to Proposed BESS Facility Site)

FIGURE 3.13-3a

KOP 2: Soledad Canyon Road (Existing Conditions)

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Visual Simulation of the Project with Landscaping at 1 Year Post-Installation

FIGURE 3.13-3b

KOP 2: Soledad Canyon Road (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-3c

KOP 2: Soledad Canyon Road (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 1 Year Post-Installation

FIGURE 3.13-3d

KOP 2: Soledad Canyon Road (Visual Simulation with Southern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-3e

KOP 2: Soledad Canyon Road (Visual Simulation with Southern Gen-Tie Route Option)

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View to the southeast from Sierra Highway (approximately 0.15 mile from Proposed Substation Site)

FIGURE 3.13-4a

KOP 3: Sierra Highway (Existing Conditions)

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Visual Simulation of the Project with Landscaping at 1 Year Post-Installation

FIGURE 3.13-4b

KOP 3: Sierra Highway (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-4c

KOP 3: Sierra Highway (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 1Year Post-Installation

FIGURE 3.13-4d

KOP 3: Sierra Highway (Visual Simulation with Southern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-4e

KOP 3: Sierra Highway (Visual Simulation with Southern Gen-Tie Route Option)

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View to the northwest from Foreston Drive (approximately 0.20 mile from Proposed BESS Facility Site)

FIGURE 3.13-5a

KOP 4: Foreston Drive (Existing Conditions)

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Visual Simulation of the Project with Landscaping at 10 Years Post- Installation

FIGURE 3.13-5b

KOP 4: Foreston Drive (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-5c

KOP 4: Foreston Drive (Visual Simulation with Southern Gen-Tie Route Option)

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View to the southwest from the Metrolink Train Station (approximately 1 mile from Proposed BESS Facility Site)

FIGURE 3.13-6a

KOP 5: Metrolink Train Station (Existing Conditions)

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Note: Project components are not clearly visible due to distance between KOP 5 and components (and due to screening associated with foreground trees)

Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

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FIGURE 3.13-6b

KOP 5: Metrolink Train Station (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

Note: Project components are not clearly visible due to distance between KOP 5 and components (and due to screening associated with foreground trees)

FIGURE 3.13-6c

KOP 5: Metrolink Train Station (Visual Simulation with Southern Gen-Tie Route Option)

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View to the northwest from the Mt. Emma Trail (approximately 4.2 mile from Proposed BESS Facility Site)

FIGURE 3.13-7a

KOP 6: Mt. Emma Trail (Existing Conditions)

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Visual Simulation of the Project with Landscaping at 10 Years Post-Installation

FIGURE 3.13-7b

KOP 6: Mt. Emma Trail (Visual Simulation with Northern Gen-Tie Route Option)

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Visual Simulation of the Project with Landscaping at 10 Years Post- Installation

FIGURE 3.13-7c

KOP 6: Mt. Emma Trail (Visual Simulation with Southern Gen-Tie Route Option)

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3.14 Waste Management

This section includes the expected potential effects on human health and the environment from nonhazardous and hazardous waste generated by the Prairie Song Reliability Project (Project). The Project will consist of an up to 1,150-megawatt (MW) containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation.

This evaluation of waste management includes the following elements:

- Section 3.14.1 describes Project site investigations and the nonhazardous and hazardous waste facilities that will serve the Project.
- Section 3.14.2 describes the Project's environmental analysis in terms of waste and waste disposal sites.
- Section 3.14.3 discusses potential cumulative effects.
- Section 3.14.4 describes mitigation measures that should be considered during Project construction, operation, maintenance, and decommissioning.
- Section 3.14.5 presents laws, ordinances, regulations, and standards (LORS) that apply to the generated waste.
- Section 3.14.6 lists the agencies that have jurisdiction over the generated waste and specifies whom to contact in those agencies.
- Section 3.14.7 describes permits required for generated waste and a schedule for obtaining those permits.
- Section 3.14.8 provides the references used to prepare this subsection.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical reports, included as an appendix to this application:

- Appendix 3.5A – Phase I Environmental Site Assessment, dated October 2024 (for the Southern Gen-Tie Route parcels)
- Appendix 3.5A – Phase I Environmental Site Assessment, dated November 2024 (for the remainder of the Project site [the BESS facility and Northern Gen-Tie Route parcels])

A summary of the waste management evaluation is provided in the table below.

		Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:					
1	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?	☐	☐	☒	☐

3.14.1 Affected Environment

This subsection discusses the condition of the site and identifies the nonhazardous and hazardous waste facilities that will serve the Project.

