PRESIDENTIAL SUBSTATION PROJECT

Draft Environmental Impact Report CPUC A.08-12-023 SCH #: 2009021059

Prepared for California Public Utilities Commission September 2011





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ACRONYMS

ACSR	Aluminum Conductor Steel Reinforced
ADT	average daily traffic
afy	acre feet per year
AGS	above ground surface
APLIC	Avian Power Line Interaction Committee
APM	Applicant Proposed Measure
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
BACT	Best Available Conventional Technology
BAT	Best Available Technology
ВСТ	Best Conventional Technology
bgs	below ground surface
BMP	Best Management Practice
CAA	Clean Air Act
CAAQS	California ambient air quality standards
Cal-OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	Building Standards Code
CCAR	California Climate Action Registry
CCWMP	Calleguas Creek Watershed Management Plan
C&D	Construction and Demolition
CDFG	California Department of Fish and Game
CEC	California Energy Commission
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations

CGS	Colifornia Coological Surray
CGS CH4	California Geological Survey methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIWMB	California Integrated Waste Management Board
CJUTCC	California Joint Utility Traffic Control Committee
CJUTCM	California Joint Utility Traffic Control Manual
CLP	Cross-linked Polyetheylene
CMWD	Calleguas Municipal Water District
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide equivalent
COSCA	Conejo Open Space Conservation Agency
CPUC	California Public Utilities Commission
CRPD	Conejo Recreation and Park District
CRTDP	Cultural Resources Treatment and Discovery Plan
CSP	corrugated steel pipe
CUP	conditional use permit
CUPA	Certified Unified Program Agency
CVUSD	Conejo Valley Unified School District
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibels
DHS	California Department of Health Services
DMP	discharge monitoring plan
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EIA	Effective Impervious Area
EIR	Environmental Impact Report
EMF	electric and magnetic fields
EMS	emergency medical services
ENA	Electrical Needs Area
EPA	U.S. Environmental Protection Agency
EPRI	Electric Power Research Institute
ESA	Endangered Species Act

FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
FPP	Farmland Protection Program
FPPA	Farmland Protection Policy Act
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GIS	Geographic Information System
GO 131-D	CPUC General Order 131-D
GSWC	Golden State Water Company
HCP/NCCP	Habitat Conservation Plan/Natural Community Conservation Plan
HFCs	hydrofluorocarbons
HWCL	Hazardous Waste Control Law
Hwy	Highway
Hz	hertz
IARC	International Agency for Research on Cancer
IBC	International Building Code
IEEE	Institute of Electrical and Electronics Engineers
IPCC	Intergovernmental Panel on Climate Change
kcmil kV	thousand circular mill Kilovolt
kW	kilowatt (equal to 1000 watts)
LARWQCB	Los Angeles Regional Water Quality Control Board
LDAR	leak detection and repair
Ldn	day/night noise level
Leq	equivalent noise level
Lmax	Maximum Noise Level
LOS	Level of Service
LUFT	Leaking Underground Fuel Tank
LUST	leaky underground storage tank
LWS	Light Weight Steel
MEER	Mechanical and Electrical Equipment Room
MBTA	Migratory Bird Treaty Act
mG	milliGauss
mph	miles per hour

MS4s	municipal separate storm sewer systems
MSE	mechanically stabilized earth
MSL	mean sea level
MUSD	Moorpark Unified School District
MVA	megavolt
MW	megawatts
MWD	Metropolitan Water District
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCCPA	Natural Communities Conservation Plan Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO ₂	Nitrogen dioxide
NO3	nitrate
N2O	nitrous oxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OSHA	U.S. Department of Labor Occupational Safety & Health Administration
PEA	Proponent's Environmental Assessment
PM	particulate matter
PMMP	Paleontological Mitigation and Monitoring Plan
ppm	parts per million
ppv	peak particle velocity
PSHA	probabilistic seismic hazard assessment
PRC	Public Resources Code
РТС	Permit to Construct
PVC	polyvinyl chloride
PV	photovoltaic

RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Assessment
RMS	
ROC	root mean square
ROW	reactive organic compounds
	Right of Way
RPS	Renewable Portfolio Standard
RSRPD	Rancho Simi Recreation and Park District
RWQCB	Regional Water Quality Control Board
SAC	Stranded Aluminum Conductor
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCC	Sheriff's Communications Center
SCCAB	South Central Coast Air Basin
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SDC	Seismic Design Category
SF6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plans
SLF	Sacred Lands File
SO_2	Sulfur dioxide
SOAR	Save Open-Space and Agricultural Resources
SPCC	Spill Prevention Control and Countermeasure Plan
SQMP	Storm Water Quality Management Program
SRRE	Source Reduction and Recycling Element
SVLRC	Simi Valley Landfill and Recycling Center
SVP	Society for Vertebrate Paleontology
SVUSD	Simi Valley Unified School District
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
ТАС	toxic air contaminants
TDS	total dissolved solids
TGM	Technical Guidance Manual
TMDL	Total Maximum Daily Load
TOPD	Thousand Oaks Police Department
тот	Thousand Oaks Transit
TSCA	Toxics Substaces Control Act
TSDF	Treatment, Storage, and Disposal Facility
TSPs	tubular steel poles

UPTC USACE USDA USFWS	Union Pacific Transportation Company U.S. Army Corps of Engineers U.S. Department of Agriculture U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tanks
V/C	volume to capacity
VCAPCD	Ventura County Air Pollution Control District
VCFD	Ventura County Fire Department
VCSD	Ventura County Sheriff's Department
VCTC	Ventura County Transportation Commission
VCWWD	Ventura County Waterworks District
VISTA	Ventura Intercity Service Transit Authority
VOC	volatile organic compounds
VRSD	Ventura Regional Sanitation District
WDRs	waste discharge requirements

EXECUTIVE SUMMARY

ES.1 Introduction / Background

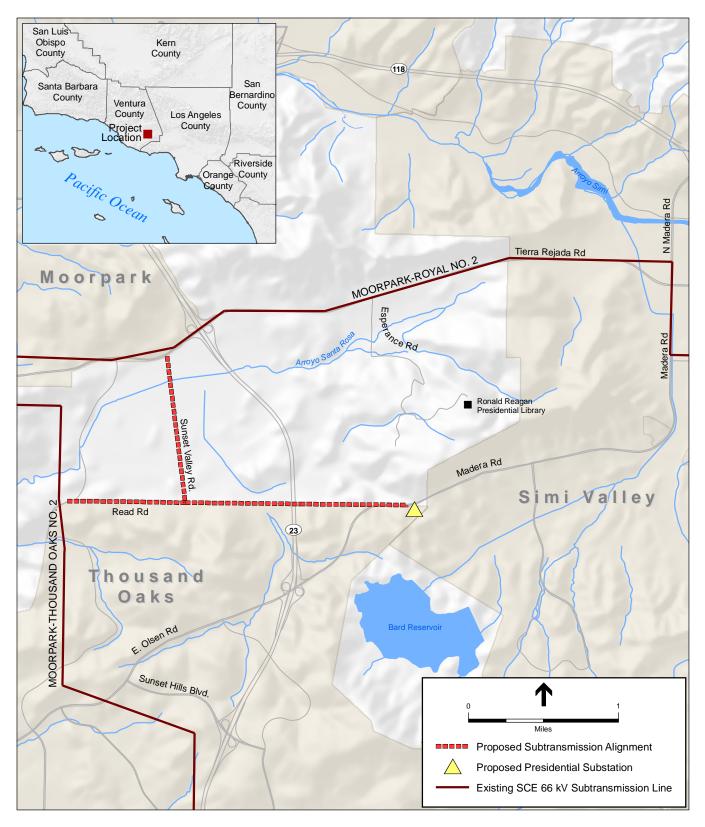
Southern California Edison (SCE), in its California Public Utilities Commission (CPUC) application for the Presidential Substation Project (Proposed Project) (A.08-12-023), filed on December 22, 2008, seeks a Permit to Construct (PTC), to construct, operate and maintain electrical facilities pursuant to CPUC General Order (GO) 131-D. The application includes the Proponent's Environmental Assessment (PEA) (SCE, 2008) prepared pursuant to Rule 2.4 of CPUC's Rules of Practice and Procedure.

The purpose of the Presidential Substation Project (Proposed Project) is to meet the forecasted electrical demands in the cities of Simi Valley and Thousand Oaks, as well as adjacent areas of Ventura County (Electrical Needs Area [ENA]). The ENA is presently served by three of the 66/16 kilovolt (kV) distribution substations that are fed by the Moorpark 66 kV System. These three distribution substations (Thousand Oaks Substation, Potrero Substation, and Royal Substation) provide electrical service to approximately 60,000 metered customers and are presently at or near their operating capacity. The Proposed Project would construct a new 66/16 kilovolt (kV) distribution substation (proposed Presidential Substation) and associated 66 kV subtransmission lines (proposed subtransmission alignments), telecommunications connection, and related distribution components. Power to the proposed Presidential Substation would be supplied by connecting to two existing 66 kV subtransmission lines, Moorpark-Royal No.2 and Moorpark-Thousand Oaks No. 2.

This Draft EIR has been prepared to consider the potential environmental impacts from the Proposed Project, and to identify and evaluate a range of alternatives. Based on this evaluation and the documentation which follows, this Draft EIR identifies System Alternative B as the Environmentally Superior Alternative.

ES.1.1 Proposed Project

The Proposed Project is located in the City of Thousand Oaks and unincorporated Ventura County, California. As depicted in **Figure ES-1** the proposed Presidential Substation would be located in the northeastern portion of the City of Thousand Oaks near the jurisdictional boundary of the City of Simi Valley. The proposed subtransmission alignment traverses directly west from the proposed Presidential Substation across open space, agricultural and residential areas along Read Road to connect with the Moorpark-Thousand Oaks No. 2 subtransmission line near the intersection of Read Road and Moorpark Road. The proposed subtransmission alignment connecting with the Moorpark-



Presidential Substation Project . 207584.02 Figure ES-1 Proposed Project Overview

SOURCE: SCE, 2011

Royal No. 2 subtransmission line would follow the same alignment due west from the proposed Presidential Substation until it turns roughly north adjacent to Sunset Valley Road. The proposed subtransmission alignment would then proceed north along the west side of Sunset Valley Road near residential and agricultural land uses and connect to the existing subtransmission line at the corner of Sunset Valley Road and Tierra Rejada Road.

The Proposed Project includes construction, operation and maintenance of the following components:

- Construction of a new 66/16 kV distribution substation (proposed Presidential Substation) on an approximately 4-acre site;
- Replacement of existing 16 kV distribution and subtransmission poles with new subtransmission poles and installation of 66 kV subtransmission conductor to supply the proposed Presidential Substation;
- Installation of underground 66 kV subtransmission facilities for the portion of the route crossing Highway 23 (Hwy 23);
- Construction or relocation of related 16 kV distribution components, including four new 16 kV distribution getaways at the proposed Presidential Substation, and relocation, transfer, or upgrade of existing 16 kV distribution facilities either to new subtransmission poles or to new underground 16 kV distribution facilities. Upgrades to new 16 kV distribution would involve installation of new conductors instead of re-hanging or burying the existing 16 kV conductor; and
- Construction of facilities to connect the proposed Presidential Substation to SCE's existing telecommunications system.

SCE's Proposed Project Objectives

The objectives of the Proposed Project are defined by SCE in its PEA (SCE, 2008). This EIR does not adopt or endorse the objectives that SCE has defined for its Proposed Project. SCE's defined objectives are presented below.

- Meet long term electrical demand requirements in the ENA beginning in 2011 and extending beyond 2014 in order to meet 10-year planning criterion;
- Improve electrical system operational flexibility and reliability by providing the ability to transfer load between 16 kV distribution circuits and distribution substations within the ENA;
- Meet project needs while minimizing environmental impacts; and
- Meet project needs in a cost-effective manner.

TABLE ES-1 SUMMARY OF PROPOSED PROJECT COMPONENTS

Construction of a new 66/16 kV low-profile distribution substation (Proposed Presidential Substation) on an approximate four-acre site

- Install one 66 kV switchrack
- Install five 66 kV circuit breakers and disconnect switches
- Install two 28 MVA, 66/16 kV transformers
- Install two 16 kV, 4.8 MVAR capacitor banks
- Install one 16 kV low-profile switchrack
- Install one TSP and one TSP Riser subtransmission poles
- Install one vault outside northwest corner of proposed Presidential Substation perimeter wall
- Install four underground16 kV distribution getaways
- Install lighting
- Construct one Mechanical and Electrical Equipment Room (MEER)
- Construct perimeter wall and gate
- Construct proposed Presidential Substation access driveway from Olsen Road
- Construct acceleration and deceleration lanes on Olsen Road
- Install site drainage
- Upgrade subtransmission (66 kV) relays at Royal and Moorpark Substations

Remove existing poles and construct new subtransmission poles and underground distribution facilities; install 66kV subtransmission conductor to proposed Presidential Substation

- Remove approximately 89 existing wooden 16 kV distribution poles and four 66 kV subtransmission poles
- Install approximately 66 steel subtransmission poles with polymer insulators within existing ROW (25 TSPs, of which two are already described in the substation section above, and 41 light weight circular poles (LWS) poles)
- Install 66 kV conductor (i.e., 2000 thousand circular mil (kcmil) copper) in new underground facilities beneath Hwy23.
- Install 66 kV conductor (i.e., 954 Stranded Aluminum (SAC) and 954 Aluminum Core Steel Reinforced (ACSR) on new subtransmission poles from subtransmission supply lines to the proposed Presidential Substation (except for the Hwy 23 crossing)
 - Double-circuit 66 kV subtransmission line from proposed Presidential Substation west to the junction of Read Road and Sunset Valley Road. (1.5 miles), within existing and/or upgraded ROW (including under Hwy 23)
 - Single-circuit 66 kV subtransmission line from junction of Read Road and Sunset Valley Road west adjacent to Read Road to the Moorpark-Thousand Oaks No. 2 (0.8 mile), within existing ROW
 - Single-circuit 66 kV subtransmission line from junction of Read Road and Sunset Valley Road north adjacent to Sunset Valley Road to the Moorpark-Royal No. 2 (1.0 mile), within existing ROW
- Construct new access roads or improve existing roads for construction and maintenance of subtransmission facilities.

Relocation of existing distribution conductor

- Transfer existing 16 kV distribution line onto new subtransmission poles or to newly constructed underground facilities:
 - For existing 16 kV distribution facilities along or near the double-circuit 66 kV subtransmission line, install new
 underground distribution facilities along or near portions of the 66 kV subtransmission route
 - For existing 16 kV distribution facilities along or near the single-circuit 66 kV subtransmission line, transfer or upgrade distribution facilities to the new 66 kV subtransmission poles. Upgrades to new 16 kV distribution would involve installation of new conductors instead of re-hanging or burying the existing 16 kV conductor
 - Existing 16 kV facilities would be undergrounded to create space for new subtransmission facilities at the intersections of Read Road and Moorpark Road and at Sunset Valley and Tierra Rejada Road
- Install two new street light poles to replace existing streetlights located on wooden 16 kV distribution poles
- Construct new access roads for construction and maintenance of underground facilities.

TABLE ES-1 (Continued) SUMMARY OF PROPOSED PROJECT COMPONENTS

Construction of facilities to connect proposed Presidential Substation to SCE's existing telecommunications system

- Install telecommunication line (i.e. fiber optic cable) from the Moorpark-Thousand Oaks No. 2 66 kV Subtransmission Line to approximately Sunset Valley Road.
- Install underground telecommunications facilities with the 16 kV distribution lines from approximately Sunset Valley
 Road to proposed Presidential Substation.
- Install underground telecommunication lines at the intersections of Moorpark Road, and Read Road, and also at Sunset Valley Road and Tierra Rejada Road to follow the 16 kV distribution pathway.

SOURCE: SCE, 2008b, 2010

Basic Project Objectives – as defined by the CEQA Team

The CEQA team requested additional technical data from SCE and conducted an independent assessment to better define the basic objectives of the Proposed Project for use in the alternatives screening process. This information included data responses which are available to the public via the project website and some technical system data determined to contain critical energy infrastructure information and is therefore confidential. The basic project objectives identified by the CEQA team based on the technical data and additional analysis are:

- Meet long term electrical demand requirements in the ENA as defined in the proponents application and PEA (SCE 2008); and
- Improve electrical system operational flexibility and reliability by providing the ability to transfer load between 16 kV distribution circuits and 16k V distribution substations within the ENA.

One method of meeting long term electrical demand requirements within the ENA would include the construction of a new substation. In order for the CEQA team to consider alternatives involving the construction, operation and maintenance of a new substation it further defined "operational flexibility" and "reliability" requirements using the additional data provided by SCE and independently assessed. The CEQA team determined that to be considered for further analysis an alternative substation site would have to meet the following objectives of the Proposed Project.

- Be capable of being served from two separate 66 kV lines.
- Be located such that at least two of the 16 kV distribution circuits can easily interconnect with circuits from adjacent substations.
- Be capable of ultimately providing 12 to 16, 16 kV distribution circuits.

ES.1.2 Summary of Public Involvement Activities

- On February 17, 2009, the CPUC published and distributed a Notice of Preparation (NOP) to advise interested local, regional, and State agencies, and interested public, that an EIR would be prepared for the Proposed Project, and included information about a public scoping meeting.
- On Tuesday, March 3, 2009 at 6:30 pm the CPUC held an educational workshop and public scoping meeting in the cafeteria of the Park Oak Elementary School, located at 1335 Calle Bouganvilla, Thousand Oaks, California.
- On Tuesday, March 3, 2009 following the educational workshop
- Due to the changes in the Proposed Project design and the length of time that passed since the initial scoping period, the CPUC conducted a 30-day supplemental scoping period. The CPUC provided several public notices for the supplemental scoping process. On Wednesday, August 25, 2010, the CPUC published and distributed a Noticing Letter to interested local, regional, and State agencies, and the public, stating that the Project Description for the Proposed Project had changed (Appendix A).
- On Tuesday, September 14, 2010, form 6:30 p.m. to 8:30 pm the CPUC conducted a supplemental scoping meeting in a meeting room at the Palm Garden Hotel, at 495 N. Ventu Park Road, Thousand Oaks, California.

ES.1.3 Areas of Controversy / Public Scoping Issues

Private citizens, homeowners, and local businesses provided the majority of the comments during the scoping process. In addition, comments were received from the following organizations and government agencies:

- California Department of Fish and Game
- Center for Biological Diversity
- City of Moorpark
- City of Simi Valley
- City of Thousand Oaks
- Deer Creek Community Association
- Department of the Interior, National Park Service/Santa Monica Mountains National Recreation Area
- Native American Heritage Commission
- Santa Monica Mountains Conservancy
- Sunset Hills Homeowners Association
- Rancho Madera Homeowners Association
- Underwood Family Farms
- United States Fish and Wildlife Service
- Ventura County Air Pollution Control District

- Ventura County Department of Public Work and Transportation
- Ventura County Integrated Waste Management Division
- Ventura County Planning Division
- Ventura County Resource Management Agency
- Ventura County Watershed Protection District

The Scoping Reports in Appendix A include all comments and describe which comments are not within the scope of CEQA. The overarching themes in the written and oral comments received are as follows:

- Impacts on scenic views, especially along eligible and designated-scenic Ventura County and city roadways
- Impacts from loss of agricultural land;
- Impacts to air quality from earth disturbance and removal of vegetation;
- Impacts to wildlife and plant life;
- Impacts of greenhouse gas emissions on climate change;
- Impacts to known cultural resources;
- Impacts to water quality and water runoff in the project area;
- Impacts to the surrounding land uses;
- Noise impacts from operation of the transmission lines;
- Impacts to population and housing;
- Impacts on public services and recreation;
- Impacts to the transportation systems and traffic safety;
- Cumulative impacts;
- Ensuring that alternatives are adequately addressed; and,
- Ensuring that perceived inadequacies in the PEA will not be repeated.

ES.2 Alternatives

Alternatives to SCE's Proposed Project are identified and evaluated in accordance with CEQA Guidelines. CEQA Guidelines (§15126(a)) state:

An EIR shall describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.

CEQA Guidelines (§15364) define feasibility as:

... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

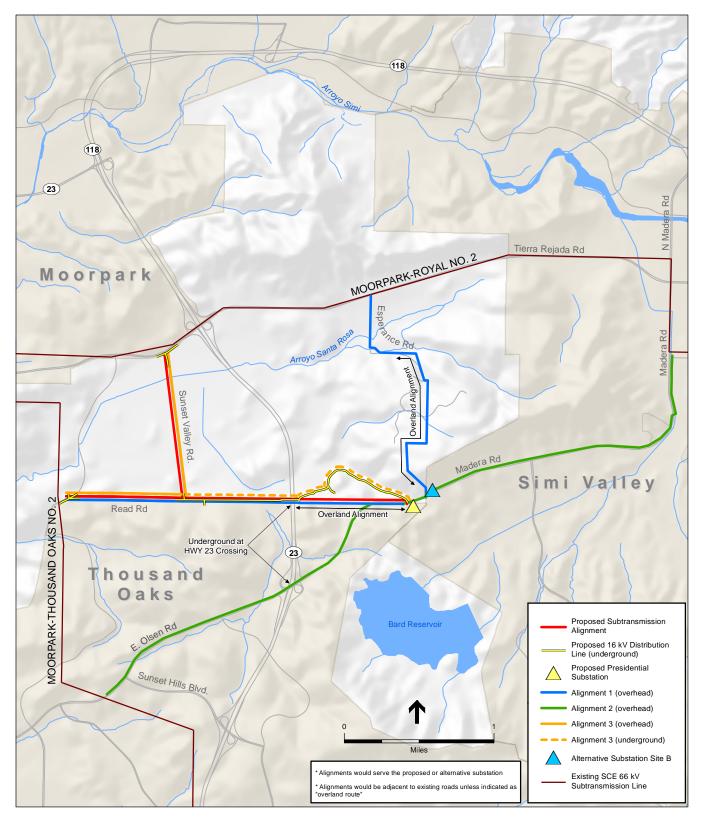
Alternatives to the Proposed Project were presented by SCE in its PEA and or developed by the CEQA Team. Particular emphasis was placed on developing feasible alternatives which would reduce impacts to Aesthetics, Noise, and Air Quality.

In total, the alternatives screening process has culminated in the identification and screening of approximately five potential alternatives for SCE's Proposed Project (not including combinations of alternative components): three alternative subtransmission alignments including a partial undergrounding alternative, one alternative substation site, and one system alternative that would upgrade existing substations.

Alternatives to the Proposed Project were screened according to CEQA guidelines to determine those alternatives to carry forward for analysis in the EIR and alternatives to eliminate from detailed consideration. The alternatives were primarily evaluated according to: (1) whether they would meet most of the basic project objectives; (2) whether they would be feasible considering legal, regulatory and technical constraints; and (3) whether they have the potential to substantially lessen any of the significant effects of the Proposed Project.¹ Other factors considered, in accordance with CEQA Guidelines (CEQA Guidelines §15126.6(f)), were site suitability, economic viability, availability of infrastructure, general plan consistency, other regulatory limitations, jurisdictional boundaries, and proponent's control over alternative sites. Economic factors or costs of the alternatives (beyond economically feasible) were not considered in the screening of alternatives since CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives or would be more costly" (CEQA Guidelines §15126.6(b)).

The detailed results of the alternatives screening analysis are contained in Chapter 3 of the EIR. Provided below are summary descriptions of the alternatives which meet the basic project objectives, lessen significant impacts, and are feasible, and were therefore carried forward for further analysis. **Figure ES-2** illustrates the general alignment of the three alternatives compared to the Proposed Project, as well as the location of the alternative substation site. Section 3.5, *Alternatives Eliminated from Full EIR Evaluation*, provides information related to other alternatives considered and the rational for elimination from further consideration.

¹ At the screening stage, it is neither possible nor legally required to evaluate all of the impacts of the alternatives in comparison to the Proposed Project with absolute certainty, nor is it possible to quantify impacts. However, it is possible to identify elements of an alternative that are likely to be the sources of impact and to relate them, to the extent possible, to general conditions in the subject area.



Presidential Substation Project . 207584.02 Figure ES-2 Alternative Subtransmission Alignments

SOURCE: SCE, 2010

ES.2.1 Alternatives Fully Evaluated in this EIR

Alternative Subtransmission Alignment 1

Description

Alternative Subtransmission Alignment 1 would be capable of serving a new substation at either the proposed Presidential Substation site or the Alternative Substation Site B (with minor alignment modifications in the vicinity of the substation).

The first source line would consist of a single-circuit subtransmission line originating at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. The alignment would extend east along the south side of Read Road within the City of Thousand Oaks along an existing 16 kV distribution circuit past the intersection of Read Road and Sunset Valley Road. The alignment would continue east along Read Road, crosses Hwy 23 (underground), and continue east to the substation site. Although the alignment would be constructed within existing ROW, some areas along Read Road could require additional overhang easement rights to accommodate the pole cross-arms. This alignment would be constructed in the same path as one of the Proposed Project source lines. However, the entire alignment would be constructed as a single-circuit subtransmission line. As a single-circuit, the line would be constructed using primarily LWS with limited use of TSPs. The pole types and locations between Moorpark Road and Sunset Valley Road would be the same as the Proposed Project. The existing 16 kV distribution line and a telecommunication line would be installed on the new LWS poles and the existing wooden 16 kV distribution poles currently in the alignment would be removed. The new telecommunication line would also be installed overhead on the LWS poles. Both the subtransmission and 16 kV distribution circuits would be constructed underground at the Hwy 23 crossing.

The second source line for would originate at the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection of Tierra Rejada Road and Esperance Road. The alignment initially would extend due south parallel to Esperance Road, and turn east approximately 0.5 mile south of Tierra Rejada Road and then southeast where the alignment leaves Esperance Road. For 1.8 miles, the alignment would cross generally overland requiring new ROW up to 25 feet wide. The alignment would terminate at the substation site entering the substation from directly north. A new telecommunication line and 16 kV distribution circuit would be installed on the new LWS poles.

In total, Alternative Subtransmission Alignment 1 would be approximately 4.5 miles long, and would cross land presently used for open space and rural residential purposes. Construction methods and duration would be similar to those described for the Proposed Project. Trenching for the installation of 16 kV distribution lines along Read Road and east of Hwy 23 would not be required under this Alternative.

Rationale for Full Analysis

This alternative would meet the basic project objectives for both the proposed Presidential Substation site and the Alternative Substation Site B. It would also meet all legal, regulatory and

technical feasibility criteria. This alternative would lessen the level of impacts on noise and air quality but would result in new significant unavoidable impacts on aesthetics.

Alternative Subtransmission Alignment 2

Description

Alternative Subtransmission Alignment 2 would be capable of serving either the proposed Presidential Substation, or Alternative Substation Site B (with minor alignment modifications in the vicinity of the substation).

The first source line would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Olsen Road and Sunset Hills Boulevard in the City of Thousand Oaks, and follow Olsen Road, primarily on the north side to the substation.

The second source line would originate at the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection of Madera Road and Tierra Rejada Road in the City of Simi Valley, and follows Madera Road to the substation sites.

Due to the curvatures in Olsen and Madera Roads, the subtransmission structures along this alignment could require additional support mechanisms such as anchors and guy wires. Poles located in a curve or corner along the alignment would require some form of guying to provide additional support. The number and locations of poles which would require additional support, has not been identified at this time. If support mechanisms could not be accommodated within the road ROW, SCE would be required to obtain additional ROW. Based on preliminary engineering, single-circuit subtransmission poles would be placed every 180 to 200 feet. Poles would be a combination of LWS and TSPs depending upon the structural needs of the location.

Construction and pole assembly would occur on existing adjacent paved roads (Madera Road and Olsen Road). No new access roads would be required for this alignment. Activities within or immediately adjacent to the roadway, could require temporary lane closure. Traffic management would be conducted in a manner similar to the Proposed Project. While conductor pulling and preparation of pull and tension sites would be similar to the Proposed Project. This alternative would require approximately 12 pull and tension sites. Similar to the proposed subtransmission alignment the pull and tension sites would be approximately 150 feet by 30 feet.

In total, Alternative Subtransmission Alignment 2 would be approximately 5 miles long and would be adjacent to land presently used for residential, commercial, public space, and open space purposes.

Rationale for Full Analysis

This alternative would meet the basic project objectives for both the proposed Presidential Substation site and the Alternative Substation Site B. It would also meet all legal, regulatory and technical feasibility criteria. This alternative would lessen the level of impacts on noise but would result in new significant unavoidable impacts on aesthetics.

Alternative Subtransmission Alignment 3

Description

Alternative Subtransmission Alignment 3 would construct two new 66 kV subtransmission source lines capable of serving either the proposed Presidential Substation site or Alternative Substation Site B (with minor alignment modifications in the vicinity of the substation). The origination points and general route would be the same as the Proposed Project. However, additional portions of Alternative Subtransmission Alignment 3 would be installed underground compared to the Proposed Project. In addition, some sections of the existing 16 kV distribution line would not need to be relocated and would instead remain in place on existing wooden poles.

The first source line would originate as a single-circuit overhead subtransmission line at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road. The alignment extends east overhead along Read Road to the intersection of Sunset Valley Road, similar to the Proposed Project. The second source subtransmission circuit would originate as a single-circuit overhead subtransmission line at the Moorpark -Royal No. 2 66 kV subtransmission line near the intersection of Tierra Rejada Road and Sunset Valley Road. The alignment extends southeast overhead along Sunset Valley Road and Sunset Valley Road. The alignment extends southeast overhead along Sunset Valley Road to the intersection with Read Road, similar to the Proposed Project. Pole structures and construction methods would be the same as for the Proposed Project for these portions of the alignment. At the intersection of Sunset Valley Road and Read Road, a TSP riser pole would be installed and from that point east, a double-circuit subtransmission line would be installed underground within Read Road, north of the centerline to the new substation.

The double-circuit subtransmission line would continue east underneath Hwy 23 in the same manner as described for the Proposed Project. However, since the line would already be underground, TSP risers on the west and east sides of the bore would not be required.

Once the double-circuit subtransmission line reaches the east side of Hwy 23, the line would continue underground to the new substation. The alignment east of Hwy 23 would follow the same underground alignment identified for undergrounding the 16 kV distribution line in the Proposed Project. However, for this alternative, the 16 kV distribution line would remain overhead on existing poles, while the 66 kV would be installed underground.

Additionally, a telecommunication line would be installed on the existing wood 16 kV distribution poles. The construction of a Hilfiker retaining wall and widening of access roads identified for pole removal and installation would not be required under this alternative.

Relocation of the existing 16 kV distribution line between Sunset Valley Road and the substation would not be required.

Rationale for Full Analysis

This alternative would meet the basic project objectives for both the proposed Presidential Substation site and the Alternative Substation Site B. It would also meet all legal, regulatory and

technical feasibility criteria. This alternative would lessen the level of impacts on noise and air quality and would eliminate significant impacts on aesthetic resources.

Alternative Substation Site B

Description

Alternative Substation Site B would construct a new 66/16 kV substation on an approximate 2.3-acre parcel of land located on the north site of Madera Road in the City of Simi Valley. Similar to the Proposed Project, this substation location is capable of being served by the proposed subtransmission alignment or Alternative Subtransmission Alignments 1, 2 or 3, with minor modifications. Unlike the proposed subtransmission alignment, the Alternative Substation, would not require crossing Olsen Road to connect to the substation. Instead, the alignment would continue on the north side of Olsen Road until reaching the Alternative Substation Site B.

Rationale for Full Analysis

This alternative would meet the basic project objectives. It would also meet all legal, regulatory and technical feasibility criteria. This alternative would lessen the level of impacts on noise and air quality and would eliminate significant impacts on aesthetic resources related to substation construction.

System Alternative B

Description

This alternative would consist of upgrading the Royal, Thousand Oaks, and Potrero Substations by replacing the existing 16.8 MVA transformers (transformer base rating at 55 degree Celsius (C) rise without cooling or other overload provisions) with larger ones. The larger transformers would not be consistent with a standard SCE transformer sizing.

Installing larger transformers could require the replacement of some existing 16 kV distribution equipment located inside and outside of the substation footprint. Additional 16 kV distribution circuits may be required at some locations or existing 16 kV distribution getaway equipment could need to be upgraded.

The approximate size of the new transformers would be in the 25 to 30 MVA range (transformer base rating) depending on the space available at the substations to accommodate the equipment and other constraints such as short circuit duty.

Rationale for Full Analysis

This alternative would meet the basic project objectives. It would also meet all legal, regulatory and technical feasibility criteria. This alternative would eliminate significant impacts on noise, air quality and aesthetic resources.

No Project Alternative

Description

In addition to the alternative subtransmission alignments/substation described above, the EIR evaluates the No Project Alternative, in accordance with CEQA requirements. CEQA Guidelines [§15126.6(e)], state that the No Project Alternative must include (a) the assumption that conditions at the time of the Notice of Preparation (i.e., baseline environmental conditions) would not be changed since the Proposed Project would not be installed, and (b) the events or actions that would be reasonably expected to occur in the foreseeable future if the project were not approved.

Under this alternative, the Proposed Project would not be implemented and the basic project objectives would not be met.

ES.3 Proposed Project Impact Assessment

ES.3.1 Impact Assessment Methodology

The analysis of environmental impacts is based upon the environmental setting applicable to each resource/issue and the manner in which the construction, operation and maintenance of the Proposed Project or alternatives would affect the environmental setting and related resource conditions. In accordance with CEQA requirements and guidelines, the impact assessment methodology also considers the following three topics: (1) the regulatory setting, and evaluates whether the Proposed Project or alternatives would be consistent with adopted federal, State and Local regulations and guidelines, (2) growth-inducing impacts, and (3) cumulative impacts. Regulatory compliance issues are discussed in each resource/issue area section. The EIR document is organized according to the following major issue area categories:

- Aesthetics
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials

- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

In order to provide for a comprehensive and systematic evaluation of potential environmental consequences to the resource/issue areas, the environmental impact assessments for the Proposed Project and alternatives are based upon a classification system, with the following four associated definitions:

Class I: Significant impact; cannot be mitigated to a level that is not significant

Class II: Significant impact; can be mitigated to a level that is not significant

Class III: Adverse impact, less than significant

No Impact: No impact identified

ES.3.2 Applicant Proposed Measures

In the Proponent's Environmental Assessment (SCE, 2008) and subsequent data response (SCE, 2010), SCE identified the following applicant proposed measures (APMs) that would be implemented to avoid or reduce potential impacts from the Proposed Project.

- **APM-BIO-01: Minimize Impacts to Coastal Sage Scrub.** To the extent feasible, the Proposed Project would be designed to avoid or minimize impacts to coastal sage scrub. Mitigation measures and compensation for impacts to coastal sage scrub would be developed in consultation with USFWS and CDFG to reduce the impacts to less than significant.
- APM-BIO-02: Minimize Impacts to Jurisdictional Drainages. A jurisdictional drainage delineation would be conducted during Spring 2009 to describe and map the extent of resources under the jurisdiction of the USACE, the RWQCB, and/or the CDFG following the guidelines presented in the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. As appropriate, SCE would secure a Streambed Alteration Agreement from the CDFG, and Clean Water Act §404 and 401 permits from the USACE and LARWQCB, respectively, prior to disturbing the jurisdictional drainage.
- **APM CUL-1: Cultural Resources Treatment Plan.** SCE will develop a Cultural Resources Treatment Plan that would define appropriate actions necessary to lessen or avoid potential impacts to sites CA-VEN-1571 and CA-VEN-744.
- APM CUL-2: Installation of Geotextile Type Fabric along Access Road. Prior to construction, SCE will address the drivability of the access road leading to site CA-VEN-744. In the event that the road is determined to be inadequate for transporting of equipment, SCE would design and implement the placement of geotextile-type fabric and fill soil along the road prior to access road usage. The placement of the geotextile-type fabric and fill soil would protect the archaeological site from potential impacts such as increased displacing of artifacts of the existing site surface due to vehicle traffic and road maintenance.
- **APM CUL-3: Capping of Archaeological Site on Potential Impact Areas.** Prior to installation of the subtransmission structure located at site CA-VEN-744, SCE will cap the portions of the site that have the potential to be impacted. To cap the site, SCE will place geotextile-type fabric on the surface of the archaeological site and then spread imported fill soil or other suitable material over the geotextile-type fabric. The capping will prevent future erosion of the site surface as a result of SCE's ingress and egress for maintenance and inspection activities. The archaeological site cap will not be removed after construction.
- **APM CUL-4: Construction of Earthen Pad.** SCE will install an earthen pad adjacent to the existing subtransmission structure location. The earthen pad is necessary to support heavy equipment required to install the subtransmission structure safely, while preserving archaeological site CA-VEN-744 from potential construction related impacts. The earthen pad area will be covered by geotextile-type fabric and then overlaid by "honey comb structure." The honey comb structure will be filled with imported fill soil. The earthen pad would not be removed after construction and will be utilized for maintenance activities.

- **APM CUL-5: Fencing of an Environmentally Sensitive Area.** SCE would install an Environmentally Sensitive Area (ESA) fence to protect portions of archaeological sites CA-VEN-744 and CA-VEN-1571 from potential impacts.
- **APM CUL-6: Native American Monitoring.** SCE will retain the services of a Chumash Native American representative to conduct monitoring activities during work carried out within sites CA-VEN-744 and CA-VEN-1571 and in their vicinity. The Native American representative will be present during any archaeological excavations and during project construction in those areas determined by SCE's project archaeologist as having the potential to contain archaeological resources.
- **APM CUL-7: Archaeological Monitoring.** A qualified archaeologist will be on site to monitor ground-disturbing activities within or in the vicinity of sites CA-VEN-744 and CA-VEN–1571. If archaeological resources were identified during construction activities, construction would be halted in that area and away from the discovery, until a qualified archaeologist assesses the significance of the resource. The archaeologist would recommend appropriate measures to record, preserve or recover the resources.
- **APM-PAL-01: Develop and Implement a Paleontological Monitoring Plan.** A project paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists shall be retained by SCE to develop and implement a Paleontological Monitoring Plan prior to the start of ground disturbing activities at the Proposed Project substation site. As part of the Paleontological Monitoring Plan, the project paleontologist shall establish a curation agreement with an accredited facility prior to the initiation of ground-disturbing activities. The Paleontological Monitoring Plan shall also include a final monitoring report. If fossils are identified, the final monitoring report shall contain an appropriate description of the fossils, treatment, and curation.
- **APM-PAL-02: Paleontological Monitoring.** A paleontological monitor shall be on site to observe ground-disturbing activities within the paleontologically sensitive formations at the Proposed Project substation site. If fossils are found during ground-disturbing activities, the paleontological monitor shall be empowered to halt the ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment.

ES.3.3 Mitigation Measures

The EIR describes feasible measures that could minimize significant adverse impacts (CEQA Guidelines §15226.4). Within each issue area, mitigation measures are recommended where environmental effects could be substantially minimized. The mitigation measures recommended by this study have been identified in the impact assessment sections of the EIR and are presented in Mitigation Monitoring, Reporting, and Compliance Program in Chapter 8.

ES.3.4 Findings

An overview of environmental impacts by resource area is provided below based on the detailed impact finding and mitigation measures for the Proposed Project and alternatives provided in Chapter 4, *Environmental Analysis*. Tables ES-4 and ES-5, at the end of this Executive Summary, provide a more detailed summary of all the environmental impacts and mitigation measures for the Proposed Project and alternatives.

Less than Significant and Less than Significant with Mitigation

For the Proposed Project and alternatives, based on technical review and evaluation against the environmental and regulatory setting, the following environmental impacts were determined to be less than significant or less than significant with mitigation (i.e., Class III and Class II, respectively).

- Agriculture Resources
- Biological Resources
- Cultural Resources
- Geology, Soils and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality

- Land Use and Planning
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems
- •

Significant Unavoidable

As summarized in **Table ES-2**, environmental impacts would be significant and unavoidable (Class I), even with implementation of feasible mitigation measures, in the following areas:

- Aesthetics (Proposed Project; Alternative Subtransmission Alignments 1 and 2)
- Air Quality (Proposed Project; Alternative Subtransmission Alignments 1, 2 and 3; Alternative Substation Site B)
- Noise (Proposed Project; Alternative Subtransmission Alignments 1 and 3)

ES.4 Summary Comparison of the Proposed Project and Alternatives

ES.4.1 Methodology

CEQA requires identification of an environmentally superior alternative, but does not provide specific direction regarding the methodology of alternatives comparison. Each project must be evaluated for the issues and impacts that are most important; this will vary depending on the project type and the environmental setting. Issue areas that are generally given more weight in comparing alternatives are those with long-term impacts (e.g., visual impacts and permanent loss of habitat/agricultural lands). Impacts associated with construction (i.e., temporary or short-term) or those that are easily mitigable to less than significant levels are considered to be less important.

The methodology used to compare alternatives in this EIR started with identification of alternatives. Based on alternatives suggested during scoping, an intensive evaluation process was completed that resulted in the determination that the EIR would analyze three alternative alignment variations, one alternative substation site, and one system alternative. A No Project alternative was also identified. The second step required assessment of the environmental impacts of the Proposed Project and alternatives. The third step was the comparison of the impacts of each alternative to those of the Proposed Project to determine the environmentally superior alternative. The environmentally superior alternative was then compared to the No Project alternative.

TABLE ES-2 SUMMARY OF SIGNIFICANT UNAVOIDABLE (CLASS I) ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT AND ALTERNATIVES BY COMPONENT

Alternative	Significant (Class I) Impacts				
Proposed Project – Includes both the proposed	Aesthetics – significant unavoidable: The Proposed Project would result in significant unavoidable impacts to scenic resources and degradation of visual character and public views. Significant unavoidable impacts would result from both the substation construction and the proposed subtransmission line construction.				
Presidential Substation and proposed subtransmission alignment	<i>Air Quality – significant unavoidable</i> : The Proposed Project construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable. Significant unavoidable impacts would result from the combined emissions associated with all components of the Proposed Project.				
	<i>Noise – significant unavoidable</i> : The Proposed Project construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria. Significant unavoidable impacts would result from the proposed subtransmission line, 16kV distribution line and telecommunications cable and access road construction.				
Significant Impact	s (Class I) Eliminated or Created by Alternatives				
Alternative Subtransmission Alignment 1	Aesthetics – significant unavoidable: Aesthetic impacts would be created on views from three equestrian centers and the Ronald Reagan Presidential Foundation and Ronald Reagan Presidential Library.				
	<i>Air Quality – significant unavoidable</i> : Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable.				
	Noise – significant unavoidable: Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria.				
Alternative Subtransmission Alignment 2	Aesthetics – significant unavoidable: Aesthetic impacts due to the presence of pole structures that would substantially degrade the existing visual character of the sites and their surroundings, and Class I impacts to approximately 2.7 miles of Olsen Road (designated Scenic Highway in the City of Thousand Oaks), and approximately 2.2 miles of Madera Road (designated Scenic Roadway in the City of Simi Valley).				
	<i>Air Quality – significant unavoidable</i> : Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable.				
	<i>Noise – less than significant</i> : Construction activities would eliminate significant unavoidable impacts related to exceeding Ventura County construction noise threshold criteria because unincorporated Ventura County residents would not be impacted under this alternative.				
Alternative Subtransmission	Aesthetics – less than significant. The subtransmission crossing of Olsen Road would be installed underground reducing the visual impact to less than significant.				
Alignment 3	<i>Air Quality – significant unavoidable</i> : Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable.				
	Noise – significant unavoidable: Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria.				
Alternative Substation Site B	Aesthetics – less than significant. Elimination of eliminate Class I impacts related to aesthetic resources.				
	<i>Air Quality – significant unavoidable</i> : Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable.				
	Noise – less than significant: Construction activities would not generate noise levels in unincorporated Ventura County in excess of Ventura County construction noise threshold criteria. Construction at this site would result in noise impacts less than significant.				
System	Aesthetics – less than significant. Class I aesthetic impacts would be eliminated.				
Alternative B	Air Quality – less than significant: Construction impacts in Ventura County associated with potential violation of ozone air quality standards and cumulatively considerable levels of NOx.				
	Noise – less than significant short-term construction impacts: Class I noise impacts in Ventura County would be eliminated. Unlike the Proposed Project and Alternative Substation Site B, this alternative would result in long-term operational impacts at the Thousand Oaks Substation. However, these impacts would be mitigated to less than significant.				

Although this comparison focuses on the most important issue areas (e.g., aesthetic resources, air quality and noise), determining an environmentally superior alternative is difficult because of the many factors that must be balanced. While the EIR identifies an environmentally superior alternative, it is possible that the Commission could balance the importance of each impact area differently and reach a different conclusion.

ES.4.2 Summary of Significant (Class I) Unavoidable Impacts

As discussed above in Table ES-2, the Proposed Project would result in significant and unavoidable impact with respect to aesthetic resources, air quality and noise. One or more of these significant unavoidable impacts were also identified for each of the alternative subtransmission alignments and the alternative substation site. System Alternative B would result in no unavoidable impacts.

ES.4.3 Environmentally Superior Alternative

The selection of an Environmentally Superior Alternative is based on differences in intensity and duration of significant impacts. Based on these differences the identified environmentally superior alternative is System Alternative B. This alternative would not result in any significant unavoidable impacts. System Alternative B, which does not involve the construction of a new substation, would meet most of the basic project objectives but would result in reduced operational flexibility and reliability compared to the Proposed Project, and other alternatives which involve construction of a new substation. All other alternatives would result in at least one significant unavoidable impact.

Seven of the alternatives combinations are variations of alignments and/or new substation location. For a number of resources there are no material environmental impact differences between the Proposed Project and alternatives including: geology, soils, seismicity and mineral resources; hydrology/water quality; land use/ planning; population/ housing; and recreation.

Implementation of the Proposed Project and all seven of the alternative combinations would involve construction of a new substation that results in significant unavoidable (Class I) air quality impacts. Although air quality impacts would be of varying degrees with regard to NOx as an ozone precursor, each of the seven alternatives would still result in exceedences of the local threshold.

ES.4.4 Environmentally Superior Alternative vs. No Project Alternative

The Environmentally Superior Alternative (System Alternative B) would result in less-thansignificant impacts on aesthetics, noise and air quality resources and would have minimal longterm impacts on residences. The most significant impact of the No Project Alternative is that SCE's ability to provide safe and reliable electric service to customers within the ENA would be jeopardized, creating the potential for increased incidence of brown-outs and black-outs in the future which could in turn result in indirect impacts to the provision of public services. Overall, the Environmentally Superior Alternative is preferred over the No Project Alternative, as the No Project Alternative would not meet the basic project objectives.

ES.5 Impact Summary Tables

Table ES-3 on the following pages summarizes all identified impacts of the Proposed Project. The following information is presented: impact number, impact class (Class I, II, or III), applicable mitigation measure, and residual impact (if significant unavoidable). **Table ES-4** presents a summary of environmental impacts increased or decreased by each of the alternatives. The table (ES-4) focuses only on Aesthetics, Noise, and Air Quality since these are the only resources with significant unavoidable impacts under the Proposed Project. Impacts on all other resources are mitigable to less than significant.

TABLE ES-3 SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact				
Aesthetics							
Impact 4.1-2: The Proposed Project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a county scenic highway. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.1-2a: For all structures that are visible from viewsheds where visual impacts are significant (i.e., Highway 23, Read Road, and Underwood Family Farms), SCE shall install tubular steel poles or light-weight steel poles made of self-weatherizing steel, which would oxidize to a natural-looking rust color within approximately one year.					
		Mitigation Measure 4.1-2b: The subtransmission line conductors shall be non-specular and non-reflective and the insulators shall be non-reflective and non-refractive.					
Impact 4.1-3: The Proposed Project would substantially damage scenic resources, including,	-	Mitigation Measure 4.1-3a: Implement Mitigation Measure 4.1-2b.	The proposed Presidential				
but not limited to, trees, rock outcroppings, and historic buildings within a city-designated scenic highway. <i>Significant unavoidable</i>		Mitigation Measure 4.1-3b: For all structures that are visible from Olsen Road, SCE shall install tubular steel poles or light-weight steel poles made of self-weatherizing steel, which would oxidize to a natural-looking rust color within about one year.	Substation and proposed subtransmission alignments would be against natural landscapes and demand viewer attention on Olsen Road, a City of Thousand Oaks designated Scenic Highway. Despite mitigation to reduce visual contrast between the scenic character of the existing landscape and the Proposed Project, significant impacts would be unavoidable.				
		Alternately, in lieu of installing self-weatherizing steel poles SCE may install standard tubular steel or light-weight steel poles and apply surface coatings with appropriate colors, finishes and textures to most effectively blend the structures with the visible backdrop landscape. For structures that are visible from one or more sensitive viewing location, the darker color shall be selected, because darker colors tend to blend into landscape more effectively than lighter colors, which may contrast and produce glare. At locations where a tubular steel pole or light-weight steel pole would be silhouetted against the skyline, non-reflective, light-gray colors shall be selected to blend with the sky. SCE shall develop a Structure Surface Treatment Plan for the tubular steel poles, light-weight steel poles, and any other visible structures.					
Impact 4.1-5: Construction of the proposed Presidential Substation could result in a temporary adverse impact to visual quality. <i>Less than</i> <i>significant with mitigation</i>	Class II	Mitigation Measure 4.1-5: The temporary fencing used during construction at the Presidential Substation site shall incorporate aesthetic treatment through use of appropriate, non-reflective materials, such as chain link fence with light brown or green vinyl slats. SCE shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.					
Impact 4.1-6: Use of construction pulling/stringing set-up locations during the approximately 13-20 month construction period could result in temporary adverse impacts to visual quality. <i>Less</i> <i>than significant with mitigation</i>	Class II	Mitigation Measure 4.1-6: SCE shall not place equipment on the pulling/splicing sites any sooner than two weeks prior to the required use.					

^a Impact Classes: Class I (significant, unmitigable); Class II (less than significant with mitigation incorporated); Class III (less than significant); Class IV (beneficial)

TABLE ES-3 (Continued) SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Aesthetics (cont.)			
Impact 4.1-8: The Proposed Project could substantially degrade the existing visual character or quality of the Proposed Project site and its surroundings from public views. <i>Significant</i> <i>unavoidable</i>	Class I	 Mitigation Measure 4.1-8a: Implement Mitigation Measure 4.1-2b and Mitigation Measure 4.1-3b. Mitigation Measure 4.1-8b: Implement Mitigation Measure 4.1-2a and 4.1-2b. 	The proposed Presidential Substation and proposed subtransmission alignments would be against natural landscapes and demand viewer attention on Olsen Road, a City of Thousand Oaks designated Scenic Highway. Despite mitigation to reduce visual contrast between the scenic character of the existing landscape and the Proposed Project, significant impacts would be unavoidable.
Impact 4.1-9: The Proposed Project would create new sources of light or glare that could adversely affect views in the project area. <i>Less than</i> <i>significant with mitigation</i>	Class II	Mitigation Measure 4.1-9a: Reduce Night Lighting and Glare Impacts. SCE shall design and install all lighting at project facilities, including construction and storage yards and the staging area, such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Construction and Operation Lighting Mitigation Plan to the CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the Construction and Operation Lighting Mitigation Plan is approved by the CPUC. The Plan shall include but is not limited to the following measures: Lighting shall be designed so exterior lighting is hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary, and to reduce glare.	
		All lighting shall be of minimum necessary brightness consistent with worker safety.	
		High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.	
		Mitigation Measure 4.1-9b: Implement Mitigation Measure 4.1-9a.	
		Mitigation Measure 4.1-9c: Only low profile shaded street lighting, if needed, shall be used to reduce down slope light spillover and night glare.	
		Mitigation Measure 4.1-9d: Implement Mitigation Measure 4.1-2b.	

^a Impact Classes: Class I (significant, unmitigable); Class II (less than significant with mitigation incorporated); Class III (less than significant); Class IV (beneficial)

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Agriculture and Forestry Resources			
Cumulative Impact: The Proposed Project's incremental contribution (0.06 acre) to Ventura County's overall decline in Farmland would be a cumulatively considerable contribution to an existing significant impact.	Class II	Mitigation Measure 4.2-Cumulative: SCE shall obtain agricultural conservation easements at a one to one (1:1) ratio for each acre of Farmland that is permanently converted by the Proposed Project. An agricultural conservation easement is a voluntary, recorded agreement between a landowner and a holder of the easement that preserves the land for agriculture. The easement places legally enforceable restrictions on the land. The exact terms of the easement are negotiated, but restricted activities shall include subdivision of that property, non-farm development, and other uses that are inconsistent with agricultural production. The mitigation lands must be of equal or better quality (according to the latest available FMMP data) and have an adequate water supply. In addition, the mitigation lands must be within the same county as the impact.	
Air Quality			
Impact 4.3-1: Project construction activities would generate ozone precursor emissions that could contribute substantially to a violation of ozone air quality standards. <i>Significant unavoidable</i>	Class I	Mitigation Measure 4.3-1: For off-road construction equipment of more than 50 horsepower and on-road diesel fueled vehicles, SCE shall ensure achievement of a Project-wide fleet-average 20 percent NOx and 20 percent ROC reduction compared to the most recent CARB fleet average. A Construction Equipment NOx and ROC Reduction Plan to achieve these reductions shall be submitted to CPUC for review and approval prior to commencement of construction activities. Construction activities cannot commence until the plan has been approved. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as such become available.	Project construction activities would generate ozone precursor emissions that could contribute substantially to a violation of ozone air quality standards.
Impact 4.3-2: Project construction activities would generate fugitive dust emissions of criteria pollutants that could contribute substantially to an existing or projected air quality violation. <i>Less than</i> <i>significant with mitigation</i>	Class II	 Mitigation Measure 4.3-2: SCE shall reduce construction-related fugitive dust emissions by implementing the following VCAPCD dust control measures. SCE shall require all contractors to comply with the following requirements: Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. All soil and fill haul trucks shall be required to have covered loads. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Air Quality (cont.)			
Impact 4.3-2 (cont.)		 Graded and/or excavated inactive areas of the construction site shall be monitored by the mitigation monitor at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust. 	
		 Signs shall be posted at the proposed Presidential Substation work site limiting traffic to 15 miles per hour or less. 	
		• During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the mitigation monitor in determining when winds are excessive.	
		 Adjacent public streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads. 	
		 Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations. 	
Impact 4.3-3: Construction activities would result in emissions of NOx that would be cumulatively considerable. <i>Significant unavoidable</i>	Class I	Mitigation Measure 4.3-3: Implement Mitigation Measures 4.3-1 (Construction Equipment NOx Reductions) and 4.3-2 (Fugitive Dust Mitigation Plan).	Project construction activities would generate ozone precursor emissions that could contribute substantially to a violation of ozone air quality standards.

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Biological Resources			
Impact 4.4-1: Construction activities associated with the Proposed Project could result in adverse impacts to the following federal and/or State-Listed Endangered or Threatened plant species: Braunton's milk-vetch, Agoura Hills dudleya, Conejo dudleya, and Lyon's pentachaeta as well as other non listed special-status species. <i>Less</i> <i>than significant with mitigation</i>	Class II	Mitigation Measure 4.4-1: SCE and or its contractors shall develop and implement a Noxious Weed and Invasive Plant Control Plan consistent with standard BMPs (see for example: Department of Transportation, State of California (Storm Water Quality Handbook - Project Planning and Design Guide [Caltrans, 2010]; and Construction Site Best Management Practices Manual [Caltrans, 2003]). The Plan shall be reviewed and approved by the Ventura County Office of the Agricultural Commissioner and the CPUC. At a minimum, the Plan shall address any required cleaning of construction vehicles to minimize spread of noxious weeds and invasive plants.	
Impact 4.4-2: Construction activities associated with the Proposed Project could result in adverse impacts to the following special-status wildlife species, if present: western pond turtle, coast horned lizard, Swainson's hawk, American peregrine falcon, coastal California gnatcatcher, and San Diego desert woodrat. <i>Less than</i> <i>significant with mitigation</i>	Class II	Mitigation Measure 4.4-2a: Within areas that provide potentially suitable habitat, SCE and/or its contractors shall perform preconstruction surveys within 24 hours of initial ground disturbance to identify the potential presence of western pond turtle, coast horned lizard and San Diego desert woodrat within work areas. If any of these species are identified during surveys of the immediate project footprint, individuals shall be relocated from work areas by an individual who is authorized by CDFG to undertake species relocation. A suitable relocation area shall be identified and approved by CDFG prior to preconstruction surveys.	
		Mitigation Measure 4.4-2b: Where impacts to coastal sage scrub cannot be avoided (e.g. at the proposed Presidential Substation site), SCE and/or its contractors shall contact CDFG and the USFWS to coordinate coastal scrub avoidance measures that have been incorporated into the project design, and determine if additional measures are needed to reduce impacts to coastal California gnatcatcher habitat. Avoidance measures may include limiting the seasonal timing of work outside the breeding so that active gnatcatcher nesting is not disrupted during construction, limiting project disturbances to the smallest possible area in or near areas with suitable habitat, and providing environmental training to construction workers. In addition, the following actions will be carried out:	
		 Coastal sage scrub shall be restored at a 1:1 ratio in areas where it is temporarily disturbed. A qualified ecologist shall prepare a restoration and mitigation plan in coordination with CDFG to mitigate for temporarily impacts to coastal sage scrub habitat. The plan shall include a full description of microhabitat conditions necessary for each affected species, seed germination and planting requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria, and monitoring requirements, as well as measures to ensure long-term sustainability. The mitigation plan shall apply to portions of the project alignment that support restored coastal sage scrub habitat (e.g. at the proposed subtransmission alignment). 	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Biological Resources (cont.)			
Impact 4.4-3: Construction activities may impact common or protected nesting migratory birds. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.4-3: SCE and/or its contractors shall implement the following measures to avoid impacts on nesting raptors and other protected birds for construction activities that are scheduled during the breeding season (February 1 through August 31):	
		No more than two weeks before construction within each new construction area, a qualified wildlife biologist shall conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction sites. If active nests are not identified, no further action is necessary. If active nests are identified, a no- disturbance buffer shall be created around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers are 300 to 500 feet for raptors and 150 to 250 feet for other nesting birds (e.g., waterfowl and songbirds), depending upon species. The size of these buffer zones and types of construction activities that are allowed in these areas could be further modified during construction in coordination with CDFG and shall be based on existing and anticipated levels of noise and disturbance.	
Impact 4.4-4: Operation of new transmission lines could impact raptors as a result of electrocution or collision. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.4-4: SCE shall follow APLIC guidelines for avian protection on powerlines. SCE and/or its contractors shall use current guidelines to reduce bird mortality from interactions with powerlines. The APLIC (2005) and USFWS recommend the following:	
		Provide 60-inch minimum horizontal separation between energized conductors or energized conductors and grounded hardware;	
		Insulate hardware or conductors against simultaneous contact if adequate spacing is not possible;	
		Use pole designs that minimize impacts to birds, and;	
		Shield wires to minimize the effects from bird collisions.	
Impact 4.4-5: Construction of the proposed subtransmission alignment could impact designated critical habitat for coastal California gnatcatcher. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.4-2a and 4.4-2b, above.	
Impact 4.4-6: Construction activities could impact jurisdictional waters of the United States and waters of the State, including drainages and seasonal wetlands. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.4-6a: SCE and/or its contractors shall through project design, avoid jurisdictional waters of the U.S. and waters of the State. This includes minimizing the footprint during construction of poles for the proposed subtransmission line and spanning drainages that occur within the alignment.	

TABLE ES-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Biological Resources (cont.)			
Impact 4.4-6 (cont.)		Mitigation Measure 4.4-6b: In the event of any project changes that involve ground disturbance outside of the boundary of the existing wetland delineation, a new wetland delineation shall be performed.	
		Mitigation Measure 4.4-6c: Where jurisdictional wetlands and other waters cannot be avoided, e.g., at the Proposed Presidential Substation site, to offset temporary and permanent impacts that occur as a result of the project, restoration, enhancement or compensatory mitigation shall be provided through the following mechanisms:	
		• To compensate for wetland impacts from the Proposed Presidential Substation, wetland enhancement and/or restoration shall be performed at a suitable off-site drainage or stream that is suitable to CDFG, RWQCB, and the Corps. Wetland mitigation and/or enhancement shall be provided at a minimum 2:1 replacement ratio in one of several nearby unnamed intermittent drainages to offset wetland losses.	
		 If temporary impacts are anticipated to wetlands, a Wetland Mitigation and Monitoring Plan shall be developed by a qualified biologist or wetland scientist in coordination with CDFG, RWQCB and the Corps that details mitigation and monitoring obligations for temporary impacts to wetlands and other waters as a result of construction activities. The Plan shall quantify the total acreage lost, monitoring and reporting requirements, and site specific plans to compensate for wetland losses resulting from the project at the ratios described above. The Plan shall be submitted to the appropriate regulatory agencies for approval. The Plan and documentation of such agency approval shall be submitted to the CPUC prior to construction. 	
Cultural Resources			
Impact 4.5-1: Project construction could cause an adverse change in the significance of a historical resource [inclusive of archaeological resources] which is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or a local register of historic resources. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.5-1: A qualified archaeologist shall be retained to serve as lead archaeologist and shall prepare a Cultural Resources Treatment and Discovery Plan prior to issuance of a grading permit. The Cultural Resources Treatment and Discovery Plan shall address the implementation of protective measures (as detailed in APMs CUL-2 through CUL-5), archaeological monitoring, and procedures for discovery of cultural resources. The Cultural Resources Treatment and Discovery Plan shall provide detailed plans for data recovery for those components of eligible resource CA-VEN-744 that cannot be avoided during project implementation, and for the capping of those portions of site CA-VEN-744 that may be indirectly impacted. The plan shall also address the creation of Environmentally Sensitive Areas within sites CA-VEN-744 and CA-VEN-1571. The Cultural Resources Treatment and Discovery Plan shall also state that if significant portions of either site are encountered during	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Cultural Resources (cont.)	·		
Impact 4.5-1 (cont.)		project implementation outside of protected areas, Proposed Project redesign should be considered in order to avoid impacts to significant areas. If avoidance is infeasible, then data recovery shall be implemented.	
		The Cultural Resources Treatment and Discovery Plan shall detail the duration and locations of archaeological and Native American monitoring during project implementation and shall provide for discretionary modifications to monitoring procedures by the lead archaeologist based on observations made by the monitor as construction progresses. The Cultural Resources Treatment and Discovery Plan shall also create measures for the accidental discovery of archaeological resources during project implementation.	
Impact 4.5-2: Project construction could adversely impact a unique archaeological resource. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.5-2a: Prior to issuance of a grading permit, an archaeological monitor shall be retained by SCE and/or its contractors to monitor all ground-disturbing activities, including grading, excavation, vegetation clearance and grubbing, and implementation of cultural resources protective measures (i.e. site capping, pad construction). The procedures for monitoring shall be outlined in the Cultural Resources Treatment and Discovery Plan as described in Mitigation Measure 4.5-1, and shall include provisions for discretionary modifications to monitoring procedures by the lead archaeologist based on observations made by the monitor as construction progresses.	
		The monitor shall be a qualified archaeologist and shall work under the supervision of an archaeologist who meets the Secretary of the Interior's professional qualification standards for archaeology. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated.	
		Due to the sensitivity of the project area for Native American resources, at least one Native American monitor shall also monitor ground-disturbing activities in the project area, including the implementation of protective measures and data recovery. Selection of monitors shall be made from the Native American Heritage Commission list provided for the Project.	
		Mitigation Measure 4.5-2b: If archaeological resources are encountered at any point during Proposed Project implementation, SCE and/or its contractors shall cease all activity within 50 feet of the find until the find can be evaluated by a qualified archaeologist. If the archaeologist determines that the resources may be significant, and if avoidance is determined to be infeasible, the archaeologist shall notify the lead agency and shall follow procedures outlined in the Cultural Resources Treatment and Discovery Plan (Mitigation	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Cultural Resources (cont.)	·		
Impact 4.5-2 (cont.)		Measure4.5-1), in consultation with the lead agency and with appropriate Native American representatives (if the resources are prehistoric or Native American in nature).	
Impact 4.5-3: The project could adversely affect unidentified paleontological resources. <i>Less than</i> <i>significant with mitigation</i>	Class II	 Mitigation Measure 4.5-3: Applicant Proposed Measures PAL-01 and PAL-02 shall be implemented for all paleontologically sensitive portions of the project area. The Paleontological Mitigation Plan, as described in Applicant Proposed Measure PAL-01, shall be based on prior paleontological evaluations, shall identify paleontologically sensitive formations within the project area, and shall address the locations of and procedures for paleontological resources monitoring, including the identification of specific paleontological monitoring locations; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils; and the preparation of a final mitigation report. All earth moving activities within those formations identified as sensitive within the Paleontological Mitigation Plan shall be monitored on a full-time basis, unless the project paleontologist determines that sediments are previously disturbed or there is no reason to continue monitoring in a particular area due to other depositional factors, which would make fossil preservation unlikely or deemed scientifically insignificant. In the event fossils are exposed during earth moving, construction activities shall be redirected to other work areas until the procedures outlined in the Paleontological Mitigation Plan have been implemented or the paleontologist determines work can resume in the vicinity of the find. 	
Impact 4.5-4: Project construction could result in damage to previously unidentified human remains. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.5-4: If human remains are uncovered during construction, SCE and/or its contractors shall immediately halt all work, contact the Ventura County Coroner to evaluate the remains, and follow the procedures and protocols set forth in §15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, SCE shall contact the NAHC, in accordance with Health and Safety Code §7050.5, subdivision (c), and PRC5097.98 (as amended by AB 2641). Per PRC 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendents regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Geology, Soils, Seismicity, and Mineral Resources			
No Impacts		No Mitigation	
Greenhouse Gas Emissions			
Impact 4.7-2: The Proposed Project could conflict with CARB's Climate Change Scoping Plan. Less than significant with mitigation	Class II	Mitigation Measure 4.7-2: SCE shall ensure that the circuit breakers installed at the proposed Presidential Substation have a guaranteed SF6 annual leak rate of no more than 0.5 percent by volume. SCE shall provide CPUC with documentation of compliance, such as specification sheets, prior to installation of the circuit breakers. In addition, SCE shall annually monitor the SF6- containing circuit breakers at the proposed Presidential Substation for the detection and repair of leaks. SCE shall annually report its Presidential Substation-related SF6 emissions to the CPUC until a regulation is approved by the State of California Office of Administrative Law that approves a regulation requiring annual reporting of SF6 emissions to the CARB.	
Hazards and Hazardous Materials			-
Impact 4.8-1: Construction, operations, and maintenance activities would require the use of certain materials such as fuels, oils, solvents, and other chemical products that could pose a potential hazard to the public or the environment through routine transport and use or accidental release. <i>Less than significant with mitigation</i>	Class II	 Mitigation Measure 4.8-1a: SCE and/or its contractors shall implement BMPs including but not limited to the following: Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction; Avoid overtopping construction and maintenance equipment fuel gas tanks; Use tarps and adsorbent pads under vehicles when refueling to contain and capture any spilled fuel; During routine maintenance of construction and operations equipment, properly contain and remove grease and oils; and Properly dispose of discarded containers of fuels and other chemicals. Mitigation Measure 4.8-1b: SCE and/or its contractors shall prepare a Hazardous Substance Control and Emergency Response Plan and implement it during construction, operations, and maintenance to ensure compliance with all applicable federal, State, and local laws and guidelines regarding the handling procedures to reduce the potential for a spill during construction, or exposure of the workers or public to hazardous materials. The plan shall also include a discussion of appropriate response actions in the event that hazardous materials are released or encountered during excavation activities. The plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities. 	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Hazards and Hazardous Materials (cont.)			
Impact 4.8-1 (cont.)		 Hazardous Materials and Hazardous Waste Handling: A project operations- specific hazardous materials management and hazardous waste management program shall be developed prior to operations of proposed Presidential Substation project. The program shall outline proper hazardous materials use, storage, and disposal requirements, as well as hazardous waste management procedures. The program shall identify types of hazardous materials to be used at the proposed Presidential Substation project and the types of wastes that would be generated. All project personnel shall be provided with project-specific training. This program shall be developed to ensure that all hazardous materials and wastes are handled in a safe and environmentally sound manner. Employees handling wastes would receive hazardous materials training and shall be trained in hazardous waste procedures, spill contingencies, waste minimization procedures and Treatment, Storage, and Disposal Facility training in accordance with OSHA Hazard Communication Standard. 	
		• Transport of Hazardous Materials: Containers used to store hazardous materials shall be properly labeled and kept in good condition. Written procedures for the transport of hazardous materials used shall be established in accordance with U.S. Department of Transportation and Caltrans regulations. A qualified transporter shall be selected to comply with U.S. Department of Transportation and Caltrans regulations.	
		• Emergency Release Response Procedures: An Operations Emergency Response Plan detailing responses to releases of hazardous materials would be developed prior to Substation operational activities. It would prescribe hazardous materials handling procedures for reducing the potential for a spill and would include an emergency response program to ensure quick and safe cleanup of accidental spills. All hazardous materials spills or threatened release, including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of the quantity spilled, would be immediately reported to the applicable agencies if the spill enters a storm drain, if the spill migrates from the site, or if the spill causes injury to a person or threatens injury to public health. The plan shall identify and make all personnel aware of the local, State, and federal emergency response reporting guidelines.	
		Mitigation Measure 4.8-1c: SCE and/or its contractors shall prepare and implement a Health and Safety Plan to ensure the health and safety of construction workers and the public during construction, operations, and maintenance. The plan shall include information on the appropriate personal protective equipment to be used during construction, operations, and maintenance.	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Hazards and Hazardous Materials (cont.)			
Impact 4.8-1 (cont.)		Mitigation Measure 4.8-1d: SCE and/or its contractors shall ensure that oil- absorbent material, tarps, and storage drums shall be used to contain and control any minor releases. Emergency spill supplies and equipment shall be kept at the project staging areas and adjacent to all areas of work, and shall be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials shall be provided in the project's Hazardous Substance Control and Emergency Response Plan (see Mitigation Measure 4.8-1b), which shall be implemented during construction operations, and maintenance.	
		Mitigation Measure 4.8-1e: SCE shall prepare and submit a Hazardous Materials Business Plan for the proposed Presidential Substation project. The required documentation shall be submitted to the Ventura County Department of Environmental Health and SCE. The Hazardous Materials Business Plan would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment.	
Impact 4.8-2: Project activities could release previously unidentified hazardous materials into the environment. <i>Less than significant with</i> <i>mitigation</i>	Class II	Mitigation Measure 4.8-2: SCE's Hazardous Substance Control and Emergency Response Plan (as required under Mitigation Measure 4.8-1b) shall include provisions that would be implemented if any subsurface hazardous materials are encountered during construction. Provisions outlined in the plan shall include immediately stopping work in the contaminated area and contacting appropriate resource agencies, including the CPUC designated monitor, upon discovery of subsurface hazardous materials. The plan shall include the phone numbers local and State agencies and primary, secondary, and final cleanup procedures. The Hazardous Substance Control and Emergency Response Construction Plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities.	
Impact 4.8-3: Project activities could release hazardous materials within the vicinity of an existing day care facility. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.8-3: Implement Mitigation Measures 4.8-1a through 4.8-1e and 4.8-2.	
Impact 4.8-4: The Proposed Project could result in a safety hazard for people working in the project area because a nearby private airstrip. <i>Less than</i> <i>significant with mitigation</i>	Class II	Mitigation Measure 4.8-4: SCE shall provide written notification to the Ventura County Sheriff Department and the land owner of the Tierra Rejada Valley landing strip stating when the new subtransmission line and poles would be erected. SCE shall also provide the Sheriff Department and the landing strip owner with recent aerial photos or topographic maps clearly showing the location of the new lines and poles. The photos or maps shall also indicate the heights of the poles and conductors. SCE shall provide documentation of compliance to the CPUC.	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Hazards and Hazardous Materials (cont.)			
Impact 4.8-5: Construction of the Proposed Project could interfere with an emergency response or evacuation plan. <i>Less than significant</i> <i>with mitigation</i>	Class II	Mitigation Measure 4.8-5: Implement Mitigation Measures 4.15-1b and 4.13-2.	
Impact 4.8-6: Construction and maintenance- related activities could ignite dry vegetation and start a fire. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.8-6: SCE and/or its contractors shall have water tanks and/or water trucks sited/available at active project sites for fire protection. All construction and maintenance vehicles shall have fire suppression equipment. Construction personnel shall be required to park vehicles away from dry vegetation. Prior to construction, SCE and its contractors shall contact and coordinate with the California Department of Forestry (CalFire) and applicable local fire departments (i.e., Ventura County) to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate locations for the water tanks if water trucks are not used. SCE shall submit verification of its consultation with CalFire and the local fire departments to the CPUC.	
Hydrology and Water Quality			
Impact 4.9-1: Construction and maintenance activities associated with the Proposed Project could result in increased erosion and sedimentation and/or pollutant (e.g., fuels and lubricants) loading to surface waters, which could increase turbidity, suspended solids, settleable solids, or otherwise degrade water quality. Less than significant with mitigation	Class II	 Mitigation Measure 4.9-1: For all segments of new or improved access roads that would be within 300 feet of an existing surface water channel (i.e., one that has a distinct bed and banks, including irrigation ditches where no berm/levee is currently in place) and traverse a ground slope greater than two percent, the following protective measures shall be adhered to and/or installed:¹ All access roads shall be out-sloped; Cross-drains (road surface drainage, e.g., waterbars, rolling dips, or channel drains) shall be installed at intervals based upon the finished road slope: road slope 5 percent or less, cross-drain spacing shall be 100 feet; 16 to 20 percent, cross-drain spacing shall be 75 feet; and 21 to 25 percent, cross-drain spacing shall be 50 feet; 	
		 Energy dissipation features (e.g., rock rip-rap, or a rock-filled container) shall be installed at all cross-drain outlets; and 	
		No new or improved road segments with finished slopes greater than 25 percent.	

¹ The mitigation measures for roads are based on measures and recommendations contained in the Handbook for Forest and Ranch Roads – A Guide for Planning, Designing, Constructing, Reconstructing, Maintaining, and Closing Wildland Roads (Weaver and Hagans, 1994).

^a Impact Classes: Class I (significant, unmitigable); Class II (less than significant with mitigation incorporated); Class III (less than significant); Class IV (beneficial)

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Hydrology and Water Quality (cont.)			
Impact 4.9-2: Dewatering during Project construction activities could release previously contaminated groundwater to surface water bodies and/or increase sediment loading to local surface water channels through overland discharge and subsequent erosion, both processes could degrade water quality in receiving surface waters. <i>Less than</i> <i>significant with mitigation</i>		 Mitigation Measure 4.9-2: Regarding dewatering activities and discharges (if necessary), the following measures shall be implemented as part of Proposed Project construction: If degraded soil or groundwater is encountered during excavation (e.g., there is an obvious sheen, odor, or unnatural color to the soil or groundwater), SCE and/or its contractor shall excavate, segregate, test, and dispose of degraded soil or groundwater in accordance with State hazardous waste disposal requirements. All dewatering activities shall, where feasible, ultimately discharge to the land surface in the vicinity of the particular installation or construction site. The discharges shall be contained, such that the water is allowed to infiltrate back into the soil (and eventually to the groundwater table) and the potential for inducing erosion and subsequent sediment delivery to nearby surface waterways is eliminated. Further, the holding tank or structure shall be protected from the introduction of pollutants (e.g., oil or fuel contamination from nearby equipment). Concerning such activities, SCE shall apply and comply with the provisions of SWRCB Order 2003-0003-DWQ, including develop and submit to the LARWQCB a discharge monitoring plan. If discharging to a community sewer system is feasible or necessary, SCE shall discharge to a community and present them with a description of and plan for the anticipated discharge. SCE shall comply with any specific requirements that the responsible organization or municipality and present them with a description of and plan for the anticipated discharge. SCE shall comply with any specific requirements that the responsible organization or municipality may have. If discharging to sufface waters (including to storm drains) would be necessary, SCE shall obtain and comply with the provisions of the LARWQCB Dewatering General Permit, including TDS and nitrate. Further, the sample(s) shall be compared to the screening criteria listed in the LARWQCB Dewatering Gener	

TABLE ES-3 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Hydrology and Water Quality (cont.)			
Impact 4.9-3: Installation of the proposed Presidential Substation would alter the local drainage pattern, potentially resulting in substantial on- or off-site erosion or sedimentation, and/or substantially increasing the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. <i>Less than significant with</i> <i>mitigation</i>	Class II	 Mitigation Measure 4.9-3: The following storm water quality control measures and BMPs shall be implemented at the proposed Presidential Substation site (see Appendix D for the related worksheet and calculations): SCE shall implement a Retention BMP(s) (as defined in the Ventura County TGM [2010]) with a design volume of approximately 0.01 acre-feet. The drainage area to this feature shall comprise at least 0.17 acre of the proposed impervious surface area. This BMP shall be selected, designed, and implemented according to the guidance and requirements summarized in the Ventura County MS4 Permit and the Ventura County TGM (2010). Alternatively, SCE shall demonstrate that the proposed storm water infiltration swale, or modifications thereto, would meet these mitigation requirements. SCE shall implement a Treatment Control BMP(s) (as defined in the Ventura County TGM [2010]) with a design volume of approximately 0.05 acre-feet. The drainage area to this feature shall comprise at least the remaining 3.83 acres of the proposed Presidential substation site (i.e., the residual drainage area not captured by the Retention BMP(s)). This BMP shall be selected, designed, and implemented according to the guidance and requirements and the Ventura County TGM (2010). Alternatively, SCE shall demonstrate that the proposed the proposed presidential substation site (i.e., the residual drainage area not captured by the Retention BMP(s)). This BMP shall be selected, designed, and implemented according to the guidance and requirements summarized in the Ventura County MS4 Permit and the Ventura County MS4 Permit and the Ventura County TGM (2010). Alternatively, SCE shall demonstrate that the proposed storm water infiltration swale, or modifications thereto, would meet these mitigation requirements. 	
Land Use and Planning			
No Impacts		No Mitigation	
Noise			
Impact 4.11-1: Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria. Significant unavoidable	Class I	 Mitigation Measure 4.11-1a: SCE and/or its contractors shall develop a Construction Noise Reduction Plan. The Plan shall include, but not be limited to, the following measures for daytime construction activities: Publish and distribute to the potentially affected community within 300 feet, a "Hot Line" telephone number or pager number, which shall be attended during active construction working hours, for use by the public to register complaints. All complaints shall be logged noting date, time, complainants' name, nature of complaint, and any corrective action taken. All construction equipment shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations. 	Project construction activities would generate noise impacts on sensitive receptors at levels that would violate standards.

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Noise (cont.)			
Impact 4.11-1 (cont.)		• Maximize physical separation, as far as practicable, between noise sources (construction equipment) and noise receptors. Separation may be achieved by providing enclosures for stationary items of equipment and noise barriers around particularly noisy areas at the project sites and by locating stationary equipment to minimize noise impacts on the community.	
		 Utilize construction noise barriers such as paneled noise shields, barriers, or enclosures adjacent to or around noisy equipment associated with access road construction, pole installation and removal, and underground trenching for distribution line and fiber optic cable in the immediate vicinity (i.e., within 200 feet) of sensitive receptors. Noise control shields shall be made featuring a solid panel and a weather-protected, sound-absorptive material on the construction-activity side of the noise shield. Shields used during linear construction activities shall be readily removable and moveable so that they may be repositioned, as necessary, to provide noise abatement for construction activities located near residential receptors. 	
		Mitigation Measure 4.11-1b: The Construction Noise Reduction Plan required by Mitigation Measure 4.11-1a shall include a nighttime noise and nuisance reduction strategy in the event that nighttime construction activity is determined to be necessary within 1,000 feet of sensitive receptors. The strategy shall include a set of site-specific noise attenuation measures that apply state of the art noise reduction technology to ensure that nighttime construction noise levels and associated nuisances are reduced to the extent feasible.	
		The attenuation measures may include, but not be limited to, the control strategies and methods for implementation that are listed below. If any of the following strategies are determined by SCE to not be feasible, an explanation as to why the specific strategy is not feasible shall be included in the Construction Noise Reduction Plan.	
		 Plan construction activities to minimize the amount of nighttime construction. 	
		 Offer temporary relocation of residents within 200 feet of nighttime construction activities. 	
		• Temporary noise barriers, such as shields and blankets, shall be installed immediately adjacent to all nighttime stationary noise sources (e.g., auger rigs, bore rigs, generators, pumps, etc.).	
		• Install temporary noise barriers that block the line of sight between nighttime activities and the closest residences within 1,000 feet.	

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact		
Noise (cont.)	loise (cont.)				
Impact 4.11-1 (cont.)		• The notification requirements identified in Mitigation Measure 4.11-1a shall be extended to include residences within 1,000 feet of pending nighttime construction activities.			
Impact 4.11-4: Construction activities could increase ambient noise levels in Thousand Oaks and Simi Valley. <i>Less than Significant with Mitigation</i>	Class II	Mitigation Measure 4.11-4: Implement Mitigation Measures 4.11-1a and 4.11-1b.			
Population and Housing					
No Impacts		No Mitigation			
Public Services					
No Impacts		No Mitigation			
Recreational Resources					
No Impacts		No Mitigation			
Transportation and Traffic					
Impact 4.15-1: Project construction would temporarily increase traffic volumes on roadways in the study area, and would potentially conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. <i>Less than</i> <i>significant with mitigation</i>	Class II	Mitigation Measure 4.15-1a: SCE shall obtain and comply with local road encroachment permits for public roads that are crossed by the proposed subtransmission alignment. SCE shall also coordinate short-term construction activities at private road crossings with the applicable private property owners. Copies of all encroachment permits and evidence of private property coordination shall be provided to the CPUC prior to the commencement of construction activities.			
		Mitigation Measure 4.15-1b: SCE shall prepare and implement a Traffic Management Plan subject to approval of the appropriate state agency and/or local government(s). The approved Traffic Management Plan and documentation of agency approvals shall be submitted to the CPUC prior to the commencement of construction activities. The plan shall:			
		 Include a discussion of work hours, haul routes, work area delineation, traffic control and flagging; 			
		Identify all access and parking restriction and signage requirements;			
		• Require workers to park personal vehicles at the approved staging area and take only necessary Project vehicles to the work sites;			

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact		
Transportation and Traffic (cont.)	Transportation and Traffic (cont.)				
Impact 4.15-1 (cont.)		 Lay out plans for notifications and a process for communication with affected residents and landowners prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which road/lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints; and 			
		 Include plans to coordinate all construction activities with emergency service providers in the area prior to construction to ensure that construction activities and associated lane closures would not significantly affect emergency response vehicles. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times. SCE shall submit verification of its consultation with emergency service providers to the CPUC. Identify all roadway locations where special construction techniques (e.g., night construction) would be used to minimize impacts to traffic flow. 			
		Mitigation Measure 4.15-1c: The County and SCE shall insure that appropriate warning signs are posted alerting bicyclists to bike lane closures and instructing motorists to share the road with bicyclists. In addition, in order to remove potential roadway hazards to bicyclist in the construction areas the SEC shall ensure that all contract haul trucks are covered to prevent spillage of materials onto haul routes, and that the area adjacent to the Substation site shall be kept free of debris and dirt that may accumulate from entering and exiting trucks by conducting regular sweeping of the project area.			
		Mitigation Measure 4.15-1d: SCE shall coordinate with the appropriate local government departments in Thousand Oaks, Simi Valley, with county agencies such as the Ventura County Public Works Agency, with state agencies such as Caltrans, and with other utility districts and agencies as appropriate, regarding the timing of construction projects that would occur near the Proposed Project. The Ventura County Public Works Agency reviews environmental documents to ensure that all individual and cumulative adverse impacts to the Regional Road Network and County-maintained local roads have been adequately evaluated and mitigated to insignificant levels. SCE shall submit verification of its coordination to the CPUC. This multi-agency coordination, and implementation of Mitigation Measures 4.15-1a and 4.15-1b, would ensure that the cumulative effect of simultaneous construction activities in overlapping areas would be minimized.			

Impact	Impact Class ^a	Mitigation Measure(s)	Significant Unavoidable Residual Impact
Transportation and Traffic (cont.)			
Impact 4.15-3: Project construction would increase potential traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.15-3a: Implement Mitigation Measure 4.15-1a, Mitigation Measure 4.15-1b, and Mitigation Measure 4.15-1c.Mitigation Measure 4.15-3b: Roads damaged by construction would be repaired to a structural condition equal to that which existed prior to construction activity. The Project Partners and the local jurisdiction shall enter into an agreement prior to construction requirements of the rehabilitation program.	
Impact 4.15-4: The Proposed Project would not result in inadequate emergency access. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.15-4: Implement Mitigation Measure 4.15-1b.	
Impact 4.15-5: The Proposed Project would temporarily conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and would temporarily decrease the performance or safety of such facilities. <i>Less than significant with mitigation</i>	Class II	Mitigation Measure 4.15-5: Implement Mitigation Measure 4.15-1c.	
Utilities and Service Systems			·
No Impacts		No Mitigation	

TABLE ES-4
ENVIRONMENTAL IMPACTS INCREASED OR DECREASED BY IMPLEMENTING AN ALTERNATIVE

Alternative	Aesthetics	Air Quality	Noise
Proposed Project	Significant unavoidable impacts related to Subtransmission Alignment Olsen Road crossing and also the Proposed Presidential Substation.	Significant unavoidable impacts related to construction emissions.	Significant unavoidable short term impacts where construction occurs near residences in unincorporated Ventura County.
Proposed Presidential Substation with Alternative Subtransmission Alignment 1	Alternative would have similar impacts as the Proposed Project. In addition, create a new significant aesthetics impact would be created associated with Esperance Road subtransmission alignment.	Alternative would not include construction of 12,500 feet of duct bank but would require a longer subtransmission alignment and more pole construction. Overall, construction emission would be slightly reduced.	Alternative would result noise impacts in new areas in addition to the Proposed Project. Impacts may be slightly reduced in some areas.
Proposed Presidential Substation with Alternative Subtransmission Alignment 2	Alternative would have similar impacts as the Proposed Project. In addition, new significant aesthetics impacts would result from the alignment adjacent to Olsen and Madera Roads.	Alternative would not include construction of 12,500 feet of duct bank but would require a longer subtransmission alignment and more pole construction. Overall, construction emission would be slightly reduced.	Impacts would be similar to the Proposed Project but because of jurisdictional boundaries would be less than significant.
Proposed Presidential Substation with Alternative Subtransmission Alignment 3	Alternative would install the subtransmission line under Olsen road, thereby eliminating the aesthetic impacts associated with the crossing. However, significant impacts would remain related to the proposed Presidential Substation site. Overall reduced but still significant unavoidable.	Alternative would eliminate construction emissions associated with access road construction and subtransmission alignment construction/pole replacement from Sunset Valley to the substation. Overall construction emissions would be reduced.	Impacts would be less than the Proposed Project because construction/pole replacement related to the subtransmission alignment would not be required for much of the alignment.
Alternative Substation Site B with Proposed Project Subtransmission Alignment.	Alternative would eliminate the significant unavoidable impacts associated with the substation site and Olsen Road crossing. Overall, impacts would be reduced to less than significant.	Construction of the alternative substation would require fewer truck haul trips and grading resulting in reduced construction emissions. Construction emissions associated with subtransmission alignment construction would be similar to the Proposed Project. Overall, construction emissions would be reduced.	
Alternative Substation Site B with Alternative Subtransmission Alignment 1.	Alternative would eliminate the aesthetics impacts related to the substation site and the Olsen road overhead crossing. However, a new significant unavoidable impact would be created related to the Esperance Road alignment.	Alternative would eliminate construction emissions associated with 12,500 feet of duct bank construction but would require a longer subtransmission alignment and more pole replacement. Substation construction is expected to require fewer truck haul trips. Overall construction emissions would be reduced.	
Alternative Substation Site B with Alternative Subtransmission Alignment 2.	Alternative would eliminate the aesthetics impacts related to the substation site and the Olsen road overhead crossing. However, a new significant unavoidable impact would be created related to the new subtransmission lines parallel to Olsen and Madera Roads.	Alternative would eliminate construction emissions associated with 12,500 feet of duct bank construction but would require a longer subtransmission alignment and more pole replacement. Substation construction is expected to require fewer truck haul trips. Overall construction emissions would be reduced.	

Alternative	Aesthetics	Air Quality	Noise
Alternative Substation Site B with Alternative Subtransmission Alignment 3.	Alternative would eliminate the significant unavoidable impacts associated with the substation site and Olsen Road crossing. Overall, impacts would be reduced to less than significant.	Alternative would eliminate construction emissions associated with access road construction and subtransmission alignment construction/pole replacement from Sunset Valley to the substation. In addition, the substation construction would involve less fill and therefore fewer truck haul trips. Overall construction emissions would be reduced.	Impacts would be less than the Proposed Project because construction/pole replacement related to the subtransmission alignment would not be required for much of the alignment.
System Alternative B	Alternative would eliminate the significant unavoidable impacts associated with the substation site and Olsen Road crossing. Overall, impacts would be reduced to less than significant.	Alternative would not require construction of a new substation or subtransmission lines, resulting in less than significant impacts on air quality.	Short term construction impacts would be less than significant. Long term noise impacts are expected to increase due to larger transformers in the existing substations but would be mitigated to less than significant.

TABLE ES-4 (Continued) ENVIRONMENTAL IMPACTS INCREASED OR DECREASED BY IMPLEMENTING AN ALTERNATIVE

CHAPTER 1 Introduction

1.1 Overview of Proposed Project

Southern California Edison (SCE), in its California Public Utilities Commission (CPUC) application for the Presidential Substation Project (A.08-12-023), filed on December 22, 2008, seeks a Permit to Construct (PTC), to construct electrical facilities pursuant to CPUC General Order (GO) 131-D. The application includes the Proponent's Environmental Assessment (PEA) (SCE, 2008) prepared pursuant to Rule 2.4 of CPUC's Rules of Practice and Procedure.

The purpose of the Presidential Substation Project (Proposed Project) is to meet the forecasted electrical demands in the cities of Simi Valley and Thousand Oaks, as well as adjacent areas of Ventura County (Electrical Needs Area [ENA]). The ENA is presently served by three of the 66/16 kilovolt (kV) distribution substations that are fed by the Moorpark 66 kV System. These three distribution substations (Thousand Oaks Substation, Potrero Substation, and Royal Substation) (ENA substations) provide electrical service to approximately 60,000 metered customers and are presently at or near their operating capacity. Therefore, SCE is proposing to construct a new 66/16 kV substation to meet the electrical needs and be operational by the Spring or Summer of 2013.

After construction of the Proposed Project, the ENA would be served by the ENA substations and the proposed Presidential Substation. The Proposed Project would construct a new 66/16 kV distribution substation (proposed Presidential Substation) and associated subtransmission lines (proposed subtransmission alignments), telecommunications connection, and 16 kV distribution getaways. The proposed Presidential Substation would be supplied by connecting to two existing 66 kV subtransmission lines, the Moorpark-Royal No. 2, and the Moorpark-Thousand Oaks No. 2 lines. The proposed subtransmission alignments would occur predominantly within 3.5 miles of existing right-of-way (ROW). The Proposed Project would be constructed and operated with two 66 kV source subtransmission lines and four 16 kV distribution getaways. The proposed Presidential Substation, an unstaffed and automated, 56 MVA, 66/16 kV low-profile distribution substation, would be constructed on a 4-acre site within a 5.4-acre ROW or acquired property in the City of Thousand Oaks near the eastern boundary of the City of Simi Valley.

The California Environmental Quality Act (CEQA) requires lead agencies to prepare an Environmental Impact Report (EIR) if the project may potentially result in significant impacts that will not be mitigated to the level of less than significant. This Draft EIR has been prepared to consider the potential environmental impacts from the Proposed Project, and to identify and evaluate a reasonable range of alternatives.

1.2 Project Objectives

Section 15126.6.(a) of the CEQA Guidelines, requires that a reasonable range of alternatives to a Project be described and analyzed. The alternatives must feasibly attain most of the basic objectives of the Proposed Project. Therefore, in order to guide in development and evaluation of alternatives, SCE was asked to define its project objectives. SCE identified the objectives for the Proposed Project in its PEA (SCE, 2008) as follows:

- Meet long term electrical demand requirements in the ENA beginning in fall of 2012 or winter of 2013 and extending beyond 2014 in order to meet the 10-year planning criterion;
- Improve electrical system operational flexibility and reliability by providing the ability to transfer load between 16 kV distribution circuits and distribution substations within the ENA;
- Meet project needs while minimizing environmental impacts; and
- Meet project needs in a cost-effective manner.

According to SCE, construction of the Proposed Project is needed to maintain safe and reliable electric service to customers and to serve forecasted electrical demand in the ENA.

To better define the basic objectives of the Proposed Project for use in the alternatives screening process, the CEQA team requested additional technical data from SCE and conducted an independent assessment The basic project objectives identified by the CEQA team based on the technical data and additional analysis are:

- Meet long term electrical demand requirements in the ENA as defined in the proponents application and PEA (SCE 2008); and
- Improve electrical system operational flexibility and reliability by providing the ability to transfer load between 16 kV distribution circuits and 16k V distribution substations within the ENA.

Information on how the CEQA team developed the basic project objectives and used them in the alternatives screening process is provided in Chapter 3, *Alternatives and Cumulative Projects*, Section 3.2.1.

1.3 Agency Use of This Document

Section 15124(d) of the CEQA Guidelines requires that an EIR contain a statement briefly describing the intended uses of the EIR. The CEQA Guidelines indicate that the EIR should identify the ways in which the Lead Agency and any responsible agencies would use this document in their approval or permitting processes. The following discussion summarizes the roles of the agencies and the intended uses of the EIR.

1.3.1 CPUC Process

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of investor-owned public utilities, including SCE. The CPUC is the lead agency for CEQA compliance in evaluation of the SCE's Proposed Project, and has directed the preparation of this Draft EIR. The Draft EIR will be used by the CPUC to describe potential environmental impacts which would result from implementation of the Proposed Project and explore a range of alternatives to potentially reduce significant adverse impacts. This EIR will be used by the CPUC, in conjunction with other information developed in the CPUC's formal record, to act on SCE's application for a PTC for construction, operation and maintenance of the Proposed Project. The CPUC will determine the adequacy of the Final EIR and, if adequate, will certify the document as complying with CEQA. If the CPUC approves a project with significant unavoidable environmental impacts, it must state why in a Statement of Overriding Considerations, which would be included in the CPUC's decision on the application.

1.3.2 Other Agencies

Several other State agencies will rely on information in this EIR to inform them in their decision over issuance of specific permits related to project construction, operation or maintenance. In addition to the CPUC, State agencies such as the California Department of Transportation (Caltrans), California Department of Fish and Game (CDFG) and the Regional Water Quality Control Board (RWQCB) would be involved in reviewing and/or approving the project. On the federal level, agencies with potential reviewing and/or permitting authority include the United States (U.S.) Army Corps of Engineers (Corps) and the U.S. Fish and Wildlife Service (USFWS).

No local discretionary (e.g., use) permits are required, since the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of SCE facilities in California. SCE would still have to obtain all ministerial building and encroachment permits from local jurisdictions, and the CPUC's General Order (GO) 131-D requires SCE to comply with local building, design, and safety standards to the greatest degree feasible to minimize project conflicts with local conditions. The CPUC's authority does not preempt special districts, such as Air Quality Management Districts (AQMD), or other State agencies or the federal government. SCE would obtain permits, approvals, and licenses as needed from, and would participate in reviews and consultations as needed with, federal, State, and local agencies as shown in **Table 1-1**.