The Project will be located in unincorporated Los Angeles County (County), California, south of State Route 14, approximately 3 miles northeast of the unincorporated community of Acton. Development of the BESS facility will occur on an area of land situated between two (2) existing transportation corridors, the Antelope Valley Freeway (State Route 14) to the north and Southern Pacific Railroad lines and Carson Mesa Road to the south, that are approximately 1,200 feet apart. The BESS facility footprint is approximately 70.8 acres, which currently consists of undeveloped lands, a residence, and disturbed dirt roads. The Project will utilize one (1) of two (2) potential gen-tie routes. The Northern Gen-Tie Route will extend approximately 1.1 miles southeast from the Project substation, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceed east and northeast to the point of interconnection at the Vincent Substation. The Southern Gen-Tie Route will run approximately 1.8 miles extending south and east from the Project substation, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceeding northeast to the point of interconnection at the Vincent Substation.

3.14.1.1 Site Investigations

Existing site conditions were captured in Phase I Environmental Site Assessments (ESAs) by Dudek (Appendix 3.5A). The Phase I ESAs were conducted in accordance with methods prescribed by ASTM E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and ASTM E2247-23, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property. The Phase I ESAs did not identify any recognized environmental conditions (RECs), historical RECs (HRECs), controlled RECs (CRECs), vapor encroachment conditions (VECs), or significant data gaps in connection with parcels related to the Project.

3.14.1.2 Solid Waste Disposal Facilities

Information about solid waste facilities, operations, and disposal sites was obtained from the California Department of Resources Recycling and Recovery (CalRecycle) Solid Waste Information System (CalRecycle 2025a). Based on a review of this information, there are over 200 active solid waste disposal facilities within Los Angeles County (CalRecycle 2025a). Table 3.14-1 presents a summary of solid waste disposal facilities within the vicinity of the Project site. Based on a review of CalRecycle's Solid Waste Information System data, the Antelope Valley Public Landfill and Lancaster Landfill and Recycling Center have no reported enforcement actions. The Chiquita Canyon Sanitary Landfill has two (2) active enforcement actions, one (1) superseded enforcement action, and one (1) complete enforcement action. The two (2) active enforcement actions at the Chiquita Canyon Sanitary Landfill are listed as a gas monitoring and control enforcement action and a site maintenance enforcement action. The Sunshine Canyon City/County Landfill has two (2) completed enforcement actions.

Table 3.14-1. Solid Waste Disposal Facilities in the Vicinity of the Project

Landfill/ Transfer Station	Location	Class	Waste Types	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Permitted Throughput (tons per day)	Estimated Closure
Antelope Valley Public Landfill	1200 West City Ranch Road, Palmdale, California 93551 (approximately 6.4 miles north of the Project site)	III	Mixed Municipal, Inert, Industrial, Green Materials, Contaminated Soil, Construction/ Demolition, Asbestos, Agricultural	30,200,000	12,194,026	5,548	4/1/2044
Lancaster Landfill and Recycling Center	600 East Avenue F, Lancaster, California 93535 (approximately 17.6 miles north of the Project site)	III	Contaminated Soil, Sludge (BioSolids), Asbestos, Green Materials, Inert, Tires, Mixed Municipal, Industrial, Construction/ Demolition, Agricultural	27,700,000	13,017,160	5,100	3/1/2044
Chiquita Canyon Sanitary Landfill	29201 Henry Mayo Drive, Castaic, California 91384 (approximately 29.5 miles west of the Project site)	III	Inert, Industrial, Construction/ Demolition, Green Materials, Mixed Municipal	110,366,000	58,259,767	12,000	1/1/2047
Sunshine Canyon City/County Landfill	14747 San Fernando Road, Sylmar, California 91342 (approximately 23.9 miles southwest of the Project site)	III	Mixed Municipal, Inert, Industrial, Green Materials, Construction/ Demolition	140,900,000	66,200,000	12,100	10/31/2037

Source: CalRecycle 2025a.

3.14.1.3 Hazardous Waste Disposal Facilities

California has two (2) active Class I landfill facilities that accept hazardous waste: Waste Management Kettleman Hills Landfill and Clean Harbor's Buttonwillow Landfill (DTSC 2025). Class I landfill facilities vary considerably in what they can do with the hazardous waste they receive. Some waste disposal facilities can only store waste, some can treat the waste to recover usable products, and others can dispose of the waste by incineration, deep-well injection, or landfilling. The State of California does not permit the incineration and deep-well injection disposal of hazardous waste. The following includes a summary of the Class I landfills available for disposal in California:

Waste Management Kettleman Hills Landfill. This landfill is on a 1,600-acre parcel that has 695 acres of permitted land for management of federal and state-listed hazardous wastes and municipal solid wastes. According to the 2003 Final Combination Permit, this landfill accepts Class I and II waste, including all hazardous waste except radioactive, medical, and unexploded ordnance (DTSC 2025). A comprehensive list of all hazardous waste accepted is included in Appendix A of the Kettleman Hills Landfill Part B permit. Based on the aforementioned list, all anticipated hazardous waste generated by the Project is accepted by Kettleman Hills Landfill (DTSC 2025). The Kettleman Hills facility currently has three (3) operational landfills: (1) B-17 is permitted to have a 17.8-million-cubic-yard capacity and is classified as a Class II/III landfill, (2) B-18 is permitted to have a 15.6-million-cubic-yard capacity and is classified as a Class I/II landfill, and (3) B-19 is permitted to have a 7.7-million-cubic-yard capacity and is classified as a Class II/III landfill. Permit renewal for the facility is currently being reviewed by the Department of Toxic Substances Control and is expected to have an updated closure date of January 2055. The landfill has no active enforcement actions. The landfill is located approximately 146.1 miles northwest of the Project site.