1.4 Public Review and Comment

1.4.1 Education Outreach

In response to letters of concern and comments from the public regarding the Proposed Project, the CPUC held an educational workshop directly before the Scoping Meeting in Thousand Oaks. The workshop was held on Tuesday, March 3, 2009 at 6:30 p.m. in the cafeteria of the Park Oak Elementary School, located at 1335 Calle Bouganvilla, Thousand Oaks, California. The workshop addressed the CPUC's process for reviewing the Proposed Project application and the role of the CEQA environmental review process. Information on how interested parties could

Permits and Other Requirements	Agency	Jurisdiction/Purpose
Federal		
Nationwide or Individual Permit (Section 404 of the Clean Water Act)	Corps	Construction impacting Waters of the United States, including wetlands
Endangered Species Consultation (Section 7 or Section 10)	USFWS	If project has the potential to effect federally listed threatened or endangered species, consultation would be required
State		
PTC	CPUC	Overall project approval and CEQA review
National Pollutant Discharge Elimination System Construction Stormwater Permit (NPDES)	California Regional Water Quality Control Board (RWQCB)	Storm water discharges associated with construction activities disturbing more than 1 acre of land
Section 401 of the Clean Water Act, Water Quality Certification (or waiver)	RWQCB	Certifies that project is consistent with State water quality standards
Encroachment Permit	Caltrans	Construction, operation, and maintenance within, under, or over State highway (Hwy 23) ROW
Endangered Species Consultation (California Endangered Species Act, California Fish and Game Code Section 2050 et seq., Section 3511, and Sections 1900-1913)	CDFG	Construction, operation, and maintenance that may affect a State- listed species or its habitat; incidental take authorization (if required)
Lake and Streambed Alteration (Section 1600)	CDFG	Construction and operation that may have an impact on wetlands or other jurisdictional water ways
Local		
Encroachment Permit (ministerial)	City of Thousand Oaks City of Simi Valley Ventura County	Construction, operation, and maintenance within, under, or over City road ROW

TABLE 1-1 SUMMARY OF POTENTIAL PERMIT REQUIREMENTS

most effectively provide input, voice concerns, pose questions, and become involved during the process was also addressed at the workshop. At the end of the workshop, a brief question and answer session was held to address questions related to the CPUC and CEQA processes.

1.4.2 Scoping

On Friday, February 17, 2009, the CPUC published and distributed a Notice of Preparation (NOP) to advise interested local, regional, and State agencies, and the interested public, that an EIR would be prepared for the Proposed Project. The NOP solicited both written and verbal comments on the EIR's scope during a 30-day comment period and provided information on a forthcoming public scoping meeting. Additionally, the NOP presented the background, purpose, description, and location of the Proposed Project, potential issues to be addressed in the EIR, and the contact name for additional information regarding the Proposed Project.

In addition to the NOP, the CPUC notified the public about the public scoping meeting through multiple newspaper legal advertisements and the project website. The NOP, newspaper legal advertisements, and the project website notification are presented in Appendix A. Notifications provided basic project information, the date, time, and location of the scoping meeting, and a brief explanation of the public scoping process.

During the public scoping meeting held on Tuesday, March 3, 2009, participants were able to comment on the scope of issues to be addressed in the EIR for the Proposed Project. Written comments were also collected throughout the public comment period. Oral comments were presented in the public scoping meetings and 39 letters and/or e-mails were received during the scoping period. Appendix A to this EIR contains the Scoping Report, which includes a copy of the NOP, the NOP mailing list, a detailed description of all verbal and written comments received, a description of comments that are not within the scope of CEQA, transcripts of the oral comments, and copies of the written comments.

The overarching themes of the written and oral comments in the Scoping Report that fall within the purview of CEQA are as follows:

- Impacts on scenic views, especially along county and city eligible and/or designated scenic highways;
- Impacts from loss of agricultural land;
- Impacts to air quality from earth disturbance and removal of vegetation;
- Impacts to wildlife and plant life;
- Impacts of greenhouse gas emissions on climate change;
- Impacts to known cultural resources;
- Impacts to water quality and water runoff in the project area;
- Impacts to the surrounding land uses;
- Noise impacts from operation of the transmission lines;
- Impacts to population and housing;
- Impacts on public services and recreation;
- Impacts to the transportation systems and traffic safety;
- Cumulative impacts;
- Ensure that alternatives are adequately addressed; and,
- Ensure that perceived inadequacies in the PEA will not be repeated.

1.4.3 Supplemental Scoping

Due to the changes in the Proposed Project design and the length of time that passed since the initial scoping period, the CPUC conducted a supplemental scoping period. The CPUC provided several public notices for the supplemental scoping process. On Wednesday, August 25, 2010, the CPUC published and distributed a Noticing Letter to notify interested local, regional, and State agencies, and the public, that the Project Description for the Proposed Project had changed (Appendix A).

The Noticing Letter solicited both written and verbal comments on the EIR's scope during a 30-day comment period and provided information on a forthcoming supplemental public scoping meeting. Additionally, the Noticing Letter explained where revisions to Data Request #4 (SCE, 2010) and information about the CEQA review of the Proposed Project could be viewed, and the contact name for additional information regarding the Proposed Project. An electronic copy of the Noticing Letter was posted on the CPUC's website. In addition to the Noticing Letter, the CPUC notified the public about the supplemental public scoping meeting through newspaper legal advertisements and the project website. The CPUC published legal advertisements in the Ventura County Star on Thursday, August 26, 2010 and Saturday, September 11, 2010.

The CPUC conducted the supplemental scoping meeting on Tuesday, September 14, 2010, from 6:30 p.m. to 8:30 p.m. in a meeting room at the Palm Garden Hotel, located at 495 N. Ventu Park Road, Thousand Oaks, California. Approximately 85 members of the public were in attendance at the supplemental scoping meeting. The public was informed that they could submit written comments on the scope and content of the environmental document by mail, facsimile, or email to the CPUC. Appendix A to this EIR contains the Supplemental Scoping Report, which includes a copy of the notices described above, a detailed description of all verbal and written comments received, a description of comments that are not within the scope of CEQA, transcripts of the oral comments, and copies of the written comments. Twenty-six written letters and 16 oral comments were received during the supplemental scoping period. The overarching themes of the written and oral comments in the Scoping Report that fall within the purview of the CEQA process were similar to the comments collected during the initial scoping period.

1.4.4 Public Comment on the Draft EIR

This Draft EIR is being circulated to local, State and federal agencies and to interested individuals who may wish to review and comment on the report. Written comments may be submitted to the CPUC during the 45-day public review period. Written and verbal comments on this Draft EIR will be accepted via regular mail, fax, and e-mail and at a noticed public meeting (either noticed in this document or under separate cover). All comments received will be addressed in a Response to Comments document, which, together with this Draft EIR, will constitute the Final EIR for the Proposed Project.

This Draft EIR identifies the environmental impacts of the Proposed Project on the existing environment, indicates how those impacts would be mitigated or avoided, and identifies and evaluates alternatives to the Proposed Project. This document is intended to provide the CPUC with the information required to exercise its jurisdictional responsibilities with respect to the Proposed Project, which would be considered at a separate noticed public meeting of the CPUC.

CEQA requires that a Lead Agency shall neither approve nor implement a project as proposed unless the significant environmental impacts have been reduced to an acceptable level. An acceptable level is defined as eliminating, avoiding or substantially lessening significant environmental effects to below a level of significance. If the Lead Agency approves a project, even though significant impacts identified in the Final EIR cannot be fully mitigated, the Lead Agency must state in writing the reasons for its action. Findings of Fact and a Statement of Overriding Considerations must be included in the record of project approval and mentioned in the Notice of Determination (NOD).

1.5 Reader's Guide to This EIR

This EIR is organized as follows:

Executive Summary. Provides a summary description of the Proposed Project, the alternatives, their respective environmental impacts, and the Environmentally Superior Alternative. Also provides a summary table of the impacts and mitigation measures of the Proposed Project and alternatives.

Chapter 1, *Introduction*. Provides a discussion of the background and project objectives, briefly describes the Proposed Project, and outlines the public agency use of the EIR.

Chapter 2, Project Description. Provides a detailed description of the Proposed Project.

Chapter 3, *Alternatives and Cumulative Projects*. Provides a description of the alternatives screening and evaluation process, describes the alternatives considered but eliminated from further analysis and the rationale therefore, and describes the alternatives analyzed in Chapter 4. Also identifies the cumulative projects considered in the analysis of cumulative impacts.

Chapter 4, *Environmental Analysis*. Provides a comprehensive analysis and assessment of impacts and mitigation measures for the Proposed Project and alternatives, including the No Project Alternative. This section is divided into main sections for each environmental issue area (e.g., Air Quality, Biological Resources, etc.) that contain the environmental settings, regulatory environment, and impacts, and of the Proposed Project and each alternative.

Chapter 5, *Comparison of Alternatives*. Provides a discussion of the relative advantages and disadvantages of the Proposed Project and the alternatives that were evaluated, and identifies the CEQA Environmentally Superior Alternative.

Chapter 6, *CEQA Statutory Sections*. Provides a discussion of growth-inducing impacts, significant environmental effect that cannot be avoided, irreversible environmental changes, and cumulative impacts.

Chapter 7, *Report Preparers*. Identifies the primary authors of this Draft EIR

Chapter 8, *Mitigation Monitoring, Reporting, and Compliance Plan.* Provides a discussion of the CPUC's mitigation monitoring, reporting and compliance program requirements for the project as approved by the CPUC.

Appendix A. Contains the Scoping Report which includes the NOP, the Supplemental Scoping Report, copies of notifications and scoping materials, and copies of comments received.

Appendix B. Provides an Electric and Magnetic Fields (EMF) Field Management Plan (FMP) summary.

Appendix C. Contains calculations pertaining to Section 4.3, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions*.

Appendix D. Contains the Ventura County Stormwater Management Standards Calculation Worksheet, as referenced in Section 4.9, *Hydrology and Water Quality*.

Appendix E. Provides a copy of the mailing list to whom the Draft EIR and/or Notice of Availability were sent.

References – Introduction

- Southern California Edison (SCE), 2008. Proponent's Environmental Assessment for the Presidential Substation Project, December 2008.
- Southern California Edison (SCE), 2010. Southern California Edison, Data Request Response. Presidential ED-04, June 9, 2010.

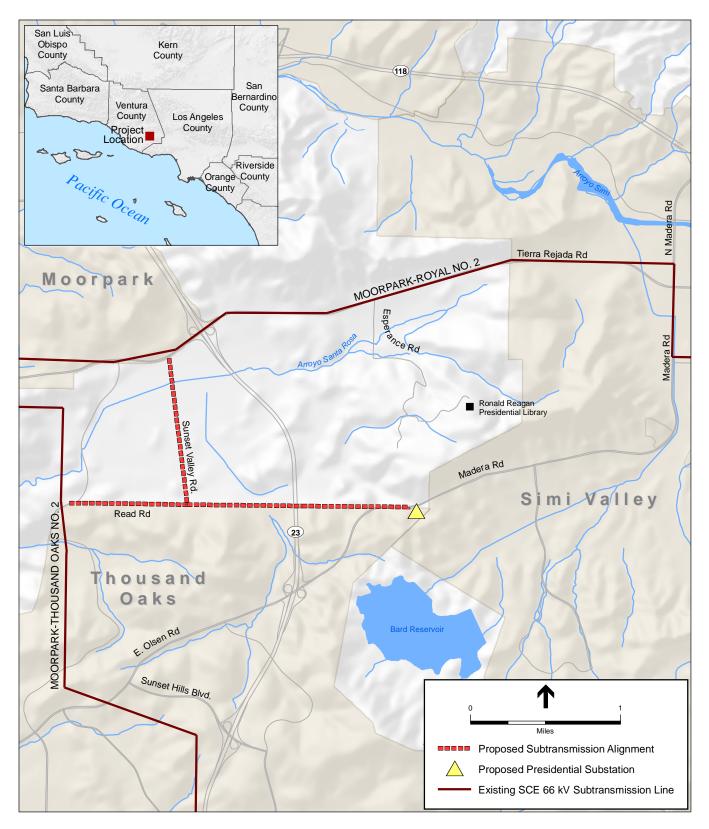
CHAPTER 2 Project Description

2.1 Introduction

This EIR examines the environmental impacts associated with construction, operation and maintenance of the proposed Southern California Edison (SCE) Presidential Substation Project (Proposed Project). As described in more detail in the sections below, the Proposed Project would consist of constructing a new 66/16 kilovolt (kV) distribution substation (proposed Presidential Substation) and associated 66 kV subtransmission lines (proposed subtransmission alignments), telecommunications connection, and related 16 kV distribution components. Power to the proposed Presidential Substation would be supplied by connecting to two existing 66 kV subtransmission lines, Moorpark-Royal No. 2 and Moorpark-Thousand Oaks No. 2. The proposed subtransmission alignment would occur within 3.5 miles of predominantly existing right-of-way (ROW). Existing tubular steel poles (TSPs) and wooden poles would be removed and a combination of new poles and underground facilities would be constructed. The information presented here was compiled from SCE's Application for a Permit to Construct (PTC) (SCE, 2008a), its Proponents Environmental Assessment (PEA) (SCE, 2008b) and its responses to data requests by the CEQA Project Team (SCE, 2009a, 2009b, 2009c, and 2010) and is intended to provide a detailed description of the proposed construction, operation and maintenance of the Proposed Project.

2.2 Project Location

The Proposed Project is located in the City of Thousand Oaks and unincorporated Ventura County, California. As depicted in **Figure 2-1**, the proposed Presidential Substation would be located in the northeastern portion of the City of Thousand Oaks near the jurisdictional boundary of the City of Simi Valley. The proposed subtransmission alignment traverses directly west from the proposed Presidential Substation across open space, agricultural and residential areas along Read Road to connect with the Moorpark-Thousand Oaks No. 2 subtransmission line near the intersection of Read Road and Moorpark Road. The proposed subtransmission alignment due west from the proposed Presidential Substation until it turns roughly north adjacent to Sunset Valley Road. The proposed subtransmission alignment to Sunset Valley Road near residential and agricultural land uses and connect to the existing subtransmission line at the corner of Sunset Valley Road and Tierra Rejada Road.



Presidential Substation Project . 207584.02 Figure 2-1 Proposed Project Overview

SOURCE: SCE, 2010

2.3 Existing System

The Electrical Needs Area (ENA) is presently served by three 66/16 kV distribution substations, which are fed by the Moorpark 66 kV System (**Figure 2-2**). These three substations (Thousand Oaks, Potrero, and Royal Substations) provide electrical service to approximately 60,000 metered customers. The three existing substations were placed in service in the 1960s (i.e., Potrero, 1969; Thousand Oaks, 1960; Royal, 1964). After construction of the Proposed Project the ENA would be served by the three existing 16 kV distribution substations and the proposed Presidential Substation.

2.4 SCE's Proposed Project

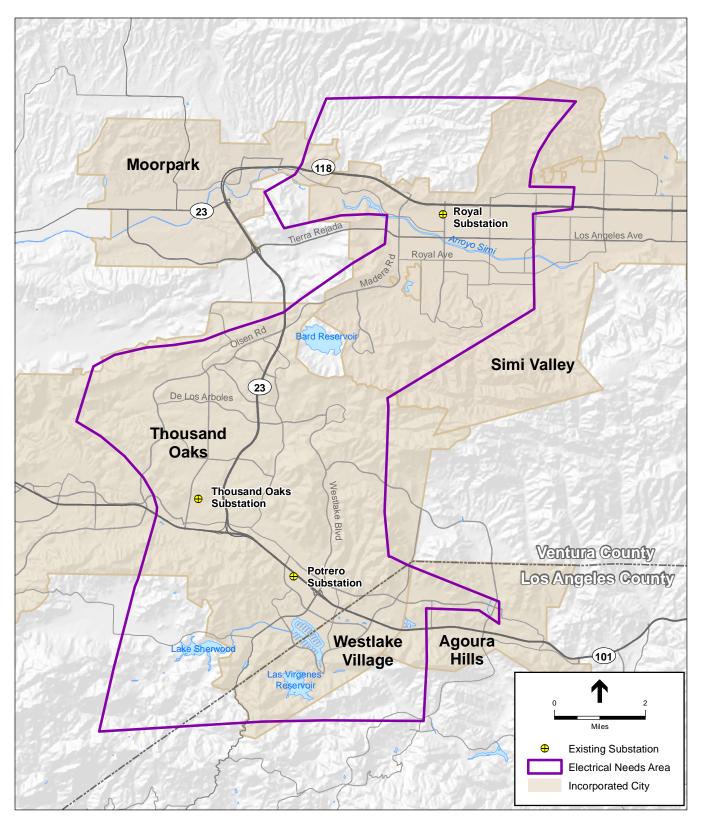
The Proposed Project includes construction, operation and maintenance of the following components, depicted in **Figure 2-3**:

- Construction of a new 66/16 kV distribution substation (proposed Presidential Substation) on an approximately 4-acre site;
- Replacement of existing 16 kV distribution and subtransmission poles with new subtransmission poles and installation of 66 kV subtransmission conductor to supply the proposed Presidential Substation;
- Installation of underground 66 kV subtransmission facilities for the portion of the route crossing Highway 23 (Hwy 23);
- Construction or relocation of related 16 kV distribution components, including four new 16 kV distribution getaways at the proposed Presidential Substation, and relocation, transfer, or upgrade of existing 16 kV distribution facilities either to new subtransmission poles or to new underground 16 kV distribution facilities. Upgrades to new 16 kV distribution would involve installation of new conductors instead of re-hanging or burying the existing 16 kV conductor; and
- Construction of facilities to connect the proposed Presidential Substation to SCE's existing telecommunications system.

The proposed subtransmission alignment would be constructed in a combination of existing and new ROW.

2.5 Proposed Project Components

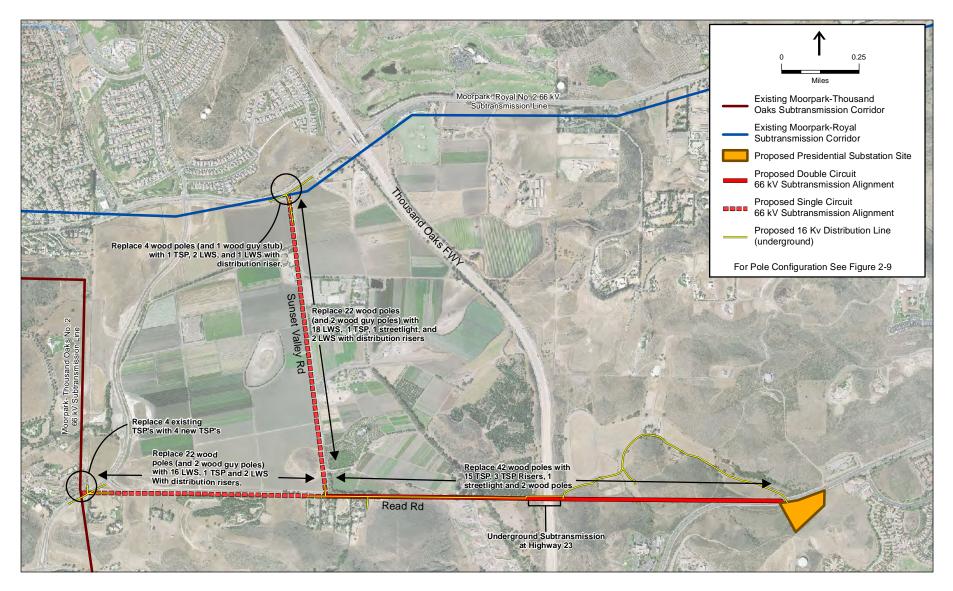
The Proposed Project consists of a number of distinct project components that together make up the Proposed Project. This section presents a detailed discussion of each of these components. Section 2.6 presents ROW information while Sections 2.7 and 2.8 includes details on pre-construction and construction activities, anticipated schedule and anticipated start of operations. Section 2.9 discusses the operation and maintenance of the Proposed Project. A list of the key components associated with the Proposed Project is provided **Table 2-1**, followed by a more detailed discussion.



Presidential Substation Project . 207584.02 Figure 2-2 Electrical Needs Area

2-4

SOURCE: SCE, 2010



Presidential Substation Project . 207584.02 Figure 2-3 Proposed Project

SOURCE: SCE, 2010

TABLE 2-1 SUMMARY OF PROPOSED PROJECT COMPONENTS

Construction of a new 66/16 kV low-profile distribution substation (Proposed Presidential Substation) on an approximate 4-acre site

- Install one 66 kV switchrack
- Install five 66 kV circuit breakers and disconnect switches
- Install two 28 megavolt (MVA), 66/16 kV transformers
- Install two 16 kV, 4.8 MVAR capacitor banks
- Install one 16 kV low-profile switchrack
- Install one TSP and one TSP riser subtransmission poles
- Install one vault outside northwest corner of proposed Presidential Substation perimeter wall
- Install four underground16 kV distribution getaways
- Install lighting
- Construct one Mechanical and Electrical Equipment Room (MEER)
- Construct perimeter wall and gate
- Construct proposed Presidential Substation access driveway from Olsen Road
- Construct acceleration and deceleration lanes on Olsen Road
- Install site drainage
- Upgrade subtransmission (66 kV) relays at Royal and Moorpark Substations

Remove existing poles and construct new subtransmission poles and underground distribution facilities; install 66kV subtransmission conductor to proposed Presidential Substation

- Remove approximately 89 existing wooden 16 kV distribution poles and four 66 kV subtransmission poles
- Install approximately 66 steel subtransmission poles with polymer insulators within existing ROW (25 TSPs, of which two are described in the substation section above, and 41 light weight steel (LWS) circular poles)
- Install 66 kV conductor (i.e., 2000 thousand circular mill [kcmil^a] copper) in new underground facilities beneath Hwy23.
- Install 66 kV conductor (i.e., 954 Stranded Aluminum (SAC) and 954 Aluminum Core Steel Reinforced (ACSR) on new subtransmission poles from subtransmission supply lines to the proposed Presidential Substation (except for the Hwy 23 crossing)
 - Double-circuit 66 kV subtransmission line from proposed Presidential Substation west to the junction of Read Road and Sunset Valley Road. (1.5 miles), within existing and/or upgraded ROW (including under Hwy 23)
 - Single-circuit 66 kV subtransmission line from junction of Read Road and Sunset Valley Road west adjacent to Read Road to the Moorpark-Thousand Oaks No. 2 (0.8 mile), within existing ROW
 - Single-circuit 66 kV subtransmission line from junction of Read Road and Sunset Valley Road north adjacent to Sunset Valley Road to the Moorpark-Royal No. 2 (1.0 mile), within existing ROW
- Construct new access roads or improve existing roads for construction and maintenance of subtransmission facilities.

Relocation of existing distribution conductor

- Transfer existing 16 kV distribution line onto new subtransmission poles or to newly constructed underground facilities:
 - For existing 16 kV distribution facilities along or near the double-circuit 66 kV subtransmission line, install new underground distribution facilities along or near portions of the 66 kV subtransmission route
 - For existing 16 kV distribution facilities along or near the single-circuit 66 kV subtransmission line, transfer or upgrade distribution facilities to the new 66 kV subtransmission poles. Upgrades to new 16 kV distribution would involve installation of new conductors instead of re-hanging or burying the existing 16 kV conductor
 - Existing 16 kV facilities would be undergrounded to create space for new subtransmission facilities at the intersections of Read Road and Moorpark Road and at Sunset Valley and Tierra Rejada Road
- Install two new street light poles to replace existing streelights located on wooden 16 kV distribution poles
- Construct new access roads for construction and maintenance of underground facilities.

TABLE 2-1 (Continued) SUMMARY OF PROPOSED PROJECT COMPONENTS

Construction of facilities to connect proposed Presidential Substation to SCE's existing telecommunications system

- Install telecommunication line (i.e. fiber optic cable) from the Moorpark-Thousand Oaks No. 2 66 kV Subtransmission Line to approximately Sunset Valley Road.
- Install underground telecommunications facilities with the 16 kV distribution lines from approximately Sunset Valley Road to proposed Presidential Substation.
- Install underground telecommunication lines at the intersections of Moorpark Road. and Read Road, and also at Sunset Valley Road and Tierra Rejada Road to follow the 16 kV distribution pathway.

^a Wire size expressed in kcmil is the equivalent cross sectional area in thousands of circular mills. A circular mill is the area of a circle with a diameter of one thousandth (0.001) of an inch (NEMA, 2011).

SOURCE: SCE, 2008b, 2010

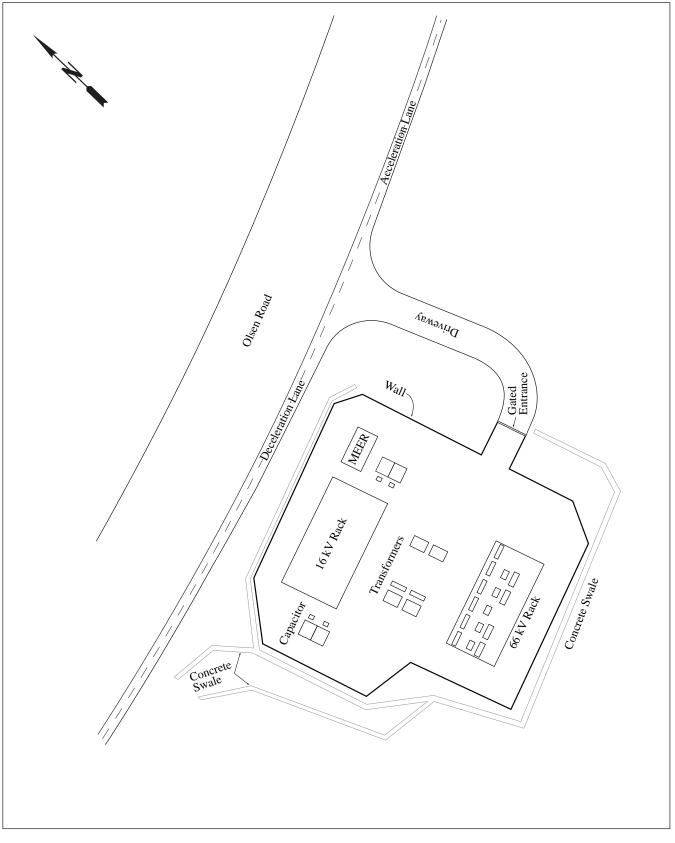
Implementation of the Proposed Project would result in construction, operation and maintenance of two new 66 kV source subtransmission line segments and four new 16 kV distribution getaways. The two proposed 66kV source subtransmission lines would connect to the existing Moorpark-Royal No. 2 and Moorpark-Thousand Oaks No. 2 lines.

However, the proposed Presidential Substation would be built to accommodate one additional 66 kV subtransmission source line and eight additional 16 kV distribution getaways at ultimate build-out. Since ultimate build-out is not identified within SCE's 10 year planning period, the potential alignments of the additional subtransmission line and 16 kV distribution circuits is highly speculative. Therefore, the potential ultimate build-out is not included as part of the Proposed Project analyzed within this EIR. However, where useful for clarity, some drawings and figures show the location within the proposed Presidential Substation where future equipment *could* be placed. If current relevant laws and CPUC regulations apply at the time that the additional 66 kV subtransmission line should be proposed, a separate PTC application and CEQA review for the additional 66 kV subtransmission source line would be required. Future permitting and licensing requirements for any additional 66 kV subtransmission source line have yet to be determined. However, under CPUC General Order 131-D, the future 16 kV distribution circuits are not subject to additional CEQA analysis or CPUC review.

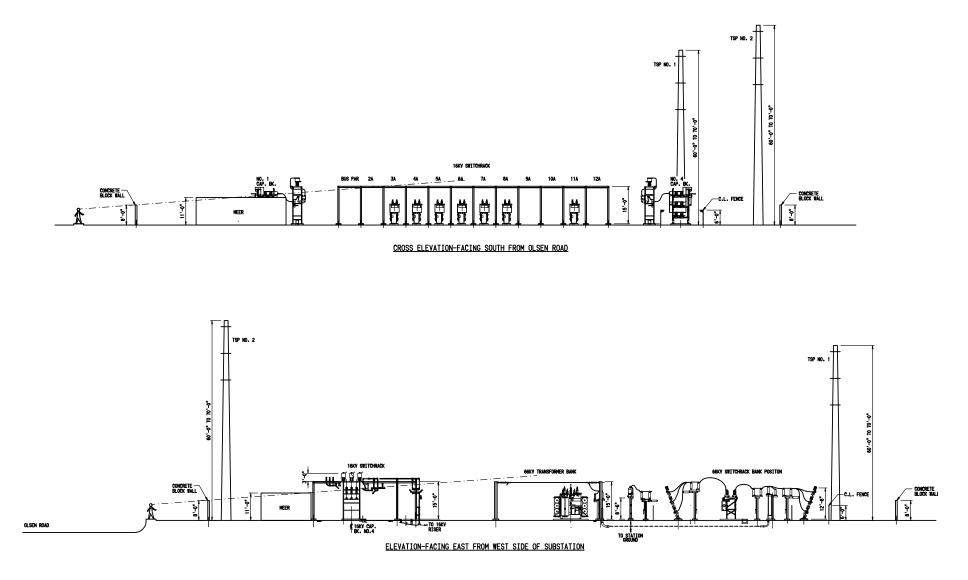
2.5.1 Substations

2.5.1.1 Proposed Presidential Substation

The proposed Presidential Substation, an unstaffed and automated, 56 MVA, 66/16 kV low-profile distribution substation, would be constructed on a 4-acre site in the City of Thousand Oaks near the eastern boundary with the City of Simi Valley (Figure 2-1). The proposed Presidential Substation would include, among other facilities, an asphalt concrete access road, perimeter wall, interior fences and gate. **Figures 2-4** and **2-5** depict the preliminary proposed Presidential Substation layout and profile views of the proposed Presidential Substation respectively. Power would flow into the proposed Presidential Substation via new overhead 66 kV subtransmission lines and leave the



Presidential Substation . 207584.02 Figure 2-4 Proposed Substation Layout



Presidential Substation . 207584.02
 Figure 2-5
 Substation Profile View

SOURCE: SCE, 2010

proposed Presidential Substation underground via four 16 kV distribution getaways and one vault. The following sections describe the proposed Presidential Substation components that would be installed at or near the proposed Presidential Substation site.

Substation Equipment and Associated Facilities

One 66 kV Switchrack

One steel 66 kV switchrack, approximately 120 feet long, 65 feet wide and 17 feet high would be installed on concrete foundations in an area approximately 120 feet long and 65 feet wide. The switchrack would consist of both an operating bus and a transfer bus and contain six positions. The positions would be used for:

- Two 66 kV source lines;
- Two transformer banks;
- One bus-tie; and
- One vacant position for future use.

The operating and transfer buses would each be approximately 120 feet long and consist of one 1,590 kcmil ACSR per phase.

This configuration would allow for a total of three 66 kV subtransmission line at ultimate buildout, two of which are part of the Proposed Project, the remaining one is not within the reasonably foreseeable future.

66 kV Circuit Breakers and Disconnect Switches

The two line positions and two bank positions described above would be equipped with a circuit breaker and three group-operated disconnect switches each. The bus-tie position would be equipped with a circuit breaker and one group-operated disconnect switch.

Two 28 MVA, 66/16 kV Transformers

Two 28 MVA, 66/16 kV transformers, each equipped with a group operated isolating disconnect switch on the high and low voltage side, surge arresters and neutral current transformers, would be installed. The transformer area dimensions would be approximately 80 feet long, 42 feet wide and 15 feet high.

Two 16 kV, 4.8 MVAR Capacitor Banks

Two 16 kV, 4.8 MVAR capacitor banks would be installed. Each capacitor bank enclosure would be approximately 16 feet long, 13 feet wide and 17 feet high.

One 16 kV Switchrack

The 16 kV low-profile switchrack would consist of 12 9-foot wide bays accounting for seven equipped positions. At ultimate build-out, the wrap around design arrangement would allow for 22 positions. The 16 kV switchrack dimension would be approximately 108 feet long, 34 feet wide and 17 feet high. This configuration would allow for a total of 12 16 kV distribution

getaways at ultimate build-out, four of which are considered part of the Proposed Project, the remaining eight are not within the reasonably foreseeable future.

One Mechanical and Electrical Equipment Room (MEER)

A MEER is a prefabricated structure that is typically made of steel with light tan or beige walls and roof. Dark brown may trim the roofline, wall joints, and doorway. The MEER would be equipped with air conditioning, control and relay panels, a battery and battery charger, AC and DC distribution, a human-machine interface rack, telecommunication equipment, a telephone and an alarm system that would alert SCE personnel when an unauthorized entry into the MEER is detected. Control cable trenches would connect the MEER to the 66 kV switchrack. The MEER dimensions would be approximately 36 feet long, 20 feet wide and 12 feet high.

One Distribution Vault

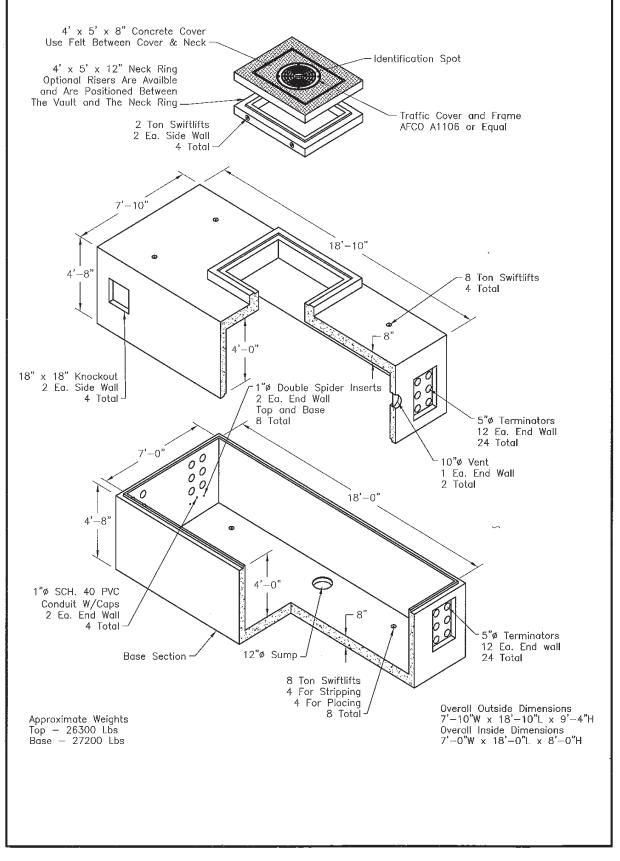
One 16 kV distribution vault would be installed underground outside of the northwest corner of the proposed Presidential Substation perimeter wall (described below). The vault would be approximately 19 feet long, 8 feet wide and 9.5 feet deep. It would house incoming conduits including four 16 kV distribution getaways. Access to the vault via a manhole would be provided by a 4 feet long by 5 feet wide concrete cover at ground level.

The vent pipes associated with the vault would protrude above ground. Vent pipes are typically 10 inches in diameter and typically have a height between 30 and 34 inches (SCE, 2009b).

Four 16 kV Distribution Getaways and Other Distribution Facilities

The Proposed Project would construct four 16 kV distribution getaways from the 16 kV switchrack to distribute electricity outside the proposed Presidential Substation. At ultimate buildout the proposed Presidential Substation could support up to twelve 16 kV distribution getaways. However, only the installation of four 16 kV getaways is considered in this document and described below because the development and timing of the additional eight getaways is not certain at this time and therefore is not reasonably foreseeable. All 16 kV distribution getaways would exit the switchrack power cable trench via underground duct banks.

Four 16 kV distribution getaways would be located within a duct bank approximately 90 feet long (includes both inside and outside proposed Presidential Substation perimeter distance) consisting of six 5-inch diameter conduits. The duct bank would exit the west end of the 16 kV switchrack power cable trench and proceed north until it exits the proposed Presidential Substation site underneath the perimeter wall. At this point, the underground duct bank would turn west, and enter the east wall of the vault described above. In addition, the section of existing 16 kV distribution line between the proposed Presidential Substation site and the intersection of Read Road and Sunset Valley Road would be removed from the existing wooden poles and installed underground in a duct bank (Figure 2-3). **Table 2-2** provides a summary of the duct bank construction alignments, not including the 90 feet of duct bank from the proposed Presidential Substation to the first vault described above.



Presidential Substation . 207584.02 Figure 2-6 Distribution Vault Type II

SOURCE: SCE, 2010

Duct Bank Contents	Description of Alignment	Approximate Number of Vaults and Pull Boxes Required	# of 5-inch Diameter Conduits per Duct Bank
Two 16 kV distribution getaways	From the east end of the new distribution vault (near proposed Presidential Substation) approximately 700 feet east along Olsen Road to an existing manhole	0	2
Two 16 kV distribution getaways	From the west end of the new distribution vault (near proposed Presidential Substation) approximately 8,700 feet west along Olsen Road to the intersection with Erbes Road,	8 ^a	6
Up to two 16 kV distribution getaway lines. (same lines as above getaway)	From a new distribution vault installed on Olsen Road north 1000 feet of duct bank to the City of Thousand Oaks Water Reclamation facility.	0	2
Relocation of existing 16 kV distribution line (new conductor would be installed) and telecommunications line	From the proposed Presidential Substation west along Olsen Road a crossing onto the private driveway diagonally across from the proposed Presidential Substation. Alignment passes under Hwy 23 and adjacent to Read Road west to the intersection with Sunset Valley Road	13 vaults and 13 pull boxes	4
Relocation of existing 16 kV distribution line (new conductor would be installed) and telecommunications line	Under Moorpark Road near the intersection of Read Road and Moorpark Road	0	4
Relocation of existing 16 kV distribution line (new conductor would be installed) and telecommunications line	Under Tierra Rejada Road near the intersection of Sunset Valley Road and Tierra Rejada Road	0	4

TABLE 2-2 OVERVIEW OF DUCT BANK CONSTRUCTION

NOTES:

^a Based on preliminary design all eight vaults would be installed south of Olsen road (SCE 2009a, SCE 2009c)

From the east end of the new vault, trench and two underground 5-inch diameter conduits would be constructed approximately 700 feet east to an existing manhole on Olsen Road. Two of the 16 kV distribution getaways would be installed in these conduits.

A second underground duct bank containing six 5-inch diameter conduits would be constructed from the west end of the vault and extend approximately 8,700-feet under Olsen Road to Erbes Road, where the conduit would connect to an existing underground distribution structure. Two of the six 5-inch diameter conduits would contain the other two 16 kV distribution getaways, which entered the vault. The duct bank would be located underneath the existing east bound bike lane on Olsen Road. In association with the duct bank, eight tub style vaults with vent pipes would be installed along the route to the existing Erbes Road underground distribution structure. Based on preliminary design, all eight vaults would be installed south of Olsen Road. (SCE 2009a, SCE 2009c).

In addition, approximately 1000 feet of trench and two 5-inch diameter conduits from one of the new vaults installed on Olsen Road would be constructed to the existing padmounted switch located within the City of Thousand Oaks Water Reclamation facility located just west of the Hwy 23 southbound off-ramp.

A section of duct bank would be installed at the intersection of Moorpark Road and Read Road to underground the existing 16 kV distribution line in order to create additional space for the new 66 kV subtransmission line. Three new 16 kV risers would be installed on two existing wood 16 kV distribution poles on Moorpark Road (one in road ROW and one on private property) and one on a new LWS subtransmission pole on Read Road west of Moorpark Road.

A section of duct bank would also be installed at the intersection of Tierra Rejada Road and Sunset Valley Road to underground the existing 16 kV distribution line in order to create additional space for the new 66 kV subtransmission line. Three new 16 kV risers would be installed on one existing wood subtransmission pole on Tierra Rejada Road and two on new LWS subtransmission poles (one on Tierra Rejada Road west of Sunset Valley Road and one on Sunset Valley Road south of Tierra Rejada Road).

From the west end of the vault, an underground duct bank containing four 5-inch diameter conduits would be constructed approximately 12,500 feet long. The alignment of the duct bank would proceed from the vault west on Olsen Road and north onto the private driveway which is diagonally across from the proposed Presidential Substation and property and back into road ROW once west of Hwy 23. The new duct bank would follow a private road and private property and replace five existing wood poles. The duct bank would connect to the existing four 5-inch diameter conduits crossing under Hwy 23 and continue to be installed from the west side of Hwy 23 along Read Road until Sunset Valley Road. At this location, new 16 kV distribution risers would be installed on two LWS poles near the intersection of Read Road and Sunset Valley Road. It is estimated that approximately 13 new vaults with associated vent pipes would be installed along this route along with approximately 13 new pull boxes. One of the four 5-inch diameter conduits in the duct banks would contain one 16 kV distribution circuit which would be routed through the new vaults. Along this alignment a fiber optic telecommunications cable would occupy one of the four 5-inch diameter conduits and would pass through the pull boxes. To facilitate the undergrounding of the 16 kV distribution line, approximately five new 16 kV distribution risers would be installed on existing wood 16 kV distribution poles, of which two existing wood poles would be replaced. East of Hwy 23, a spur of approximately 750 feet of trench and 4-inch diameter conduit would be constructed to connect existing distribution facilities to the new underground 16 kV distribution system.

Lighting

Typical lighting at SCE's distribution substations consists of approximately fifteen 120 volt incandescent lamps rated at 120 watts. These lights would be installed on switchracks and transformer racks. These lights would manually be turned on and off and would only be turned on during planned maintenance or emergency work performed after dusk. Typically, the lights would

be mounted at a height of 7.5 feet above ground. Additionally, a beacon safety light would be installed on the proposed Presidential Substation gate and be activated when the gate is opened.

Perimeter Wall

The proposed Presidential Substation site would be surrounded by a perimeter wall that, based on preliminary design, would be tan in color and approximately eight feet high. A band of at least three strands of barbed wire would be affixed near the top of the inside of the perimeter wall and would not be visible from the outside. The barbed wire would serve as a deterrent to unauthorized access, and protect against theft and property damage.

Plants would be installed and maintained only outside the north and east perimeter walls, as the south and west walls are generally not visible from local roadways. Landscaping and irrigation would be installed after the perimeter wall is constructed and irrigation service is established. The preliminary landscaping plan includes a mixture of groundcover, shrubs, and trees based on the City of Thousand Oaks guidelines and standards for landscape plantings (SCE 2009c). Proposed species are listed in **Table 2-3**.

Latin Name	Common Name	Height at Installation	Height at Maturity	
Cistus	Sunset Gold rockrose	1-2 feet	3-4 feet	
Festuca cinerea	blue fescue	1 foot	2 feet	
Ribes viburnifolium	Catilina Perfume	1-2 feet	3-4 feet	
Myrsine Africana	African Boxwood	3-4 feet	4-5 feet	
Geijera parviflora	Australian willow	6-8 feet	25-30 feet	

TABLE 2-3 PROPOSED LANDSCAPE PLANTINGS

Irrigation water to establish and maintain landscaping would come from an existing 4-inch water pipeline that is located along the north side of Olsen Road between the current Ventura County Sheriff Station and the city boundaries of Thousand Oaks and Simi Valley (SCE 2009c).

Prior to the start of the proposed Presidential Substation construction, SCE would consult with the City of Thousand Oaks to develop an appropriate landscaping plan and perimeter wall design that would be submitted with the grading permit application for the Proposed Project.

Substation Access

Vehicular access to the proposed Presidential Substation entrance would be provided from a new 24-foot-wide asphalt concrete driveway. This proposed driveway which would lead from Olsen Road to the proposed locked metal gate, would accommodate two-way traffic access into the proposed Presidential Substation (Figure 2-4). The metal gate would be a minimum of eight feet high by 24 feet wide. Vehicular ingress and egress from Olsen Road would be established by widening Olsen road to create a deceleration and acceleration lane (Figure 2-4). Olsen Road

would be widened along the length of the acceleration and deceleration lanes. The acceleration lane would be approximately 12 feet wide by 215 feet long and the deceleration would be approximately 12 feet wide by 220 feet long. In addition, SCE would install a walk-in gate within the perimeter wall for pedestrian access.

Substation Drainage

Currently, the watershed area including the proposed Presidential Substation site consists of approximately 11.5 acres of hillside all of which drains into an existing 36-inch corrugated steel pipe (CSP) culvert. The existing CSP is located within the proposed 4-acre Presidential Substation site and directs flow in a northwesterly direction under Olsen Road. The culvert discharges into a narrow riparian area, which in turn flows into an open valley (SCE 2009b).

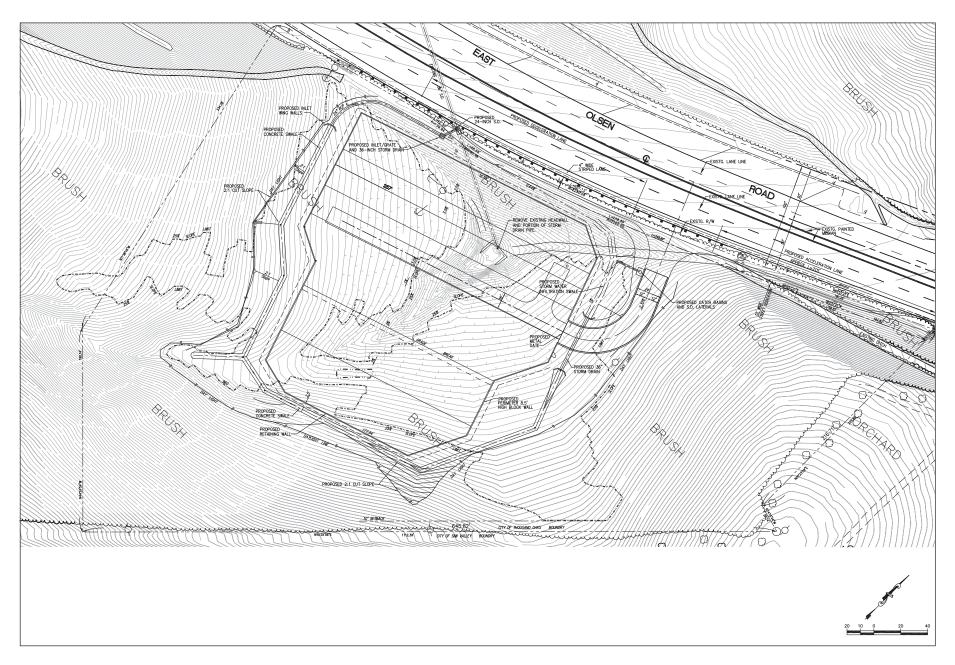
To construct the proposed Presidential Substation, it is anticipated that approximately 40,000 cubic yards of soil would be imported to fill low spots on the site to support the Presidential Substation equipment and associated facilities. The preliminary grading plan is shown in **Figure 2-7**. A new culvert would be connected to the existing CSP by the construction of a concrete box, and pour-in-place concrete swales would be installed around the proposed Presidential Substation to direct drainage. The hillside runoff would be routed to new concrete swales and into a new storm drain. Some runoff would be routed to a dirt infiltration swale and then into a catch basin (SCE 2009c).

The proposed Presidential Substation runoff would be routed to an opening in the north wall to the concrete swales and into the catch basin above the existing 36-inch CSP. Both the hillside and proposed Presidential Substation runoffs would come together at the catch basin. All drainage would be routed to the concrete swales, storm drain pipe and then to the existing CSP culvert under Olsen Road. Entrances to the drain and culvert would be screened (SCE 2009c).

The proposed Presidential Substation grading design would incorporate Spill Prevention Control and Countermeasure (SPCC) Plan requirements due to the planned operation of oil-filled transformers at the proposed Presidential Substation (in accordance with 40 CFR Part 112.1 through Part 112.7). Typical SPCC features include curbs and berms designed and installed to contain spills, should they occur. These features would be part of SCE's final engineering design for the Proposed Project.

2.5.1.2 Royal and Moorpark Substation Upgrades

The Proposed Project would include upgrades to the existing 66 kV subtransmission relays at the Royal and Moorpark substations. At the Royal Substation, SCE would replace two 66 kV relays with two upgraded 66 kV relays. SCE would reuse the existing relay rack and the associated switches currently in place. At the Moorpark Substation, SCE would replace ten 66 kV relays with four upgraded 66 kV relays. SCE would remove the existing wood panels in the relay room and install new relay racks with new switches. No relay upgrades would be required at the Thousand Oaks Substation. All proposed upgrades would occur within the existing fenceline.