Clean Harbors Buttonwillow Landfill. This landfill is permitted at 13.25 million cubic yards and can accept 10,500 tons per day (CalRecycle 2025a). The landfill is permitted to accept waste until 2040 (CalRecycle 2025a). Buttonwillow has been permitted to manage a wide range of hazardous wastes, including Resource Conservation and Recovery Act (RCRA) hazardous wastes, California hazardous waste, and nonhazardous waste for stabilization treatment, solidification, and landfill. The landfill can handle waste in bulk (solids and liquids) and in containers. Typical waste streams include nonhazardous soil, California hazardous soil, hazardous soil for direct landfill, hazardous waste for treatment of metals, plating waste, hazardous and nonhazardous liquid, and debris for microencapsulation (CalRecycle 2025a). The landfill has no reported enforcement actions. The landfill is located approximately 104.1 miles northwest of the Project site.

3.14.2 Impact Analysis

3.14.2.1 Methodology

The information presented is based on data obtained from the State of California about the capacity of landfills, Phase I ESAs, and other readily available resources provided online. Potential direct and indirect Project impacts related to waste management were evaluated against the California Environmental Quality Act (CEQA) significance criteria and are discussed below. The impact analysis evaluates potential Project impacts during Project construction, operation, and decommissioning.

3.14.2.2 Impact Evaluation Criteria

Environmental analysis for waste management is in accordance with the criterion from the CEQA Guidelines Section 15002(g), Appendix G. This section evaluates the Project against the following criterion. Will 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? The potential risks or hazards posed by the transportation of hazardous materials, including hazardous wastes, are described and analyzed in Section 3.5, Hazardous Materials Handling.

3.14.2.3 CEQA Appendix G Assessment Criteria

3.14.2.3.1 Will 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?

Construction and Decommissioning

Less than Significant. During the construction phases, the Project will generate nonhazardous and hazardous waste. As discussed in Section 2, Project Description, the construction of the Project will require approximately 26 months to complete, including testing and commissioning. Table 3.14-2 presents a summary of estimated potential waste streams created by construction activities. The quantities listed in Table 3.14-2 are estimates and are subject to change based on design modifications or market conditions.

Table 3.14-2. Potential Waste Generated During Construction

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity
Nonhazardous Waste					
Scrap wood, plastic, paper, etc.	Construction	Normal refuse	Nonhazardous	Recycle and/or dispose of at a Class II or III landfill.	80 tons
Concrete waste	Construction	Solids	Nonhazardous	Recycle and/or dispose of at a Class II or III landfill.	160 tons
Scrap metal	Construction	Parts, wire, etc.	Nonhazardous	Recycle and/or dispose of at a Class II or III landfill.	160 tons
Soil/rock	Excavation/grading	Topsoil	Nonhazardous	Recycle and/or dispose of at a Class II or III landfill.	79 acre-feet

Table 3.14-2. Potential Waste Generated During Construction

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity
Wastewater					
Sanitary waste	Portable toilets	Liquid	Nonhazardous	Removed by contracted sanitary service.	400,000 gallons
Hazardous Waste					
Empty hazardous material containers	Construction	Drums and containers	Hazardous and nonhazardous	Dispose of containers <5 gallon as normal refuse. Return containers >5 gallons to vendors for recycling or reconditioning.	40 units
Spent welding materials (welding rods, wire and grinding wheels, etc.)	Construction	Solids	Hazardous	Dispose of at Class I landfill.	More than 800 pounds
Waste oil (lubricating and insulating)	Construction equipment and vehicles, lube oil and flushes	Hydrocarbons	Non-RCRA hazardous liquid	Recycle or dispose of at a permitted facility.	8,000 gallons
Waste oil filters	Construction equipment and vehicles	Solids	Hazardous	Recycle at a permitted facility.	400 units
Oily rags, oil sorbent	Cleanup of small spills	Hydrocarbons	Hazardous	Recycle or dispose of at a permitted facility.	800 units
Solvents, detergents, glycols, refrigerants, paint, and adhesives	Equipment maintenance	Solvents	Hazardous	Recycle at a permitted facility.	40 gallons
Spent lead–acid batteries and electrical fuses	Equipment	Metals	Universal waste	Recycle or dispose of off site at Universal Waste Facility.	<40 units

Table 3.14-2. Potential Waste Generated During Construction

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity
Spent alkaline batteries	Equipment	Metals	Universal waste	Recycle or dispose of off site at Universal Waste Facility.	800 units

Note: RCRA = Resource Conservation and Recovery Act.