Presidential Substation . 207584.02
 Figure 2-7
 Preliminary Grading Plan

SOURCE: SCE, 2010

2.5.2 Subtransmission Lines

2.5.2.1 Proposed Subtransmission Alignment

The Proposed Project would involve installation of two new 66 kV subtransmission lines. The Proposed Project would bring 66 kV power to the proposed Presidential Substation from the Moorpark-Royal No. 2 and Moorpark-Thousand Oaks No. 2, 66 kV Subtransmission Lines. The general alignment of the subtransmission lines would be as follows:

- An overhead single-circuit 66 kV subtransmission line would be installed from the intersection of Tierra Rejada Road and Sunset Valley Road heading south to the intersection of Sunset Valley Road and Read Road. This subtransmission line would be located on the west side of Sunset Valley Road within the road ROW. The existing 16 kV distribution poles would be removed.
- An overhead single-circuit 66 kV subtransmission line would be installed from the intersection of Moorpark Road and Read Road heading east to the intersection of Sunset Valley Road and Read Road. This subtransmission line would be located along the south side of Read Road within the road ROW. The existing 16 kV distribution poles would be removed.
- At the junction of Sunset Valley Road and Read Road, the two single circuit subtransmission lines would meet and become an overhead double circuit subtransmission line continuing east on the south side of Read Road to a point just west of Hwy 23.
- The double circuit subtransmission line would transition from an overhead line to underground at a riser pole west of Hwy 23. The underground subtransmission line would be installed beneath Hwy 23 to a riser pole located east of the Hwy.
- From the TSP riser pole east of Hwy 23 corridor to the proposed Presidential Substation, the double circuit 66 kV subtransmission line would be constructed overhead.

2.5.2.2 Poles

The Proposed Project would require the installation of approximately 66 new subtransmission poles, a combination of LWS 66 kV subtransmission poles with 954 Stranded Aluminum Conductor (SAC), and 66 kV subtransmission TSPs with 954 ACSR and polymer insulators.

LWS poles would be installed for the single-circuit portions of the Proposed Project and TSPs for the double circuit portion and at connection points with the 66 kV source lines. LWS poles would extend approximately 61 to 75 feet above ground surface (ags) and TSPs approximately 60 to 100 feet ags, with the tallest TSPs to be used on the SCE subtransmission ROW to tap the Moorpark-Thousand Oaks No. 2 66 kV circuit. TSPs would be installed at select locations such as turning points and other areas that would require extra structural strength, respectively. TSP Risers would extend 60 to 85 feet ags. **Figure 2-8** depicts typical subtransmission pole configurations while **Table 2-4** provides a summary of pole information. Note that identified pole locations, as well as the heights and ranges identified in Table 2-4, on **Figures 2-9a** through **2-9f** and throughout the text, are estimates based on preliminary engineering and provided for general context only. Specific pole locations and heights will be determined during final engineering, but are not

Pole Type	Typical Pole Height Above Ground Surface (ags)	Number of Poles Removed	Number of Poles Installed	
Wood	New – 29-61 feet Existing 43 – 75 feet	89	2	
LWS	61-75 feet 61-75 feet	0 0	36 5	
LWS-with 16 kV Distribution Riser				
TSP or TSP Dead End	60-100 feet	4	22	
TSP-Riser	60-85 feet	0	3	
Totals		98	68	

TABLE 2-4 SUMMARY OF POLE INFORMATION

SOURCE: SCE, 2008b, SCE 2010

anticipated to deviate in a substantial way from the locations, heights and ranges set forth in Table 2-4, the text and Figures 2-9a through 2-9f.

New poles would be installed within the existing ROW but some areas along Sunset Valley Road and Read Road could require additional overhang easement rights to accommodate pole cross arms. Three conductors would be installed on each pole for the single circuit 66 kV subtransmission lines and six conductors for the 66 kV double circuit subtransmission line. Additional cross arms and conductors would be installed on the single circuit 66 kV subtransmission lines for 16 kV distribution circuits and an SCE telecommunications line.

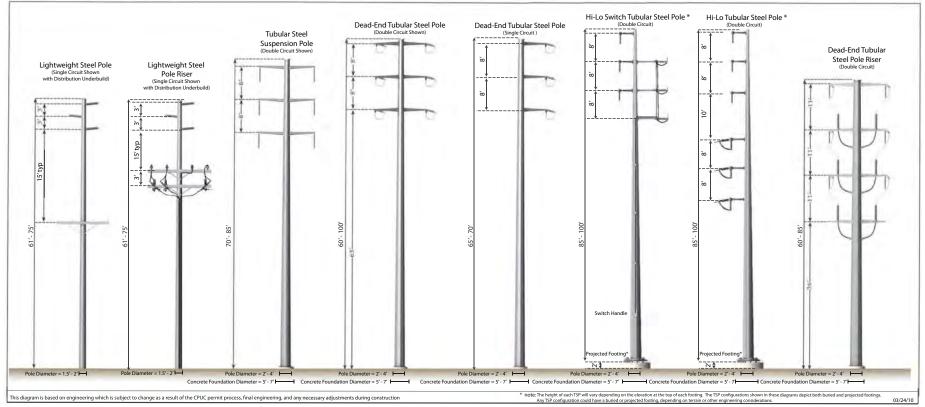
All poles would be designed to be consistent with the Suggested Practices for Raptor Protection on Power Lines: the State of the Art in 2006 (Edison Electric Institute and the Avian Power Line Interaction Committee, 2006). These design features could include one or more of the following: conductor and insulator covers, increased conductor spacing, suspending phase conductors, insulated jumper wires, horizontal jumper supports, and perch deterrents on crossarms.

Approximate pole locations and heights are provided in Figures 2-9a through 2-9f.

Light Weight Steel Poles

LWS poles would consist of an all steel structure with a dulled galvanized finish (SCE 2009c). LWS poles would range from 61 to 75 feet ags with a base diameter of approximately 1.5 – 2.0 feet tapering to approximately 1 foot diameter at the top of the pole. Locations of new LWS poles include:

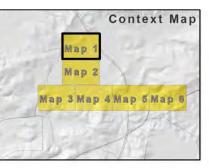
• From the intersection with Moorpark Road along Read Road to the junction with Sunset Valley Road, approximately 22 wood 16 kV distribution poles (approximately 65 feet ags) would be replaced with approximately 18 new subtransmission LWS poles (61 to 75 feet ags).



2-20

* Based on preliminary engineering this type of pole will not be used.



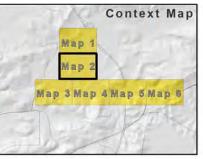


	Existing Underground Distribution
-	Install Underground Distribution/Telecom
_	Install 66kV Underground Subtransmission
	Remove – Wood/Guy Pole (29 – 75')
٠	Install – LWS (61 – 75')
•	Install – TSP (60 – 100')
۵	Remove – TSP (55 – 80')
۲	Install – Wood Pole (29 – 61')
۲	Remain – Wood Pole (43 – 70')
8	LWS Pole w/16 kV Riser Attachment (61 – 75')
	TSP Riser (60 – 85')
۲	District Street Light
	Presidential Substation Location
	Lot Lines
NOTE:	

Poles for which specific heights are unavailable (N/A) will be within the height ranges indicated above.

*All pole heights are approximate above ground heights.





 Existing Underground Distribution
 Install Underground Distribution/Telecom
 Install 66kV Underground Subtransmission
 Remove – Wood/Guy Pole (29 – 75')
 Install – LWS (61 – 75')
 Install – TSP (60 – 100')
 Remove – TSP (55 – 80')

• Install – Wood Pole (29 – 61')

• Remain – Wood Pole (43 – 70')

Solution 2010 kV Riser Attachment (61 – 75')

- ISP Riser (60 85')
- District Street Light

Presidential Substation Location

- Lot Lines

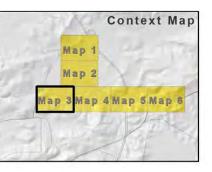
NOTE:

Poles for which specific heights are unavailable (N/A) will be within the height ranges indicated above

*All pole heights are approximate above ground heights.

Presidential Substation . 207584.02 Figure 2-9b Subtransmission and Distribution Map Book





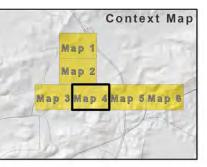
	Existing Underground Distribution
-	Install Underground Distribution/Telecom
_	Install 66kV Underground Subtransmission
	Remove – Wood/Guy Pole (29 – 75')
٠	Install – LWS (61 – 75')
	Install – TSP (60 – 100')
۸	Remove – TSP (55 – 80')
۲	Install – Wood Pole (29 – 61')
۲	Remain – Wood Pole (43 – 70')
8	LWS Pole w/16 kV Riser Attachment (61 – 75')
	TSP Riser (60 – 85')
۲	District Street Light
	Presidential Substation Location
	Lot Lines
NOTE:	

Poles for which specific heights are unavailable (N/A) will be within the height ranges indicated above

*All pole heights are approximate above ground heights.

Presidential Substation . 207584.02 Figure 2- 9c Subtransmission and Distribution Map Book

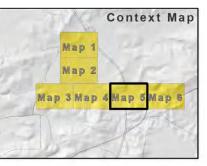




Existing Underground Distribution
Install Underground Distribution/Telecom
Install 66kV Underground Subtransmission
A Remove – Wood/Guy Pole (29 – 75')
 Install – LWS (61 – 75')
Install – TSP (60 – 100')
A Remove – TSP (55 – 80')
 Install – Wood Pole (29 – 61')
 Remain – Wood Pole (43 – 70')
& LWS Pole w/16 kV Riser Attachment (61 – 75')
🔀 🛛 TSP Riser (60 – 85')
 District Street Light
Presidential Substation Location
C Lot Lines
NOTE: Poles for which specific heights are unavailable (N/A) will be within the height ranges indicated above

*All pole heights are approximate above ground heights.





Existing Underground Distribution

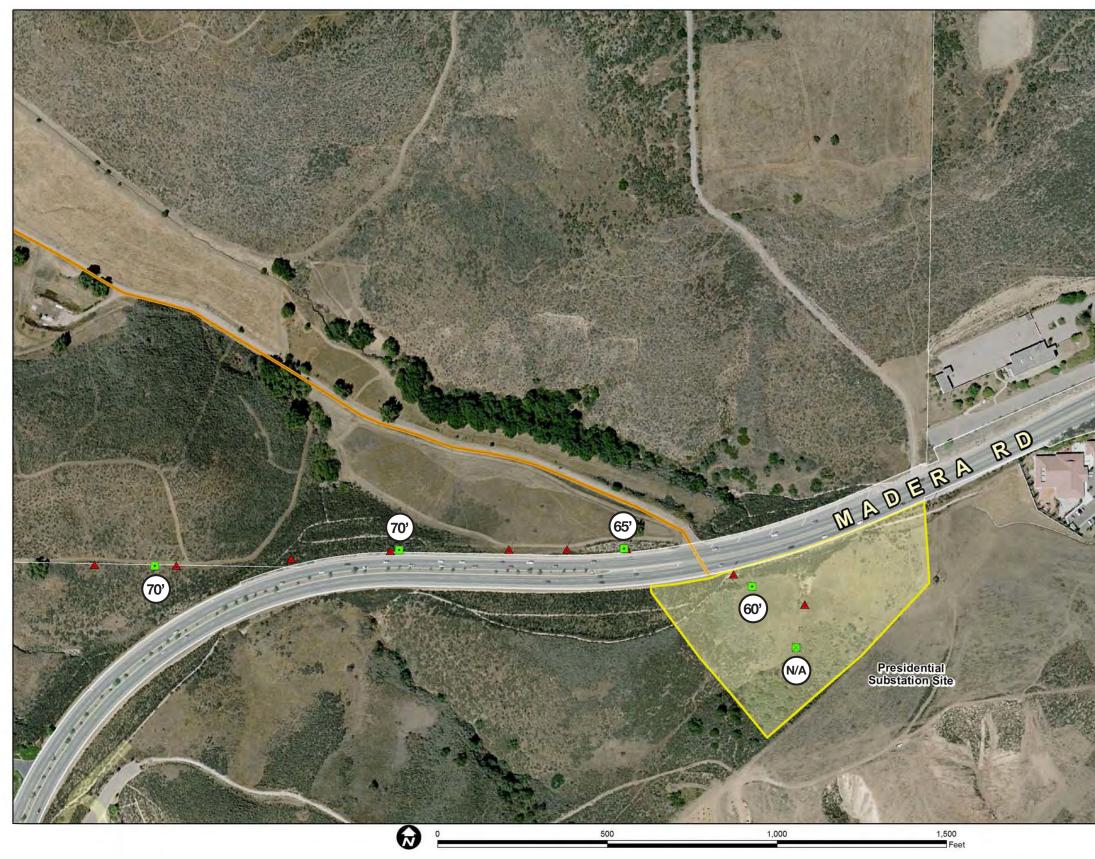
- Install Underground Distribution/Telecom
- Install 66kV Underground Subtransmission
- Remove Wood/Guy Pole (29 75')
- Install LWS (61 75')
- Install TSP (60 100')
- A Remove TSP (55 80')
- Install Wood Pole (29 61')
- Remain Wood Pole (43 70')
- LWS Pole w/16 kV Riser Attachment (61 75')
- TSP Riser (60 85')
- District Street Light
- Presidential Substation Location

____ Lot Lines

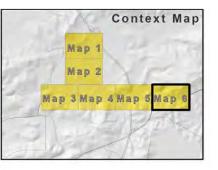
NOTE:

Poles for which specific heights are unavailable (N/A) will be within the height ranges indicated above

*All pole heights are approximate above ground heights.







Existing Underground Distribution
Install Underground Distribution/Telecom
Install 66kV Underground Subtransmission
Remove – Wood/Guy Pole (29 – 75')
Install – LWS (61 – 75')
Install – TSP (60 – 100')
Remove – TSP (55 – 80')
Install – Wood Pole (29 – 61')
Remain – Wood Pole (43 – 70')
LWS Pole w/16 kV Riser Attachment (61 – 75')
TSP Riser (60 – 85')
District Street Light

Presidential Substation Location

____ Lot Lines

NOTE:

Poles for which specific heights are unavailable (N/A) will be within the height ranges indicated above

*All pole heights are approximate above ground heights.

Presidential Substation . 207584.02 Figure 2- 9f Subtransmission and Distribution Map Book

- From Tierra Rejada Road along Sunset Valley Road to the junction with Read Road, approximately 22 wooden 16 kV distribution poles (approximately 35 feet ags.) would be replaced with approximately 20 new subtransmission LWS poles (approximately 61-65 feet ags).
- Along Tierra Rejada Road, near the junction of Sunset Valley Road, approximately three existing wood subtransmission poles and one guy stub would be replaced with three LWS poles (approximately 61-65 feet ags).

Tubular Steel Poles

The TSPs would consist of an all steel structure with a dulled galvanized finish (SCE 2009c). TSPs would range from 60 to 100 feet ags with a base pole diameter of approximately two to four feet, tapering to between 1.5 and 2 feet (approximately 15-22 inches) at the top of the pole. The tallest poles would be used on the SCE subtransmission ROW to tap the Moorpark-Thousand Oaks No. 2 66 kV circuit. TSPs are installed on a concrete base 5 to 7 feet in diameter that extends between approximately 12 to 40 feet below ground surface and may extend up to 2 feet ags. Three TSP riser poles would be installed. Based on preliminary engineering, the rest of the TSPs would be a combination of dead-end and suspension TSPs.

Locations of new TSPs include:

- From the junction of Sunset Valley Road and Read Road to the proposed Presidential Substation, approximately 37 existing wooden 16 kV distribution poles (29 to 75 feet ags) would be replaced with 14 TSPs (70–100 feet ags), and two TSP risers to accommodate the underground subtransmission crossing of Hwy 23. The TSP riser to the west of Hwy 23 would be approximately 80 feet tall, and the TSP riser to the east of Hwy 23 would be approximately 85 feet tall.
- Four existing 66 kV TSPs and one wood 16 kV distribution pole near the intersection of Read Road and Moorpark Road would be replaced with five new subtransmission TSPs.
- Two subtransmission wood poles and one 16 kV distribution wood pole near the intersection of Tierra Rejada Road and Sunset Valley Road would be replaced with two subtransmission TSPs (60-100 feet ags).
- One new TSP riser and one new TSP would be installed within the proposed Presidential Substation perimeter.

2.5.2.3 Underground State Highway 23 Subtransmission Line Crossing

The double circuit 66 kV subtransmission lines would be installed underground (approximately 750 feet) in order to cross Hwy 23. On either side of Hwy 23 the double circuit subtransmission lines would be overhead. Installing the conductor underground would require the installation of an approximately 80-feet tall TSP riser pole near the end of Read Road just west of Hwy 23. On the east side of Hwy 23 an approximately 85-foot tall TSP riser pole would be installed. Undergrounding the subtransmission conductor would include the installation of approximately six vaults, conduits and two circuits of three conductor 2,000 kcmil copper cable each.

2.5.3 Distribution Conductor Relocation and Telecommunication Lines

The existing 16 kV distribution conductor would be removed from the existing wooden poles and either installed or upgraded on the new 66 kV subtransmission poles, or moved to underground distribution facilities, depending on the location. Upgrades to existing 16 kV distribution lines would involve installation of new conductors instead of re-hanging or burying the existing 16 kV conductor. The 16 kV distribution lines would be installed or upgraded on the new 66 kV subtransmission poles where the proposed subtransmission line is single circuit. This includes the sections along Sunset Valley Road, and along Read Road from approximately Moorpark Road to Sunset Valley Road. The distribution conductor would also be installed underground near the intersection of Moorpark Road and Read Road, near the intersection of Sunset Valley Road, and underneath Hwy 23. The alignment of the underground distribution installation is shown in Figures 2-9a through 2-9f. Where the proposed subtransmission line is double circuit, the 16 kV distribution circuits would be installed underground. Following the relocation of the 16 kV distribution line and the removal of any 3rd party (e.g., phone company, cable TV) attachments, the existing wooden poles would be removed.

Access roads on the east side of Hwy 23 would be stabilized using a Hilfiker Wall MSE (mechanically stabilized earth) wall, Gabion retaining walls (maximum height 10.5 feet) and reinforced geogrids. The roads would have a minimum drivable width of 14 feet and a metal and wood post railing would be installed where required. A reinforced concrete slab would be constructed as protection from heavy vehicles where the proposed access road crosses over an existing culvert.

A telecommunication line (i.e., fiber optic cable) would follow the same overhead/underground alignment as the 16 kV distribution line described above. The telecommunication line would be installed overhead where the 16 kV distribution line would be overhead and underground in the same duct bank as the 16 kV distribution line. The underground telecommunication facilities would include a separate telecommunications pullbox system adjacent to any new distribution vault.

The relocation of existing 16 kV distribution would require the removal of three streetlight/wood pole combinations. At the intersection of Read Road and Sunset Valley Road, the intersection of Sunset Valley Road and Tierra Rejada Road, and the intersection of Moorpark Road and Read Road three streetlight/wood pole combinations need to be removed and replaced, or re-connected. Two of the existing streetlight/wood pole combinations would be replaced with marblelite electroliers (concrete pole with underground connection) in order to accommodate the subtransmission alignment. In addition, one existing overhead connected streetlight/wood pole combination would be re-connected with an underground service requiring a new riser.

2.6 Rights-of-Way Requirements

The proposed Presidential Substation site would be constructed on approximately 5.4 acres of property to be acquired. The portion of the property to be developed would be approximately 4 acres. The proposed subtransmission alignments would be located within existing road ROW, currently being used for 16 kV distribution. However, some areas along Sunset Valley Road and Read Road could require additional overhang easement rights to accommodate pole cross-arms and wires, and may require additional rights depending on final engineering. The relocation of overhead 16 kV distribution circuits to newly installed underground facilities would require acquisition of new ROW east of Hwy 23. This existing overhead 16 kV distribution easement would be upgraded to accommodate the new subtransmission line. The underground distribution alignment shown in Figures 2-9e and 2-9f would require new ROW for access roads and underground facilities. New easements may be required to use existing paved and unpaved roads for access to the subtransmission line (SCE, 2010).

2.7 Preconstruction Activities

The following activities would occur prior to start of construction.

2.7.1 Geotechnical Studies

SCE would conduct a geotechnical study of the proposed Presidential Substation site and the subtransmission line, which would include an evaluation of the depth to the water table, evidence of faulting, liquefaction potential, physical properties of subsurface soils, soil resistivity, slope stability, and the presence of hazardous materials.

2.7.2 Worker Environmental Awareness Training

Prior to construction of the Proposed Project, a Worker Environmental Awareness Plan (WEAP) would be developed based on the final engineering design, the results of preconstruction surveys, and the Mitigation Monitoring, Reporting and Compliance Plan associated with this EIR. SCE would present the WEAP to all construction workers prior to their start of work. A record of all trained personnel would be kept with the construction foreman.

In addition to the instruction for compliance with any additional site-specific biological or cultural resource protective measures and project mitigation measures that are developed after the preconstruction surveys, all construction personnel would also receive the following:

- A list of phone numbers of SCE personnel associated with the Proposed Project (archeologist, biologist, environmental compliance coordinator, and regional spill response coordinator);
- Instruction on the Ventura County Air Pollution Control District Fugitive Dust and Ozone Precursor Control Measures;
- Direction that site vehicles must be properly muffled;

- Instruction on what typical cultural resources look like, and if discovered during construction, to suspend work in the vicinity of any find and contact the site foreman and archeologist or environmental compliance coordinator;
- Instruction on how to work near the cultural resource Environmentally Sensitive Area that would be delineated by the Project Archeologist;
- Instruction on the responsibilities of the Paleontological Monitor at the proposed Presidential Substation site;
- Instruction on individual responsibilities under the Clean Water Act, the Proposed Projectspecific Stormwater Pollution and Prevention Plan (SWPPP), site-specific Best Management Practices (BMPs), and the location of all applicable Material Safety Data Sheets;
- Instructions to notify the foreman and regional spill response coordinator in case of hazardous materials spills and leaks from equipment, or upon the discovery of soil or groundwater contamination;
- A copy of the truck routes to be used for material delivery; and
- Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the Proposed Project.

2.8 Construction

This section describes construction methods that would be used to complete the various components of the Proposed Project

Project construction activities would include:

- Proposed Presidential Substation construction and existing substation upgrades
 - Site preparation and grading
 - Below-grade construction
 - Above-grade construction
 - Existing Substation upgrades
- Subtransmission and telecommunication line installation, and relocation of existing distribution conductor
 - Access road and site preparation
 - LWS and TSP installation, including below ground TSP concrete footings
 - Underground subtransmission conductor installation for Hwy 23 crossing, including trenching, boring, conduit and vault installation.
 - Conductor and telecommunication line stringing
 - Underground distribution installation, including trenching and duct bank construction
 - Transfer or upgrades of existing 16 kV distribution and telecommunication lines
 - Remove existing wooden poles

- Energize 16 kV distribution, telecommunications and subtransmission lines
- Post construction cleanup and landscaping

2.8.1 Staging Areas

Construction staging for the Proposed Project would require a temporary marshalling yard. SCE anticipates using the Moorpark Substation (in the City of Moorpark), Thousand Oaks Service Center (in the City of Thousand Oaks) and/or Pardee Substation (in the City of Santa Clarita) as a marshalling yard for parking and the storage of materials and equipment during construction. If neither the Moorpark Substation, the Thousand Oaks Service Center, nor the Pardee Substation could be used as a marshalling yard, SCE would consider other options which could include leasing an existing, approximately 3-acre commercial facility located within approximately 5 miles of the construction area. In addition, the Proposed Project would require establishment work areas, pull and tension sites; and access to poles along the proposed subtransmission alignment. SCE would ensure that the construction, workers would park their personal vehicles at the SCE Thousand Oaks Service Center, SCE Moorpark Substation, SCE Northern Transmission Office/Pardee Substation in Santa Clarita, or at a marshalling yard and carpool to the jobsite daily in company vehicles.

Materials and equipment staged at the marshalling yard could include, but not be limited to, conductor reels, telecommunication line/fiber optic cable, wire stringing equipment, poles, line trucks, cross arms, insulators, and portable sanitation facilities. Material from the pole installation and removal such as poles and other debris would be temporarily stored at the marshalling yard as the material awaits salvage, recycling, or disposal. All materials associated with construction efforts would be delivered by truck to the established marshalling yard. Delivery activities requiring major street use would be scheduled to occur during off-peak traffic hours, to the extent feasible in accordance with applicable local ordinances, generally considered to be 9:00 am to 4:00 pm (SCE 2009c).

If an existing commercial facility or other property zoned to allow the use of marshalling and/or staging yards is leased near the Proposed Project, the site would be fenced (chain link) and screened from view from adjacent residences or businesses. The yard would be surfaced with crushed rock if the existing surfacing is not compatible with storage and equipment requirements. Land disturbed at the staging areas, if any, would be restored to preconstruction conditions to the extent reasonably feasible, or to the conditions agreed upon between the landowner and SCE following the completion of construction of the Proposed Project.

2.8.2 Access Roads

Construction vehicles and equipment would use a combination of existing paved and unpaved public and private roads.

2.8.2.1 Presidential Substation Site

Construction vehicles would access the proposed Presidential Substation site from Olsen Road and Madera Road, which are both paved public roadways.

2.8.2.2 Subtransmission Lines, Relocation of Existing Distribution Lines and Telecommunication Installation

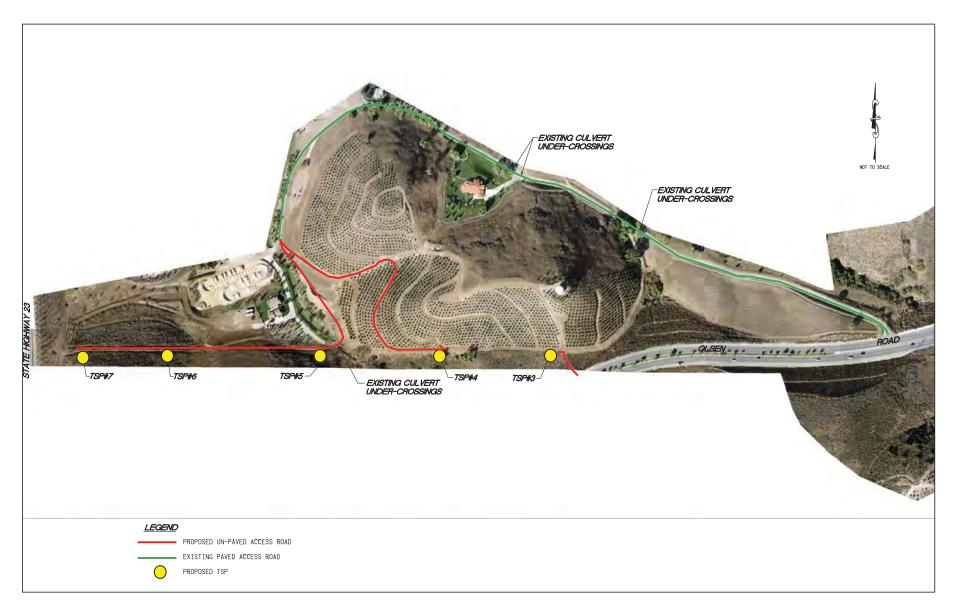
The subtransmission line construction vehicles and equipment would use the existing paved asphalt roads identified below. No changes to these existing roads would be required.

- Read Road;
- Sunset Valley Road;
- Tierra Rejada Road;
- Moorpark Road;
- Madera Road; and
- Olsen Road.

In addition, construction activities would use paved and unpaved roads east of Hwy 23, north of Olsen Road as depicted on **Figure 2-10**. Grubbing and clearing would be required for use of an existing unpaved access road off of Olsen/Madera Road. Stabilization of the existing dirt access road on the east side of Hwy 23 would require using a Hilfiker Wall also known as a mechanically stabilized earth (MSE) Wall, Gabion Retaining Walls (maximum height 10.5 feet), and reinforced geogrids. Grading for this portion of the access road would result in approximately 1,645 cubic yards of cut and 1,430 cubic yards of fill; any excess cut soil may be used as fill for the proposed Presidential Substation site. This access road would have a minimum drivable width of 14 feet, and a metal and wood post railing would be used, where required, per the Caltrans, Standard Plans for metal guard railing. A reinforced concrete slab would be constructed as protection from heavy vehicles where the proposed access road crosses over an existing culvert (SCE 2010).

The construction vehicle transportation route needed to build the 66 kV subtransmission line would include the use of additional existing unpaved roads located within a private avocado grove north of Olsen Road. These unpaved access roads would be approximately 14 feet wide. Three-point vehicular turn-around areas, used for ingress and egress, and a semi-level pad, used for operation and maintenance, would be graded. Grading for this portion would require construction of Gabion Retaining Walls (ranging in height from 2 to 9 feet). Approximately 13 avocado trees would be removed to provide for this access road. Where the proposed access road crosses over existing storm drain pipes along the harvest road, these small pipes would be encased in concrete slurry to protect against damage from heavy vehicles. Grading of access road for this portion would result in approximately 2,300 cubic yards of cut and 500 cubic yards of fill. The excess cut soil could be used as a fill for the proposed Presidential Substation site.

Existing storm drain inlets located along the unpaved access roads would be replaced with small concrete catch basins and traffic rated basin covers. If existing stone retaining walls located adjacent to these inlets interfere with the unpaved access roads as modified, the retaining walls would be removed and a new retaining wall (maximum height of 3.5 feet) would be constructed



Presidential Substation . 207584.02 Figure 2-10 Access Roads

SOURCE: SCE, 2010

out of the road. Metal plates or concrete caps would be used, when necessary, to temporarily cover existing culverts located on the paved access road (identified in Figure 2-10) during construction of the 66 kV subtransmission line.

For any construction activities within public ROWs, the use of a traffic control service and any lane closures would be conducted in accordance with local ordinances and city permit conditions. These traffic control measures are typically consistent with those published in the California Joint Utility Traffic Control Manual (CJUTCM) (CJUTCC, 2010).

2.8.3 Presidential Substation Construction and Existing Substation Upgrades

Sections 2.8.3.1 through 2.8.3.3 describe the construction process and methodology for the proposed Presidential Substation. Section 2.8.3.4 describes proposed upgrades to the Royal and Moorpark substations.

2.8.3.1 Site Preparation and Grading

The proposed, approximately 4-acre Presidential Substation site would need to be prepared for construction and installation of substation equipment and other ancillary facilities. Preparation would include survey, vegetation removal, fill, and grading. A contractor office trailer and equipment trailer would be placed within the proposed Presidential Substation construction area for the duration of construction. Initial site preparation and grading would occur during the dry season; consequently no dewatering activities are anticipated.

The proposed Presidential Substation site is sloped on two sides and has a low spot near the center of the site, which descends to the north. At its lowest point (located at/near the culvert entrance to the CSP under Olsen Road), the elevation is approximately 41 vertical feet lower than the proposed finished grade. To prepare the site for construction, all existing vegetation would be cleared and a temporary chain link fence would be installed around the perimeter. The low spot would be filled with approximately 40,000 cubic yards of imported soil. At this time the closest fill sources are located in Fillmore, Inglewood, and Monrovia, approximately 20, 60, and 70 miles from the proposed Presidential Substation respectively. Approximately 5,440 truckloads of fill would be required to bring the site up to grade. Filling operations would be completed within the first three months of construction delivering approximately 60 truckloads per day if operating seven days per week. During the filling of the site, grading operations would include the construction of the storm drain connection to the existing CSP. A new culvert would be connected to the existing storm drain by the construction of a concrete box.

The area to be enclosed by the perimeter wall would be graded to a slope that varies between 1 and 2 percent and compacted to 90 percent of the maximum dry density. The finished grade would be approximately 4 feet higher than the elevation of Olsen Road. SCE would prepare a grading plan consistent with the requirements of the City of Thousand Oaks which would include proposed drainage, and obtain a grading permit from the City of Thousand Oaks. All concrete swales would be constructed using pour-in-place concrete (Figure 2-7).

2.8.3.2 Below Grade Construction

After preparation of the proposed Presidential Substation site, below grade facilities, including a ground grid, trenches, equipment foundations, utilities (i.e., drainage), and the footing of the proposed Presidential Substation wall, would be installed. Some trenches would be used to house duct banks and could extend beyond the proposed Presidential Substation perimeter. Extensive below grade construction at the proposed Presidential Substation would be required to install drainage as described in Section 2.5.1.1.

Within the Substation Perimeter

The proposed Presidential Substation ground surface would be composed primarily of fill. Below grade construction would include trenching and installing the ground grid (in power cable trenches), and utilities. Additional grading and excavation would be necessary to install equipment foundations.

Ground Grid

The ground grid consists of direct buried copper conductors within the proposed Presidential Substation site. The ground grid would be designed based on soil resistivity measurements collected during a geotechnical investigation that would be conducted prior to construction.

Utilities

Utilities such as electrical service and telecommunications would enter the proposed Presidential Substation underground and require below grade construction.

Equipment Foundations

Installation of equipment including switchracks, the MEER, transformer banks, capacitor banks and two TSP would require the construction of concrete foundations.

Underground Distribution Getaways

Four 16 kV distribution getaways would exit the proposed Presidential Substation via an underground duct bank. The circuits would be located in conduits placed in a trench from the 16 kV distribution rack power cable trench to the vault outside the proposed Presidential Substation.

Outside the Substation Perimeter

In addition to the power cable trenches located within the proposed Presidential Substation perimeter, one vault and additional underground duct banks would be constructed outside the proposed Presidential Substation perimeter walls.

Distribution Vault Installation

The vault (described in Section 2.5.1 and shown in Figure 2-6) would be installed outside the proposed perimeter wall, within the proposed Presidential Substation site. A backhoe, with a 36-inch bucket, would be used to excavate a hole approximately 20 feet long, 9 feet wide and

11.5 feet deep. Assuming the soil is uncontaminated, approximately 80 tons of soil (i.e. eight loads with 10-ton dump trucks) would be extracted (SCE 2009a). Excavated soil would be used as fill at the proposed Presidential Substation Site, or disposed of at a local landfill in accordance with all applicable laws.

Shields or trench shoring would temporarily be installed to brace the walls of the trench. Then 6-inches of ³/₄-inch crushed rock would be dumped into the hole, compacted, and leveled. Then the shields or trench shoring would be removed. Using the boom on the delivery truck from the vault manufacturer, the bottom half of the vault would be lowered into place followed by the top half. The seam would be sealed with mastic, a sealant to keep the vault seams from leaking. Then the manhole, which includes necking and the vault cover and frame, would be installed and sealed with mastic and grout (SCE 2009b).

Next, approximately 18 tons of a cement/sand slurry, which would be delivered by two 10-ton cement trucks, would be poured around the vault and on top of the vault to a thickness of approximately six inches.

Vent pipes would then be installed to provide ventilation to cool any distribution transformers that may ultimately be installed inside the vault by excavating and installing the vent pipes running to the designed location with a backhoe creating approximately another six yards of haul-off dirt. The vent pipe conduits would then be encased in concrete and after the encasement hardens, the trench would be backfilled with a cement/sand slurry. To finish the street would be repaved in accordance with the city's permit requirements (SCE 2009b).

Distribution Getaways

Four getaways would require trenching for the installation of duct banks to carry the conduit. The dimensions and locations of these duct banks were described in Section 2.5.1 – Subheading: *Four 16 kV Distribution Getaways and Other Distribution Facilities*, and Table 2-2. The following discussion is limited to the construction methodology for installation.

Trenching would typically involve using a backhoe with a 24-inch bucket to excavate an approximate 24-inch trench, approximately 60-inches deep. Excavated soil and roadway would be hauled off site and disposed of at a local landfill in accordance with applicable laws and regulations. Shields or trench shoring would be temporarily installed for safety to brace the walls of the trench. Conduits would then be installed using spacers to create a duct bank. The temporary shoring would be removed. The conduits would then be encased in concrete with a minimum encasement of three-inches on all sides. After the concrete encasement has hardened, the trench would be backfilled with 1.5 sack and sand slurry (which is a mix of sand and water with 1.5 bags of cement added with no aggregate) in accordance with the minimum permit requirements as required by the local jurisdiction. The trench would be finished as street and repaved in accordance with the city's permit requirements.

After installation of the duct bank, vaults, and vent pipes has been completed, cable crews would pull in three single conductor 1000 kcmil jacketed Aluminum Cross-linked Polyetheylene (CLP)

cables per circuit run in two of the 5-inch diameter conduits in the duct bank. A work area approximately 15 feet by 60 feet would be cleared to allow a rodder (cable pulling truck) to set up at every other vault (a total of five rodder work areas) to pull cable both ways. At opposite ends of every other vault, cable carousels (requiring a 15 feet by 60 feet work area) would be set up to feed cable both ways. Other distribution crews would install the vault grounds, rack the cables, install any switches, any transformers, other equipment, and make the appropriate cable splices and terminations. Switching would be performed to put the new equipment into service. Lane closures and traffic control permits may be required for conductor installation (SCE 2009c).

Landscape Irrigation

To connect the irrigation system to the water supply located on the north side of Olsen Road a minimum 0.75 inch main would be installed crossing Olsen Road. A minimum 12-inch pavement trench would be constructed to place the line and a concrete thrust block would be installed at the point of connection. Following installation, all disturbed pavement would be restored to its original condition to the extent reasonably feasible (SCE 2009c).

2.8.3.3 Above Grade Construction

After the below grade structures are installed, above grade equipment and ancillary facilities (i.e., buses, capacitors, circuit breakers, transformers, steel support structures, TSPs, and the MEER) would be installed. In preparation, the ground surface of the proposed Presidential Substation site would be finished (i.e., pads, roads, etc.) with materials imported to the site. These materials, and their approximate surface area and volumes are listed below in **Table 2-5**.

Element	Material	Approximate Surface Area (ft ²)	Approximate Volume (yd ³)
Fill	Soil	170,000	40,000
Foundations	Concrete	2,000	125
Cable Trenches	Concrete	1,700	12
66 kV Bus Enclosures	Asphalt Concrete	1,800	33
Internal Driveway	Asphalt Concrete/Class II Aggregate	4,700	62/110
External Driveway	Asphalt Concrete/Class II Aggregate	2,900	35/35
Rock Surfacing	Crushed Rock	44,000	6,000
Perimeter Wall Foundation	Concrete	2,900	160

 TABLE 2-5

 SUBSTATION GROUND SURFACE IMPROVEMENT MATERIALS, AREAS, AND VOLUMES

SOURCE: SCE, 2009b

The transformers would be delivered by heavy-transport vehicles and off-loaded on site by large cranes with support trucks. A traffic control service may be used for transformer delivery, if necessary. All other equipment (circuit breakers, disconnect switches, capacitor banks, reactor banks, MEER, lighting, switchrack steel, etc.) would typically be delivered by SCE using a 30 or 40 foot flat bed truck, and off-loaded with a forklift (SCE 2009c).

2.8.3.4 Royal and Moorpark Substations

All proposed upgrade activities at the existing substations would occur within their existing fencelines. Construction activities at each substation would include:

- *Royal Substation.* Two upgraded 66 kV relays would be delivered and installed. The installation would require an outage on the Moorpark-Royal #2 66 kV subtransmission line. All secondary wiring related to the removed relays would be replaced with new secondary wiring. Removed relays, secondary wiring and related devices would be placed on pallets and shipped to SCE's Alhambra Combined Facility Building for proper disposal.
- *Moorpark Substation*. Replace ten 66 kV relays with four upgraded 66 kV relays and remove the existing wood panels in the relay room and install new relay racks with new switches. The installation would require an outage on the Moorpark-Thousand Oaks #2 66 kV line. Removed relays, panels and related devices would be placed on pallets and shipped to SCE's Alhambra Combined Facility Building for proper disposal.

SCE does not anticipate dropping service to any customers during these construction activities.

2.8.4 Subtransmission, Distribution and Telecommunication Line Installation

The following section describes the construction methodology for installing the new subtransmission and telecommunication lines. This would include the following activities: survey, access road preparation, Hwy 23 underground 66 kV installation, pole installation, TSP footing installation, conductor and telecommunication line stringing, transfer and upgrade of existing 16 kV distribution and installation of new telecommunication lines to new poles, relocation of some existing 16 kV distribution and telecommunication lines underground, and removal of existing wooden poles.

2.8.4.1 Survey

Subtransmission line construction activities would begin with the survey of the 66 kV proposed subtransmission alignments, including the limits of grading for structure excavations, pads and access roads. Survey crews would stake the new pole locations, including reference points and centerline hubs.

2.8.4.2 Access Road Preparation

Access roads necessary for the installation of new poles, removal of existing wooden poles, underground distribution installation and conductor stringing are described in Section 2.8.2.

2.8.4.3 Pole Installation

Figure 2-11 Shows the typical pole installation construction sequence which is similar for both LWS poles and TSPs.

Light Weight Steel Poles

At each proposed LWS pole location, an approximate 5 foot radial area would be cleared, as needed, of vegetation by hand crews with pruners and gas powered weed trimmers. A tool truck would transport the hand crews and equipment to each LWS pole location.

Once the site is prepared, a hole would be bored approximately 24 to 30 inches in diameter and 10 to 12 feet deep resulting in the removal of approximately 1.2–2.2 cubic yards of soil (SCE, 2010). If a caisson (retaining structure) is needed, a hole would be bored approximately 30 to 42 inches in diameter and 12 to 40 feet deep resulting in the removal of approximately 2.2-14.3 cubic yards of soil. Diameter and depth of the caisson would depend on geotechnical analysis. LWS poles are normally installed using a line truck.

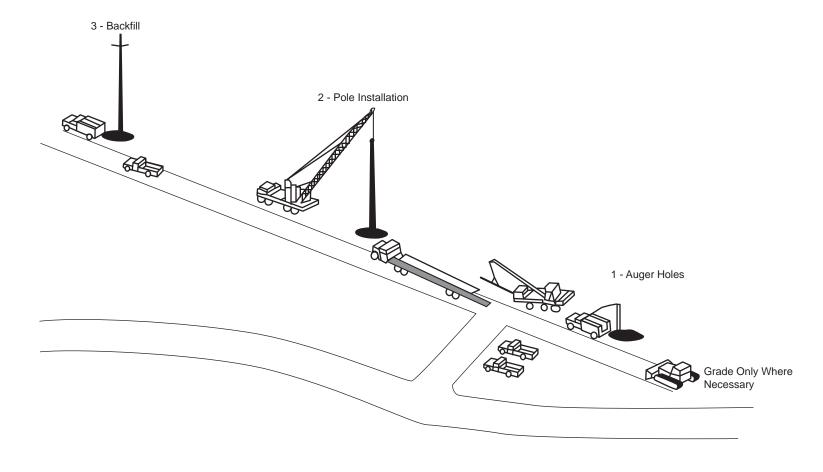
LWS poles are typically delivered whole (minus cross-arms and insulators) or in sections by a truck and trailer to adjacent roads. Poles would be assembled adjacent to the pole installation location within or adjacent to the existing road ROW. Traffic control necessary for the work will be performed in accordance with the CJUTCM published by the California Joint Utility Traffic Control Committee (CJUTCC, 2010). Anticipated traffic control measures may include closure of one lane along Read Road and Sunset Valley Road during assembly and installation.

The LWS poles would be placed in the hole and excavated material would then be used to backfill the hole. If the excavated material is not suitable for use as backfill, imported clean fill material, such as clean dirt and/or pea gravel, would be used. LWS poles would extend approximately 61 to 75 feet ags with a diameter of typically 1.5 to 2 feet at the base, tapering to approximately 1-foot diameter at the top of the pole. The approximately 20 LWS subtransmission poles along Sunset Valley Road would be set in caissons (SCE, 2010).

Tubular Steel Poles

At each proposed TSP location, an approximate 10 foot radial area would be cleared, using the same methods described for LWS pole installation.

Once the site is prepared, a hole would be bored to install a concrete foundation (i.e., footing) approximately 5-7 feet in diameter and 12- 40 feet below ground resulting in the removal of approximately 22 cubic yards of soil. Then a steel (rebar) cage would be inserted into the hole, and concrete poured into the hole. The finished foundation would extend up to approximately 2 feet above the ground. After the concrete has cured, the TSP would be delivered in sections to each concrete foundation by truck, lifted into place with a crane, and bolted onto the foundation.



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Figure 2-11 Typical Construction Sequence

SOURCE: SCE, 2010

TSPs are typically delivered in sections using a truck and trailer. Poles would be assembled adjacent to the pole installation location on private property or within or adjacent to the existing road ROW. Traffic control necessary for the work would be performed in accordance to the CJUTCM published by the California Joint Utility Traffic Control Committee (2010). Anticipated traffic control measures may include intermittent closure of all lanes along Read Road between Sunset Valley Road and Hwy 23 during assembly and installation in accordance with all applicable permitting requirements.

Table 2-6 provides a summary of the typical pole metrics for LWS poles and TSPs.

Pole Type	Approximate Diameter at Base (feet)	Approximate Height ags (feet)	Approximate Auger Hole Depth (feet)	Approximate Auger Diameter (feet)
LWS	1.5 – 2	61 – 75	10 – 12	2 - 2.5
TSP (including risers and dead-end)	2 – 4	60 – 100	N/A	N/A
TSP Concrete Foundation	3 – 5	2	12 - 40	5 – 7
LWS Caissons	2.5 - 3.5	1	12 - 40	3 – 4

TABLE 2-6 TYPICAL SUBTRANSMISSION POLE METRICS

SOURCE: SCE 2008b, SCE 2010

In the event that the foundations would be placed in soft or loose soils that extend below the groundwater level, the hole may be stabilized with drilling mud slurry. Mud slurry would be placed in the hole after drilling to prevent the sidewalls from sloughing. The concrete for the foundation is then pumped to the bottom of the hole, displacing the mud slurry. The mud slurry brought to the surface is typically collected in a baker tank, vacuum truck or a pit adjacent to the foundation, and then pumped out to be reused, or discarded at an off-site disposal facility in accordance with all applicable laws.

Excavated Soil Disposal

Excavated material from installation of LWS and TSPs would be spread at each pole site, used to backfill excavations from removal of nearby wood poles, used at the proposed Presidential Substation site, or used in the rehabilitation of existing access roads. Alternatively, the excavated soil may be disposed of at a local landfill in accordance with all applicable laws.

2.8.4.4 Conductor and Telecommunication Overhead Installation

Conductor pulling/stringing set-up locations would be approximately 150 feet by 30 feet in size, and require level areas to allow for maneuvering of the equipment. When possible, these locations would be located on existing level areas and existing roads to minimize the need for grading and cleanup. Typically, conductor pulling sites occur every 6,000 feet or less.

Conductor pulling/stringing operations begin with the installation of travelers, or rollers, on the bottom of each of the insulators using bucket trucks. The rollers allow the conductor to be pulled through each structure until the entire line is ready to be pulled to the final tension position. Following installation of the rollers, a sock line (a small cable used to pull the conductor) would be pulled onto the rollers from structure to structure using bucket trucks. Once the sock line is in place, it would be attached to the conductor and used to pull, or string, the conductor into place on the rollers using conventional pulling equipment at pull and tension sites along the line. The conductor would be pulled through each structure under a controlled tension to keep it elevated and away from obstacles, thereby preventing third-party damage to the line and protecting the public. Conductor wire installation may include the use of guard structures at roadway crossings (see discussion below under Section 2.8.4.9, *Guard Structures*).

Conductor pulling would be in accordance with SCE specifications and similar to process methods detailed in the Institute of Electrical and Electronics Engineers (IEEE) Standard 524-1992 (Guide to the Installation of Overhead Transmission Line Conductors). Circuit outages, pulling times, and safety protocols needed for conductor stringing would be determined prior to work to ensure that safe and quick installation of conductor is accomplished.

Where existing 16 kV distribution is relocated or upgraded to subtransmission poles, SCE telecommunication lines would be installed by attaching the cable to the subtransmission poles in a manner similar to that described above for conductor. A truck with a cable reel would be set up at one end of the section to be pulled, and a truck with a winch would be set up at the other end. The cable would be pulled onto the pole and permanently secured. Fiber strands in the cable from one reel would be spliced to fiber strands in the cable from the next reel to form one continuous path. One reel typically holds 20,000 feet of cable.