The Project will dispose of nonhazardous waste from construction and decommissioning activities at a Class III landfill. When practical, nonhazardous waste will be recycled to the extent possible. What cannot be recycled will be disposed of at any of the permitted landfills discussed below. A Construction and Demolition Recycle and Reuse Plan will be prepared to ensure disposal of waste conforms with applicable regulations. Most solid waste generated during construction will be nonhazardous and consist primarily of cardboard, wood pallets, copper wire, scrap metal, common trash, and concrete waste. Construction waste materials will be handled in accordance with the California Green Build Standards Code (24 CCR Part 11, Section 5.408), which establishes standards for construction and demolition (C&D) waste management and recycling or salvage of a minimum of 65% of nonhazardous C&D waste. Non-recyclable construction waste will be placed into commercial trash dumpsters located on site. Dumpsters will be collected as needed by a commercial service and delivered to a landfill.

Construction of the Project will result in the excavation of soil, which will be reused on site. No soil export is anticipated.

The proposed BESS facility will require lithium-iron phosphate, or similar, batteries. The batteries will be delivered to the Project site in U.S. Department of Transportation–certified vehicles and in compliance with all applicable requirements of the U.S. Department of Transportation, California Highway Patrol, and the California Department of Motor Vehicles. Further, batteries may be considered hazardous waste in California when they are discarded, whether rechargeable or not. Accordingly, the battery modules included in the BESS facility eventually will require disposal in accordance with the applicable hazardous waste requirements. Standard construction practices will be observed such that an incidental release shall be appropriately contained and remediated as required by regulation.

Other hazardous materials used for construction will be typical for most construction projects of this type. As described in Table 3.14-2, materials will include small quantities of gasoline, diesel fuels, oils, lubricants, cleaning solvents, detergents, degreasers, paints, glycol-based anti-freeze, dust palliatives, herbicides, and welding materials/supplies. All hazardous materials will be used, stored, and disposed of in accordance with the manufacturers' specifications and consistent with applicable regulatory requirements. Workers will be trained to engage in safe work practices and to properly identify and handle any hazardous materials on site. Limited amounts of hazardous materials will be stored or used on site during Project construction, including diesel fuel, gasoline, and motor oil for vehicles; dielectric oil and mineral oil to be sealed within the transformers; herbicides; and lead–acid-based or lithium-ion-based batteries for emergency backup. Appropriate spill containment and cleanup kits will be maintained during construction and decommissioning activities. Disposal of hazardous waste, during construction will be at a permitted treatment, storage, and disposal facility. Hazardous waste generated at the facility will not be stored on site for more than 90 days following its generation date and will be transported by a permitted hazardous waste transporter.

During decommissioning activities, nonhazardous waste and hazardous waste materials will be removed from site. A Draft Decommissioning Plan has been prepared (Appendix 2F) and will be implemented during decommissioning activities to ensure appropriate removal of BESS equipment from the foundations, disconnection of wiring, and removal of site infrastructure, as appropriate at the time of decommissioning consistent with then-applicable LORS and use of the site. The gen-tie facilities will be decommissioned and dismantled, and the site will be restored. Batteries and other equipment and materials will be recycled to the extent feasible to minimize disposal in landfills. All nonhazardous wastes will be collected and disposed of in appropriate landfills or waste collection facilities. All hazardous wastes will be disposed of according to applicable LORS. In summary, the Project will generate nonhazardous and hazardous waste during its construction, facility start up, testing, and decommissioning. However, there are multiple locations that will accept anticipated waste streams generated by the facility. The solid waste Class III landfills listed in Table 3.14-1 have a collective remaining capacity of over 149,670,953 cubic yards. Similarly, waste disposal needs for permitted hazardous waste and soil is within thresholds that accepting facilities can accommodate without altering or impacting accepting facility structure.

Waste generated during construction and operation of the Project alone is not expected to generate quantities of waste such that the surrounding accepting facilities cannot accommodate the additional materials. Therefore, the impact of the Project on solid waste recycling, disposal capacity, and hazardous waste capacity will be less than significant for construction and decommissioning activities.

Operations

Less than Significant. A small amount of waste will be generated on site during facility operations. Section 2 includes a detailed description of the O&M activities of the Project. The operation of the Project is anticipated to generate nonhazardous and hazardous waste. Although the primary waste stream will be nonhazardous, the potential exists for varying quantities of hazardous waste to be generated on a periodic basis. Table 3.14-3 presents a summary of potential wastes and estimated quantities generated during Project operations. Estimated quantities will be generated on an annual basis.

Table 3.14-3. Potential Waste Generated During Operations

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity (Annual)
Nonhazardous Waste					
Scrap wood, plastic, paper, etc.	Maintenance activities	Normal refuse	Nonhazardous	Recycle and/or dispose of at a Class II or III landfill.	1,600 pounds
Scrap metal	Maintenance activities	Parts, wire, etc.	Nonhazardous	Recycle and/or dispose of at a Class II or III landfill.	800 pounds
Spent substation or electrical components	Maintenance activities	Metals, mineral oils, solids, electrical materials	Nonhazardous	Recycle and/or dispose of at a Class II or III landfill.	1,200 pounds

Table 3.14-3. Potential Waste Generated During Operations

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity (Annual)
Wastewater					
Sanitary waste	Septic	Liquid	Nonhazardous	Septic	16,000 gallons
Hazardous Waste					
Waste oil (lubricating and insulating)	Maintenance from machinery, lubricating oil systems and oil filled transformers; small leaks and spills	Hydrocarbons	Hazardous	Cleaned up using sorbent and rags – disposed of by certified oil recycler.	800 gallons
Empty hazardous material containers	Maintenance activities	Drums and containers	Hazardous and nonhazardous	Dispose of containers <5 gallon as normal refuse. Return containers >5 gallons to vendors for recycling or reconditioning.	400 pounds
Spent welding materials (welding rods, wire and grinding wheels, etc.)	Maintenance activities	Solids	Hazardous	Dispose of at Class I landfill.	400 pounds
Waste oil filters	Maintenance activities equipment and vehicles	Solids	Hazardous	Recycle at a permitted facility.	400 pounds
Battery coolant (ethylene glycol and water mixture)	Routine maintenance (5- to 7-year replacement)	Liquid	Hazardous	Recycle at a permitted facility.	32,000 gallons yearly average (replaced on 5-year cycle)
Oily rags/sorbents	Maintenance, wipe down of equipment, cleanup of spills	Hydrocarbons and cloth	Hazardous	Recycled or disposed of by certified oil recycler.	8 units
Spent lithium-ion battery cells	Equipment	Metals	Metals	Returned to manufacturer for recycling.	60 tons
Spent lead–acid batteries	Equipment	Metals	Universal waste	Recycle or dispose of off site at Universal Waste Facility.	<160 pounds

Table 3.14-3. Potential Waste Generated During Operations

Waste	Origin	Composition	Classification	Disposal	Estimated Quantity (Annual)
Spent alkaline batteries	Equipment	Metals	Universal waste	Recycle or dispose of off site at Universal Waste Facility.	<160 pounds
Controlled waste streams	Smoke detectors, fire extinguishers	Controlled substance	Hazardous	Recycled or disposed of by certified waste hauler.	<160 pounds

During O&M activities, the Project will generate small amounts of waste, such as broken or rusted metal, defective or malfunctioning equipment, electrical materials, empty containers, other miscellaneous solid waste, and typical refuse from the O&M staff. When practical, nonhazardous waste will be recycled to the extent possible. What cannot be recycled will be disposed of at a permitted landfill. On average, less than half a ton of waste per week is anticipated to be collected in a bin that will be collected by a commercial waste management service and disposed of at a Class III landfill.

Disposal of hazardous waste during operations will be at a permitted treatment, storage, and disposal facility. Hazardous waste generated at the facility will not be stored on site for more than 90 days following its generation date and will be transported by a permitted hazardous waste transporter.

The Project will generate minimal quantities of waste during operation activities. Waste generated during operation of the Project alone is not expected to generate quantities of waste such that the surrounding accepting facilities cannot accommodate the additional materials. Therefore, the impact of the Project on solid waste recycling, disposal capacity, and hazardous waste capacity will be less than significant for operational activities. In addition, the Project will prepare and implement a Hazardous Materials Business Plan (HMBP) that will contain an inventory of hazardous materials on site, procedures and contacts for communicating an immediate response to a reportable release or threatened release of a hazardous material, and employee training in project safety procedures and emergency response plans and procedures in the event of a reportable release or threatened release. Any release of hazardous materials will be handled and disposed of in accordance with the HMBP and federal and state regulations.

3.14.3 Cumulative Effects

A cumulative impact is defined as a proposed project's incremental effect of closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Public Resources Code Section 21083; 14 CCR 15064[h], 15065[a](3), 15130, and 15355).

According to CalRecycle, approximately 3,191,109 tons of waste were landfilled within Los Angeles County during the first two quarters of 2024, and approximately 6,454,612 tons of waste were landfilled within Los Angeles County in 2023 (CalRecycle 2025b). These numbers represent waste landfilled, not recycled, transformed, or exported for outside disposal or total waste generation for Los Angeles County. Prior to disposal, source reduction

and recycling efforts will be implemented for both this and the cumulative projects listed in Table 3-2. As a worst-case scenario, if no waste can be recycled, transformed, or disposed of by other means, it is estimated that approximately 1.8 tons of nonhazardous solid waste will be landfilled per year during operational activities, which will only represent approximately 0.000028% of Los Angeles County total waste landfilled per year. The Project will prepare a Construction and Demolition Recycle and Reuse Plan, which will ensure that waste is reduced and recycled to the maximum extent. Likewise, it is estimated that solid waste generated during construction will be minimal. As all of the cumulative projects listed in Table 3-2 will also be required to comply with state and local waste reduction policies that will reduce the total volume of wastes sent to landfills for disposal, sufficient capacity is available at the landfills in Los Angeles County with no cumulative adverse impact anticipated. Therefore, anticipated waste generated by the Project will not result in a direct and indirect cumulative waste management impact to Los Angeles County.