2.8.4.5 Highway 23 Underground 66 kV Installation

The two new 66 kV subtransmission circuits in the vicinity of Hwy 23 would be undergrounded. To underground this portion of the 66 kV subtransmission route, SCE would install two 66 kV subtransmission TSP riser poles on either side of the highway; approximately 900 linear feet of 2000 copper cable consisting of two runs of three cables per run; approximately six pre-cast concrete vaults; and an underground duct bank to house the cables. The duct substructure would consist of six PVC conduits, approximately 5 inches in diameter, and a 4/0 Bare Copper ground wire would be placed within a trench, or inserted in a bore casing, then fully encased in concrete. The trench would be backfilled with sand slurry. The six concrete encased conduits, which would contain the two 66 kV subtransmission circuits, would be approximately 900 feet in length, measuring between the TSP riser poles on either side of Hwy 23.

The following components of the undergrounding installation would occur within a temporary construction area approximately 900 feet by 50 feet. The proposed construction area for undergrounding the 66KV Subtransmission Line at Hwy 23is depicted in **Figure 2-12**.

- Excavation of open cut trench
- Installation of underground vaults



2-43

Presidential Substation . 207584.02

Proposed Construction Area for Undergrounding of 66 kV Subtransmission Line at State Highway 23

SOURCE: SCE, 2010

- Installation of a steel casing beneath the freeway via bore construction
- Installation of underground cable

Excavated material from the undergrounding construction activities would be distributed at each structure site to backfill excavations of removed poles or in the rehabilitation of existing access roads or disposed of off-site in accordance with applicable laws. Alternatively, excavated material may be disposed of at an authorized off-site disposal facility.

Open Cut Trench

To construct the substructure that would contain the underground 66 kV subtransmission line, A trench approximately 72 inches deep by 24 inches wide by approximately 250 feet long would be excavated between the 66 kV subtransmission TSP riser pole and the start of bore construction located on the west side of Hwy 23. SCE would also excavate a trench approximately 72 inches deep by 24 inches wide by approximately 200 feet long between the bore construction and the 66 kV subtransmission TSP on the east side of Hwy 23. Once the PVC ducts and a 4/0 Bare Copper ground wire are placed within the trench, the ducts and a 4/0 Bare Copper ground wire would be fully encased in concrete and the trench would then be backfilled with sand slurry.

In order to excavate the trench and install the duct substructure, a temporary construction area of approximately 25 feet in width adjacent to the entire length of the trench would be needed for construction equipment and related construction activities. The equipment needed includes: 1-ton crew truck, backhoe for excavation of trench, dump trucks for soil disposal, work trucks for material deliveries such as pre-cast vaults, conduit, concrete encasement, and sand slurry, and working space needed for crews to install the underground conduit.

Underground Vaults

Within approximately 250 feet of the trench on the west side of Hwy 23, two vaults would be installed near the new 66 kV subtransmission TSP riser pole. Within the approximately 200 feet of the trench on the east side of Hwy 23, up to four vaults would be installed. Two vaults would be installed near the new 66 kV subtransmission TSP riser pole and two additional vaults could be installed near the bore pit location on the east side of the freeway, depending on final engineering considerations. The installation of each vault requires the excavation of a hole of approximately 12.5 feet wide, 22.5 feet long, and 13.5 feet deep. The outside dimensions of each vault are approximately 21.5 feet long, 11.5 feet wide, and 11.5 feet tall. The vaults are set to a depth so that the main body is a minimum of 18 inches below the surface. The only surface exposure would be a 4 foot by 5 foot opening to provide access into the vault. In order to install the vaults, a temporary area approximately 50 foot wide by 100 foot long would be needed for construction equipment and working space for crews around each vault location. Equipment would a backhoe needed to dig the holes, trucks to deliver material, a crane to set the vaults, equipment trailer, dump truck, asphalt grinder.

Bore Construction

Bore construction would be necessary in order to underground the 66 kV subtransmission lines beneath Hwy 23. Bore pits would need to be established on both sides of Hwy 23 and would temporarily impact an area approximately 40 feet wide, 60 feet long, and could slope to a depth of 10-15 feet deep, depending on surface conditions (see **Figure 2-13**, Conceptual Bore Construction at Hwy 23). The bore excavation beneath the freeway would be approximately 36 inches in diameter by 450 feet in length. The installation of the 66 kV substructure beneath Hwy 23 would include but would not be limited to the following activities:

- Locate any existing underground utilities;
- Excavate bore pits;
- Place trench shield;
- Lower bore equipment into place with crane (launch pit);
- Begin drill and push procedure (typically 10 foot sections);
- Install approximately 36-inch diameter steel bore casing;
- Pull-in duct with plastic spacers and a 4/0 Bare Copper ground wire; and
- Pump casing full of required concrete or slurry mix.

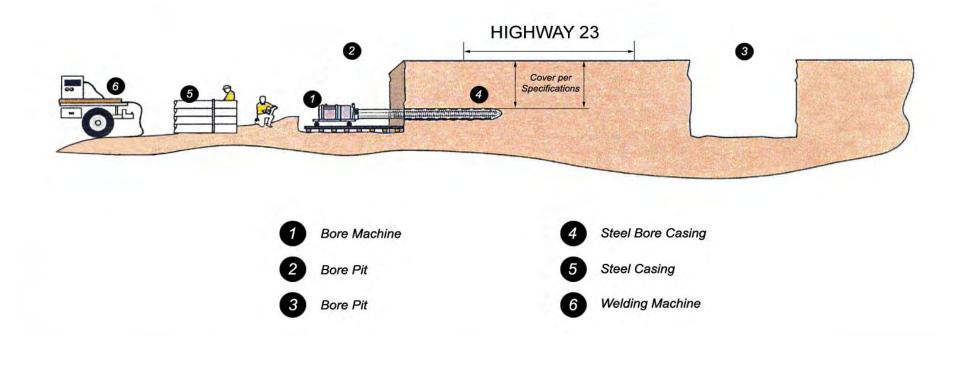
The equipment needed includes a backhoe, boom truck/crane loader, excavator, bore machine, welding machine, trench shields, concrete truck, dump truck, and a flat bed truck.

Underground Cable

The underground cable would be installed between each vault and each 66 kV subtransmission TSP riser pole. Typically, cable would be pulled from vault to vault using a cable pulling machine and cable tensioner. Cable would be pulled from the vaults near the 66 kV subtransmission TSP riser poles to the top of each pole using a crane. After the cable is installed, it would be spliced in each vault and underground cable termination insulators are installed on the 66 kV subtransmission TSP riser poles to connect the underground cable to the overhead wire. Equipment needed would include a crane, cable pulling machine, cable reel/tensioner, line truck, and splicing rig.

2.8.4.6 16 kV Distribution and Telecommunications Line Underground Installation

From the intersection of Sunset Valley Road and Read Road east to the proposed Presidential Substation, the 16 kV distribution conductor and telecommunications line would be installed underground. The installation of a distribution duct bank would digging an approximately 52 inches deep by 24 inches wide trench for approximately 12,500 feet along portions of the 66 kV subtransmission alignment where TSPs would be constructed. The amount of soil to be removed would be approximately 5,000 cubic yards. Additional excavation would be required to install approximately 13 vaults and 13 pull boxes. An additional trench approximately 750 feet long, 42 inches deep and 24 inches wide would be constructed to re-connect existing tap lines. There would be one 4-inch conduit installed in these trenches and approximately 195 cubic yards of soil would be removed (SCE 2010).



The underground telecommunications cable would be installed by pulling the cable in the same conduit bank (different conduit) that the distribution system would use and provide. A truck with a cable reel would be set up at one end of the section to be pulled, and a truck with a winch would be set up at the other end. Fiber strands in the cable from one reel would be spliced to fiber strands in the cable from the next reel to form one continuous path.

2.8.4.7 Removal of Existing Poles

When the existing 16 kV distribution circuits, subtransmission circuits and telecommunications lines are transferred to new poles, where applicable (e.g. portions of the route involving LWS poles), or placed underground, approximately 89 wood 16 kV distribution poles and five wood subtransmission poles located within existing ROW would be removed, including below ground portions. It is anticipated that third party utilities on the existing poles would be relocated and would follow SCE's proposed facilities. The standard work practice for removing a pole is to attach a sling at the upper end of the pole, using boom or crane equipment, while using a hydraulic jack at the base to vertically lift the pole until it can be lifted out of the ground. Excavation around the base of the pole would only be required if the base of a pole had been encased in hardened soil or manmade materials (e.g., asphalt or concrete), or where there is evidence that the pole has deteriorated to the point that it would splinter or break apart by the jacking and pulling operation described above. After removal, the hole would be backfilled using imported fill in combination with soil that may be available as a result of excavation for the installation of LWS poles or TSP foundations. The backfill material would be thoroughly tamped and the filled hole would be leveled to grade. The removal of the four existing TSPs may require excavating 2 to 3 feet below the surface, cutting the poles or foundations, and backfilling the area with clean fill.

2.8.4.8 Guard Structures

SCE guard structures are temporary facilities that are designed to stop the movement of a conductor should it momentarily drop below a conventional stringing height during conductor stringing activities. These structures may be installed, as needed, at transportation and utility crossings to protect vehicular and pedestrian traffic located at Sunset Road, Read Road, and Madera Road.

Typical guard structures are 60 to 80 feet tall standard wood poles, and depending on the width between the conductor points being supported on the permanent structures, the number of guard poles installed on either side of a crossing would be between two and four. The guard structures are removed after the conductor is secured to the permanent structures. In some cases, the wood poles could be substituted with the use of specifically equipped boom-type trucks with heavy outriggers staged to prevent the conductor from dropping.

Alternate (non-intrusive) methods for preventing conductor from falling beneath a specified height across major roadway crossings include;

- Installing temporary netting to protect some types of under-built infrastructure;
- Detouring all traffic off a roadway at the crossing position;

- Implementing a controlled continuous traffic break while stringing operations are performed; or
- Strategically placing of special line trucks with extension booms on a highway or road deck.

Based on a review of the number of road crossings that would be needed for the proposed subtransmission alignment, SCE has estimated that approximately 12 guard structures could be installed to facilitate construction. Note that these estimates are preliminary as the types of guard structures that would be required for crossings and the number of crossings necessary would be field verified upon completion of final design. Public agencies differ on their policies for preferred methods to protect public safety during conductor and shield wire stringing operations. SCE would work closely with the applicable jurisdiction to secure the necessary permits to string conductor across all transportation and utility crossings.

2.8.4.9 Energizing 66 kV Subtransmission Lines

Lastly, the 66 kV subtransmission lines would be energized. The existing Moorpark-Thousand Oaks No. 2 and Moorpark-Royal No. 2 66 kV subtransmission lines would be de-energized in order to connect the proposed Presidential Substation 66 kV subtransmission lines. De-energizing and connecting the existing subtransmission lines to the new poles may occur at night when electrical demand is low to reduce the need for outages or load shifting at the proposed Presidential Substation. Once the connections are made, the subtransmission lines would be returned to service (i.e., re-energized).

2.8.5 Site Cleanup and Waste Disposal

During construction, water trucks may be used to spray water to minimize the quantity of airborne dust created by construction activities and equipment. Any damage to existing roads as a result of construction would be repaired once construction is complete in accordance with local agency requirements.

SCE would restore all areas that were temporarily disturbed by construction of the Proposed Project (including the marshalling yard and conductor pull sites) to as close to preconstruction conditions as possible, or to the conditions agreed upon between the landowner and SCE following the completion of construction of the Proposed Project. In addition, all construction materials and debris would be removed from the area and recycled or properly disposed of off-site. SCE would be required to conduct a final inspection to ensure that all cleanup activities were successfully completed.

2.8.5.1 Storm Water Pollution Prevention Plan

Construction of the Proposed Project would disturb a surface area greater than 1 acre. Therefore a Construction General Permit (Order Number 2009-0009-DWQ) from the Los Angeles Regional Water Quality Control Board (LARWQCB) would be required. To obtain coverage under this permit, SCE would prepare a SWPPP that includes project information; monitoring and reporting

procedures; and BMPs, such as dewatering procedures, storm water runoff quality control measures (boundary protection), spill reporting, and concrete waste management, as applicable to the project. The SWPPP would be based on final engineering design and would include all project components.

2.8.5.2 Hazards and Hazardous Materials

Construction, operation and maintenance of the Proposed Project would require the limited use of hazardous materials, such as fuels, lubricants, and cleaning solvents. All hazardous materials would be stored, handled, and used in accordance with the applicable regulations. For all hazardous materials in use at the construction site, Material Safety Data Sheets would be made available to all site workers in cases of emergency.

The SWPPP prepared for the Proposed Project would provide detail of locations that hazardous materials may be stored during construction, and the protective measures, notifications, and cleanup requirements for any accidental spills or other releases of hazardous materials that could occur.

In addition, construction of the Proposed Project would occur within 1,200 feet of a private airstrip in the Tierra Rejada Valley. SCE would provide a construction schedule to the operator of the airstrip prior to construction of the subtransmission source line on Sunset Valley Road.

2.8.5.3 Waste Management

Construction of the Proposed Project would result in the generation of various waste materials, including wood, soil, vegetation, and sanitation waste (portable toilets). The existing wood poles removed for the Proposed Project would be: 1) reused by SCE, 2) returned to the manufacturer, 3) disposed of in a Class I hazardous waste landfill, or 4) disposed of in the lined portion of a Regional Water Quality Control Board (RWQCB)-certified municipal landfill. Soil excavated for the Proposed Project would either be used as fill or disposed of off-site at an appropriately licensed waste facility. Sanitation waste (i.e., human generated waste) would be disposed of according to sanitation waste management practices.

2.8.6 Project Construction

2.8.6.1 Construction Workforce and Equipment

The estimated elements, materials, number of personnel and equipment required for construction of the Proposed Project are summarized in **Table 2-7**. Construction would be performed by either SCE construction crews or contractors, depending on the availability of SCE construction personnel at the time of construction. If SCE transmission and telecommunications construction crews are used they would likely be based at one of SCE's local facilities such as the Moorpark Substation or the Thousand Oaks Service Center. Contractor construction personnel would be managed by SCE construction management personnel. SCE anticipates a total of approximately 42 construction personnel working on any given day.

Activity and Number of Personnel	Number of Work Days	Equipment and Quantity	Duration of Use (Hours/Day)
Proposed Presidential Substation	Construction		
Survey (2 people)	10	2-Survey Trucks	8
Grading (15 people)	90	1-Dozer 2-Loader 1-Scraper 1-Grader 1-Water Truck 2-4X4 Backhoe 1-4X4 Tamper 1-Tool Truck 1-4X4 Pickup	4 4 3 2 2 2 2 2 2 2 2 2
Fencing (4 people)	10	1-Bobcat 1-Flatbed Truck 1-Crewcab Truck	8 2 4
Civil (10 people)	60	1-Excavator 1-Foundation Auger 2-Backhoe 1-Dump truck 1-Skip Loader 1-Water Truck 2-Bobcat Skid Steer 1-Forklift 1-17-ton Crane 1-Tool Truck	4 6 for 15 days and 3 for 15 days 3 2 3 3 3 4 2 hours/day for 45 days 3
MEER (4 people)	20	1-Carry-all Truck 1-Stake Truck	3 2
Electrical (10 people)	70	2-Scissor Lifts 2-Manlifts 1-Reach Manlift 1-15 ton Crane 1-Tool Trailer 2-Crew Trucks	3 3 4 3 for 35 days 3 2
Wiring (5 people)	25	1-Manlift 1-Tool Trailer	4 3
Transformers (6 people)	30	1-Crane 1-Forklift 2-Crew Trucks 1-Low Bed Truck	6 for 10 days 6 2 4
Maintenance Crew Equipment Check (2 people)	30	2-Maintenance Trucks	4
Testing (2 people)	80	1-Crew Truck	6
Asphalting (6 people)	15	2-Paving Roller 1-Asphalt Paver 1-Stake Truck 1-Tractor 1-Dump Truck 2-Crew Trucks 1-Asphalt Curb Machine	4 4 3 3 2 3
Landscaping (6 people)	15	1-Tractor 1-Dump Truck	6 3

TABLE 2-7 CONSTRUCTION EQUIPMENT USE

Activity and Number of Personnel	Number of Work Days	Equipment, Quantity of and Types	Duration of Use (Hours/Day)
66 kV Subtransmission Line Const	truction		
Survey (4 people)	4	2-1/2 Ton Pick-Up Truck 4x4	8
Civil Work (12 people)	35	1-Water Truck	4
(Access Roads, Structure Pads,		1-Road Grader	6
Retaining Walls, Drainage		2-1 Ton Crew Cab, 4x4	2
Systems)		1-Backhoe	6
-,,		2-Front Loader	6
		1-Drum Type Compactor	4
		1-Track Type Dozer	6
		1-Excavator	6
		2-Dump Trucks	6
		2-Lowboy Truck/Trailer	2
			Z
Remove Existing Wood Poles	6	1-1 Ton Crew Cab Flat Bed, 4x4	5
(Subtransmission and 16 kV	0	1- Rough Terrain Crane Truck	6
Distribution) (6 people)		1–Compressor Trailer	6
Distribution) (o people)		1–Flat Bed Truck/Trailer	
			8
Romovo Existing TSRs	4	2-3/4 Ton Pick-up Truck, 4x4	F
Remove Existing TSPs	4	· · · ·	5
(8 people)		2-1-Ton Crew Cab Flat Bed,4x4	5
		1-Compressor Trailer	5
		1-80-Ton Rough Terrain Crane	6
		1-Dump Truck	6
		1-Backhoe/Front Loader	6
Steel Pole Haul (4 people)	17	2-3/4 Ton Pick-up Truck,4x4	5
		1- Rough Terrain Crane	6
		1- 40' Flat Bed Truck/Trailer	8
			0
Steel Pole Assembly (8 people)	33	2-3/4 Ton Pick-up Truck,4x4	5
		2-1-Ton Crew Cab Flat Bed,4x4	5
		1 – Compressor Trailer	5
		1-80-Ton Rough Terrain Crane	6
		r oo ron toogin renam orane	0
Steel Pole Erection (8 people)	33	1-3/4 Ton Pick-up Truck,4x4	5
	50	1-1-Ton Crew Cab Flat Bed,4x4	5
		1 – Compressor Trailer	5
		1-80-Ton Rough Terrain Crane	6
TSP Footing Installation	50	1-Crew Truck	8
(7 people)		1-Backhoes/Front Loader	8
		1-Water Truck	8
		1-Cement Concrete Mixer Truck	5
		1-Auger Truck	5
		1-Boom/Crane Truck	5
		3-Concrete Mixer Truck	5
		1-Dump Truck	5
Construction In stall - the s	40	0.4 Tag Oracu Oak Flat Daddad	0
Conductor Installation	12	2-1 Ton Crew Cab Flat Bed4x4	8
(20 people)		2-Wire Truck & Trailer	2
		1-Dump Truck (trash)	2
		4-Bucket Trucks	8
		Drum Straw Line Puller	6
		1-Slicing Rig	2
		1-Static Truck/Tensioner 2-Boom/Crane Trucks	2 6

TABLE 2-7 (Continued) CONSTRUCTION EQUIPMENT USE

Activity and Number of Personnel	Number of Work Days	Equipment, Quantity of and Types	Duration of Use (Hours/Day)
66 kV Subtransmission Line Cons	struction (cont.)		
Guard Structure Installation (6 people)	4	1- 3/4-Ton Pick Up Truck, 4x4 1- 1-Ton Crew Cab Flat Bed, 4x4 1- Compressor Trailer 1- Auger Truck 1- Extendable Flat Bed Pole Truck 1- Rough Terrain Truck 1- Bucket Truck	6 6 6 6 8 4
Guard Structure Removal (6 people)	3	1- 3/4-Ton Pick Up Truck, 4x4 1- 1-Ton Crew Cab Flat Bed, 4x4 1- Compressor Trailer 2- Extendable Flat Bed Pole Truck 1- Rough Terrain Crane 1- Bucket Truck	6 6 6 8 4
Underground Construction (6 people)	28	 1-Ton Flatbed Truck 4-Ton Bobtail Dump Truck 10 wheel Dump Truck Backhoe/Front Loader Equipment Trailer 40 horsepower Concrete Saw Asphalt Grinder Crane Truck Compressor Trailer 	6 6 6 8 6 6 8 4
Bore Construction (8 people)	22	1-Large Rubber Tire Backhoe JD 710 1-Boom Truck/Crane Truck 1- Excavator 1-Welder/Generator 4-Trench Shields 1-Dump Truck 1-Bore Machine with Power Pack 2- Concrete Mixer Trucks	6 8 8 8 4 8 5
Restoration (7 people)	4	1-Ton Crew Cab 4x4 1-Water Truck 1-Road Grader 1-Backhoe/Front Loader 1- Drum Type Compactor 1- Track Type Dozer 1- Lowboy Truck/Trailer	2 8 6 6 6 6 3
Telecommunications Construction	n		
Fiber Optic Installation (4 people)	10	1-Pickup Truck (Gasoline) 2-Heavy Duty Trucks	8 8
Distribution Underground Along F	Portions of Subtra	Insmission Route	
Civil (13 people)	62	2- Backhoes 4- Dump Trucks 1- Roller 1- Grinder 1- Delivery Truck (vault & pull box) 4- Cement Trucks	8 8 8 8 8 8
Electrical (14 people)	43	1- Rodder Truck 1- Cable Dolly 2- Companion Vehicle 1- Splice Truck 1- Double Bucket Truck 1- Troubleman Truck	8 8 2 8 8 8

TABLE 2-7 (Continued) CONSTRUCTION EQUIPMENT USE

Activity and Number of Personnel	Number of Work Days	Equipment, Quantity of and Types	Duration of Use (Hours/Day)
Distribution Underground Along Po	ortions of Subtra	nsmission Route (cont.)	
Electrical (3 people)	2	1-Line Truck 1-Companion Vehicle	8 2
Olsen Road Getaway Construction			
Trenching Laying Conduit Encasement Slurry (10-12 People)	104	2-Backhoes 1-Dump Truck 2-Crew Trucks 1-Cement Truck	8 8 8 8
Asphalt Paving (4 People)	7	1-Dump Truck 1-Crew Truck 1-paving Roller	8 8 8
Vault Delivery (1 Person)	9	1-Four Ton Truck with a Crane	4
Cable Pulling (7 People)	10	1-Rodder Truck 1-Cable Carousel	8 8
Switch Installation (4 People)	10	1-Line Truck 1-Pickup Truck	8 8
Cable Splicing (4 People)	<u>30</u>	2-Vans	8
Distribution Overhead Along Portion	ons of Subtransn	nission Route	
Electrical Overhead Installation and Transfer Work (8 people)	55	2-Line Truck 2-Companion Vehicle 1-Wire Dolly 1-Wire Pulling Dolly	8 2 8 8

TABLE 2-7 (Continued) CONSTRUCTION EQUIPMENT USE

SCE anticipates that crews would work concurrently whenever possible; however, the estimated deployment and number of crew members would be dependent upon city permitting, material availability, and construction scheduling. For example, electrical equipment (such as proposed Presidential Substation MEER, wiring, and transformer) installation may occur while subtransmission line construction proceeds. Proposed Presidential Substation electrical equipment installation activities may require approximately 32 personnel while the subtransmission construction activities may require 20 personnel.

2.8.6.2 Construction Schedule

Construction of the Proposed Project is anticipated to take approximately 13 to 20 months. **Table 2-8** summarizes the length of time anticipated to construct each component of the Proposed Project. Crews would typically be scheduled to work during daylight hours (7:00 a.m. to 5:00 p.m.), Monday through Friday. If different hours or days are necessary, SCE would obtain variances from local noise ordinances, as necessary, from the jurisdiction within which the work would take place. If nighttime work were required, temporary artificial illumination would be

Proposed Project Component	Duration ^a (months)	Estimated Schedule
Construction Begins (preparation of marshalling yard, delivery of materials, surveying, staking, vegetation clearing and grading)		January 2012
66 kV Subtransmission Line Construction	13	February 2012-March 2013
16 kV Distribution Line Relocation	11	February 2012 – January 2013
Proposed Presidential Substation Construction	13	February 2012-March 2013
Telecom Installation	7	February 2012 – September 2012
Project Operational		April 2013
Clean Up	10	Occurs throughout construction, to be completed by April 2012
Total Construction ^b	13-20	

TABLE 2-8 PROPOSED CONSTRUCTION TIMETABLE

^a Proposed durations are for construction only, are approximate and subject to change based on final engineering, timely receipt of required approvals and permits, outage constraints, and other events not within SCE's control.

^b Total construction duration is an estimate based on potential parallel construction activities. Construction start times are dependent on receipt of required approvals and permits, and acquisition of property rights.

SOURCE: SCE, 2011.

required to protect the safety of the construction workers, but would be oriented downward to minimize effect on any nearby receptors. Construction would commence following CPUC approval, receipt of all required permits, final engineering, property acquisition and procurement activities.

2.9 Project Operation and Maintenance

Components of the Proposed Project would require routine maintenance, and may require emergency repair for service continuity. The proposed Presidential Substation would be unstaffed, and electrical equipment within the proposed Presidential Substation would be remotely monitored and controlled by an automated system from SCE's Ventura Regional Control Center. SCE personnel would visit the proposed Presidential Substation site for electrical switching and routine maintenance purposes. Routine maintenance would include equipment testing, equipment monitoring, and repair. SCE personnel would generally visit the proposed Presidential Substation three to four times per month. The new 66 kV subtransmission source lines would be maintained in a manner consistent with CPUC General Order 95 and CPUC General Order 165 as described below.

The minimum vegetation clearing requirement around the base of a 66 kV pole is approximately 10 feet (radial area). Standard vegetation management (tree trimming) guidelines for an energized 66 kV conductor is 12 feet plus one year's growth. SCE's standards provide that adequate clearance between vegetation and energized conductors is maintained at all times, during all conditions, for a minimum of one year for the fastest known growing species in the electrical

system. For example, the typical one year's growth for a Peruvian Pepper Tree (which exists near the Proposed Project) is approximately 4-6 feet. Therefore, an 18 foot clearance would have to be maintained from the top of the tree to the bottom of the 66 kV conductor.

The Proposed Project would be inspected, maintained, and repaired following completion of construction in a manner consistent with good maintenance and repair practices. This involves both routing preventative maintenance and emergency procedures to maintain service continuity. In addition, inspections of project facilities would be performed. In general, some components would be inspected annually, at a minimum, for corrosion, equipment misalignment, loose fittings and other common mechanical problems (SCE 2008b).

2.10 Electric and Magnetic Fields

Extremely low frequency (ELF) electric and magnetic fields (EMF) include alternating current (AC) fields and other electromagnetic, non-ionizing radiation from 1 Hz to 300 Hz. Power lines, like electrical wiring and electrical equipment, produce ELF fields at 60 Hz (OSHA, 2011). This EIR does not consider EMF in the context of the CEQA analysis of potential environmental impacts because [1] there is no agreement among scientists that EMF creates a potential health risk, and [2] there are no defined or adopted CEQA standards for defining health risk from EMF. For example, on behalf of the California Public Utilities Commission, three scientists who work for the California Department of Health Sciences (DHS) were asked to review studies by the National Institutes of Environmental Health Sciences Working Group, the International Agency for Research on Cancer, and the British National Radiological Protection Board about possible health problems from electric and magnetic fields from power lines, wiring in buildings, some jobs, and appliances (Neutra et al., 2002). The results of their evaluation noted "important differences between the three DHS reviewers' conclusions" and made no recommendations about actions to be taken to address potential health risks (Id.).

However, recognizing that there is a great deal of public interest and concern regarding potential health effects from human exposure to EMF from transmission lines, this document does provide information regarding EMF associated with electric utility facilities and human health and safety. Thus, the EMF information in this EIR is presented for the benefit of the public and decision makers.

Potential health effects from exposure to *electric fields* from transmission lines (i.e., the effect produced by the existence of an electric charge, such as an electron, ion, or proton, in the volume of space or medium that surrounds it) typically do not present a human health risk since electric fields are effectively shielded by materials such as trees, walls, etc. Therefore, the majority of the following information related to EMF focuses primarily on exposure to *magnetic fields* (i.e., the invisible fields created by moving charges) from transmission lines.

After several decades of study regarding potential public health risks from exposure to power line EMF, research results remains inconclusive. Several national and international panels have conducted reviews of data from multiple studies and state that there is not sufficient evidence to

conclude that EMF causes cancer. For example, the International Agency for Research on Cancer (IARC) and the California Department of Health Services (DHS) both have classified EMF as a *possible* carcinogen.

Presently, there are no applicable federal, State or local regulations related to EMF levels from power lines or related facilities, such as substations. However, the California Public Utilities Commission has implemented a decision (D.06-01-042) requiring utilities to incorporate "low-cost" or "no-cost" measures for managing EMF from power lines up to approximately four percent of total project cost.

Using the four percent benchmark and otherwise in accordance with "EMF Design Guidelines" filed with the CPUC in compliance with CPUC Decisions 93-11-013 and 06- 01-042, SCE would implement low- and no-cost measures to reduce magnetic field levels for the Proposed Project. The specific measures are described in the Field Management Plan submitted by SCE [in response to data request 4] (SCE, 2010). A copy of the Field Management Plan is included in the EIR as Appendix B and its measures are summarized in Tables 2, 3, and 4 of the Field Management Plan.

Project Component	Proposed Low- and No-Cost Measures
Along Read Road from Moorpark Road to Sunset Valley Road	 Utilizing pole heights that meet or exceed the Preferred Design criteria specified in SCE's EMF Design Guidelines in areas where there are residences near the proposed subtransmission alignment Selecting compact pole-head configurations with reduced phase-to phase distance
Along Sunset Valley Road from Tierra Rejada to Read Road	Selecting compact pole-head configurations with reduced phase-to phase distance
	 Using pole heights that meet SCE's preferred design
Along Read Road from Sunset Valley Roa to Proposed Presidential Substation	 Utilizing pole heights that meet or exceed the Preferred Design criteria specified in SCE's EMF Design Guidelines in areas where there are residences near the proposed subtransmission alignment
	Using double-circuit construction that reduces spacing between circuits as compared with single-circuit construction
	 Phasing circuits to reduce the magnetic fields (CAB-ABC or equivalent):
	Moorpark-Presidential-Thousand Oaks 66 kV: BAC (top to bottom)
	 Moorpark-Presidential-Royal 66 kV – CAB (top to bottom)
Proposed Presidential Substation	 Placing major proposed Presidential Substation electric equipment (such as transformers) away from the existing property lines

 TABLE 2-9

 LOW- AND NO-COST MEASURES IDENTIFIED FOR THE PROPOSED PROJECT

SOURCE: SCE, 2010

2.11 Required Permits and Approvals

The CPUC is the CEQA Lead Agency for the Proposed Project. SCE would obtain permits, approval or licenses as need from, and would participate in reviews and consultation as needed with, federal, State and local agencies as show in **Table 2-10**.

Permits and Other Requirements	Agency	Jurisdiction/Purpose
Federal		
Nationwide or Individual Permit (Clean Water Act §404)	Corps	Construction impacting Waters of the United States, including wetlands
State		
PTC	CPUC	Overall project approval and CEQA review
NPDES	California Regional Water Quality Control Board (RWQCB)	Storm water discharges associated with construction activities disturbing more than 1 acre of land
Section 401 of the Clean Water Act, Water Quality Certification (or waiver)	RWQCB	Certifies that project is consistent with State water quality standards
Encroachment Permit	Caltrans	Construction, operation, and maintenance within, under, or over State highway (Hwy 23) ROW
Lake and Streambed Alteration (Section 1600)	CDFG	Construction and operation that may have an impact on wetlands or other jurisdictional water ways
Local		
Encroachment Permit (ministerial)	City of Thousand Oaks City of Simi Valley Ventura County	Construction, operation, and maintenance within, under, or over city road ROW

TABLE 2-10 SUMMARY OF PERMITS REQUIREMENTS

References – Project Description

California Joint Utility Traffic Control Committee (CJUTCC), 2010. California Joint Utility Traffic Control Manual, 5th edition, www.sce.com/nrc/aboutsce/regulatory/distributionmanuals/tcm.pdf, April 2010.

Edison Electric Institute and the Avian Power Line Interaction Committee. 2006. Suggested Practices for Raptor Protection on Power Lines: the State of the Art in 2006, published by the Edison Electric Institute and the Avian Power Line Interaction Committee in collaboration with the Raptor Research Foundation.

- NEMA, 2011. The Association of Electrical and Medical Imaging Equipment Manufacturers, http://www.nema.org/stds/Popular-Acronyms.cfm, accessed 2011.
- Neutra et al., 2002. Raymond Richard Neutra, M.D., Dr., P.H.; Vincent DelPizzo, Ph.D. GDE; and Geraldine M. Lee, Ph.D. An Evaluation of the Possible Risks from Electric and Magnetic Fields (EMFs) from Power Lines, Internal Wiring, Electrical Occupations, and Appliances, June 2002.
- Southern California Edison (SCE), 2008a. Application of Southern California Edison Company (U-338-E) for a Permit to Construct Electrical Facilities with Voltages Between 50 kV and 200 kV: Presidential Substation Project. December 22, 2008.
- SCE. 2008b. Proponents Environmental Assessment. Presidential Substation Project. December 22, 2008.SCE. 2009a. Southern California Edison, Data Request Response. Presidential ED-01, March 23, 2009.
- SCE. 2009b. Southern California Edison, Data Request Response. Presidential ED-02, April 17, 2009.
- SCE. 2009c. Southern California Edison, Data Request Response. Presidential ED-03, May 19, 2009
- SCE, 2010. Southern California Edison, Data Request Response. Presidential ED-04, June 9, 2010.
- SCE, 2010b. Southern California Edison, Data Request Response. Presidential ED-05, November 22, 2010.
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- U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), 2011. Extremely Low Frequency (ELF) Radiation. www.osha.gov/SLTC/elfradiation/index.html, accessed July 7, 2011.

CHAPTER 3 Alternatives and Cumulative Projects

This section documents (1) the range of alternatives that were suggested and evaluated; (2) the approach and methods used to screen the feasibility of these alternatives according to guidelines established under CEQA; and (3) the results of the alternatives screening analysis. This section is organized as follows: Section 3.1 is an overview of the alternatives development and screening process; Section 3.2 describes the methodology used for alternatives evaluation; Section 3.3 presents a summary of which alternatives have been selected for full analysis in the EIR and which have been eliminated based on CEQA criteria; Section 3.4 describes the alternatives that have been retained for full EIR analysis, including the No Project Alternative; and Section 3.5 presents descriptions of each alternative that was eliminated from EIR analysis and explains why each was eliminated. Finally, Section 3.6 identifies and describes past, present, and reasonably foreseeable future projects that are considered in the cumulative impact analysis for this EIR.

3.1 Alternatives Development and Screening Process

One of the most important aspects of the environmental review process is the identification and assessment of a reasonable range of alternatives that have the potential for avoiding or minimizing the impacts of a project. In addition to mandating consideration of the No Project Alternative, CEQA Guidelines (§15126.6) emphasize the selection of a reasonable range of technically feasible alternatives and adequate assessment of these alternatives to allow for a comparative analysis of potential environmental effects for consideration by decision makers. CEQA Guidelines state that the discussion of alternatives shall focus on alternatives capable of meeting most basic project objectives and eliminating or reducing significant adverse environmental effects of a project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. However, CEQA Guidelines declare that an EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote or speculative.

Numerous alternatives to the Proposed Project were suggested during the scoping period (February 17, 2009 – March 19, 2009) and during the supplemental scoping period (August 26, 2010 – September 25, 2010). Other alternatives were presented by SCE in its PEA, or developed by the CEQA Team.

In total, the alternatives screening process has culminated in the identification and screening of approximately sixteen (combinations of components are counted as separate alternatives) potential alternatives for the Proposed Project. These alternatives range from different substation

locations and subtransmission alignments and designs, to various expansion of existing system options as well as "Non-wires alternatives"¹.

3.2 Alternatives Screening Methodology

The evaluation of alternatives to the Proposed Project was completed using a screening process that consisted of three steps:

Step 1: Clarify the description of each alternative to allow comparative evaluation.

Step 2: Evaluate each alternative using CEQA criteria (defined below).

Step 3: Determine the suitability of the each alternative for full analysis in the EIR. Infeasible alternatives and alternatives that clearly offered no potential for overall environmental advantage were removed from further analysis.

Following the three-step screening process, the advantages and disadvantages of the remaining alternatives were carefully weighed with respect to CEQA's criteria for consideration of alternatives. These criteria are discussed in greater detail below.

CEQA Guidelines (§15126.6 (a)) state that:

An EIR shall describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.

In order to comply with CEQA's requirements, each alternative that has been suggested or developed for this project has been evaluated in three ways:

- Does the Proposed Project alternative meet most basic project objectives?
- Is the alternative feasible (i.e. legal, regulatory, technical)?
- Does the alternative avoid or substantially lessen any significant effects of the Proposed Project (including consideration of whether the alternative itself could create significant effects potentially greater than those of the Proposed Project)?

3.2.1 Consistency with Project Objectives

CEQA Guidelines require the consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives" (§15126.6 (b)). Therefore, it is not required that each alternative meet all of SCE's objectives.

¹ "Non-wires alternatives" include methods of meeting project objectives that do not require major transmission lines (e.g., renewable energy supplies, conservation and demandside management, etc.).

The objectives of the Proposed Project are defined by SCE in its PEA (SCE, 2008). This EIR does not adopt or endorse the objectives that SCE has defined for its Proposed Project. SCE's defined objectives are presented below.

SCE's Proposed Project Objectives

- Meet long term electrical demand requirements in the ENA beginning in 2011 and extending beyond 2014 in order to meet 10-year planning criterion;
- Improve electrical system operational flexibility and reliability by providing the ability to transfer load between 16 kV distribution circuits and distribution substations within the ENA;
- Meet project needs while minimizing environmental impacts; and
- Meet project needs in a cost-effective manner.

Basic Project Objectives – as defined by the CEQA Team

The CEQA team requested additional technical data from SCE and conducted an independent assessment to better define the basic objectives of the Proposed Project for use in the alternatives screening process. This information included data responses which are available to the public via the project website and some technical system data determined to contain critical energy infrastructure information and is therefore confidential. The basic project objectives identified by the CEQA team based on the technical data and additional analysis are:

- Meet long term electrical demand requirements in the ENA as defined in the proponents application and PEA (SCE 2008); and
- Improve electrical system operational flexibility and reliability by providing the ability to transfer load between 16 kV distribution circuits and 16k V distribution substations within the ENA.

One method of meeting long term electrical demand requirements within the ENA would include the construction of a new substation. In order for the CEQA team to consider alternatives involving the construction, operation and maintenance of a new substation it further defined "operational flexibility" and "reliability" requirements using the additional data provided by SCE and independently assessed. The CEQA team first clarified the technical requirements used to develop the "substation target area"² described in the PEA. These technical requirements were then used to develop and evaluate potential substation sites for the necessary operational flexibility, for those alternatives which would involve construction of a new substation.

² SCE presented a substation target area in its application and PEA for identifying suitable substation site alternative locations (SCE 2008)

In order to meet reliability needs, a potential substation site must be capable of being served from two separate 66 kV subtransmission lines. This would permit maintenance of service to the substation should one of the two 66 kV subtransmission lines be taken out of service through some contingency. Reliability decreases the longer the distance the two 66 kV source lines are routed within the same ROW.

Operational flexibility is related to the ability of a potential substation site to support multiple interconnections with 16 kV circuits from adjacent substations. If a new substation is going to be effective in removing load from adjacent substation 16 kV distribution circuits, it is necessary for the new location to provide at least two 16 kV circuit routes that connect to adjacent substations. Operational flexibility increases as the potential number of adjacent substations accessible through 16 kV interconnections increases. Consequently, locating a new substation in close proximity to the end of or mid-point between existing circuits maximizes operational flexibility. **Figure 3-1** shows an approximation of the existing circuitry for the existing substations serving the ENA (the exact circuitry was determined to be critical infrastructure information and therefore confidential). To accomplish the necessary operational flexibility a new substation site should be capable of being expanded such that it would be capable of ultimately providing between 12 and 16 16kV distribution circuits. In general, 16 kV distribution circuits exit substations through a combination of aerial and underground getaways. Underground getaways would be installed in concrete duct banks, containing multiple conduits for housing conductor circuits.

Consequently the CEQA team determined that to be considered for further analysis an alternative substation site would have to meet the following objectives of the Proposed Project.

- Be capable of being served from two separate 66 kV lines.
- Be located such that at least two of the 16 kV distribution circuits can easily interconnect with circuits from adjacent substations.
- Be capable of ultimately providing 12 to 16, 16kV distribution circuits.

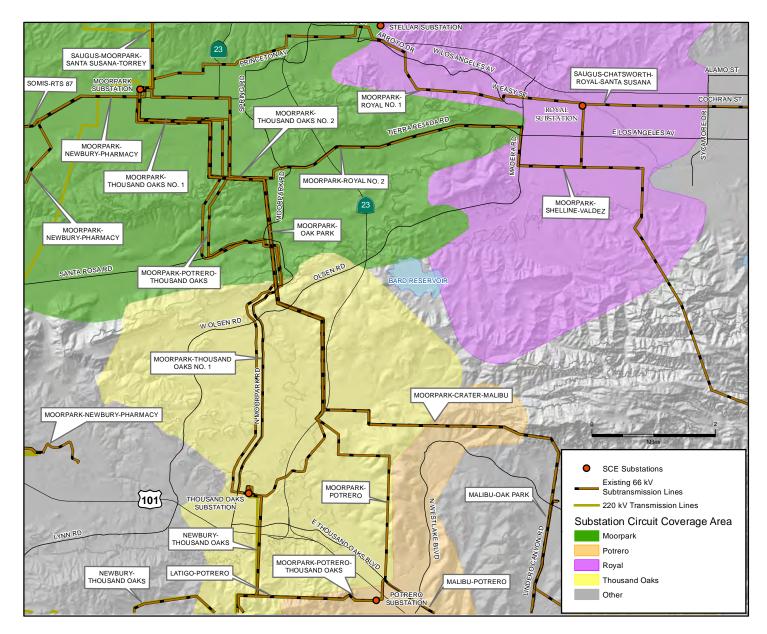
3.2.2 Feasibility

CEQA Guidelines (§15364) define feasibility as:

... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

In addition, CEQA requires that the Lead Agency consider site suitability, economic viability, availability of infrastructure, general plan consistency, other regulatory limitations, jurisdictional boundaries, and proponent's control over alternative sites in determining the range of alternatives to be evaluated in the EIR (CEQA Guidelines §15126.6(f) (1)). Feasibility can include three components:

• **Legal Feasibility:** Does the alternative have the potential to avoid lands that have legal protections that may prohibit or substantially limit the feasibility of permitting a 66/16 kV substation and associated transmission facilities?



Presidential Substation Project . 207584.02 Figure 3-1 Existing Circuitry Belonging to Moorpark Thousand Oaks, and Royal Substations

- **Regulatory Feasibility:** Does the alternative have the potential to avoid lands that have regulatory restrictions that may substantially limit the feasibility of, or permitting of, a 66/16 kV substation and associated subtransmission facilities within a reasonable period of time?
- **Technical Feasibility:** Is the alternative feasible from a technological perspective, considering available technology; the construction, operation, and maintenance or spacing requirements of multiple facilities using common ROW; and the potential for common mode failure?

For the screening analysis, the legal, technical, and regulatory feasibility of potential alternatives was assessed. The assessment was directed toward reverse reason; that is, a determination was made as to whether there was anything about the alternative that would be infeasible on technical, legal, or regulatory grounds.

This screening analysis does not focus on relative economic factors or costs of the alternatives (as long as they are found to be economically feasible) since CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives or would be more costly" (CEQA Guidelines §15126.6(b)).

3.2.3 Potential to Eliminate Significant Environmental Effects

CEQA requires that to be fully considered in an EIR, an alternative must have the potential to "avoid or substantially lessen any of the significant effects of the project" (CEQA Guidelines §15126.6(a)).

If an alternative was identified that clearly would not provide potential overall environmental advantage as compared to the Proposed Project, it was eliminated from further consideration. At the screening stage, it is neither possible, nor legally required, to evaluate all of the impacts of the alternatives in comparison to the Proposed Project with absolute certainty, nor is it possible to quantify impacts. However, it is possible to identify elements of an alternative that are likely to be the sources of impact and to relate them, to the extent possible, to general conditions in the subject area.

Table 3-1 presents a summary of the potential significant environmental effects of the ProposedProject. The impacts in Table 3-1 are representative of those resulting from preliminary EIRpreparation and were therefore used to determine whether an alternative met CEQA Guidelines§15126.6 requirements.

3.3 Summary of Screening Results

Table 3-2 provides a composite list of the alternatives considered, and the results of the screening analysis with respect to the criteria findings for consistency with project objectives, feasibility and environmental effectiveness. Alternatives carried forward for full EIR analysis are listed below in Section 3.3.1. Alternatives eliminated from further consideration follow in Section 3.3.2.

Issue Area	Impact
4.1 Aesthetics	 Degradation to the existing visual character and quality of the project site resulting from the presence of the proposed Presidential Substation.
	 Degradation of scenic resources on Olsen Road, a City of Thousand Oaks designated scenic highway, from the presence of the proposed Presidential Substation, proposed subtransmission alignments, and overhead conductors.
4.2 Agriculture and Forestry Resources	No Significant Unavoidable Impacts
4.3 Air Quality	 Project construction activities would generate ozone precursor emissions that could contribute substantially to a violation of ozone air quality standards.
4.4 Biological Resources	No Significant Unavoidable Impacts
4.5 Cultural Resources	No Significant Unavoidable Impacts
4.6 Geology & Soils	No Significant Unavoidable Impacts
4.7 Greenhouse Gas Emissions	No Significant Unavoidable Impacts
4.8 Hazards and Hazardous Materials	No Significant unavoidable Impacts
4.9 Hydrology and Water Quality	No Significant Unavoidable Impacts
4.10 Land Use and Planning	No Significant Unavoidable Impacts.
4.11 Mineral Resources	No Significant Unavoidable Impacts
4.12 Noise	 Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County Construction noise threshold criteria at the following locations:
	 Residences along the north side of Read Road; and Residences along the underground 16 kV distribution route east of (Hwy 23 due to 16 kV distribution and access road construction.
4.13 Population and Housing	No Significant Unavoidable Impacts.
4.14 Public Services	No Significant Unavoidable Impacts.
4.15 Recreation	No Significant Unavoidable Impacts.
4.16 Transportation / Traffic	No Significant Unavoidable Impacts.
4.17 Utilities and Service Systems	No Significant Unavoidable Impacts.

TABLE 3-1 SUMMARY OF POTENTIALLY SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

Alternative				
Substation Site	Subtransmission Alignment	Project Objectives Criteria	Feasibility Criteria	Environmental Criteria
Passes Screening		1	-	
 Proposed Presidential Substation site – with alternative subtransmission alignments Located on a 4-acre site south of Olsen Road in the City of Thousand Oaks. 	 Alternative Subtransmission Alignment 1 Follows same Read Road alignment as proposed subtransmission alignment. Connection to Moorpark-Royal No. 2 requires acquiring 1.8 miles of new ROW. Within viewshed of the Ronald Regan Presidential Library. 	Meets all project objectives	Meets feasibility criteria	Meets environmental criteria, although may result in different types of impacts than the Proposed Project.
	 Alternative Subtransmission Alignment 2 Within road ROW along Olsen and Madera Roads. Requires installation of additional guy wiring along curves. 	Meets all project objectives	Meets feasibility criteria	Meets environmental criteria, although may result in different types of impacts than the Proposed Project.
	 Alternative Subtransmission Alignment 3 Same overhead 66 kV subtransmission alignment for single circuit portions of route, with underground crossings at Moorpark Road and Tierra Rejada Road. Undergrounding of 66 kV subtransmission line between intersection of Read Road and Sunset Valley Road east to the proposed Presidential Substation, with 16 kV distribution line overhead. Requires digging trench 20 inches deeper than Proposed Project. 	Meets all project objectives	Meets feasibility criteria	Meets environmental criteria although may result in different types of impacts than the Proposed Project.
 Alternative Substation Site B – with alternative subtransmission alignments Located at the former Ventura County Sheriff station. 	 Proposed Project Subtransmission Alignment Single-circuit 66 kV along Read Road from Moorpark Rd to Sunset Valley Road Single-circuit 66 kV along Sunset Valley Road from Tierra Rejada Road to Read Road Double-circuit from Read Rd. and Sunset Valley Road to Alternative Substation Site B. 	Meets most project objectives	Meets feasibility criteria	Meets environmental criteria, although may result in different types of impacts than the Proposed Project.