3.14.4 Mitigation Measures

No mitigation measures are required as no significant impacts will occur.

3.14.5 Laws, Ordinances, Regulations, and Standards

Nonhazardous and hazardous waste handling associated with the Project will be governed by federal, state, and local laws. Applicable laws and regulations address proper waste handling, storage, and disposal practices to protect the environment from contamination and to protect facility workers and the surrounding community from exposure to nonhazardous and hazardous waste. Table 3.14-4 presents a summary of the LORS applicable to waste handling.

Table 3.14-4. LORS Applicable to Waste Management

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
Federal	RCRA Subtitle D	Regulates design and operation of nonhazardous solid waste landfills.	**Yes.** Nonhazardous waste generated as part of Project implementation will be handled and disposed of in accordance with Subtitle D.	Section 3.14.2.3.1 Section 3.14.5.1
Federal	RCRA Subtitle C	Controls storage, treatment, and disposal of hazardous waste.	**Yes.** Hazardous waste generated as part of Project implementation will be handled and disposed of in accordance with Subtitle C.	Section 3.14.2.3.1 Section 3.14.5.1
State	CEQA	Requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of the Project and to reduce	**Yes.** CEC, per the CEC's Opt-In Application process.	Section 3.14.2.3.1 Section 3.14.5.2

Table 3.14-4. LORS Applicable to Waste Management

Jurisdiction	LORS	Applicability	Project Conformity	Opt-In Application Reference
		environmental impacts to the extent feasible.		
State	CIWMA (AB 939)	Controls solid waste collectors, recyclers, and depositors.	**Yes.** Waste generated as part of Project implementation will be handled and disposed of in accordance with AB 939 requirements.	Section 3.14.2.3.1 Section 3.14.5.2
State	AB 341/SB 1018 – Mandatory Commercial Recycling	Requires commercial businesses generating 4 cubic yards per week or more of solid waste to adopt recycling practices.	**Yes.** Recyclable materials generated as part of Project implementation will be recycled in accordance with AB 341/SB 1018 as applicable.	Section 3.14.2.3.1 Section 3.14.5.2
State	CCR Title 24, Part 11 (CALGreen)	Establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality.	**Yes.** Solid waste generated will be recycled in accordance with CALGreen requirements for recycling percentages.	Section 3.14.2.3.1 Section 3.14.5.2
State	CCR Title 22, Division 4.5	Controls storage, treatment, and disposal of hazardous waste under the Department of Toxic Substance Control.	**Yes.** Hazardous wastes generated by the Project will be handled and disposed of in conformance with CCR Title 22, Division 4.5.	Section 3.14.2.3.1 Section 3.14.5.2
Local	Construction and Demolition Debris Recycling and Reuse Ordinance	Requires projects in the unincorporated areas to recycle or reuse 50% of the debris generated.	**Yes.** The Project will conform to the requirements of the County's Construction and Demolition Debris Recycling and Reuse Ordinance.	Section 3.14.2.3.1 Section 3.14.5.3
Local	Los Angeles County General Plan	Provides a comprehensive policy framework to guide development and growth in the unincorporated areas of the County.	**Yes**. The Project will conform to the Los Angeles County General Plan goals and policies related to waste.	Section 3.14.2.3.1 Section 3.14.5.3

Notes: LORS = laws, ordinances, regulations, and standards; RCRA = Resource Conservation and Recovery Act; CEQA = California Environmental Quality Act; CEC = California Energy Commission; CIWMA = California Integrated Waste Management Act; AB = Assembly Bill; SB = Senate Bill; CCR = California Code of Regulations; CALGreen = California Green Building Standards; County = Los Angeles County.

3.14.5.1 Federal LORS

Resource Conservation and Recovery Act

The RCRA, which amends the Solid Waste Disposal Act of 1965, was enacted in 1976 to address municipal and industrial solid waste generated nationwide. The act gives the U.S. Environmental Protection Agency the authority to control hazardous waste from "cradle to grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes. The federal Hazardous and Solid Waste Amendments to the RCRA were adopted in 1984 and were aimed at waste minimization and phasing out land disposal of hazardous waste, as well as providing guidance for corrective action of releases. The amendments also allowed for increased enforcement authority for the U.S. Environmental Protection Agency, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. Amendments to the RCRA in 1986 further enabled the U.S. Environmental Protection Agency to address environmental hazards relative to underground tank storage of petroleum and other hazardous substances.

Nonhazardous solid waste: Federal involvement is limited to establishing minimum criteria that prescribe the best practicable controls and monitoring requirements for solid waste disposal facilities. RCRA 42 United States Code 6901 Subtitle D assigns responsibility for the regulation of nonhazardous waste to the states.

Nonhazardous waste generated as part of Project implementation will be handled and disposed of in accordance with Subtitle D.

Hazardous waste: RCRA 42 United States Code 6901 Subtitle C establishes a "cradle to grave" system of hazardous waste management by instituting controls for generation, transportation, treatment, storage, and disposal of hazardous waste. Above certain levels of waste produced, Subtitle C applies to all states and all hazardous waste generators. RCRA also establishes waste regulations for energetic wastes (explosives) in 40 Code of Federal Regulations Part 266, Subpart M.

Hazardous waste generated as part of Project implementation will be handled and disposed of in accordance with Subtitle C.

3.14.5.2 State LORS

California Integrated Waste Management Act (Assembly Bill 939)

Pursuant to the California Integrated Solid Waste Management Act of 1989 (Public Resources Code 40050 et seq.) or Assembly Bill (AB) 939, all cities in California are required to reduce the amount of solid waste disposed of in landfills. AB 939 required a reduction of 25% by 1995 and 50% by 2000. Contracts that include work that will generate solid waste, including C&D debris, have been targeted for participation in source reduction, reuse, and recycling programs. C&D waste is heavy, inert material that creates significant problems when disposed of in landfills. Because C&D waste is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that generate C&D waste should emphasize deconstruction and diversion planning rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction Project, which allows maximum use of the deconstructed materials for recycling in other construction projects and sends a minimum amount of the deconstruction material to landfills. Waste should be diverted from

disposal in landfills (particularly Class III landfills) and maximize source reduction, reuse, and recycling of C&D debris. AB 939 also required cities and counties to prepare solid waste planning documents (e.g., the Source Reduction and Recycling Element, the Household Hazardous Waste Element, and the Non-Disposal Facility Element).

Waste generated as part of Project implementation will be handled and disposed of in accordance with AB 939 requirements.

Assembly Bill 341/Senate Bill 1018 Mandatory Commercial Recycling

Mandatory Commercial Recycling was one of the measures adopted in the AB 32 Scoping Plan by the California Air Resources Board pursuant to the California Global Warming Solutions Act (Chapter 488, Statutes of 2006). The Mandatory Commercial Recycling Measure focuses on increased commercial waste diversion as a method to reduce greenhouse gas emissions. It is designed to achieve a reduction in greenhouse gas emissions of 5 million metric tons of carbon dioxide equivalents. To achieve the measure's objective, an additional 2 to 3 million tons of materials annually will need to be recycled from the commercial sector by the year 2020 and beyond (CalRecycle 2025c).

The regulation was adopted at CalRecycle's January 17, 2012, Monthly Public Meeting. This regulation reflects the statutory provisions of AB 341 (Chesbro, Chapter 476, Statutes of 2011) and provides additional procedural clarifications and sets forth the requirements of the statewide mandatory commercial recycling program. The regulation was approved by the Office of Administrative Law on May 7, 2012, and became effective immediately. On June 27, 2012, the Governor signed Senate Bill 1018, which included an amendment that requires a business that generates 4 cubic yards or more of commercial solid waste per week to arrange for recycling services (CalRecycle 2025c).

Recyclable materials generated as part of Project implementation will be recycled in accordance with AB 341/Senate Bill 1018 as applicable.

California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, commonly referred to as CALGreen, establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of residential and non-residential buildings. CALGreen standards are updated periodically. The latest version (CALGreen 2022) became effective on January 1, 2023.

Mandatory CALGreen standards pertaining to water, wastewater, and solid waste include the following (24 CCR Part 11):

- Reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings
- Reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- Diversion of 65% of C&D waste from landfills

Solid waste generated will be recycled in accordance with CALGreen requirements for recycling percentages.

California Code of Regulations Title 22, Division 4.5

The Hazardous Waste Control Act of 1972 established standards for the handling, transportation, treatment, and disposal of hazardous waste. The regulatory framework is documented in California Code of Regulations (CCR) Title 22, Division 4.5, which is enforced by the Department of Toxic Substances Control.

Hazardous wastes generated by the Project will be handled and disposed of in conformance with CCR Title 22, Division 4.5.

3.14.5.3 Local LORS

Construction and Demolition Debris Recycling and Reuse Ordinance

The County of Los Angeles Board of Supervisors adopted the Construction and Demolition Debris Recycling and Reuse Ordinance on January 4, 2005. The ordinance added Chapter 20.87 to the Los Angeles County Code, which requires projects in the unincorporated areas to recycle or reuse 50% of the debris generated. Its purpose is to increase the diversion of C&D debris from disposal facilities and will assist the County in meeting the State of California's 50% waste reduction mandate.