TABLE 3-2 SUMMARY OF ALTERNATIVES SCREENING ANALYSIS

Alternative				
Substation Site	Subtransmission Alignment	Project Objectives Criteria	Feasibility Criteria	Environmental Criteria
Passes Screening (cont.)		1		1
Alternative Substation Site B – with alternative subtransmission alignments (cont.)	 Alternative Subtransmission Alignment1 Follows same Read Road alignment as proposed subtransmission alignment. Connection to Moorpark–Royal No. 2 requires acquisition of 1.8 miles of new ROW. Within viewshed of the Ronald Regan Presidential Library. 	Meets most project objectives	Meets feasibility criteria	Meets environmental criteria, although may result in different types of impacts than the Proposed Project.
	 Alternative Subtransmission Alignment 2 Within road ROW along Olsen and Madera Roads. Requires installation of additional guy wiring along curves. 	Meets most project objectives	Meets feasibility criteria	Meets environmental criteria, although may result in different types of impacts than the Proposed Project.
	 Alternative Subtransmission Alignment 3 Same subtransmission alignment for single circuit portions of route. Undergrounding of 66 kV subtransmission between intersection of Read Road and Sunset Valley Road east to the Alternative Substation Site B, with 16 kV distribution line overhead. Requires digging trench 20 inches deeper than Proposed Project. 	Meets all project objectives	Meets feasibility criteria	Meets environmental criteria although may result in different types of impacts than the Proposed Project.
 System Alternative B - Upgrading existing substation sites using non-standard transformer sizes Replaces existing transformers with larger transformers to increase the capacity of existing substations. Requires change to non-standard equipment 	Additional 66 kV subtransmission lines would not be required.	Meets most project objectives	Meets feasibility criteria	Meets environmental criteria, although may result in different types of impacts than the Proposed Project.

Alternative				
Substation Site	Subtransmission Alignment	Project Objectives Criteria	Feasibility Criteria	Environmental Criteria
Fails Screening	• •	1	-	
Either Proposed Presidential Substation Site or Alternative Substation Site B	 Alternative Subtransmission Alignment 4 Underground both 66 kV source subtransmission lines including both single and double circuit portions. Alignment would follow the Proposed Project alignment for undergrounding 16 kV distribution. 	Meets most project objectives	Meets feasibility criteria	Would result in significant unavoidable impacts on cultural resources for portions of the single circuit subtransmission alignment. Would create new environmental impact due to trenching and underground construction in areas not proposed for underground construction under the
	 Existing overhead 16 kV would remain in place. 16 kV distribution getaways would be the same as for the Proposed Project. 			Proposed Project. Would not reduce overall environmental impacts. And results in greater significan unavoidable environmental impacts than Alternative Subtransmission 3 alignment with no additional reduction in significant environmental impacts.
 Alternative Substation Site C Located on a four-acre site west of Moorpark Road approximately 0.25 mile south of Tierra Rejada Road. Substation would be located adjacent to the Moorpark-Thousand Oaks No. 2 source line. 	 Subtransmission Alignment would include: Short connection loop with Moorpark Thousand Oaks No. 2. Proceeding north from Substation parallel or collocated with Moorpark Thousand Oaks No. 2 to connect with Moorpark-Royal No. 2. Distribution duct bank south in Moorpark Road ROW to connect with Thousand Oaks Substation 16 kV distribution circuits. Distribution duct bank north along Moorpark Road and then either a duct bank or overhead 16 kV distribution line along Tierra Rejada Road. 	Fails. Does not meet reliability criteria.	Fails to meet feasibility criteria	Fails - Would result in greater impacts or aesthetic resources. Could result in significant unavoidable traffic impacts.
 Alternative Substation Site D Located on a 4-acre site immediately south of Tierra Rejada Road approximately half-way between Hwy 23 and Esperance Road. Substation would be located adjacent to the Moorpark-Royal No. 2 subtransmission line. 	 Subtransmission Alignment would include: Two short 66 kV subtransmission lines connecting to existing subtransmission lines along Tierra Road. Option – 66 kV subtransmission line west along Tierra Rejada Road connecting to Moorpark Thousand Oaks No. 2 to reduce reliability impacts. 		Meets feasibility criteria	The alternative with the technically feasible subtransmission and 16 kV distribution alignments would fail to reduce overall significant unavoidable impacts. Significant unavoidable impacts would likely occur on air quality, noise, aesthetics and traffic.

Alternative				
Substation Site	Subtransmission Alignment	Project Objectives Criteria	Feasibility Criteria	Environmental Criteria
Fails Screening (cont.)				
Alternative Substation Site D (cont.)	 Duct bank constructed east along Tierra Rejada Road to connect with Royal Substation 16 kV distribution circuits. Second duct bank would be either: East along Tierra Rejada Road and then southwest along Madera/Olsen Roads to connect with Thousand Oaks Substation circuits; or West along Tierra Rejada Road and then south along Moorpark Road to connect with Thousand Oaks Substation circuits. 	Alternative using the Moorpark-Shelline-Valdez 66 kV Source line would fail to meet reliability criteria. Alternative including 16 kV distribution duct bank east along Tierra Rejada and then southwest along Madera/Olsen Road would fail to meet reliability criteria. Alternative which includes use of the Moorpark- Thousand Oaks No. 2 as the 66 kV line, and routing a 16 kV distribution duct bank west along Tierra Rejada Road and then south along Moorpark Road would likely meet reliability criteria.		
 Alternative Substation Site E Located on a 4-acre site immediately South of Tierra Rejada Road in unincorporated Ventura County at the border with the City of Simi Valley. Substation would be located adjacent to the Moorpark-Royal No. 2 subtransmission line. 	 Subtransmission Alignment would include: Two short connections to lines along Tierra Road. Option – one line connection to Moorpark Thousand Oaks No. 2 to reduce reliability impacts. Duct bank constructed east along Tierra Rejada Road to connect with Royal Substation 16 kV distribution circuits. Second ductbank would be either: East along Tierra Rejada Road and then southwest along Madera/Olsen Roads to connect with Thousand Oaks Substation circuits; or West along Tierra Rejada Road and then south along Moorpark Road to connect with Thousand Oaks Substation circuits. 	Alternative using the Moorpark-Shelline-Valdez 66 kV Source line would fail to meet reliability criteria. Alternative including 16 kV distribution duct bank east along Tierra Rejada and then southwest along Madera/Olsen Road would fail to meet reliability criteria. Alternative which includes use of the Moorpark- Thousand Oaks No. 2 as the 66 kV line, and routing a 16 kV distribution duct bank west along Tierra Rejada Road and then south along Moorpark Road would likely meet reliability criteria.	Meets feasibility criteria	The alternative with the technically feasible subtransmission and 16 kV distribution alignments would fail to reduce overall significant unavoidable impacts. Significant unavoidable impacts would likely occur on air quality, noise, aesthetics and traffic.

TABLE 3-2 (Continued)					
SUMMARY OF ALTERNATIVES SCREENING ANALYSIS					

Alternative		_					
Substation Site	Subtransmission Alignment	Project Objectives Criteria	Feasibility Criteria	Environmental Criteria			
Fails Screening (cont.)							
 Alternative Substation Site F with subtransmission alignment Located on a 4-acre site in agricultural land immediately north west of the junction of Read Road and Sunset Valley Road. Reduces the distance of subtransmission lines along Read Road. Located closer to residences and recreational site than proposed Presidential Substation site. 	 Subtransmission Alignment. single-circuit 66 kV subtransmission alignment along Sunset Valley Road would be similar to proposed alignment. single-circuit 66 kV along Read road would be shorter than under the proposed alignment. Would require installation of a duct bank from the intersection of Read Road and Sunset Valley Road due east to Olsen Road to access necessary 16 kV distribution road ROWs. 	Meets most project objectives	Meets feasibility criteria.	 Fails to meet environmental criteria. Results in more and greater impacts than Proposed Project. Due to the Substation location, the visual resource impacts to the viewshed from Moorpark Road and Tierra Rejada Road would increase compared to the Proposed Project. Potentially significant impacts to recreational facility during construction of Substation. 			
Alternative Substation Site G Located on a 4-acre site immediately east of Moorpark Road approximately 0.2 mile south of Read Road.	 Subtransmission Alignment would include: Short connection loop with Moorpark- Thousand Oaks No. 2 subtransmission line Single Circuit 66 kV line from Substation north to the Moorpark-Royal No. 2 subtransmission line. 16 kV Distribution duct bank constructed south along Moorpark Road to connect with Thousand Oaks Substation circuits. Second duct bank north along Moorpark Road to Tierra Rejada road and then east along Tierra Rejada Road to connect with Royal Substation circuits. 	Fails. Would result in reduced operational flexibility.	Meets feasibility criteria.	Due to increased project length, is likely to result in increased environmental impacts compared to Proposed Project. Would result in increased aesthetic resources and traffic impacts.			
 System Alternative A – Increase capacity of existing substations using standard transformer sizes. Expand one or more of the existing substations using SCE's standard transformer sizes 	No additional 66 kV subtransmission lines would be required.	Fails. Would not provide the capacity needs of SCE as stated in the basic objectives for the Proposed Project	Meets feasibility criteria	Meets environmental criteria.			

Alternative							
Substation Site	Subtransmission Alignment	Project Objectives Criteria	Feasibility Criteria	Environmental Criteria			
Fails Screening (cont.)							
 Non-Wires –Demand Management Conservation Replace need for substation and subtransmission line through implementation of energy conservation program 	No additional 66 kV subtransmission lines would be required	Fails. Would not provide the capacity or reliability needs of SCE, as stated in the basic objectives for the Proposed Project.	Fails. These programs are not feasible on a scale that would be suitable to replace the Proposed Project within a reasonable period of time.	Meets environmental criteria. Complete avoidance of the Propose Project would eliminate the potential impacts of the construction and operation of the transmission line and substation upgrade, and no new significant impacts would be created.			

3.3.1 Alternatives Analyzed in the EIR

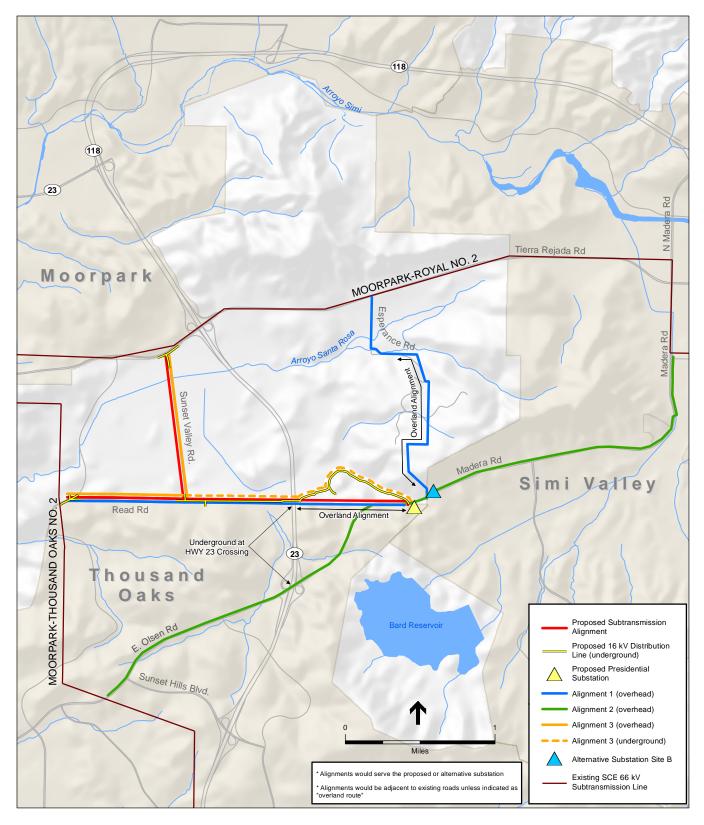
The alternatives listed below are those that have been selected through the alternative screening process for detailed EIR analysis; the No Project Alternative is also included as required by CEQA. Each of the alternatives would substantially meet project objectives, would be feasible, and would avoid or reduce potential environmental effects of the Proposed Project. The Alternatives analyzed include combinations of alternative subtransmission alignments and one alternative substation site. All of the alternative subtransmission alignments are capable of serving either the proposed Presidential Substation or the Alternative Substation Site B with minor modifications. As a result, the analysis is separated into the individual substation and subtransmission alignment components in order to minimize redundancy. The alternatives are illustrated in **Figure 3-2**, and briefly described in Table 3-2 as well as in greater detail in Section 3.4. Alternatives analyzed in the EIR include:

- No Project
- Proposed Presidential Substation with:
 - Alternative Subtransmission Alignment 1
 - Alternative Subtransmission Alignment 2
 - Alternative Subtransmission Alignment 3 Undergrounding portions of 66 kV alignment
- Alternative Substation Site B with:
 - Proposed Subtransmission Alignment
 - Alternative Subtransmission Alignment 1
 - Alternative Subtransmission Alignment 2
 - Alternative Subtransmission Alignment 3 Undergrounding portions of 66 kV alignment
- System Alternative B Upgrade existing substations by replacing existing transformers with larger units.

3.3.2 Alternatives Eliminated from EIR Consideration

The alternatives that have been eliminated through the alternative screening process from EIR analysis are listed below. As summarized in Table 3-2, these alternatives have been eliminated due to a failure to meet most basic project objectives and in some cases because the alternative would have greater environmental impacts than the Proposed Project. The rationale for elimination of each alternative is summarized in Table 3-2 and is described in greater detail in Section 3.5.

- Alternative Subtransmission Alignment 4 Underground entire subtransmission alignment
- Alternative Substation Site C and subtransmission alignment
- Alternative Substation Site D and subtransmission alignment
- Alternative Substation Side E and subtransmission alignment



Presidential Substation Project . 207584.02 Figure 3-2 Alternative Subtransmission Alignments

SOURCE: SCE, 2010

- Alternative Substation Site F and subtransmission alignment
- Alternative Substation Site G and subtransmission alignment
- Increase capacity of existing substations using standard transformer sizes
- Non-Wires Demand Management Conservation

3.4 Alternatives Evaluated in this EIR

Alternatives analyzed in this EIR include one alternative substation site, three alternative subtransmission alignments and one system alternative. System Alternative B and the No Project Alternative are stand-alone alternatives and the evaluation of environmental effects is comprehensive.

Any alternative involving construction of a new substation would also require construction of two 66 kV subtransmission lines to supply the substation. In order to comprehensively consider the environmental effects of the Alternative Subtransmission Alignments (1, 2 and 3) the effects of constructing a new substation need to be considered as well. Specifically, Alternative Subtransmission Alignments 1, 2, 3 and the proposed subtransmission alignment would all be capable of supplying a new substation at either the proposed Presidential Substation site or Alternative Substation Site B with minor modifications. This results in seven different alternative combinations, plus the System Alternative B, and a No Project Alternative for a total of nine alternatives analyzed.

The following analysis separates the substation site alternative analyses from the alignment analyses in order to avoid redundancy. The impacts presented in Chapter 5 describe the alignment and substation in combination. The order alternatives are presented below is as follows:

- Alternative Subtransmission Alignment 1
- Alternative Subtransmission Alignment 2
- Alternative Subtransmission Alignment 3
- Alternative Substation Site B
- System Alternative B
- No Project Alternative

3.4.1 Alternative Subtransmission Alignment 1

Description

Alternative Subtransmission Alignment 1 would be capable of serving a new substation at either the proposed Presidential Substation site or the Alternative Substation Site B (with minor alignment modifications in the vicinity of the substation). This alternative alignment was presented in the PEA as Alternative Route 1 (SCE 2008) and is shown in Figure 3-2. Similar to the Proposed Project this alternative would construct two 66 kV source lines. The first source line would consist of a single-circuit subtransmission line originating at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. The alignment would extend east along the south side of Read Road within the City of Thousand Oaks along an existing 16 kV distribution circuit past the intersection of Read Road and Sunset Valley Road. The alignment would continue east along Read Road, crosses Hwy 23 (underground), and continue east to the substation site. Although the alignment would be constructed within existing ROW, some areas along Read Road could require additional overhang easement rights to accommodate the pole cross-arms. This alignment would be constructed in the same path as one of the Proposed Project source lines. However, the entire alignment would be constructed as a single-circuit subtransmission line. As a single-circuit, the line would be constructed using primarily LWS with limited use of TSPs. The pole types and locations between Moorpark Road and Sunset Valley Road would be the same as the Proposed Project. The existing 16 kV distribution line and a telecommunication line would be installed on the new LWS poles and the existing wooden 16 kV distribution poles currently in the alignment would be removed. The new telecommunication line would also be installed overhead on the LWS poles. Both the subtransmission and 16 kV distribution circuits would be constructed underground at the Hwy 23 crossing.

The second source line for would originate at the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection of Tierra Rejada Road and Esperance Road. The alignment initially would extend due south parallel to Esperance Road, and turn east approximately 0.5 mile south of Tierra Rejada Road and then southeast where the alignment leaves Esperance Road. For 1.8 miles, the alignment would cross generally overland requiring new ROW up to 25 feet wide. The alignment would terminate at the substation site entering the substation from directly north. A new telecommunication line and 16 kV distribution circuit would be installed on the new LWS poles.

In total, Alternative Subtransmission Alignment 1 would be approximately 4.5 miles long, and would cross land presently used for open space and rural residential purposes. Construction methods and duration would be similar to those described for the Proposed Project. Trenching for the installation of 16 kV distribution lines along Read Road and east of Hwy 23 would not be required under this Alternative.

Rationale for Full Analysis

Project Objectives

This alternative would meet the basic project objectives for both the proposed Presidential Substation site and the Alternative Substation Site B.

Feasibility

This alternative would meet all legal, regulatory, and technical feasibility criteria. Additional ROW easements would need to be negotiated with property owners to gain easements for the new ROW. SCE could choose to pursue legal condemnation should negotiations fail to result in equitable agreements.

Lessen Significant Environmental Impacts

Similar to the Proposed Project, Alternative Subtransmission Alignment 1 could result in significant unavoidable impacts to aesthetics, noise and air quality resources. However, some of the impacts to air quality and noise resources would be reduced under this alternative, but not to a level of less than significant. This alternative would operate construction equipment for a shorter period of time and result in fewer truck haul trips since 12,500 feet of duct bank would not be constructed. This would result in reduced construction emissions. Due to the reduced construction effort, significant unavoidable noise impacts along Read Road would be reduced.

Potential New Impacts Created

Aesthetic impacts would increase under this alternative. New significant unavoidable impacts on visual resources would occur due to the affect of the alignment on views from the Ronald Regan Presidential Library. Other significant unavoidable aesthetic impacts would be similar to the Proposed Project.

Significant unavoidable noise impacts would occur in the area along the Esperance Road alignment where it would not occur under the Proposed Project. Overall the number of sensitive receptors affected by noise would increase under this alternative.

3.4.2 Alternative Subtransmission Alignment 2

Description

Alternative Subtransmission Alignment 2 would be capable of serving either the proposed Presidential Substation, or Alternative Substation Site B (with minor alignment modifications in the vicinity of the substation).

The first source line would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Olsen Road and Sunset Hills Boulevard in the City of Thousand Oaks, and follow Olsen Road, primarily on the north side to the substation.

The second source line would originate at the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection of Madera Road and Tierra Rejada Road in the City of Simi Valley, and follows Madera Road to the substation sites.

Due to the curvatures in Olsen and Madera Roads, the subtransmission structures along this alignment could require additional support mechanisms such as anchors and guy wires. Poles located in a curve or corner along the alignment would require some form of guying to provide additional support. The number and locations of poles which would require additional support, has not been identified at this time. If support mechanisms could not be accommodated within the road ROW, SCE would be required to obtain additional ROW. Based on preliminary engineering, single-circuit subtransmission poles would be placed every 180 to 200 feet. Poles would be a combination of LWS and TSPs depending upon the structural needs of the location.

Construction and pole assembly would occur on existing adjacent paved roads (Madera Road and Olsen Road). No new access roads would be required for this alignment. Activities within or immediately adjacent to the roadway, could require temporary lane closure. Traffic management would be conducted in a manner similar to the Proposed Project. While conductor pulling and preparation of pull and tension sites would be similar to the Proposed Project. This alternative would require approximately 12 pull and tension sites. Similar to the proposed subtransmission alignment the pull and tension sites would be approximately 150 feet by 30 feet.

In total, Alternative Subtransmission Alignment 2 would be approximately 5 miles long and would be adjacent to land presently used for residential, commercial, public space, and open space purposes.

Rationale for Full Analysis

Project Objectives

This alternative would meet the basic project objectives for both the proposed Presidential Substation site and the Alternative Substation Site B.

Feasibility

This alternative would meet all legal, regulatory, and technical feasibility criteria. Additional ROW easements would need to be negotiated with property owners to gain easements for the new ROW. SCE could choose to pursue legal condemnation should negotiations fail to result in equitable agreements.

Lessen Significant Environmental Impacts

Similar to the Proposed Project, Alternative Subtransmission Alignment 2 would result in significant unavoidable air quality and aesthetics impacts. This alternative would reduce impacts from construction noise to a level of less than significant. While the effects of construction noise on residents could increase due to an increased number of residents near the construction areas, because the alignment is not located in unincorporated Ventura County, the significance threshold is higher and would therefore result in a less than significant impact.

Potential New Impacts Created

Air Quality impacts resulting from construction emissions would be significant unavoidable at a level similar to the Proposed Project. The localized areas of construction would be different but the impact would be approximately the same.

Impacts on aesthetic resources along Olsen Road would increase because the alignment parallels more of the road. Similar to the Proposed Project impacts on aesthetic resources would be significant unavoidable.

3.4.3 Alternative Subtransmission Alignment 3

Description

Alternative Subtransmission Alignment 3 would construct two new 66 kV subtransmission source lines capable of serving either the proposed Presidential Substation site or Alternative Substation Site B (with minor alignment modifications in the vicinity of the substation). The origination points and general route would be the same as the Proposed Project. However, additional portions of Alternative Subtransmission Alignment 3 would be installed underground compared to the Proposed Project. In addition, some sections of the existing 16 kV distribution line would not need to be relocated and would instead remain in place on existing wooden poles.

The first source line would originate as a single-circuit overhead subtransmission line at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road. The alignment extends east overhead along Read Road to the intersection of Sunset Valley Road, similar to the Proposed Project. The second source subtransmission circuit would originate as a single-circuit overhead subtransmission line at the Moorpark -Royal No. 2 66 kV subtransmission line near the intersection of Tierra Rejada Road and Sunset Valley Road. The alignment extends southeast overhead along Sunset Valley Road and Sunset Valley Road. The alignment extends southeast overhead along Sunset Valley Road to the intersection with Read Road, similar to the Proposed Project. Pole structures and construction methods would be the same as for the Proposed Project for these portions of the alignment. At the intersection of Sunset Valley Road and Read Road, a TSP riser pole would be installed and from that point east, a double-circuit subtransmission line would be installed underground within Read Road, north of the centerline to the new substation.

In general the construction methodologies required for installation of the double circuit subtransmission line underground would be similar to those required for the relocation of the 16 kV distribution line for the Proposed Project. Some differences include

Trenching for undergrounding 66 kV. A trench approximately 24 inches wide by 72 inches deep would be excavated, in the same location as the trench for the Proposed Project 16 kV distribution alignment, but 20 inches deeper.

Duct Bank Installation. The duct bank required for subtransmission circuits would be installed deeper than the Proposed Project duct banks and would be comprised of cable conduit, spacers, ground wire, and concrete encasement. The duct bank would consist of six 5-inch diameter polyvinyl chloride (PVC) conduits fully encased with a minimum of three inches of concrete all around. The duct bank would accommodate six cables.

Vault installation. Separate vaults would be required for each of the subtransmission circuits where splicing is necessary, and the vault size would be larger than the Proposed Project 16 kV distribution vaults. The inside dimensions of subtransmission vaults are approximately 10 feet wide by 20 feet long with an inside height of 9.5 feet. The installation of each vault would require excavation of a hole approximately 12.5 feet wide, 22.5 feet long, and 13.5 feet deep. The outside dimensions of each vault would be 11.5 feet wide, 21.5 feet long, and 11.5 feet tall. Vaults are set to a depth so that the main body is a minimum of 18 inches below the surface.

Cable Pulling and Splicing. Following vault and duct bank installation, SCE would typically pull the electrical cables through the duct banks, splice the cable segments at each vault, and terminate cables at the transition structures where the alignment would transition from underground to overhead. To pull the cables through the duct banks, a cable reel is placed at one end of the conduit segment, and a pulling rig is placed at the opposite end. The cable from the cable reel is attached to a rope in the duct bank, and the rope linked to the pulling rig, which pulls the rope and the attached cable through the duct banks. A lubricant is applied as the cable enters the ducts to decrease friction and facilitate travel through the PVC conduits. Each electrical cable for the 66 kV subtransmission line is typically pulled through the individual conduits in the duct bank at a rate of two to three cables between structures each day. After a cable pulling is completed, the electrical cables are spliced together in each vault. A splice crew then conducts splicing operations at each vault location and continues until all splicing is completed.

Transition Structure (TSP Riser Pole) Construction. At each end of an underground 66 kV section, the cables typically rise out of the ground at TSP riser poles, which accommodate the transition from underground to overhead subtransmission line.

The double-circuit subtransmission line would continue east underneath Hwy 23 in the same manner as described for the Proposed Project. However, since the line would already be underground, TSP risers on the west and east sides of the bore would not be required.

Once the double-circuit subtransmission line reaches the east side of Hwy 23, the line would continue underground to the new substation. The alignment east of Hwy 23 would follow the same underground alignment identified for undergrounding the 16 kV distribution line in the Proposed Project. However, for this alternative, the 16 kV distribution line would remain overhead on existing poles, while the 66 kV would be installed underground.

Additionally, a telecommunication line would be installed on the existing wood 16 kV distribution poles. The construction of a Hilfiker retaining wall and widening of access roads identified for pole removal and installation would not be required under this alternative.

Relocation of Existing 16 kV Distribution

As described for the Proposed Project, there are existing overhead 16 kV distribution lines located along the entire alignment. The following describes the relocation of existing 16 kV distribution that would be required for Alternative Subtransmission Alignment 3:

- Along Sunset Valley Road from Tierra Rejada Road south to the intersection with Read Road – and Along Read Road from approximately Moorpark Road east to the intersection with Sunset Valley Road. Existing wooden poles carrying 16 kV distribution lines would be removed. Following installation of new poles (predominantly LWS), the 16 kV distribution line would be installed on the new poles beneath the 66 kV subtransmission line. In addition, a telecommunication line would also be installed on the same poles.
- Along Read Road from the intersection of Sunset Valley Road east to Hwy 23. The existing wood poles would remain in place and the 16 kV distribution line would not be relocated. An additional telecommunication line would be installed on the existing poles.

• *From Hwy 23 east to the Proposed Substation.* The existing wooden poles would remain in place and continue to support the 16 kV distribution line. A telecommunication line would also be installed in the duct bank as described for the Proposed Project.

Rationale for Full Analysis

Project Objectives

This alternative would meet the basic project objectives for both the proposed Presidential Substation site and the Alternative Substation Site B.

Feasibility

This alternative would meet all legal, regulatory, and technical feasibility criteria. Similar to the Proposed Project additional ROW easements would need to be negotiated with property owner. SCE could choose to pursue legal condemnation should negotiations fail to result in equitable agreements.

Lessen Significant Environmental Impacts

Similar to the Proposed Project, this alternative would result in significant unavoidable impacts on noise and air quality resources. However, because the alignment would not require the replacement of poles along the eastern portion of Read Road and east of Hwy 23, the construction emissions and noise would be reduced. Some of this reduction would be countered by an increased trenching effort but an overall reduction in air quality and noise impacts compared to the Proposed Project is expected.

This alternative would reduce impacts on aesthetic resources to a level of less than significant. Alternative 3 would install the 66 kV subtransmission conductor in the vicinity of Olsen Road underground and would not require the removal or replacement of the existing 16 kV distribution poles and lines. Consequently, the aesthetic impacts associated with the overhead 66 kV subtransmission line in the vicinity of Olsen Road would be eliminated.

Potential New Impacts Created

Alternative Subtransmission Alignment 3 would require trenching to a depth of 72 inches for approximately 12,500 feet, which is 20 inches deeper than the Proposed Project. This would result in increased construction time, and truck trips to dispose of excess excavated soils thereby increasing air quality and noise impacts related to trenching. However, because this alternative eliminates the need to construct an access road and replace poles along the eastern portion of Read Road and east of Hwy 23, the overall air quality and noise impacts would be reduced.

3.4.4 Alternative Substation Site B

Description

Alternative Substation Site B would construct a new 66/16 kV substation on an approximate 2.3-acre parcel of land located on the north site of Madera Road in the City of Simi Valley. Similar to the Proposed Project, this substation location is capable of being served by the proposed subtransmission alignment or Alternative Subtransmission Alignments 1, 2 or 3, with minor modifications. Unlike the proposed subtransmission alignment, the Alternative Substation, would not require crossing Olsen Road to connect to the substation. Instead, the alignment would continue on the north side of Olsen Road until reaching the Alternative Substation Site B.

The parcel is currently owned by the City of Simi Valley and previously housed the Ventura County Sheriff's Department. The Parcel contains several abandoned concrete block buildings and structures, a garage, parking areas and formerly contained four underground fuel storage tanks. The City of Simi Valley is presently using this parcel as overflow parking for the Ronald Reagan Presidential Library. Privately owned vacant land bounds the parcel to the east and the west. A residential parcel is located to the north. Alternative Substation Site B is located directly across the street from the Wood Ranch community entrance. The parcel has an established entry which is controlled by a traffic signal at the intersection of Madera Road and Country Club Drive. Existing vehicular access to this site may need to be modified.

The development of the substation site would consist of the complete demolition of all above ground and any below ground structures. The existing site would be cleared of all buildings, hardscape, landscape, irrigation, perimeter fencing /block walls and foundations. All debris unsuitable for reclaimed materials would be disposed of at an approved landfill.

The ground surface is presently terraced upslope, from the lower parking lot and internal roads to the upper building pad and parking lot, the lower level up to the upper level elevations. It is anticipated that the remainder of the site would be graded as cut to create the required fill. The proposed grading for Alternate Substation Site B would involve creating a pad consisting of a 1.5 percent minimum to 3 percent maximum slope to accommodate positive drainage across all substation equipment.

Existing site drainage is directed towards a concrete swale and storm drain inlet located at the southwest corner of the site. All existing impervious surfaces, such as asphalt pavement, roof structures, and sidewalks would be eliminated. These surfaces would be dedicated to pervious surfaces where storm water runoff could be minimized. Proposed impervious surfaces to be constructed on the site would include the typical equipment foundations, asphalt concrete driveways, the MEER, and access roads to the substation. No below ground storm drain pipes are anticipated to be necessary. The existing slope and concrete terrace drains along the north hill would remain undisturbed. Drainage from the slope may be directed in a controlled method using concrete swales toward Olsen Road and into the existing catch basin inlet. The substation footprint may accommodate this slope.

While engineering and configuration of Alternative Substation B would be different than the Proposed Project Substation because the site is smaller, substation equipment heights would be the same. Design of the perimeter wall and landscaping would be coordinated with the City of Simi Valley and would likely be similar to the Proposed Project.

The construction and alignment of the 16 kV distribution getaways would be similar to the Proposed Project, but may require construction of two duct banks underneath Olsen road.

Rationale for Full Analysis

Project Objectives

This alternative would meet the basic project objectives.

Feasibility

This alternative would meet all legal, regulatory, and technical feasibility criteria. Acquisition of approximately 2.3 acres of land for the substation site would have to be negotiated with property owners (currently the City of Simi Valley). SCE could choose to pursue legal condemnation should negotiations fail to result in equitable agreements.

Lessen Significant Environmental Impacts

Similar to the Proposed Project Alternative Substation Site B would result in significant unavoidable air quality impacts. However, air quality impacts would be reduced compared to the Proposed Project due to reduced fill import requirements. In addition, impacts on aesthetics resources would be reduced to a level of less than significant. Construction of a new substation at Alternative Substation Site B would eliminate the need for an overhead subtransmission line to cross Olsen Road under Alternative Alignments 1, 2, and the proposed subtransmission alignment, this eliminates the significant unavoidable aesthetic impacts associated with the crossing. In addition, because the site is already an industrial site, the significant unavoidable aesthetics impacts associated with development of the proposed Presidential Substation site would be eliminated.

Potential New Impacts Created

No new impacts would be created.

3.4.5 System Alternative B – Upgrade Existing Substations with Non-Standard Equipment

Description

This alternative would consist of upgrading the Royal, Thousand Oaks, and Potrero Substations by replacing the existing 16.8 MVA transformers (transformer base rating at 55 degree Celsius (C) rise without cooling or other overload provisions) with larger ones. The larger transformers would not be consistent with a standard SCE transformer sizing.

Installing larger transformers could require the replacement of some existing 16 kV distribution equipment located inside and outside of the substation footprint. Additional 16 kV distribution circuits may be required at some locations or existing 16 kV distribution getaway equipment could need to be upgraded.

The approximate size of the new transformers would be in the 25 to 30 MVA range (transformer base rating) depending on the space available at the substations to accommodate the equipment and other constraints such as short circuit duty.³

Rationale for Full Analysis

Project Objectives

This alternative would meet most of the project objectives but the operational flexibility and reliability would be less than under the Proposed Project.

Replacement of the existing transformers at one of the substations would temporarily reduce the reliability of the system as existing transformers are taken off line for replacement. If the transformer change out is accomplished during the non-summer period, reliability issues could be minimized or eliminated.

Feasibility

This alternative would meet all regulatory and technical feasibility criteria. No additional land or ROW acquisitions would be required under this alternative.

Lessen Significant Environmental Impacts

System Alternative B would not require the construction of a new substation and associated subtransmission or 16 kV distribution lines. Impacts on air quality, noise and aesthetics would be less than significant.

Potential New Impacts Created

The equipment used at these three substations may not be consistent with standard SCE substations and therefore it may not be as efficient for SCE to replace or repair equipment from existing stocks. Consequently, the time necessary to replace broken equipment or acquire parts to repair, may take longer, resulting in potential impacts on utility service (i.e. brown/black outs).

Thousand Oaks Substation is located near residences. Increasing transformer sizes would increase noise associated with the operation of the substation. However, transformers could be built to mitigate noise to less than significant levels.

³ The ability of a piece of electrical equipment to withstand abnormally high electrical current generated as a result of a short circuit. Electrical currents in excess of the short circuit duty can damage equipment leading to wide spread electrical system failure.

Larger transformers would increase the visual profile of the substations. Because these are already industrial sites, the impact of an increased profile would be less than significant.

3.4.6 No Project Alternative

CEQA requires an evaluation of the No Project Alternative in order that decision makers can compare the impacts of approving the project with the impacts of not approving the project. According to CEQA Guidelines (§15126.6[e]), the No Project Alternative must include:

- (a) the assumption that conditions at the time of the Notice of Preparation (i.e., baseline environmental conditions) would not be changed since the Proposed Project would not be installed, and
- (b) the events or actions that would be reasonably expected to occur in the foreseeable future if the project were not approved. The first condition is described in the EIR for each environmental resource as the "environmental baseline," since no impacts of the Proposed Project would be created. This section defines the second condition of reasonably foreseeable actions or events. The impacts of these actions are evaluated in each issue area's analysis in Section 4.

Under the No Project Alternative, the Proposed Project would not be implemented. It is likely that SCE would need to implement System Alternative A as a temporary fix as demand increases. However, System Alternative A would fail to meet most of the basic project objectives and therefore was not carried forward for analysis.

3.5 Alternatives Eliminated from Full EIR Evaluation

As discussed in Section 3.1, alternatives were assessed for their ability to reasonably achieve the basic project objectives and reduce the significant environmental impacts of the Proposed Project. Also, their technical, legal, and regulatory feasibility were evaluated. Based on these screening criteria, the alternatives eliminated from EIR consideration are listed above in Section 3.3.2. The rationale for elimination of each alternative is presented below.

3.5.1 Alternative Subtransmission Alignment 4

Description

Alternative Subtransmission Alignment 4 would construct the entire 66 kV subtransmission line underground from the origination points to the substation. The alignment would be the same as for the overhead portions described for Alternative Subtransmission Alignment 3. The construction of 66 kV subtransmission line underground from the intersection of Sunset Valley Road and Read Road east to the new substation would be the same as described for Alternative Subtransmission Alignment 3.

Compared to Alternative Subtransmission Alignment 3, two additional segments of 66 kV subtransmission line would be constructed underground. These would include the segments from

the origination point with the Moorpark-Thousand Oaks No. 2 line east along Read Road to Sunset Valley Road, and from the origination point with the Moorpark-Royal No. 2 line south along Sunset Valley Road to Read Road. At the intersection of Read Road and Sunset Valley Road the two single circuit lines would meet and be installed in a single duct bank east to the substation. The existing 16 kV distribution lines along these segments would remain in place, none of the existing wooden poles would be removed. A telecommunication line would be installed on the existing poles.

Rationale for Elimination

Alternative Subtransmission Alignment 4 would be technically feasible and capable of meeting basic project objectives.

Similar to the Proposed Project noise and air quality impacts would be significant unavoidable but to a greater degree. Construction emission levels (air quality impacts) and noise impacts would increase due to the increased trenching and duct bank construction required compared to the Proposed Project.

Impacts on aesthetic resources would be reduced to a level of less than significant in the same manner as Alternative Subtransmission Alignment 3.

In addition, preliminary analysis of environmental impacts identified potential significant impacts on cultural resources for the segment between the origination point with Moorpark-Thousand Oaks No. 2 and the intersection of Read Road and Sunset Valley Road.

Alternative Subtransmission Alignment 4 was eliminated from consideration because impacts to air quality and noise resources would increase and an additional potentially significant cultural resources impact would occur. In addition, the impacts on aesthetic resources would not be reduced more than under Alternative Subtransmission Alignment 3 which also reduced noise and air quality impacts and was carried forward for analysis.

3.5.2 Alternative Substation Site C

Description

Alternative Substation Site C would construct a new 66 kV/16 kV substation on a site approximately 4-acres in size, adjacent to the Moorpark-Thousand Oaks No 2 66 kV line. The substation would be located west of Moorpark Road roughly halfway between Read Road and Tierra Rejada Road. The site is located approximately 1.2 miles outside of the ENA.

The substation would be supplied by the Moorpark-Thousand Oaks No. 2 and Moorpark-Royal No. 2 66 kV source lines. A short connector loop would connect the substation to the Moorpark-Thousand Oaks No. 2 66 kV source line. A second 66 kV subtransmission line approximately 0.4-mile long would be constructed from the Moorpark-Royal No. 2 subtransmission line.

Distribution getaways carrying 16kV distribution circuits for this substation would likely be aligned north and south to access the interconnection points of the 16 kV distribution system. The northern alignment would likely be constructed in a duct bank under Moorpark Road to approximately Tierra Rejada Road. From there the existing ROW along Tierra Rejada Road would be followed to connect with the Simi Valley distribution circuits near Madera Road. It is not known whether this portion of the 16 kV line would be installed in a duct bank. The southern alignment would follow Moorpark Road south over the Norwegian Grade to connect with Thousand Oaks Substation distribution circuits. This would require the construction of a duct bank underneath Moorpark Road approximately 1.9 miles long.

Rationale for Elimination

An analysis of this alternative was conducted by the CEQA team to assess whether it was technically feasible and capable of meeting the basic project objectives. The construction of a duct bank south along Moorpark Road to interconnect with the Thousand Oaks Substation distribution circuits would require the closure of at least one lane of traffic for the duration of the duct bank construction. The topography and geology of the Norwegian grade would make trenching difficult. Construction would require additional time per foot of trench compared with the trenching for the Proposed Project. Studies have not been conducted to determine whether trenching and installation of conductor in this area would be technically feasible.

Because Alternative Substation Site C is 1.2 miles outside the Electrical Needs Area, it would not meet the substation siting criteria of being located such that at least two of the 16 kV distribution circuits could easily interconnect with circuits from adjacent substations. The addition of the duct bank distance to the existing 16 kV distribution line distance exceeds the standard reliability criteria for 16 kV distribution circuits in suburban and urban areas which are typically 3-5 miles. Connection with circuits from adjacent substations would add approximately 1.5 to 2.0 miles of additional16 kV distribution routing compared with the proposed substation and would result in 40% less operational flexibility (SCE 2009d).

Preliminary analysis of environmental impacts identified significant temporary impacts on traffic and aesthetics resources during the duct bank construction along Moorpark Road. Similar to the Proposed Project air quality impacts would be significant and unavoidable, Impacts on aesthetics resources resulting from the construction of a substation along Moorpark Road would be significant unavoidable to a greater degree than under the Proposed Project due its proximity to the County-Eligible Scenic Highway, changes to the existing viewshed (including the duration the substation would be visible to travelers).

3.5.3 Alternative Substation Site D

Description

Alternative Substation Site D would construct a new 66 kV/16 kV substation on a site approximately 4-acres in size, adjacent to the south side of Tierra Rejada Road. The substation

would be located roughly halfway between Hwy 23 and Esperance Road. The site is located approximately 0.5-mile outside of the ENA.

The CEQA team examined two potential 66 kV sources of power for a substation in this location. The first option would be to tap into the two existing 66 KV subtransmission lines which run along Tierra Rejada Road. These 66 kV subtransmission lines are the Moorpark-Royal No 2. and Moorpark-Shelline-Valdez. The second option is to use the Moorpark-Royal No.2 66 kV line along Tierra Rejada, and to construct a new 66 kV subtransmission line along Tierra Rejada to connect with the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line (approximately 2.6 miles long). This option would use the same two source lines as the Proposed Project.

Alternative Substation Site D would require the construction of two duct banks to provide for connecting the substations getaways with the Royal Substation and Thousand Oaks Substation 16 kV distribution circuits. Figure 3-1 shows the approximate 16 kV distribution circuit areas for each existing substation. The first duct bank would follow Tierra Rejada Road from the substation, approximately 2.7 miles east to connect with the Royal Substation distribution circuits near Madera Road. The second duct bank would be constructed to connect the substation getaways with the Thousand Oaks Substation circuits to the south. Two optional alignments using existing ROW for the second duct bank were identified:

Option 1 would follow Tierra Rejada Road east to Madera Road and then follow Madera and Olsen Roads back west to connect with the Thousand Oaks distribution. This alignment would be approximately 6.9 miles long.

Option 2 would follow Tierra Rejada Road west to Moorpark Road and then follow Moorpark Road south to connect with Thousand Oaks Substation circuits. This alignment would be approximately 3.4 miles long if technically feasible. Preliminary engineering for this potential duct bank has not been conducted but technical challenges associated with trenching and anchoring conduit up the Norwegian Grade (Moorpark Road) are anticipated (SCE 2009d).

Rationale for Elimination

An analysis of this alternative was conducted by the CEQA team to assess whether it was technically feasible and capable of meeting the basic project objectives. Alternative Substation Site D would require connection with two 66 kV subtransmission source lines. While connecting to the Moorpark-Royal No. 2 subtransmission line would be technically feasible, connection with either the Moorpark-Shelline-Valdez or the Moorpark-Thousand Oaks No. 2 lines present technical problems. Connection with the Moorpark-Shelline–Valdez 66 kV line would create a fault current problem should one of both of the Moorpark transformers be lost and therefore would fail to meet reliability criteria. Connection with the Moorpark-Thousand Oaks No.2 line would require bringing conductor from the existing line, north to Tierra Rejada Road and then east along Tierra Rejada Road to the substation. In order to meet reliability criteria, the line could not be collocated on the existing towers. Consequently, a new series of poles would need to be

constructed on the opposite side of Tierra Rejada Road, resulting in poles on both sides of Tierra Rejada Road for approximately 2.6 miles.

Alternative Substation Site D is 0.5 mile outside the ENA and in a location that would make connecting to existing 16 kV distribution circuits difficult. As a result of being located outside the substation target area the operational flexibility and reliability would be reduced compared with the proposed project but would still result in a net increase compared with a no project alternative. It would not meet the substation siting criteria of being located such that at least two of the 16 kV distribution circuits could easily interconnect with circuits from adjacent substations. The connection of the substation getaways with Thousand Oaks Substation circuits using the Option 1 alignment would require approximately 6.9 miles of duct bank exceeding standard reliability criteria (3-5 miles). The Option 2 alignment (3.4 miles) for the second duct bank would be able to meet reliability criteria, although sufficient engineering has not been completed to determine the technical feasibility of trenching and installing conductor along Moorpark Road.

The CEQA team assumed the technical feasibility of this alternative and conducted an environmental screening based on the following components:

- 66 kV subtransmission line connecting the substation to the Moorpark Royal #2 source line immediately across Tierra Rejada Road from the substation
- 66 kV subtransmission line connecting the substation to the Moorpark Thousand Oaks #2 source line by constructing a new 2.6-miles long 66 kV subtransmission line along the south side of Tierra Rejada Road, crossing Moorpark Road to the connection point.
- One 2.7-miles long 16 kV distribution getaway duct bank from the substation east along Tierra Rejada Road to a connection with the Royal Substation distribution circuits.
- One 3.4 miles long 16 kV distribution getaway duct bank (Option 2) from the substation west along Tierra Rejada Road and south along Moorpark Road to connect with the Thousand Oaks Substation distribution circuits

Based on these components construction of a new substation at Alternative Substation Site D would likely result in significant unavoidable air quality and noise impacts similar to the Proposed Project.

Significant unavoidable permanent aesthetic impacts would be created as a result of a new 66 kV subtransmission alignment along the southern side of Tierra Rejada Road. This would create 2.6 miles where subtransmission facilities are on both the north and south sides of Tierra Rejada Road. In addition temporary aesthetics impacts along Moorpark Road during constructed are anticipated. This alternative would however, eliminate the Proposed Project aesthetic impacts in the vicinity of the proposed Presidential Substation.

Due to the topography and geology of Moorpark Road alignment and the expected trenching difficulty there could be adverse traffic impacts on Moorpark Road for an extended construction period.

Although the location of aesthetics impacts would be changed, overall significant environmental impacts from Alternative Substation Site D would not be reduced compared to the Proposed Project. Therefore, this alternative was eliminated from consideration in the EIR.

3.5.4 Alternative Substation Site E

Description

Alternative Substation Site E would construct a new 66 kV/16 kV substation on a site approximately 4-acres in size, adjacent to the south side of Tierra Rejada Road. The substation would be located in unincorporated Ventura County, at the border with Simi Valley. The site is located approximately 0.4 mile outside of the ENA.

The CEQA team examined two potential 66 kV sources of power for a substation in this location. The first option would be to tap into the two 66 KV subtransmission lines which run along Tierra Rejada Road. These 66 kV subtransmission lines are the Moorpark-Royal No 2. and the Moorpark-Shelline-Valdez. The second option is to use the Moorpark-Royal No.2 66 kV subtransmission line along Tierra Rejada Road, and to construct a new 66 kV subtransmission line along Tierra Rejada to connect with the Moorpark-Thousand Oaks No. 2 line (approximately 4.2 miles long). This option would use the same two source lines as the Proposed Project.

Alternative Substation Site E would require the construction of two duct banks to provide for connecting the substations getaways with the Royal Substation and Thousand Oaks Substation 16 kV distribution circuits. Figure 3-1 shows the approximate 16 kV distribution circuit areas for each existing substation. The first duct bank would likely follow Tierra Rejada Road from the substation east (4.3 miles) to connect with the Royal Substation distribution circuits near Madera Road. The second duct bank would be constructed to connect the substation getaways with the Thousand Oaks Substation circuits to the south. Two optional alignments using existing ROW for the second duct bank were identified:

Option 1 would follow Tierra Rejada Road east to Madera Road and then follow Madera and Olsen Roads back west to connect with the Royal Substation distribution circuits. This alignment would be approximately 5.3 miles long.

Option 2 would follow Tierra Rejada Road west to Moorpark Road and then follow Moorpark Road south to connect with Thousand Oaks Substation circuits. This alignment would be approximately 4.9 miles long if technically feasible. Preliminary engineering for this potential duct bank has not been conducted but technical challenges associated trenching and anchoring conduit up the Norwegian Grade (Moorpark Road) are anticipated (SCE 2009d).

Rationale for Elimination

An analysis of this alternative was conducted by the CEQA team to assess whether it was technically feasible and capable of meeting the basic project objectives. Alternative Substation Site E would require connection with two 66 kV subtransmission source lines, while connecting with the Moorpark-Royal No. 2 subtransmission line would be technically feasible, connection with either the Moorpark-Shelline-Valdez or the Moorpark-Thousand Oaks No. 2 lines present technical problems. Connection with the Moorpark-Shelline–Valdez 66 kV subtransmission line would create a fault current problem should one of both of the Moorpark transformers be lost and therefore fail to meet reliability criteria. Connection with the Moorpark-Thousand Oaks No.2 line would require bringing conductor from the existing line, north to Tierra Rejada Road and then east along Tierra Rejada Road to the substation. Collocating the line on existing towers would fail to meet reliability criteria. To increase reliability new series of poles would be constructed on the opposite side of Tierra Rejada Road, resulting in poles on both sides of Tierra Rejada Road for approximately 4.1 miles.

Alternative Substation Site E is 0.4 mile outside the ENA and in a location that would make connecting to existing 16 kV distribution circuits difficult. As a result of being located outside the substation target area the operational flexibility and reliability would be reduced compared with the proposed project but would still result in a net increase compared with a no project alternative. It would not meet the substation siting criteria of being located such that at least two of the 16 kV distribution circuits could easily interconnect with circuits from adjacent substations. The connection of the substation getaways with Thousand Oaks Substation circuits using the Option 1 alignment would require approximately 5.3 miles of duct bank exceeding standard reliability criteria (3-5 miles). The Option 2 alignment (4.9 miles) for the second duct bank would be able to meet reliability criteria, although sufficient engineering has not been completed to determine the technical feasibility of trenching and installing conductor along Moorpark Road.

The CEQA team assumed the technical feasibility of this alternative and conducted an environmental screening based on the following components:

- 66 kV subtransmission line connecting the substation to the Moorpark Royal #2 source line immediately across Tierra Rejada Road from the substation
- 66 kV subtransmission line connecting the substation to the Moorpark Thousand Oaks #2 source line by constructing a new 4.2-miles long 66 kV subtransmission line along the south side of Tierra Rejada Road, crossing Moorpark Road to the connection point.
- One 4.3-miles long 16 kV distribution getaway duct bank from the substation east along Tierra Rejada Road to a connection with the Royal Substation distribution circuits.
- One 4.9 miles long 16 kV distribution getaway duct bank (Option 2) from the substation west along Tierra Rejada Road and south along Moorpark Road to connect with the Thousand Oaks Substation distribution circuits

Based on these components construction of a new substation at Alternative Substation Site D would likely result in significant unavoidable air quality and noise impacts similar to the Proposed Project.

Significant unavoidable permanent aesthetic impacts would be created as a result of a new 66 kV subtransmission alignment along the southern side of Tierra Rejada Road. This would create 4.2 miles where subtransmission facilities are on both the north and south sides of Tierra Rejada Road. In addition temporary aesthetics impacts along Moorpark Road during constructed are anticipated. This alternative would however, eliminate the Proposed Project aesthetic impacts in the vicinity of the proposed Presidential Substation.

Due to the topography and geology of Moorpark Road alignment and the expected trenching difficulty there could be adverse traffic impacts on Moorpark Road for an extended construction period.

Although the location of aesthetics impacts would be changed, overall significant environmental impacts from Alternative Substation Site D would not be reduced compared to the Proposed Project. Therefore, this alternative was eliminated from consideration in the EIR.

3.5.5 Alternative Substation Site F

Description

Alternative Substation Site F would construct a new 66/16 kV substation on an approximate 4-acre parcel of land located northwest of the intersection of Read Road and Sunset Valley Road in unincorporated Ventura County. The parcel is privately owned, and land use is described by Ventura County as quasi open space/undeveloped. The parcel does not contain any structures with the exception of the existing 16 kV distribution lines along Sunset Valley Road. The site is located a short distance outside of the ENA.

The substation would be supplied by two 66 kV source lines initiated at the same locations as the Proposed Project. The 66 kV source line from Moorpark-Royal No. 2 would originate near the intersection of Tierra Rejada Road and follow existing ROW along the western side of Sunset Valley Road until it reaches the substation. The 66 kV source line from Moorpark-Thousand Oaks No. 2 would originate near the intersection of Read Road and Moorpark Road and follow existing ROW along the southern side of Read Road until it reaches the substation. The alignment would cross Read Road to connect with the substation. These alignments would be similar to the single-circuit 66 kV alignments of the Proposed Project.

Distribution would require the construction of two duct banks to permit the exit of four 16 kV circuits. The first duct bank would connect the substation to approximately the intersection of Tierra Rejada Road and Sunset Valley Road. The alignment would begin at the substation and follow the existing 16 kV distribution line alignment along Sunset Valley Road North to Tierra Rejada Road. From there, the duct bank would follow Tierra Rejada Road east to approximately Madera Road

where it would connect with the Royal Substation distribution circuits. The alignment would be approximately 4.2 miles long.

The second duct bank approximately 3.1 miles long would be constructed to connect the substation to the Thousand Oaks Substation distribution circuits at approximately the intersection of Moorpark Road and Olsen Road. The alignment of the duct bank would be from the substation west along Read Road to the intersection with Moorpark Road. From there the alignment would follow Moorpark Road south over the Norwegian grade to the intersection with Olsen Road.

The construction of a duct bank south along Moorpark Road to interconnect with the Thousand Oaks Substation distribution circuits would require the closure of at least one lane for the duration of the duct bank construction. The topography and geology of the Norwegian grade would make trenching difficult. Construction would require additional time per foot of trench compared with the trenching for the Proposed Project. Preliminary engineering for this potential duct bank has not been conducted but technical challenges associated trenching and anchoring conduit up the Norwegian Grade (Moorpark Road) are anticipated (SCE 2009d).

Rationale for Elimination

Although this alternative is located outside the substation target area defined by SCE it would be capable of serving the ENA. As a result of being located outside the substation target area the operational flexibility and reliability would be reduced compared with the proposed project but would still result in a net increase compared with a no project alternative. This alternative would meet most of the basic project objectives and meets all legal, regulatory, and may meet technical feasibility criteria. Trenching for a duct bank up the Norwegian grade is anticipated to be difficult due to the topography and geology of the ROW. Preliminary engineering has not been conducted to determine whether conductor could adequately be anchored within conduit.

Overall this alternative would fail to lessen environmental impacts. Specific Proposed Project environmental impacts may be reduced but several new and more significant environmental impacts would be created. This substation would not require construction of a double circuit subtransmission line from the intersection of Sunset Valley Road and Read Road east to where the proposed Presidential Substation Site is located along Olsen Road. Impacts associated with construction along this alignment would not occur. However, ultimate build-out of the substation may require construction of a duct bank along this corridor, but is not considered to be reasonably foreseeable because the need for the additional duct bank has not been identified as occurring within the 10-year planning period.

The substation would be located immediately across from Underwood Farms which has been identified as a recreational facility. Construction of the substation would take several months, limiting the ability of SCE to schedule construction activities to avoid peak recreational visitation periods at Underwood Farms.

Trenching up the Norwegian grade will result in impacts on traffic and transportation. The narrowness of the corridor would require lane closures in order to trench and install the duct bank along Moorpark Road. Temporary aesthetics impacts resulting from trenching and duct bank installation along Moorpark Road would also occur.

Temporary and permanent significant unavoidable aesthetic impacts resulting from the substation construction and operation would occur as a result of its location.

3.5.6 Alternative Substation Site G

Description

Alternative Substation Site G would construct a new 66 kV/16 kV substation on a site approximately 4-acres in size, adjacent to the eastern side of Moorpark Road. The substation would be located in the City of Thousand Oaks, a short distance south of the intersection of Read Road and Moorpark Road. The substation site is in between Moorpark Road and the existing Moorpark-Thousand Oaks No. 2 66 kV subtransmission line. The site is located approximately 0.5 mile outside of the ENA.

The substation would be supplied by the Moorpark-Thousand Oaks No. 2 and Moorpark-Royal No. 2 66 kV source lines. Construction of 1.1 miles of 66 kV subtransmission line would be necessary to connect the substation to the Moorpark-Royal No. 2 66 kV source line. A second 66 kV subtransmission source connection would be constructed from the Moorpark-Thousand Oaks No. 2 subtransmission line which is immediately adjacent to the substation site.

Distribution getaways carrying 16kV distribution circuits for this substation would likely be aligned north and south to access the interconnection points of the 16 kV distribution system. The northern alignment would likely be constructed in a duct bank under Moorpark Road to approximately Tierra Rejada Road. From there the existing ROW along Tierra Rejada Road would be followed to connect with the Simi Valley distribution circuits near Madera Road (approximately 5.2 miles total). It is not known whether this portion of the 16 kV line would be installed in a duct bank or overhead on poles currently carrying the Moorpark-Royal No. 2 66 kV subtransmission line. The southern alignment would follow Moorpark Road south over the Norwegian Grade to connect with Thousand Oaks Substation distribution circuits. This would require the construction of a duct bank underneath Moorpark Road. Trenching for a duct bank up the Norwegian Grade (approximately 0.8 mile long) is anticipated to be difficult due to the substrate and narrowness of the ROW. Preliminary engineering for this potential duct bank has not been conducted but technical challenges associated trenching and anchoring conduit up the Norwegian Grade (Moorpark Road) are anticipated (SCE 2009d).

Rationale for Elimination

An analysis of the alternative was conducted by the CEQA team to assess whether it was technically feasible and capable of meeting the basic project objectives. The Alternative Substation Site G would require the construction of a duct bank south along Moorpark Road to interconnect with the Thousand Oaks Substation distribution circuits. The duct bank would be constructed within the Moorpark Road ROW requiring the closure of at least one lane for the duration of the duct bank construction. A second duct bank containing 16 kV distribution circuits would be required north along Moorpark Road to Tierra Rejada Road, where it would continue east in the existing ROW until reaching the interconnection with Royal Substation circuits.

Because Alternative Substation Site G is 0.5 mile outside the ENA, it would not meet the substation siting criteria of being located such that at least two of the 16 kV distribution circuits can easily interconnect with circuits from adjacent substations. Alternative Substation Site G would add approximately 1.5 to 2.0 miles of additional 16kV distribution routing compared with the proposed substation and would result in 40% less operational flexibility (SCE 2009d).

Trenching up the Norwegian grade would result in impacts on traffic and transportation. The narrowness of the corridor would require lane closures in order to trench and install the duct bank along Moorpark Road. Temporary aesthetics impacts resulting from trenching and duct bank installation along Moorpark Road would also occur.

Temporary and permanent significant unavoidable aesthetic impacts resulting from the substation construction and operation would occur as a result of its location.

3.5.7 System Alternative A – Upgrade Existing Substations Using Standard SCE Equipment and Transformers

Description

Increase capacity at two of the existing ENA Substations: Upgrade Potrero Substation and Royal Substation by replacing the existing transformers and 16 kV station capacitor banks with higher capacity equipment, and adding additional 16 kV circuits. The Thousand Oaks Substation is not capable of supporting an upgrade. The upgrades would consist of:

Potrero Substation Upgrades

- Replace two 22.4 MVA transformers with two 28 MVA transformers;
- Change two 3MVAR 16 kV station capacitor banks to two 4.8 MVAR 16 kV station capacitor banks; and
- Install one new 16 kV circuit approximately 1-mile long.

Royal Substation

- Replace one 22.4 MVA transformer with a 28 MVA transformer;
- Replace and relocate two 16 kV capacitor banks (4.8 and 6.0 MVAR) with three new 4.8 MVAR 16 kV capacitor banks;
- Extend the 16 kV operating and transfer buses and rack; and
- Install two new 16 kV circuits approximately 6.5 miles long.

Rationale for Elimination

This alternative does not meet the basic project objective of meeting long-term projected electrical load requirements in the ENA. The alternative would add 16.8 MVA of additional capacity which is not sufficient to meet need beyond 2014. Consequently, this alternative would require construction of a new substation in the future.

3.5.8 Non-Wires Alternative – Demand Management Conservation

Description

Demand Management Conservation programs are designed to reduce customer energy consumptions. CPUC regulatory requirements dictate that supply-side and demand-side resource options should be considered on an equal basis in a utility's plan to acquire lowest cost resources. These programs are designed to either reduce the overall use of energy or to shift the consumption of energy to off-peak times.

SCE offers a number of energy efficiency programs in California, under the umbrella of its Rebate and Savings program. The specific programs are divided into residential, business, builders and buyers, and energy management assistance programs.

Rationale for Elimination

Reductions in demand through energy conservation programs are part of SCE's future operations and are incorporated into its long-term peak load forecasts. Existing Demand Management Conservation programs run by SCE include rebates on energy-efficient appliances, incentives for customer-owned solar generation, a metering system that allows SCE customers with smart thermostats and appliances to automatically respond during critical peak pricing and reliability events, and more (SCE, 2011). However, these programs require voluntary participation. As separate and stand alone programs, SCE cannot guarantee that such voluntary programs would provide either the capacity or reliability needs of SCE in the ENA, as stated in the objectives for the Proposed Project. For these reasons, this alternative was eliminated from further consideration.

3.5.9 Non-Wires Alternative – Renewable or Conventional/ Distributed Generation Energy Resources

Description

Renewable

California Senate Bill (SB) X1-2, signed by Governor Brown in April 2011, codifies California's renewable energy goals at 33 percent by 2020. This law requires all California electricity providers to increase their procurement of eligible renewable resources to at least 33 percent by

2020, and contains interim targets of 20 percent by 2013 and 25 percent by 2016. When SB X1-2 takes effect on January 1, 2012, it will replace California's prior Renewable Portfolio Standard (RPS), enacted in 2002, that required retail sellers of electricity to increase their procurement of eligible renewable to 20 percent by 2017. The RPS Program was originally mandated by SB 1078 (Sher, Chapter 516, Statutes of 2002) under Public Utilities Code §381, 383.5, 399.11 through 399.15, and 445.

The CPUC, in collaboration with the California Energy Commission (CEC), is addressing its responsibilities in implementing the RPS through its own proceedings. On April 22, 2004 the CPUC issued an Order Instituting Rulemaking to specifically address the RPS (R.04-04-026). On March 8, 2003, the CEC and the CPUC approved an Energy Action Plan in addition to the Renewable Portfolio Standard. On September 21, 2005, the Energy Action Plan II was finalized. The shared goal of the Energy Action Plan is to:

"Ensure that adequate, reliable, and reasonably-priced electrical power and natural gas supplies, including prudent reserves, are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers."

In January 2006, the CPUC created the California Solar Initiative (CPUC ruling R.04-03-017) which moves the consumer renewable energy rebate program for existing homes from the CEC to the utility companies under the direction of the CPUC.

The CEC manages \$350 million targeted for new residential building construction. It will use funds already allocated to the CEC to foster renewable projects between 2007 and 2011. Called the New Solar Homes Partnership, it will focus on new residential construction.

Most of California's developed geothermal resources are located in Sonoma, Lake, Imperial, and Inyo Counties. Other geothermal resource areas in the State are found in Lassen, Mono, Siskiyou, and Modoc Counties. Some of the sites for new geothermal development are located in areas characterized by sensitive cultural and environmental concerns. Other issues that could delay development include permitting and access to transmission.

At present, there are over 16,000 wind turbines in the U.S., with most of them located in California. In total, approximately 1,800 megawatts (MW) of electricity is generated from 105 separate wind farms. According to the Renewable Resources Development Report (CEC, 2003), even in high capacity areas, wind energy technology requires approximately 5 to 6 acres per megawatt of wind power. In addition, an obstacle to utilizing wind generation is the lack of existing transmission infrastructure to transport the wind-generated power to the grid.

Currently there are two types of solar generation available: solar thermal power (also known as concentrating solar power) and photovoltaic (PV) power generation. At present, California generates approximately 345 MW of power with solar thermal power plants, with the majority of these facilities being parabolic-trough electric plants installed in the Mojave Desert, due to the large tracks of land required for this technology. PV power systems are available on a

significantly smaller scale, and have received increased support from private and public sections since the 1970s. PV systems typically convert about 10 percent of the available solar energy to alternating current electricity, and require approximately one square kilometer (247 acres) for a 100 MW rated power system.

Distributed Generation

Distributed generation is electricity production that is on-site or close to the load center that could be interconnected at16kV distribution, sub-transmission, or transmission system voltages. Distributed generation is generally limited to systems less than 20 MW. Distributed generation does not include hydroelectricity, geothermal, non-combined heat and power related digester gas, landfill gas, and municipal solid waste.

In March 2007 the CEC released the staff report *Distributed Generation and Cogeneration Policy Roadmap for California* (CEC, 2007). The report included a vision for Distributed Generation and Cogeneration of being significant components of California's electrical system, meeting over 25 percent of the total peak demand. To achieve its vision, California will support incentives in the near term, transition to new market mechanisms, and reduce remaining institutional barriers. In 2010, the California Attorney General's office released the "*Clean Energy Jobs Plan*" that provided possible mechanisms to create 12,000 MW of localized energy generation in California. The Clean Energy Jobs Plan called for California to develop 12,000 MW of localized energy by year 2020. The Plan described localized energy as onsite or small energy systems located close to where energy is consumed that can be constructed quickly (without new transmission lines) and typically without any environmental impact.

Rationale for Elimination

The distributed generation industry is still a nascent industry that survives despite some difficult market conditions. There are numerous institutional, industry and market barriers that have impeded the growth and adoption of the industry to date. Although the potential is recognized, distributed generation is not currently a significant energy resource. As of 2005, distributed generation penetration is 2.5 percent of total peak demand in California (CEC, 2007).

A Distributed Generation Alternative would involve deployment of distributed generation in the form of many small projects within the ENA at a pace more aggressive than SCE anticipates, or is projected in the Clean Energy Jobs Plan, which identified year 2020 as the target date for developing 12,000 MW of distributed energy. This timeframe exceeds the capacity needs projections within the ENA. Even if distributed generation energy supply sources in the ENA were built, substation capacity would continue to be a limiting factor requiring additional infrastructure. Because the potential for, and timing of, distributed generation within the ENA is uncertain and would require additional substation capacity, this alternative was not carried forward for analysis.

3.6 Cumulative Projects

As required by CEQA (§15130 et seq. of the CEQA Guidelines), this EIR includes an analysis of "cumulative impacts." CEQA defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative analysis is intended to describe the "incremental impact of the project when added to other, closely related past, present, or reasonably foreseeable probable future projects" and can result from "individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines, §15355).

A cumulative scenario has been developed to identify projects that are reasonably foreseeable and that would be constructed or operated during the life of the Proposed Project. The projects that comprise the cumulative impact scenario do not include existing projects that are under construction now, completed, or in operation. Existing projects are included as part of the environmental setting for individual issue areas and are analyzed with respect to each resource issue area in Chapter 4 *Environmental Analysis*.

The projects considered to be part of the cumulative scenario are presented in **Table 3-3**, which also describes the approximate geographic location of each project (**Figure 3-3**). The projects in the cumulative scenario include a range of project types from small single-family housing developments and road improvements to one industrial project that are in the vicinity of the Proposed Project and alternatives.

Cumulative impacts are analyzed in Chapter 6, CEQA Statutory Sections, Section 6.4, Cumulative Impacts.

Map ID	APN(s) or Project Name	Address / Location	Agency / Organization	Details	Status / Timeline	Distance from Proposed Project/Alternatives
T0-1	Case Number: 2008-70203 SUMN	3505 N. Moorpark Road (near intersection of Moorpark Road and Olsen Road)	City of Thousand Oaks	Install enhanced vapor recovery and in-station diagnostics requirements per State of California mandate.	Under Construction: Commercial	Less than 0.5 mile of Alternative 2
T0-2	2009-70045 PAR	4898 N. Moorpark Road	City of Thousand Oaks	Allow church facility use involving construction of a new sanctuary, social hall and classroom building.	Institutional Proposed	Less than 0.5 mile of the Proposed Project and Alterative 1 and 0.5 to 1.0 mile from Alternative 2
T0-3	2009-70043 SUMN	California Lutheran University Campus Faculty Road	City of Thousand Oaks	Construct (LEED-certified) two-story academic building and demolish three existing buildings (E, F, and G) for the California Lutheran University		Less than 0.5 mile of Alternative 2
T0-4	2008-0652 SUMN	California Lutheran University Campus, Campus Drive (area)	City of Thousand Oaks	Allow permanent use of existing temporary trailer facility for office space/storage.	Institutional Proposed	Approximately 0.5 mile of Alternative 2
T0-5	2008-70451 SUMN	California Lutheran University Campus, Campus Drive (area)	City of Thousand Oaks	Retain Facilities Building and modify east entrance to approved residence hall (Trinity Hall) for an existing university.	Institutional Proposed	Approximately 0.5 mile of Alternative 2
T0-6	2007-70124 SUMN	3575 N. Moorpark Road	City of Thousand Oaks	Install security gate at existing retirement facility	Institutional Proposed	Less than 0.5 mile of Alternative 2
T0-7	2004-71640 SUMN	California Lutheran University Campus	City of Thousand Oaks	Install emergency propane generator in fenced enclose for KCLU	Institutional Proposed	Less than 0.5 mile of Alternative 2
T0-8	Case Number: P/2005- 70012 LTP/2001-724Z APN: 5180060040	Near the intersection of Moorpark Road and Olsen Road (northwest side of intersection area)	City of Thousand Oaks	Construct dementia care facility; remove one and encroach one sycamore tree; change zone to P- L for future expansion of Castle Hill Retirement Village.	Institutional Proposed	Less than 0.5 mile of Alternative 2
T0-9	2207-70544 SUMNJ/2007-70625 LTMN/ 2007-70624 ORMN	California Lutheran University Campus, Olsen Road (area)	City of Thousand Oaks	Modify Master Plan; construct four new buildings (residence hall, facilities, academic and child care)	Institutional, Under Construction	Less than 0.5 mile of Alternative 2
T0-10	2007-70331 SUMN	California Lutheran University Campus, 139 Overton Court	City of Thousand Oaks	Phased construction of softball stadium for north campus area.	Institutional, Under Construction	Less than 0.5 mile of Alternative 2
T0-11	2003-790 DP	3620 Avienda Verano	City of Thousand Oaks	Develop Northwood Neighborhood Park	Institutional, Under Construction	Less than 0.5 mile of Alternative 2
T0-12	2003-425 LLA/1974-253 SUP M21/539 OPT	California Lutheran University Campus, area north of Olsen Road, between Mountclef Blvd. and Campus	City of Thousand Oaks	Construct sports/fitness center, pool athletic fields, tennis courts, track, preschool, maintenance and facilities yars; lot line adjustment for three lots; prune/ encroach seven / transplant 17 and remove seven oak trees.	Institutional, Under Construction	Less than 0.5 mile of Alternative 2

 TABLE 3-3

 CUMULATIVE SCENARIO – APPROVED AND PENDING PROJECTS

Map ID	APN(s) or Project Name	Address / Location	Agency / Organization	Details	Status / Timeline	Distance from Proposed Project/Alternatives
T0-13	2008-70474 SUMN	2967 N. Moorpark Road	City of Thousand Oaks	Expand/renovate existing veterinary emergency clinic	Commercial Approved	0.5 mile of Alternative 2
TOA-1	2009-70090 SUMN	2689 N. Moorpark Road	City of Thousand Oaks	Install enhanced vapor recovery and in-station diagnostics requirements per State of California mandate.	Commercial Under Construction	More than 0.5 mile but less than 1.0 mile of Alternative 2
TOA-2	2007-70697 LD/2003- 795-DP/944 PMW	2166 N. Moorpark Road and 2194 N. Moorpark Road	City of Thousand Oaks	Construct two-story medical building; merge two parcels into one and allow a single lot subdivision for medical office condos.	Commercial Under Construction	More than 0.5 mile but less than 1.0 mile of Alternative 2
	APN: 675037275			for medical office condos.		
TOA-3	2008-70554 SUMN	3525 Streamside Lane (near Dragon Fly off of Campus Drive, north of Olsen Road)	City of Thousand Oaks	Construct trellis, BBQ and children's play area.	Institutional Under Construction	More than 0.5 mile but less than 1.0 mile of Alternative 2
TOA-4	2006-70674 SUMN	3604 Hummingbird Lane (Fly off of Campus Drive, north of Olsen Road)	City of Thousand Oaks	Phase construction of arts/crafts building at prior- approved continuing care retirement facility.	Institutional Under Construction	More than 0.5 mile but less than 1.0 mile of Alternative 2
TOA-5	1974-253 SUP M22	Northeast corner Olsen Road and Campus Drive	City of Thousand Oaks	Phase construction of retirement facility with garden terrace apartments, single family villas, independent and assisted living, skilled nursing, recreation/ maintenance buildings and guard kiosk.	Institutional Under Construction	More than 0.5 mile but less than 1.0 mile of Alternative 2
TORES-1	2007-70159 PAR	Calle Zocala Circle	City of Thousand Oaks	Construct 10,000 sf detached dwelling and attached garage Residential Propose		Less than 0.5 mile of the Proposed Project and Alterative 1 and Alternative 2
TORES-2	2003-83 HPD/ 5467 T	Northwest corner of Olsen Road And Moorpark Road	City of Thousand Oaks	Divide 11.8 ac. into four lots, construct single- family detached dwellings Residential Proposed		Less than 0.5 mile of Alternative 2
TORES-3	2008-70560 PPD	4406 Zacalo Circle	City of Thousand Oaks	aks to dwelling Propos		Less than 0.5 mile of the Proposed Project and approximately 0.5 mile of Alterative 1 and Alternative 2
TORES-4	2004-71646 PPD	4920 Read Road	City of Thousand Oaks	aks 0.5 mil		Adjacent to/ Less than 0.5 mile of the Proposed Project and Alterative 1
TORES-5	2008-70341 SUP	East side of Moorpark Road, Approx 800 ft north of Olsen Road	City of Thousand Oaks			Less than 0.5 mile of Alternative 2
TORES-6	2003-222 PPD/2006- 70021 LD	730, 742, 766, 788, 786 Calle Contento	City of Thousand Oaks	Divide five lots into four; construct single-family detached dwellings	Residential Under Construction	Adjacent to/ Less than 0.5 mile of Alternative 2

 TABLE 3-3 (Continued)

 CUMULATIVE SCENARIO – APPROVED AND PENDING PROJECTS

Map ID	APN(s) or Project Name	Address / Location	Agency / Organization	Details	Status / Timeline	Distance from Proposed Project/Alternatives
1A	Casden	Southeast corner of Los Angeles Avenue and Madera Road	City of Simi Valley	Amend General Plan Land Use Designation to High Density Residential; Subdivide into 266 lots for residential development; Change zone to residential high (RH); Construct 266 condominiums and townhomes	Approved/ not built	Less than 0.5 mile of Alternative 2
1B	Huppert	1055 Fourth Street	City of Simi Valley	Subdivide into five lots for residential development; Construct five single family residences	In Plan Check Site Inspection (PCSI)	Less than 0.5 mile; less than 1.0 mile of Alternative 2
1C	Friendly Village Mobile Home Park	195 Tierra Rejada Road	City of Simi Valley	Replace laundry room with mobile home space	Under Construction	Less than 0.5 mile; less than 1.0 mile of Alternative 2
1D	Sunrise Assisted Living	136 Tierra Rejada Road	City of Simi Valley	 Change zoning to Residential Medium (Rm) Subdivide into two lots for senior living department Construct a 78 unit assisted living facility 	Under Construction	Less than 0.5 mile; less than 1.0 mile of Alternative2
1E	Ronald Reagan Presidential Library Annexation	229 acres near the terminus of Presidential Drive	City of Simi Valley	Annexation of Ronald Regan Presidential Library and adjacent property and pre-zoning	Incomplete Application	Less than 0.5 mile of Alternative 2 and less than 0.50 mile of the Proposed Project and approximately 0.50 mile of Alternative 1
1F	Villa Adagio	Southeast corner of Los Angels Avenue and Simi Village Drive	City of Simi Valley	 Change general plan designation of District Commercial to High Density Residential Change zoning to Residential Very High (RVH) 	Approved/ not built	Less than 0.5 mile of Alternative 2
2A	Sinaloa Park	980 Madera Road	City of Simi Valley			Less than 0.5 mile of Alternative 2
2B	St. Francis of Assisi Episcopal Church	280 Royal Avenue	City of Simi Valley	Meeting room (490 sq. ft.) addition to an existing In PCSI school building		Less than 0.5 mile of Alternative 2
2C	Target Store	51 Tierra Rejada	City of Simi Valley	Construct a Target Store and two pad buildings Approved/ not built 0.5 mile		0.5 mile from Alternative 2
2D	Tomra Pacific	1268 Madera Road	City of Simi Valley	Allow a staffed recycling center behind the Incomplete < Less than0.5		< Less than0.5 mile of Alternative 2
2E	Ventura County Fire Station #43	5850 East Los Angeles Avenue	City of Simi Valley	Construct a new fire station	In PCSI	Approximately 0.5 mile from Alternative 2

 TABLE 3-3 (Continued)

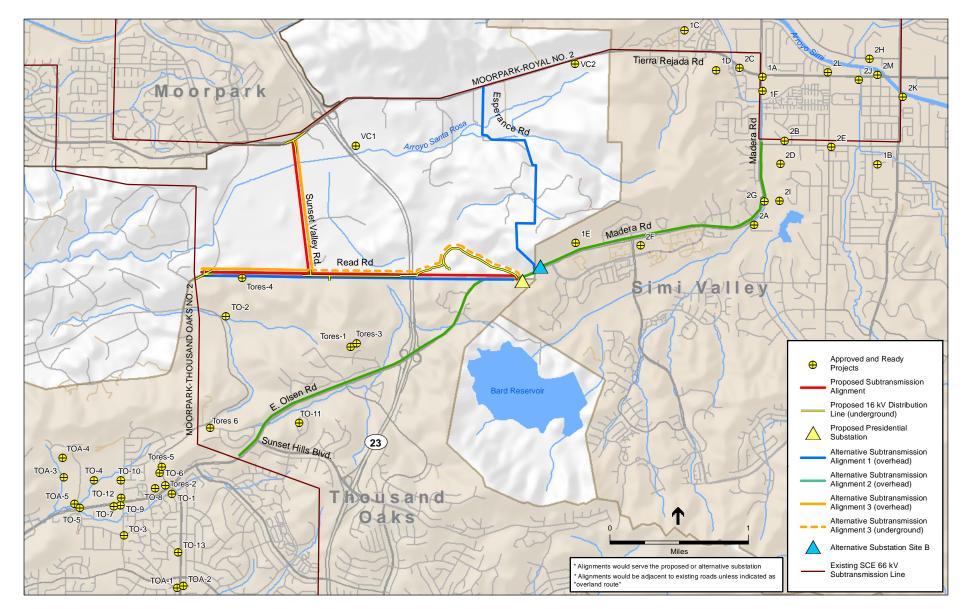
 CUMULATIVE SCENARIO – APPROVED AND PENDING PROJECTS

Map ID	APN(s) or Project Name	Address / Location	Agency / Organization	Details	Status / Timeline	Distance from Proposed Project/Alternatives
2F	Wood Ranch Center: Cell Site	525 Country Club Drive	City of Simi Valley	Install an emergency generator and wall enclosure	Incomplete Application	Less than 0.5 mile of Alternative 2 and less than 1.0 mile of the Proposed Project and approximately 1.0 mile from Alternative 1
2G	Wood Ranch Office Park	Madera Road north of Irvine Road	City of Simi Valley	 Subdivide one parcel into five lots for commercial uses Modify TP-SP-0631 	 Under Construction Incomplete Application 	Less than 0.5 mile of Alternative 2
				3. Construct multi-building office complex	3. Under Construction	
				4. Relocation of Pad 10 to the west	4. Approve/ not built	
2H	City Auto Body	2150 Agate Court	City of Simi Valley	Construct a 7,575 sq. ft. automotive repair facility	1. Approved/ not built	Approximately 1.0 mile of Alternative 2
21	Centre Court	1308 Madera Road	City of Simi Valley	1. Convert a soccer field in an existing retail center to a two-story 20,000 sq. ft. retail/office building	In PCSI	Less than 0.5 mile of Alternative 2
2J	Goodwill Store	660 East Los Angeles Avenue	City of Simi Valley	New stucco, light fixtures and fencing the receiving area.	Under Construction	Less than 0.5 mile, less than 1.0 mile of Alternative 2
2K	Los Angeles Square	1955 First Street	City of Simi Valley	Façade renovation of an existing shopping center Under Construction		1.0 mile of Alternative 2
2L	Medical Office Building	525 East Los Angeles Avenue	City of Simi Valley	1. Merge two lots for construction of medical office building	Approved/ not built	Less than 0.5 mile, less than 1.0 mile of Alternative 2
				2. Construct an approximate 25,000 sq. ft. three story medical office building		
2M	Mountain Gate Plaza	Northeast corner of First Street and Los Angeles Avenue (approximately 1227 East Los Angeles Avenue)	City of Simi Valley	1. Eight lot commercial subdivision 1. Is approved/not built 1.0 mill 2. convert theater to medical office 2. Is under construction 1.0 mill		1.0 mile of Alternative 2
VC1	50000393095	Adjacent to Tierra Rejada Road, west of State Hwy 23	County of Ventura	Equestrian Center. Renewal of an expired CUP (CUP 4696) for events. No new development proposed.	Incomplete	0.5 mile of Proposed Project and within 1.0 mile of Alternative 1
VC2	5000370285	Adjacent to Tierra Rejada Road and Llevarancho Road	County of Ventura	The project would develop 63 acres of 138 acre parcel with a church facilities and related uses.	Incomplete	Less than 1.0 mile of Alternative 1

 TABLE 3-3 (Continued)

 CUMULATIVE SCENARIO – APPROVED AND PENDING PROJECTS

SOURCES: City of Simi Valley, 2008; City of Thousand Oaks, 2009; County of Ventura, 2009



3-45

SOURCE: SCE, 2010

Presidential Substation Project . 207584.02 Figure 3-3 Projects Proposed, Approved, or Under Construction

References – Alternatives and Cumulative Projects

- California Energy Commission, 2010. Blythe Solar Power Project: Revised Staff Assessment, www.energy.ca.gov/sitingcases/solar_millennium_blythe/documents/index.html
- City of Simi Valley, 2008. Summary of Residential Development: Fourth Quarter 2008 City of Thousand Oaks, 2009. Current Planning Development Projects, City of Thousand Oaks, Community Development Department, May 2009 (project status through April 30, 2009).
- County of Ventura, 2009. Pending Projects List; Recently Approved Projects List, as of April 30, 2009.
- Southern California Edison (SCE). 2009d. Southern California Edison personal communication at July 10, 2009 Technical/Alternatives Meeting with SCE, CPUC and ESA. Information included in technical question follow up telephone conversations on group conference calls.
- SCE, 2011. Southern California Edison, Environment: Committed to Environmental Protection, www.sce.com/PowerandEnvironment/default.htm, accessed September 6, 2011.

CHAPTER 4 Environmental Analysis

Introduction to Environmental Analysis

This chapter provides discussion and full public disclosure of the significant environmental impacts of the Proposed Project and alternatives, including the No Project Alternative. This chapter examines the potential environmental impacts associated with the Proposed Project and alternatives as they relate to the following 16 areas of environmental analysis:

4.1	Aesthetics	4.9	Hydrology and Water Quality
4.2	Agriculture and Forestry Resources	4.10	Land Use and Planning
4.3	Air Quality	4.11	Noise
4.4	Biological Resources	4.12	Population and Housing
4.5	Cultural Resources	4.13	Public Services
4.6	Geology, Soils, Seismicity and Mineral Resources	4.14	Recreation
4.7	Greenhouse Gas Emissions	4.15	Transportation and Traffic
4.8	Hazards and Hazardous Materials	4.16	Utilities and Service Systems

Analysis within each issue area includes consideration of the following components of the Proposed Project:

- Construction of a new 66/16 kV distribution substation on an approximately 4-acre site;
- Replacement of existing 16kVdistribution and subtransmission poles with new subtransmission poles and installation of 66 kV subtransmission conductor to supply the substation. Installation of underground 66 kV subtransmission facilities for a small portion of the route;
- Construction or relocation of related 16kV components, including four new 16 kV distribution getaways at the proposed Presidential Substation, and relocation, transfer, or upgrade of existing 16 kV distribution facilities either to new subtransmission poles or to new underground 16kV distribution facilities. Upgrades to new 16 kV distribution getaways would involve installation of new conductors instead of re-hanging or burying the existing 16 kV conductor; and
- Construction of facilities to connect the substation to SCE's existing telecommunications system.

Within each of the environmental areas listed above, the discussion of Proposed Project impacts is provided in the following format:

- Environmental Setting
- Regulatory Setting (i.e., applicable regulations, plans, and standards)
- Significance Criteria
- Applicant Proposed Measures
- Environmental Impacts and Mitigation Measures for the Proposed Project
- Cumulative Impacts for the Proposed Project
- Environmental Impacts and Mitigation Measures for the Alternatives including the No Project Alternative

In addition to the No Project Alternative, the following alternatives are fully analyzed in this EIR (refer to Chapter 3 for a description of each alternative):

- Alternative Subtransmission Alignment 1
- Alternative Subtransmission Alignment 2
- Alternative Subtransmission Alignment 3
- Alternative Substation Site B
- System Alternative B

Each environmental issue area analyzed in this document provides background information and describes the environmental setting (baseline conditions) to help the reader understand the conditions that would cause an impact to occur. In addition, each section describes how an impact is determined to be "significant" or "less than significant". Finally, the individual sections recommend mitigation measures to reduce significant impacts. Throughout Chapter 4, *Environmental Analysis*, both impacts and the corresponding mitigation measures are identified by a bold letter-number designation (e.g., **Impact 4.1-1** and **Mitigation Measure 4.1-1a**).

In performing the analysis for this EIR, the EIR preparers relied on available published studies and reports and conducted independent investigations as needed. Information provided by SCE in their application and accompanying environmental documentation was also considered in the EIR analysis after independent review and assessment by the EIR preparers. The specific documents considered and relied upon are cited for each issue area in Sections 4.1 through 4.16.

Environmental Assessment Methodology

Environmental Baseline

The analysis of each issue area begins with an examination of the existing physical setting (baseline conditions as determined pursuant to §15125(a) of the State CEQA Guidelines) that may be affected by the Proposed Project and alternatives. The effects of the Proposed Project and alternatives are defined as changes to the environmental setting that are attributable to Proposed

Project components or operation. Pursuant to CEQA Guidelines (§15125[a]), the environmental setting used to determine the impacts associated with the Proposed Project and alternatives is based on the environmental conditions that existed in the study area in February 2009 at the time the Notice of Preparation was published.

Impact Significance Criteria

Significance criteria are identified for each environmental issue area. The significance criteria serve as benchmarks for determining if a component action would result in a significant adverse environmental impact when evaluated against the baseline. According to the State CEQA Guidelines §15382, a significant effect on the environment means "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…"

Applicant Proposed Measures (APMs)

In the Proponent's Environmental Assessment (SCE, 2008) and subsequent data response (SCE, 2010), SCE identified the following applicant proposed measures (APMs) that would be implemented to avoid or reduce potential impacts from the Proposed Project.

- **APM-BIO-01: Minimize Impacts to Coastal Sage Scrub.** To the extent feasible, the Proposed Project would be designed to avoid or minimize impacts to coastal sage scrub. Mitigation measures and compensation for impacts to coastal sage scrub would be developed in consultation with USFWS and CDFG to reduce the impacts to less than significant.
- **APM-BIO-02: Minimize Impacts to Jurisdictional Drainages.** A jurisdictional drainage delineation would be conducted during Spring 2009 to describe and map the extent of resources under the jurisdiction of the USACE, the RWQCB, and/or the CDFG following the guidelines presented in the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. As appropriate, SCE would secure a Streambed Alteration Agreement from the CDFG, and Clean Water Act Section 404 and 401 permits from the USACE and LARWQCB, respectively, prior to disturbing the jurisdictional drainage.
- **APM CUL-1: Cultural Resources Treatment Plan.** SCE will develop a Cultural Resources Treatment Plan that would define appropriate actions necessary to lessen or avoid potential impacts to sites CA-VEN-1571 and CA-VEN-744.
- APM CUL-2: Installation of Geotextile Type Fabric along Access Road. Prior to construction, SCE will address the drivability of the access road leading to site CA-VEN-744. In the event that the road is determined to be inadequate for transporting of equipment, SCE would design and implement the placement of geotextile-type fabric and fill soil along the road prior to access road usage. The placement of the geotextile-type fabric and fill soil would protect the archaeological site from potential impacts such as increased displacing of artifacts of the existing site surface due to vehicle traffic and road maintenance.

- **APM CUL-3: Capping of Archaeological Site on Potential Impact Areas.** Prior to installation of the subtransmission structure located at site CA-VEN-744, SCE will cap the portions of the site that have the potential to be impacted. To cap the site, SCE will place geotextile-type fabric on the surface of the archaeological site and then spread imported fill soil or other suitable material over the geotextile-type fabric. The capping will prevent future erosion of the site surface as a result of SCE's ingress and egress for maintenance and inspection activities. The archaeological site cap will not be removed after construction.
- **APM CUL-4: Construction of Earthen Pad.** SCE will install an earthen pad adjacent to the existing subtransmission structure location. The earthen pad is necessary to support heavy equipment required to install the subtransmission structure safely, while preserving archaeological site CA-VEN-744 from potential construction related impacts. The earthen pad area will be covered by geotextile-type fabric and then overlaid by "honey comb structure." The honey comb structure will be filled with imported fill soil. The earthen pad would not be removed after construction and will be utilized for maintenance activities.
- **APM CUL-5: Fencing of an Environmentally Sensitive Area.** SCE would install an Environmentally Sensitive Area (ESA) fence to protect portions of archaeological sites CA-VEN-744 and CA-VEN-1571 from potential impacts.
- **APM CUL-6: Native American Monitoring.** SCE will retain the services of a Chumash Native American representative to conduct monitoring activities during work carried out within sites CA-VEN-744 and CA-VEN-1571 and in their vicinity. The Native American representative will be present during any archaeological excavations and during project construction in those areas determined by SCE's project archaeologist as having the potential to contain archaeological resources.
- **APM CUL-7: Archaeological Monitoring.** A qualified archaeologist will be on site to monitor ground-disturbing activities within or in the vicinity of sites CA-VEN-744 and CA-VEN-1571. If archaeological resources were identified during construction activities, construction would be halted in that area and away from the discovery, until a qualified archaeologist assesses the significance of the resource. The archaeologist would recommend appropriate measures to record, preserve or recover the resources.
- **APM-PAL-01: Develop and Implement a Paleontological Monitoring Plan.** A project paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists shall be retained by SCE to develop and implement a Paleontological Monitoring Plan prior to the start of ground disturbing activities at the Proposed Project substation site. As part of the Paleontological Monitoring Plan, the project paleontologist shall establish a curation agreement with an accredited facility prior to the initiation of ground-disturbing activities. The Paleontological Monitoring Plan shall also include a final monitoring report. If fossils are identified, the final monitoring report shall contain an appropriate description of the fossils, treatment, and curation.
- **APM-PAL-02: Paleontological Monitoring.** A paleontological monitor shall be on site to observe ground-disturbing activities within the paleontologically sensitive formations at the Proposed Project substation site. If fossils are found during ground-disturbing activities, the paleontological monitor shall be empowered to halt the ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment.

Moreover, the Project Description does incorporate procedures or protocols which directly relate to how the Proposed Project would be constructed, and which were considered as part of the Proposed Project during preparation of this EIR. The Project Description, therefore, upon adoption of the Final EIR, becomes part of the Mitigation Monitoring, Reporting and Compliance Program, and the construction components and methods therein would be monitored by the CPUC.

Environmental Consequences

The EIR evaluates the environmental consequences and potential impacts that the Proposed Project and the alternatives would create. The impacts identified were compared with predetermined, specific significance criteria, and were classified according to significance categories listed in each issue area.

Impact Analysis

The EIR evaluates the potential environmental impacts that the Proposed Project and alternatives would create. Impacts are classified as:

- Class I: Significant; cannot be mitigated to a level that is less than significant
- Class II: Significant; can be mitigated to a level that is less than significant

Class III: Less than significant, no mitigation required

No Impact: No impact identified

When significant impacts are identified, feasible mitigation measures are formulated to eliminate or reduce the intensity of the impacts and focus on the protection of sensitive resources. The effectiveness of a mitigation measure is subsequently determined by evaluating the impact remaining after its application. Those impacts meeting or exceeding the impact significance criteria after mitigation are considered residual impacts that remain significant (Class I). Implementation of more than one mitigation measure may be needed to reduce an impact below a level of significance. The mitigation measures recommended in this document are identified within each issue area section (Sections 4.1 through 4.16) and are presented in the Mitigation Monitoring, Reporting and Compliance Program in Chapter 8 of this document.

Cumulative Projects Impact Analysis

Section 6.4 presents the cumulative impact scenario. The focus in the cumulative impact analysis was to identify those project impacts that might not be significant when considered alone, but may contribute to a significant impact when viewed in conjunction with past, current, and reasonably foreseeable future projects.

Impacts of Alternatives

Chapter 3 provides a list, description, and map that identify alternatives to the Proposed Project. Each issue area section (Sections 4.1 through 4.16) presents the impact analysis for each alternative, while Chapter 5 provides a summary of the collective impacts of each alternative in comparison with the impacts of the Proposed Project.

References – Environmental Analysis

- Southern California Edison (SCE), 2008. Proponent's Environmental Assessment for the Presidential Substation Project, February 2008.
- Southern California Edison (SCE), 2010. Southern California Edison, Data Request Response. Presidential ED-04, June 9, 2010.

4.1 Aesthetics

This section describes the visual resources in the vicinity of the Proposed Project and alternatives, and the associated regulatory framework. The impact analysis presents the significance criteria used to evaluate impacts on identified resources as a consequence of implementing the Proposed Project or alternatives, the methods used in evaluating these impacts, and the results of the impact assessment based on the applied significance criteria.

4.1.1 Setting

The study area for visual resources encompasses the landscapes directly affected by facilities proposed under the Proposed Project and each of the project alternatives, as well as the surrounding areas that would be within view of the project components. The visual analysis focuses on views from public areas including major or scenic roadways, parks and recreational areas, and scenic vistas.

Definitions Related to Visual Resources

Visual resources consist of the landforms, vegetation, rock and water features, and human modifications that create the visual character and sensitivity of a landscape. A number of factors are documented for the existing visual resources of the study area in order to determine the manner in which those resources or characteristic landscapes may be modified by the Proposed Project and alternatives. The primary existing visual condition factors considered in this study area are defined below and include: Visual Quality, Viewer Exposure, Viewer Types and Volumes, and Visual Sensitivity.

Visual Quality is defined as the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The attributes of line, form and color combine in various ways to create landscape characteristics whose variety, vividness, coherence, uniqueness, harmony, and pattern contribute to the overall visual quality of an area. For the purposes of this EIR, visual quality is defined according to three levels:

- *Indistinctive, or industrial*: generally lacking in natural or cultural visual resource amenities typical of the region
- *Representative*: typical or characteristic of the region's natural and/or cultural visual amenities
- Distinctive: unique or exemplary of the region's natural or cultural scenic amenities

Viewer Exposure addresses the variables that affect viewing conditions from potentially sensitive areas. Viewer exposure considers the following factors:

- Landscape visibility (i.e., the ability to see the landscape)
- Viewing distance (i.e., the proximity of viewers to the project)

- Viewing angle whether the project would be viewed from above (superior), below (inferior) or from a level (normal) line of sight
- Extent of visibility whether the line of sight is open and panoramic to the project area or restricted by terrain, vegetation and/or structures
- Duration of view

Viewer Types and Volumes of use pertain to the types of use (i.e., public viewers including recreationalist and motorist) and amounts of use (i.e., number of recreational users or motorists) that various land uses receive.