The Project will conform to the requirements of the County's Construction and Demolition Debris Recycling and Reuse Ordinance.

Los Angeles County General Plan

The Los Angeles County General Plan 2035 provides a comprehensive policy framework to guide development and growth in the unincorporated areas of the County. Specifically, the Public Services and Facilities Element includes policies aimed at promoting the orderly and efficient planning of public facilities and infrastructure in conjunction with land use development and growth (Los Angeles County 2015). For this Project, the following policies are particularly relevant:

Policy PS/F 4.3: Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas.

Policy PS/F 4.4: Evaluate the potential for treating stormwater runoff in wastewater management systems or through other similar systems and methods.

Policy PS/F 5.1: Maintain an efficient, safe and responsive waste management system that reduces waste while protecting the health and safety of the public.

Policy PS/F 5.2: Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.

Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.

Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects.

The Project will conform to the Los Angeles County General Plan goals and policies related to waste.

3.14.6 Agencies and Agency Contacts

Federal and some state-level agencies discussed in this section will all be involved in the regulation of the waste generated by the Project. However, the regulations are administered and enforced primarily through the designated California Environmental Protection Agency Certified Unified Program Agency, which is the Los Angeles County Fire Department Health, Hazardous Materials Division, and through the CalRecycle-designated Local Enforcement Agency, which is the Los Angeles County Department of Public Health, Environmental Health. The individuals to contact for nonhazardous and hazardous waste management are listed in Table 3.14-5.

A draft HMBP has been prepared and is included as Appendix 3.5B; however, approval of the HMBP from the Los Angeles County Fire Department, Health Hazardous Materials Division, will be superseded by California Energy Commission approval of the Project under the opt-in program.

Table 3.14-5. Agency Contacts for Waste Management

Permit or Approval	Agency Contact	Applicability
Solid Waste and Recycling/C&D Recycle and Reuse Plan*	Los Angeles County Public Works C&D Unit Annex Building, 3rd Floor 900 South Fremont Avenue Alhambra, California 91803 626.300.2070 CND@pw.lacounty.gov	Prior to waste-generating activities.
Hazardous Waste/HMBP*	Los Angeles County Fire Department, Health Hazardous Materials Division Mario Tresierras, Division Chief 5825 Rickenbacker Road Commerce, California 90040 323.890.4045 Fire-HHMDCERS@fire.lacounty.gov	During construction and/or operations when hazardous materials will be stored on site.

Source: Los Angeles County 2025a, 2025b, 2025c; Los Angeles County Fire Department 2025.
Notes: C&D = construction and demolition; HMBP = Hazardous Materials Business Plan.
* State and local approvals will be superseded by California Energy Commission approval of the Project under the Opt-In program.

3.14.7 Permits and Permit Schedule

The temporary storage for disposal of hazardous wastes will be included in the Project's HMBP (Appendix 3.5B). The Project will prepare a Construction and Demolition Recycle and Reuse Plan prior to Project waste-generating activities. No additional permits are required.

3.14.8 References

CalRecycle (California Department of Resources Recycling and Recovery). 2025a. "Los Angeles County." SWIS Facility/Site Search [online database]. Accessed January 21, 2025. https://www2.calrecycle.ca.gov/SolidWaste/Site/Search.

CalRecycle. 2025b. "Landfill Tonnage Reports." Accessed January 21, 2025. https://www2.calrecycle.ca.gov/LandfillTipFees.

CalRecycle. 2025c. "California's Mandatory Commercial Recycling Law Background." Accessed January 21, 2025. https://calrecycle.ca.gov/recycle/commercial/.

DTSC (California Department of Toxic Substances Control). 2025. "California Commercial Offsite Hazardous Waste Permitted Facilities." Accessed January 21, 2025. http://www.envirostor.dtsc.ca.gov/public/commercial_offsite.asp.

Los Angeles County. 2015. "Public Services and Facilities Element." In *Los Angeles County General Plan*. Adopted October 6, 2015, as amended. Accessed January 23, 2025. https://planning.lacounty.gov/wp-content/uploads/2022/11/13.0_gp_final-general-plan-ch13.pdf.

Los Angeles County. 2025a. "Solid Waste Permitting & Surveillance Program." Accessed January 23, 2025. http://www.publichealth.lacounty.gov/eh/about/solid-waste-permitting-surveillance-program.htm.

Los Angeles County. 2025b. "Los Angeles County Certified Unified Program Agency (CUPA)." Accessed January 23, 2025. https://pw.lacounty.gov/epd/ust/cupa.cfm.

Los Angeles County. 2025c. "Construction and Demolition." Accessed January 23, 2025. https://pw.lacounty.gov/epd/cd/.

Los Angeles County Fire Department. 2025. "Health Hazardous Materials Division." Accessed January 23, 2025. https://fire.lacounty.gov/health-hazardous-materials-division/.

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