Visual Sensitivity is the overall measure of an existing landscape's susceptibility to adverse visual changes. People in different visual settings, typically characterized by different land uses surrounding a project, have varying degrees of sensitivity to changes in visual conditions depending on the overall visual characteristics of the place. In areas of more distinctive visual quality, such as designated scenic highways, designated scenic roads, parks, and recreation and natural areas, visual sensitivity is characteristically more pronounced. In areas of more indistinctive or representative visual quality, sensitivity to change tends to be less pronounced, depending on the level of visual exposure. This analysis of visual sensitivity is based on the combined factors of visual quality, viewer types and volumes, and visual exposure to the Proposed Project and alternatives. Visual sensitivity is reflected according to high, moderate and low visual sensitivity ranges.

Regional and Local Setting

Existing Visual Quality of the Region

The Proposed Project and alternatives are located in a semi-rural area of southeastern Ventura County, within the Conejo Valley. The visual character of southeastern Ventura County is characterized by mountains, valleys and coastal areas. Bordered to the north by Los Padres National Forest, to the east and south by Los Angeles County, and to the west by the Pacific Ocean, dominant features and natural landforms include rolling foothills, ridgelines, agricultural lands, and views of the Simi Hills to the north and east and Santa Monica Mountains to the south and west. The Conejo Valley is a picturesque valley encompassing parts of southeastern Ventura County and northwestern Los Angeles County, and is known for its rim of scenic mountains and rolling hills.

In the study area, the primary land uses are residential developments, farmland, and open space. Urban centers include the cities of Thousand Oaks, Simi Valley, and Moorpark. However, a significant portion of land is also unincorporated and remains rural in character, with such features as farms, grassy hills, and equestrian centers. Natural landforms visible from and within the study area include major ridgelines, canyons, woodlands, valley floor, rolling hillsides and knolls, stands of oak and sycamore trees, and green and urban parkways. Human-made features (including utility poles and lines, residential and agricultural structures, ancillary farming equipment, fencing, roadways, and local road signage) are visible from select locations, in both near-field and far-field distances. Existing subtransmission lines, as well as other existing utility structures, are established features within the study area's landscape setting.

A significant portion of the study area falls within the Tierra Rejada Valley, an area in unincorporated Ventura County that is protected as part of the Tierra Rejada Valley Greenbelt Agreement. Greenbelt Agreements in Ventura County are created to maintain the integrity of separate, distinct cities and to prevent inappropriately placed development between city boundaries. These agreements protect agricultural lands and open space, as well as reassure property owners located within these areas that land will not be prematurely converted to uses which are incompatible with agriculture or open space uses (Ventura County, 2010a). Visual resources in the Tierra Rejada Greenbelt include open space, agricultural areas, equestrian centers, rolling hillsides, and rural residential developments.

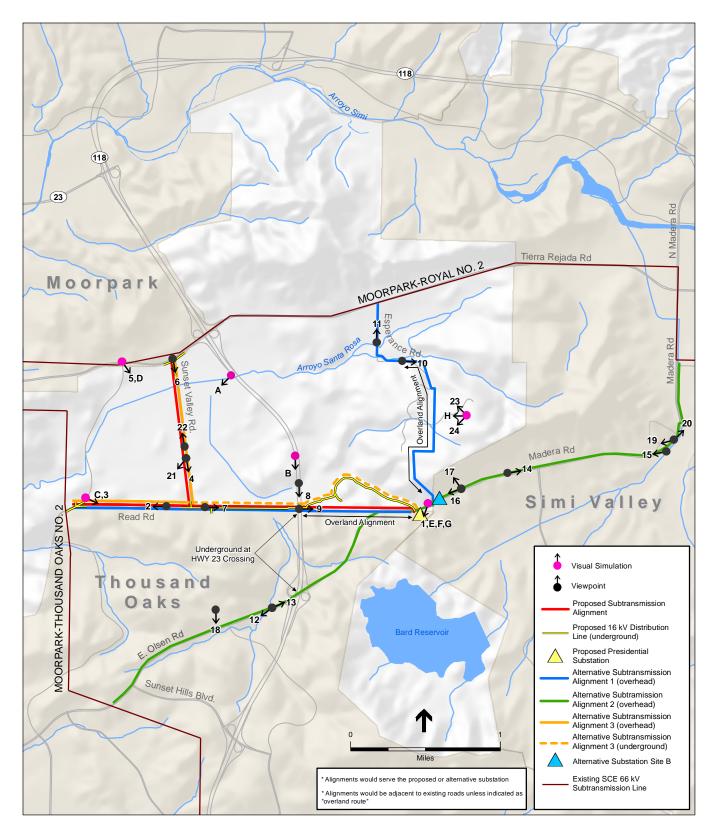
Two additional designated open space areas are located in the vicinity of the Proposed Project and alternatives. The McCrea Open Space Area is comprised of 148 acres located between East Olsen Road in the City of Thousand Oaks and Read Road in Ventura County. Within the McCrea Open Space is a 75-acre Wildlife Refuge, whose visual resources include a deep canyon that provides a year-round water source for local wildlife and riparian vegetation, and rocky outcrops that are favorite roosting and nesting sites for birds of prey. In addition, the area supports several species of rare and endangered plants (COSCA, 2009). The Sunset Hills Open Space Area includes 410 acres of open space preserves distributed throughout the Sunset Hills community in northern Thousand Oaks. The preserves within this Open Space Area protect oak woodlands, coastal sage scrub, non-native grasslands and coastal sage scrub. Several trails stemming from a trailhead on the east side of Erbes Road provide views of Bard Reservoir and, on clear days, the Pacific Ocean. The area supports numerous species of wildlife, including birds of prey such as red-tailed hawks (*Buteo jamaicensis*), black-shouldered kites (*Elanus axillaris*), and northern harriers (*Circus cyaneus*). Anna's hummingbirds are attracted to the area during spring blooms (COSCA, 2009).

Existing Visual Quality of Project Site

The following subsections describe the existing visual character of the areas in which the Proposed Project and alternatives would be constructed. In conjunction with the descriptions, a series of photographs taken from representative public vantage points portray the existing visual character of these locations. **Figure 4.1-1** is a viewpoint map that depicts, by photograph numbers, the location and directions from which these setting photographs were taken. **Figures 4.1-2a** through **4.1-2f** present the setting photographs, which were assigned numbers by order of mention in following subsections. The photographs depicting viewsheds are limited in the sense that they provide only fixed viewpoints and cannot demonstrate all views of or from the project site or along a site's perimeter.

Proposed Presidential Substation

The proposed Presidential Substation site is on the eastern edge of the City of Thousand Oaks, on Olsen Road near the border of the City of Simi Valley. The visual quality of the site is considered representative and characteristic of the region's natural amenities. Surrounded by avocado orchards, the Substation, which would have a 4-acre footprint, would be built on land which is presently undeveloped. Surface terrain is characterized by low hills and a ravine created by the convergence of two hills just south of Olsen Road, which drains to an existing storm drain under



Presidential Substation Project . 207584.02 Figure 4.1-1 Viewpoint Map

SOURCE: SCE, 2010; ESA, 2010



Photo 1: View of Proposed Presidential Substation site from Olsen Road looking southwest



Photo 2: Read Road looking west



Photo 3: Moorpark Road at Read Road looking east



Photo 4: Sunset Valley Road looking south toward Read Road

Presidential Substation . 207584.02 Figure 4.1-2a Existing Settings



Photo 5: Moorpark Road and Tierra Rejada Road looking southeast across greenbelt



Photo 6: Tierra Rejada Road looking south down Sunset Valley Road



Photo 7: Read Road near intersection with Sunset Valley Road, looking east



Photo 8: Highway 23 southbound approaching border of the City of Thousand Oaks looking south

Presidential Substation . 207584.02

Figure 4.1-2b Existing Settings

SOURCE: ESA, 2009



Photo 9: Highway 23 northbound at border between the City of Thousand Oaks and unincorporated Ventura County, looking east



Photo 11: Esperance Drive looking north



Photo 10: Esperance Drive looking east



Photo 12: Olsen Road at Calle Zocalo looking southwest

Presidential Substation . 207584.02 Figure 4.1-2c Existing Settings



Photo 13: Olsen Road at Calle Zocalo looking northeast



Photo 14: Madera Road at Presidential Drive looking east



Photo 15: Madera Road at Irvine Road looking west



Photo 16: Madera Road westbound approaching North Country Club Drive

Presidential Substation . 207584.02

Figure 4.1-2d Existing Settings

SOURCE: ESA, 2009



Photo 17: View of Alternative Substation Site B from Olsen Road and North Country Club Drive, looking northwest



Photo 18: View from Canada Park looking south



Photo 19: View from Sinaloa Golf Course looking west at Madera Road at Irvine Road



Photo 20: View from Sinaloa Golf Course looking northeast at Madera Road

Presidential Substation . 207584.02
 Figure 4.1-2e
 Existing Settings

SOURCE: ESA, 2009



Photo 21: View from entrance of Underwood Family Farms on Sunset Valley Road, looking south



Photo 22: View from entrance of Underwood Family Farms on Sunset Valley Road, looking north



Photo 23: View from the west lawn of the Ronald Reagan Presidential Foundation and Library, looking northwest



Photo 24: View from the west lawn of the Ronald Reagan Presidential Foundation and Library, looking southwest

Presidential Substation . 207584.02

Figure 4.1-2f Existing Settings

SOURCE: ESA, 2009

the road. The site consists of undeveloped agricultural/open space, dominated by grasses, bushes and shrubs (see **Figure 4.1-2a**, **Photo 1**, which represents a motorist's view of the site looking southwest from Olsen Road). Existing subtransmission lines are established features within the landscape setting, as is a guard rail separating the site from Olsen Road. The site is zoned *Open Space (OS)* by the City of Thousand Oaks Zoning Ordinance, a designation that recognizes and identifies "the intrinsic ecological value, scenic and/or undisturbed nature of particular private parcels of land" (City of Thousand Oaks, 2009). Adjacent areas consist of a privately owned avocado orchard (south and east), Lake Bard Water Filtration Plant (further south), and a former sheriff's station, now abandoned, across Olsen Road to the northeast.

Views of the proposed Presidential Substation would be limited to motorists traveling on Olsen Road, an east-west local roadway bordering the north side of the Substation site. Figure 4.1-2a, Photo 1 represents the view of a motorist heading west on Olsen Road, past the proposed Presidential Substation site. Olsen Road is a City of Thousand Oaks designated Scenic Highway (City of Thousand Oaks, 1974), with four lanes and a bike lane, and a traffic speed of 55 miles per hour. Olsen Road becomes Madera Road, a designated Scenic Roadway in the City of Simi Valley and Eligible County Scenic Highway, once it enters the City of Simi Valley, just east of the Substation site. Views of the Substation from this roadway would be unobstructed for approximately one-half mile. A sidewalk is located on the south side of Olsen Road, from the intersection of Olsen Road and North Country Club Drive to approximately 215 feet northeast of the proposed Presidential Substation site. However, a hillside between the end of the sidewalk and the Substation would be partially to fully screen views of the Substation. In addition, this sidewalk would be expected to experience a low volume of pedestrians, because it leads to a vacant site and ends abruptly on a busy road.

Proposed Subtransmission Alignment along Read Road from Moorpark Road to Sunset Valley Road

A Proposed Project subtransmission alignment would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line, near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. For approximately 0.8 mile, the proposed subtransmission alignment would parallel Read Road along the south side, within existing SCE franchise ROW. Read Road is a two-lane County road with unpaved shoulders that is an Eligible County Scenic Highway (Ventura County, 2010a). Existing utility lines run parallel to the roadway on both the north and south sides, with an existing SCE subtransmission line running along the south side of the road (see **Figure 4.1-2a**, **Photo 2**, which represents motorists' views from Read Road heading west). The land to the north of this portion of Read Road is part of the Tierra Rejada Greenbelt. The visual character of the landscape is agricultural and open space, and features consist of crops and open fields. To the south of Read Road, the visual character is hilly terrain with agriculture and rural residences, with approximately 40 residences on large lots. The visual quality is representative of the agricultural/residential attributes generally present in the area.

Viewers of the proposed subtransmission alignment in this area would consist of residential viewers; motorists on Moorpark Road, Read Road, and Sunset Valley Road; and visitors to the Underwood Family Farms on Sunset Valley Road, a local farm that provides educational tours, a

harvest festival, and self-pick produce. Moorpark Road is a two-lane Eligible County Scenic Highway that travels north-south just west of the proposed subtransmission alignment. Motorists on Moorpark Road would travel under the tie-in point of the proposed subtransmission alignment with the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line, and would have open and unobstructed views of the proposed subtransmission alignment as it travels east along Read Road. Figure 4.1-2a, Photo 3, represents motorists' views traveling on Moorpark Road, looking east down Read Road towards the Proposed Project. Views would be unobstructed from Moorpark Road, looking across open space and agricultural land in the Tierra Rejada Greenbelt. Motorists along Read Road would also have open views of the proposed subtransmission alignment. As seen in Figure 4.1-2a, Photo 2, mature trees on Read Road would partially obstruct views of the poles and lines from some locations, but views of the proposed subtransmission alignment would be predominantly unobstructed across a backdrop of sky. Motorists traveling south on Sunset Valley Road and visitors to Underwood Family Farms would have views of the proposed subtransmission alignment from across the Tierra Rejada Greenbelt, for approximately 1.0 mile. Views of the proposed subtransmission alignment would be partially obstructed by utility structures on Sunset Valley Road. However, Read Road, along which the proposed subtransmission alignment runs, is slightly elevated compared to Sunset Valley Road. As depicted in Figure 4.1-2a, Photo 4, which represents motorists' views looking southwest from Sunset Valley Road, Read Road's slight elevation would enhance views of the proposed subtransmission alignment. The Underwood Family Farm and associated facilities (including a classroom) are located along the east side of Sunset Valley Road. At some locations, mature trees and farm facilities would partially or fully obscure views of the proposed subtransmission alignment from residences and the Family Farm. However, from other locations views of the proposed subtransmission alignment would be unobstructed. As stated above, the visual quality of the viewshed for the proposed subtransmission alignment is considered representative, as views from the roadways include Greenbelt area, agricultural operations, and residences.

A limited number of residential viewers would have views of this proposed subtransmission alignment. As noted above, approximately 40 residences are located along the south side of Read Road from Moorpark Road to Sunset Valley Road, all of whom would have open views of the subtransmission line. Several of these residences are located on the hillside, and thus would have elevated views of the poles and lines. At some locations, mature trees would partially or fully obscure views of the Proposed Project from residences. However, from other locations, views of the Proposed Project would be unobstructed. In addition, a private residential development is located in the City of Moorpark, a little over 1.0 mile north of Read Road. Open views toward the proposed subtransmission alignment would be available from approximately 17 residences located along the south side of Delaware Drive, a private roadway located along a hillside that overlooks the Tierra Rejada Greenbelt. These residences have unobstructed views of the Greenbelt to the south, against a backdrop of rolling hills. A variety of man-made features including existing poles and lines for electricity, telephones and other utilities, as well as ancillary farming equipment, residences, local roadways and signage are also are visible from this location. The closest residence in this development would be located approximately 1.0 mile from the Read Road portion of the proposed subtransmission alignment.

Proposed Subtransmission Alignment along Sunset Valley Road from Tierra Rejada Road to Read Road

A Proposed Project subtransmission line would tie-in at Moorpark-Royal No. 2 66 kV subtransmission line on Tierra Rejada Road at Sunset Valley Road. The proposed subtransmission alignment would travel south along the west side of Sunset Valley Road for approximately 1.0 mile to Read Road, within existing SCE franchise ROW. Sunset Valley Road is a two-lane County road with unpaved shoulders that traverses the Tierra Rejada Greenbelt. As such, the visual character of the landscape is the same as described above, consisting predominantly of agricultural and open space. Existing SCE electrical lines run parallel to the roadway on west side of the road, and features visible from the road include crops, ancillary farming equipment and structures, a nursery, a farm, rural residential areas and equestrian areas. The visual quality is representative of the agricultural attributes generally present in the area.

Viewers of this proposed subtransmission alignment would consist of residential viewers; motorists on Moorpark Road, Sunset Valley Road, and Tierra Rejada Road in unincorporated Ventura County and Read Road in the City of Thousand Oaks; and visitors to Underwood Family Farms. Motorists on Moorpark Road would have partially obstructed views of this portion of the proposed subtransmission alignment from a distance of approximately one-half mile, for roughly 1.0 mile. Views from Moorpark Road would be across open space and agricultural land in the Tierra Rejada Greenbelt, and views would range from partially obstructed by intervening low hills and vegetation to open and panoramic. Figure 4.1-2b, Photo 5, represents motorists' views looking southeast across the greenbelt, toward the proposed subtransmission alignment, from the corner of Moorpark Road and Tierra Rejada Road. From this location, views of the project would be mostly screened by topography, and would blend with other features in the viewshed such as existing utility poles, lines, and the traffic signal. Motorists traveling east on Read Road between Moorpark Road and Sunset Valley road would have open and unobstructed views of this portion of the proposed subtransmission alignment across the Greenbelt, for approximately 0.8 mile. Motorists traveling north and south on Sunset Valley Road, including visitors to Underwood Family Farm, would travel parallel and next to the proposed subtransmission alignment for approximately 1.0 mile, and would have open and unobstructed views of the Proposed Project for the entire duration of the travel time. Figure 4.1-2a, Photo 4, represents motorists' views looking southwest from Sunset Valley Road.

Tierra Rejada Road is a four-lane road that travels east-west. Motorists on Tierra Rejada Road would travel under the tie-in point of the proposed subtransmission line with the Moorpark-Royal No. 2 66 kV subtransmission line, and would have open and unobstructed views of the proposed subtransmission alignment as the line travels south along Sunset Valley Road. Figure **4.1-2b**, **Photo 6**, represents motorists' views from Tierra Rejada Road, at the traffic light at the corner of Sunset Valley Road looking southwest. Views would be partially obstructed by topography and vegetation from some portions of Tierra Rejada Road, and open and unobstructed looking across open space and agricultural land from other portions. Again, the visual quality of the viewshed for Tierra Rejada Road and Sunset Valley Road is considered representative, and views from the roadways include greenbelt area, agriculture and residences.

The same residential viewers discussed above (for the proposed subtransmission alignment along Read Road from Moorpark Road to Sunset Valley Road) would have views of this portion of the proposed subtransmission alignment. As such, viewers include rural residences situated along Read Road in unincorporated Ventura County, as well as Delaware Drive in the City of Moorpark. Views from the residences on Read Road would range in distance from approximately 0 to 1.0 mile. At some locations, mature trees would partially or fully obscure views of the Proposed Project. However, from other residences, views of the Proposed Project would be unobstructed, particularly from the houses on the hill on south side of Read Road. Views from the residences on Delaware Drive would start from a distance of approximately 0.2 mile, and be largely panoramic and unobstructed, due to the elevation of the residences on the hillside.

Views of this portion of the proposed subtransmission alignment from the Underwood Family Farm would range from open and panoramic to partially/fully obstructed by structures and intervening vegetation. The visual quality of the viewshed for Underwood Family Farms is considered representative, and views from the facilities include greenbelt area, agriculture and residences.

Proposed Subtransmission Alignment along Read Road from Sunset Valley Road to the Proposed Presidential Substation

From the corner of Read Road and Sunset Valley Road, this proposed subtransmission alignment would travel east along the south side of Read Road for approximately three-quarters of a mile until the end of Read Road just west of Hwy 23 (see **Figure 4.1-2b**, **Photo 7**). The proposed subtransmission alignment would continue east underneath Hwy 23, an Eligible County Scenic Highway in Ventura County, and a designated Scenic Highway in the City of Thousand Oaks. In this area, Hwy 23 is a four-lane divided highway with a traffic speed of 65 miles per hour. The proposed subtransmission alignment would continue east from Hwy 23 for another three-quarter mile, crossing Olsen Road, a designated Scenic Highway in the City of Thousand Oaks, and connecting with the Proposed Project Presidential Substation. As described earlier, Olsen Road is four-lane divided road with a traffic speed of 55 miles per hour.

The visual character of the landscape surrounding this portion of the proposed subtransmission alignment is predominantly agricultural and open space, composed of crops, farms, associated ancillary farming equipment, residences, and existing infrastructure including roads and utility structures. A portion of land adjacent to the proposed subtransmission alignment to the south is zoned Open Space by the City of Thousand Oaks, and as such, is recognized for its intrinsic scenic value (City of Thousand Oaks, 2009). Viewers of the Proposed Project in this area would be limited to motorists on Read Road, Hwy 23, and Olsen Road, as well as from a limited number of residences. Mature trees along Read Road would partially screen views of the Proposed Project from motorists on Read Road (see Figure 4.1-2b, Photo 7). Motorists on Hwy 23 and Olsen Road would have open and unobstructed views of the Proposed Project as it approaches the roadways on both sides. **Figure 4.1-2-b**, **Photo 8**, represent motorists' views traveling on Hwy 23 motorist looking south towards a TSP where the proposed subtransmission alignment would transfer from overhead poles to a steel casing underneath Hwy 23. **Figure 4.1-2c**, **Photo 9**, portrays motorists' views looking east to where the proposed subtransmission alignment would reemerge from under

Hwy 23, and travel overhead toward the proposed Presidential Substation. The visual quality of this viewshed is considered representative, as views from the roadway include open space, agriculture, existing utility lines, a large antenna and satellite dishes on the ridgeline, and highway features such as the median and signage.

A limited number of residential viewers would have views of this portion of the proposed subtransmission alignment, including local residences along Read Road, residences in a residential development off of Read Road to the south (the Enclave development), and a residence on the east side of Hwy 23. Views from rural residences along this portion of the proposed subtransmission alignment would range from open to partially obstructed by mature trees and vegetation. Because the residences within the Enclave development are on the hillside to the south of the Read Road, their elevation would give residences more open views of the project alignment, though views would still be partially screened by vegetation and structures.

Other Substations

In addition to the construction of approximately 3.5 miles of subtransmission line and the proposed Presidential Substation (described above), the Proposed Project would include upgrades to the 66 kV subtransmission relays at the Royal and Moorpark substations. These substations are located at 2375 First Street, Simi Valley and Gabbert Avenue and West Los Angeles Avenue (Hwy 118), Moorpark, California, respectively.

All project activities would occur within the existing substation fencelines. The visual character of these substation sites is industrial, dominated by SCE's subtransmission and substation components. The substations are surrounded by chain-link fencing (some portions of which have brown slats to obstruct views) and vegetation. Due to topography, obstruction by vegetation and existing industrial structures, and existing fencing surrounding the substations, modifications made to the substations from the Proposed Project would be partially to fully screened from public views.

Alternative Subtransmission Alignment 1

Like the Proposed Project, Alternative Subtransmission Alignment 1 would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line, near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. For approximately 1.5 miles the alternative subtransmission alignment would parallel Read Road, an Eligible County Scenic Highway along the south side within existing SCE franchise ROW. The visual setting is generally characterized by designated open space areas, agricultural land, and rural residential areas located within one-quarter mile to the south of Read Road. The Enclave development is located adjacent to the ROW to the south, just west of where the alternative subtransmission alignment would cross underneath Hwy 23. At mile 1.5, Alternative Subtransmission Alignment 1 would cross underneath Hwy 23 and continue east approximately 0.75 mile. Just east of the Hwy 23 undercrossing, the visual setting is predominantly open space, with one rural residence. Approximately 120 feet before the proposed Presidential Substation site, the alternative subtransmission alignment would traverse Olsen Road, a City-designated Scenic Highway, and connect with the proposed Presidential Substation.

Motorist along Moorpark Road, Read Road, Hwy 23, and Olsen Road would have views of Alternative Subtransmission Alignment 1. Depending on the location of the motorist, views of Alternative Subtransmission Alignment 1 would range from direct and unobstructed to partially screened. Motorists along Moorpark road would have direct to partially screened views of the alternative subtransmission alignment to the east (Figure 4.1-2a, Photo 3), while motorists along Read Road would drive parallel to and under the alternative subtransmission alignment for a maximum of approximately 1.5 miles (Figure 4.1-2a, Photo 2). Motorists would have views of Alternative Subtransmission Alignment 1 from Hwy 23 to the east and the west of the highway (Figure 4.1-2b Photo 8 Figure 4.1-2c Photo 9), and from Olsen Road as they approach and pass beneath the alternative subtransmission alignment. The visual quality of views from these travel routes is considered representative of the open space, agricultural and residential landscape of the area.

From the proposed Presidential Substation site, Alternative Subtransmission Alignment 1 continues in a generally northerly direction for approximately 1.8 miles of new ROW. For approximately the first mile, the landscape is characterized by the abandoned Ventura County Sheriff's Station; open space with steep grassy hillsides, brush and rocky outcroppings; and scattered rural residences. For the next 0.8 mile the alternative subtransmission alignment parallels Esperance Road until it reaches the Moorpark-Royal No. 2 66 kV subtransmission line, near the intersection of Tierra Rejada Road and Esperance Road. The landscape in this portion of the alternative subtransmission alignment is characterized by open space, residences, several equestrian centers and associated structures, a water tank, and existing utility lines along Esperance Road.

Motorists along Esperance Drive would have primarily open and obstructed views of Alternative Subtransmission Alignment 1. **Figure 4.1-2c**, **Photo 10**, represents motorists' view from Esperance Drive looking southeast towards Alternative Subtransmission Alignment 1. **Figure 4.1-2c**, **Photo 11**, represents motorists' view from Esperance Drive looking north towards Tierra Rejada Road. Views of Alternative Subtransmission Alignment 1 from Tierra Rejada Drive would be partially obstructed by trees and vegetation. Views of Alternative Subtransmission Alignment 1 from the Ronald Reagan Presidential Library, which receives approximately 400,000 visitors annually, would have open and unobstructed views. The visual quality is considered representative of the open space, equestrian and residential landscape of the area.

Alternative Subtransmission Alignment 2

Alternative Subtransmission Alignment 2 would originate at the Moorpark-Thousand Oak Subtransmission No. 2 line, at the intersection of Olsen Road and Sunset Hills Road in the City of Thousand Oaks. Alternative Subtransmission Alignment 2 would travel approximately 2.7 miles along the north side of an existing utility corridor on Olsen Road. Olsen Road is a designated Scenic Highway in the City of Thousand Oaks. The visual setting is characterized by existing utility structures such as poles and lines, rural residences, open space, a golf course, hillsides, and scenic vistas. **Figures 4.1-2c** and **4.1-2d** represents the view from Olsen Road looking southwest (**Photo 12**), and northeast (**Photo 13**), just west of the intersection of Hwy 23. At approximately mile 1.5 Alternative Subtransmission Alignment 2 would go under Hwy 23, and continue on Olsen Road roughly 1.2 miles to the proposed Presidential Substation site. The visual setting is characterized by highway, open space, hillsides, and a limited number of buildings mostly associated with the Ventura County Sheriff's Department. The visual quality of the Olsen Road viewshed is considered representative of the open space, residential and scenic landscape of this area, with select distinct locations where the road overlooks designated scenic vistas (discussed below in Section 4.1.1.2, *Viewer Types and Volumes*).

From the proposed Presidential Substation, Alternative Subtransmission Alignment 2 would continue in a northeasterly direction for approximately 2.2 miles along the existing utility corridor on Madera Road¹, a designated Scenic Roadway in the City of Simi Valley and Eligible County Scenic Highway (City of Simi Valley, 1988; Ventura County, 2010a). Madera Road has four-lanes with a bike lane and a traffic speed of 55 miles per hour. The alternative subtransmission alignment would connect with the Moorpark-Royal No. 2 line near the corner of Madera Road and Royal Avenue. The visual setting along Madera Road varies, and is characterized by a mixture of open space, residential, a golf course, and commercial buildings. **Figure 4.1-2d**, **Photo 14**, represents motorists' view from Madera Road at Presidential Drive, which leads to the Ronald Reagan Presidential Library, looking east. **Figure 4.1-2d**, **Photo 15**, represents motorists' view from the entrance/exit of the Sinaloa Golf Course on Madera Drive looking west. The visual quality of the Madeira Road viewshed is considered representative of the mixed-use, residential and commercial quality of the area.

Viewers along Olsen Road, Hwy 23, and Madera Road would have views of Alternative Subtransmission Alignment 2. Residential views of this ROW range from partially to fully screened. Motorists traveling along Olsen Road and Madera road would travel underneath the line as it paralleled the road. Views would range from open to partially screened by vegetation and structures. Motorists along Hwy 23 would have limited views of the alternative subtransmission alignment to the west and to the east of the highway. As noted above, the visual quality of the viewshed is considered representative of the residential, commercial, and open space quality of the area.

Alternative Subtransmission Alignment 3

Alternative Subtransmission Alignment 3 would be identical to the Proposed Project with respect to the segment on Read Road from Moorpark Road to Sunset Valley, and the segment along Sunset Valley from Tierra Rejada to Read Road. As discussed above, the visual setting of these locations is generally characterized by designated open space areas, agricultural land, and rural residential areas. Viewers along Moorpark Road, Read Road, Sunset Valley Road and Tierra Rejada Road would have views of this portion of Alternative Subtransmission Alignment 3. Residential views of this ROW range from partially screened to open and panoramic.

From the intersection at Sunset Valley Road and Read Road, Alternative Subtransmission Alignment 3 would follow the same route as the Proposed Project from Sunset Valley Road to the

¹ Olsen Road in the City of Thousand Oaks becomes Madera Road upon entry into the City of Simi Valley.

Hwy 23 undercrossing, and a slightly more northerly route from the undercrossing to the proposed Presidential Substation site, following the route the proposed 16 kV distribution line relocation alignment. However, this portion of Alternative Subtransmission Alignment 3 but would be entirely underground, and consequently would not be visible to the public. The visual setting of the alternative subtransmission alignment from Sunset Valley Road to the proposed Presidential Substation is representative of the rural residential, agricultural, and open space characteristic of the region.

Alternative Substation Site B

Alternative Substation Site B is located on an approximate 2.3 acre parcel of land on the north side of Madera Road in the City of Simi Valley. The parcel is presently owned by the City of Simi Valley and previously housed the Ventura County Sheriff's Department. It contains several abandoned concrete block buildings and structures, a garage, former underground fuel storage tanks, and parking areas that were used by the Sheriff's Department. The buildings are located on the hillside, and as such are elevated from Madera Road. The ground surface of Alternative Substation Site B has been terraced upslope, from south to north. The parcel is presently landscaped with light posts and ornamental vegetation, and has some industrial features including chain link fence and a radio antenna. The facility has an established entry which is controlled by a signal at the intersection of Madera Road and Country Club Drive. The visual character of the site is representative. Privately owned vacant land bounds the parcel to the east and the west. A residential parcel is located to the north.

Views of Alternative Substation Site B would be seen by motorists traveling Madera Road and Country Club Drive in the City of Simi Valley, as well as visitors to commercial buildings located across the street from Alternative Substation Site B. Madera Road is an east-west local roadway that is a continuation of Olsen Road into the City of Simi Valley. Madera Road is a City of Simi Valley designated Scenic Roadway, four-lanes with a bike lane and a traffic speed of 55 miles per hour. The road is also an Eligible County Scenic Highway. Motorists' views of Alternative Substation Site B while heading west on Madera Road would be partially obstructed by vegetation and topography while approaching the site (see **Figure 4.1-2d**, **Photo 16**), and open and panoramic while passing by. Country Club Drive is a four-lane city road that stems off of Madera Road just southeast of Alternative Substation Site B. Motorists' views at the intersection of Country Club Drive and Madera Road would be open and panoramic, with an elevated view of Alternative Substation Site B. **Figure 4.1-2e**, **Photo 17**, represents a motorists' view from Madera Road and Country Club Drive looking northwest at the existing buildings on the site.

Directly across the street from Alternative Substation Site B are commercial buildings and a sidewalk on the south side of Madera Road. Views of Alternative Substation Site B would be open and panoramic to visitors and employees at the commercial buildings. The sidewalk would be expected to experience a low volume of pedestrians, because it leads to a vacant site and ends abruptly on a busy road.

Viewer Types and Exposures

Viewer types and exposure conditions vary substantially in the project area. Public viewer groups evaluated include motorists along major or scenic roadways, visitors to parks recreational areas, and visitors to scenic vistas. Major or scenic roadways include: Moorpark Road, Read Road, Tierra Rejada Road and Hwy 23 in unincorporated Ventura County; East Olsen Road and Hwy 23 in the City of Thousand Oaks; and Madera Road in the City of Simi Valley. Recreational areas include: Canada Park, McCrea Open Space Area, Sunset Hills Country Club Golf Course, and Sunset Hills Open Space Area in the City of Thousand Oaks; the Ronald Reagan Presidential Library, Sinaloa Golf Course, and Wood Ranch Golf Club in the City of Simi Valley; and Underwood Family Farms, Tierra Rejada Golf Club, Fieldstone Riding Club, Shadowbrook Stables, Classic Equestrian Center, CastleRock Farms, Elvenstar, and Rancho Linda Mio Riding Club in unincorporated Ventura County. Scenic vistas include six locations along Olsen Road that have been designated by the City of Thousand Oaks as prominent vistas.

For each of the viewer groups identified in the study area, viewer exposure conditions were determined based on knowledge of the project areas and site visits conducted on February 10 and April 13, 2009, and on September 14, 2010. Variables considered include the viewing distance, angle of view, the extent to which views are screened or open, and duration of view. Viewing distances are described according to whether the project activities would be viewed within a foreground (within one-half mile or 2,640 feet), middleground (one-half mile to two miles), or background (beyond two miles) zone. Viewing angle and extent of visibility consider the relative location of the project facility to the viewer and whether visibility conditions are open or panoramic, or limited by intervening vegetation, structures or terrain.

Duration of view pertains to the amount of time the project facilities or area would typically be seen from a sensitive viewpoint. In general, duration of view would be less in instances where the project facility would be seen for short or intermittent periods (such as from major travel routes and recreation destination roads) and greater in instances where the project facility would be seen regularly and repeatedly (such as from public use areas).

Motorists on Major or Scenic Travel Routes

In the study area, numerous roads are designated or eligible scenic roadways, per Ventura County, and/or the cities of Thousand Oaks and Simi Valley. In the portion of the study area within Ventura County, Hwy 23, Read Road, Madera Road and Moorpark Road are Eligible County Scenic Highways (Ventura County, 2010a). In the portion of the study area within the City of Thousand Oaks, Hwy 23, Olsen Road, Moorpark Road, and Erbes Road are designated Scenic Highways (City of Thousand Oaks, 1974). In the portion of the study area within the City of Simi Valley, Madera Road (from Olsen Road to Irvine Road, approximately) is a designated Scenic Roadway (City of Simi Valley, 1988).

Traffic volumes are classified as low (less than 10,000 vehicle trips per day), moderate (10,000 to 20,000) and high (over 20,000 vehicle trips per day). **Table 4.1-1** summarizes major and/or

Travel route	Relation to Proposed Project and Alternatives
Highway 23	Proposed Project and Alternative Subtransmission Alignments 1, 2, and 3 cross underneath.
Moorpark Road	The Proposed Project and Alternative Subtransmission Alignment 3 run parallel overhead from a distance of 0.3 to 0.7 mile for approximately 1.0 mile. The Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 cross overhead.
Read Road	Proposed Project and Alternative Subtransmission Alignment 1 travel overhead, parallel and adjacent for approximately 1.5 miles. Alternative Subtransmission Alignment 3 travels overhead parallel for approximately 0.8 mile, and underground for approximately 0.7 mile.
Tierra Rejada Road	Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 travel overhead perpendicular.
Olsen Road	Proposed Project and Alternative Subtransmission Alignment 1 cross overhead. Alternative Subtransmission Alignment 3 crosses underneath. Alternative Subtransmission Alignment 2 travels overhead, parallel and adjacent to for approximately 2.7 miles.
Madera Road	Alternative Subtransmission Alignment 2 travels overhead, parallel and adjacent to for approximately 2.2 miles. The proposed Presidential Substation site and Alternative Substation Site B are located adjacent to Madera Road.

TABLE 4.1-1 MAJOR AND SCENIC ROADS IN PROJECT AREA

scenic roads in the Proposed Project and alternatives study area. For additional information on local roadways, see Section 4.15, *Transportation and Traffic*.

Highway 23

Hwy 23 is an important regional travel corridor within the study area. As noted above, the portion of the highway to the north of the proposed undercrossing is a designated Eligible County Scenic Highway; the portion of the highway to the south of the proposed undercrossing is designated by the City of Thousand Oaks as a Scenic Highway (Ventura County, 2010a; Thousand Oaks, 1974). Traffic volumes along Hwy 23 in the study area are high, with an annual average daily traffic (ADT) level of 68,000 vehicles per day (Caltrans, 2010).

Views of the proposed subtransmission alignment from Hwy 23 would range from open and panoramic to fully screened by intervening topography and vegetation. All views would be of short duration. For motorists traveling southbound on Hwy 23, the overhead portion of the proposed subtransmission alignment to the east and west of Hwy 23 would be visible from a distance of approximately one-half mile, due to a curve in the highway. Assuming a traffic speed of 65 miles per hour, the Proposed Project would be visible for approximately 33 seconds. For motorists traveling northbound on Hwy 23, the portion of the alignment crossing Hwy 23 would be visible from a distance of approximately 0.6 mile, or roughly 39 seconds, before passing over it. Alternative Subtransmission Alignment 1 and Alternative Subtransmission Alignment 3 would cross under Hwy 23, in the same location as the Proposed Project. Alternative Subtransmission Alignment 3 would be underground on the either side of Hwy 23, resulting in no views. Alternative Subtransmission Alignment 2 would go under Hwy 23 in the City of Thousand Oaks, where Olsen Road goes under the highway, and views would be partially screened by terrain.

Moorpark Road

Moorpark Road is a north-south two-lane County road that has been designated as an Eligible County Scenic Highway by Ventura County. Traffic volumes are moderate, estimated at 16,500 vehicles per day (Ventura County, 2010b). The Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 would cross Moorpark, and views would be within foreground and middleground range. In addition to traveling under the alignment where it crosses Moorpark Road, motorists would also have views of the Sunset Valley Road portion of the Proposed Project, across the Tierra Rejada Greenbelt, as well as views of the Read Road portion of the project. Views would be primarily open and panoramic, across the Tierra Rejada Greenbelt (see Figure 4.1-2a, Photo 3), and would be of short duration. Views of the Proposed Project from the corner of Moorpark Road and Tierra Rejada Road would be partially to fully screened by topography (see Figure 4.1-2b, Photo 5).

Read Road

Read Road is a two-lane Eligible County Scenic Highway with low traffic volumes. The Proposed Project and Alternative Subtransmission Alignment 1 would parallel Read Road for approximately 1.5 miles. Alternative Subtransmission Alignment 3 would parallel Read Road for approximately 0.8 mile. Views of the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 would be open and inferior for motorists traveling under and next to the subtransmission alignments (see Figure 4.1-2a, Photo 2), but of short duration. Assuming a traffic speed of 25 miles per hour, the subtransmission alignment would be visible for a maximum of three minutes for the Proposed Project and Alternative Subtransmission Alignment 1, and under two minutes for Alternative Subtransmission Alignment 3.

Tierra Rejada Road

Tierra Rejada Road is a four-lane, divided road, with moderate traffic volumes (average 17,200 vehicles per day) (Ventura County, 2010b). The Proposed Project and Alternative Subtransmission Alignment 3 would be within foreground views from Tierra Rejada Road, as the alignment would originate on the south side of Tierra Rejada Road and head south down Sunset Valley Road. Alternative Subtransmission Alignment 1 would be within middleground view range. Views would range from open and panoramic to partially screened by intervening vegetation and topography. Views would be most visible to motorists at the traffic lights on Tierra Rejada Road at the corner of Sunset Valley Road (see Figure 4.1-2b, Photo 6), and the corner of Moorpark Road (Figure 4.1-2b, Photo 5). However, views would be of short duration. Mature trees and vegetation on Tierra Rejada Road and Esperance Drive would partially to fully screen views of the Proposed Project and Alternative Subtransmission Alignment 3, and views would be of short duration.

Olsen Road

Olsen Road is a four-lane divided road that is a designated Scenic Highway in the City of Thousand Oaks. Though the City of Thousand Oaks and Ventura County do not have exact traffic volumes for Olsen Road, as an extension of Madera Road in the City of Simi Valley traffic volumes on Olsen Road would be expected to be similar to those on Madera Road, which are high (approximately 39,300 vehicles per day) (Ventura County, 2010b). The proposed Presidential Substation would be

located on Olsen Road, and the Proposed Project and Alternative Subtransmission Alignment 1 would cross over Olsen road, just west of the proposed Presidential Substation. Views would be panoramic and open but of short duration, as motorists travel underneath the line and past the proposed Presidential Substation. Alternative Subtransmission Alignment 2 would parallel and be adjacent to Olsen Road for approximately 2.7 miles. Views of Alternative Subtransmission Alignment 2 would range from panoramic and open to partially screened by vegetation (see Figure 4.1-2c, Photo 12 and Figure 4.1-2d, Photo 13), as motorists travel underneath the line. Assuming a traffic speed of 55 miles per hour, Alternative Subtransmission Alignment 2 would be visible from Olsen Road for approximately three minutes. Alternative Subtransmission Alignment 3 would cross under Olsen Road. However, the alternative alignment would be underground on the either side of Olsen Road, resulting in no views.

Madera Road

Madera Road is the continuation of Olsen Road in the City of Simi Valley. It is a four-lane divided road, and from Olsen Road to Irvine Road it is designated as a Scenic Roadway by the City of Simi Valley. Traffic volumes are high, estimated at approximately 39,300 vehicles per day (Ventura County, 2010b). Alternative Substation Site B would be located on Madera Road. Alternative Subtransmission Alignment 2 would run parallel and adjacent to Madera Road for approximately 2.2 miles, and views from the road would range from panoramic and open to partially screened by vegetation (see Figure 4.1-2d, Photos 14 and 15), but of short duration. Assuming traffic speed of 55 miles per hour, Alternative Subtransmission Alignment 2 would be visible from Madera Road for approximately 2 minutes and 20 seconds.

Park and Recreation Areas

Public parks and designated recreational areas in the study area include open space areas, a community park, four golf courses, several equestrian centers, the Underwood Family Farm, and the Ronald Reagan Presidential Library.

Open Space Areas

Two designated open space areas are located in the study area; both are managed by the Conejo Open Space Conservation Agency (COSCA). The McCrea Open Space Area is a 148-acre discontiguous open space area known in particular for its 75 acre McCrea Wildlife Refuge. The southern border of the refuge abuts East Olsen Drive in the City of Thousand Oaks, and the northern border runs along a small portion of Read Road, in unincorporated Ventura County. The open space area is located adjacent to the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 2 north of Olsen Road. The open space area provides unobstructed views of these alignments. However, under terms of an agreement with the McCrea family, public access to this preserve is limited to protect sensitive resources (COSCA, 2008; COSCA, 2009). Consequently, the open space and refuge provides limited access to potential viewers of the Proposed Project or alternatives, and potential viewer exposure would be low.

The Sunset Hills Open Space Area consists of 410 acres of discontiguous preserves distributed throughout the Sunset Hills community in northern Thousand Oaks. The northernmost portion of the open space area is located just east of Hwy 23, along the northern border of the City of Thousand Oaks. The open space area is located adjacent to the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 to the south (between Hwy 23 and Olsen Road), and adjacent to Alternative Subtransmission Alignment 2 the north and south of Olsen Road (COSCA, 2008; COSCA, 2009). Although several trails are located in the Sunset Hills Open Space area, none provide views of the Proposed Project or alternatives because of topography and trail orientation. Therefore, viewer exposure would be considered low due to the lack of visibility.

Community Park

Canada Park is a 9.2 acre community park in the City of Thousand Oaks located approximately 0.6 mile south of the Proposed Project, Alternative Subtransmission Alignments 1 and 3, and approximately 0.1 mile north of Alternative Subtransmission Alignment 2 (CRPD, 2009). Attendance is moderate, estimated at a couple hundred visitors per day (Kouba, 2009). Recreational users would have no views of the Proposed Project, Alternative Subtransmission Alignment 1, or of Alternative Subtransmission Alignment 3 due to intervening topography. Recreational viewers would have limited to no views of Alternative Subtransmission Alignment 2 due to intervening vegetation (including mature trees) and residences. **Figure 4.1-2e**, **Photo 18**, represents recreationalists' views from the south end of Canada Park, facing south towards Alternative Subtransmission Alignment 2. If visible, view duration would be short.

Golf Courses

Sinaloa Golf Course is a 9-hole, 25-acre golf course in the City of Simi Valley (RSRPD, 2009). The entrance to and the entire eastern border of the golf course is on Madera Road, approximately 0.6 mile east of the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3, and adjacent to the south of Alternative Subtransmission Alignment 2. Attendance is moderate, estimated at approximately 250 visitors per day (Bratt, 2009). Recreational users would have no views of the Proposed Project, Alternative Subtransmission Alignment 1, or Alternative Subtransmission Alignment 3. Recreational viewers would have open to partially screened views of Alternative Subtransmission Alignment 2, with some screening from vegetation. Figure 4.1-2e, Photo 19, represents recreationalists' views from the first hole of the Sinaloa Golf Course, facing east towards Alternative Subtransmission Alignment 2. As seen in Photo 19, views of the alignment would be partially screened by mature trees. Figure 4.1-2e, Photo 20, represents a view from the same location looking northeast. As exhibited in Photos 19 and 20, some views from the golf course would be open and panoramic to Alternative Subtransmission Alignment 2. Given the orientation of the golfers and the angle of views of Alternative Subtransmission Alignment 2, view duration would be short to moderate.

The Sunset Hills Country Club is an 18-hole private golf course in the City of Thousand Oaks (RSRPD, 2009). The golf course is located primarily on the south side of Olsen Road, though some holes are on the north side, adjacent to Alternative Subtransmission Alignment 2 and one-half mile south of the Proposed Project, Alternative Subtransmission Alignment 1, and

Alternative Subtransmission Alignment 3. However, the golf course is available to club members only (Richmond, 2009); as such, it is not considered a public recreation area, and is not further evaluated in this document.

The Tom Barber Golf Center is a public driving range and golf practice center located at Tierra Rejada Rd and Hwy 23 in Moorpark. The golf center is approximately 0.5 mile northeast of the Proposed Project and Alternative Subtransmission Alignment 3, one-half mile to the west of Alternative Subtransmission Alignment 1, and approximately 1.5 miles north of Alternative Subtransmission Alignment 2. Attendance is low during the week but moderate on weekends. Views of the Proposed Project and alternatives would be partially to fully screened by intervening vegetation and topography, and duration would be short.

Tierra Rejada Golf Club is an 18-hole public golf course at 15187 Tierra Rejada Road, in the City of Moorpark. The golf course is approximately 0.5 mile to the north of the Proposed Project and Alternative Subtransmission Alignment 3, 0.5 mile to the west of Alternative Subtransmission Alignment 1, and 1.5 miles north of Alternative Subtransmission Alignment 2. Attendance is moderate, estimated at approximately 45,000 visitors per year (Leslie, 2009). Views of the Proposed Project and alternatives would be partially to fully screened by intervening vegetation and topography. Duration of views would be short.

Wood Ranch Golf Club is an 18-hole private golf course at 301 Wood Ranch Parkway in the City of Simi Valley. The golf course is approximately 0.75 mile southeast of the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3. It is 0.25 mile south of Alternative Subtransmission Alignment 2. However, as a private golf course the facility is not considered a public recreation area, and is not further evaluated in this document.

Equestrian Centers

Fieldstone Riding Club, located at 3566 Sunset Valley Road in unincorporated Ventura County, offers hunter, jumper, and equitation training, a summer camp, and horse sales (Fieldstone Riding Club, 2011). Attendance is low, estimated at 100 visitors per week (Marks, 2011). Fieldstone Riding Club is adjacent to the Proposed Project and Alternative Subtransmission Alignment 3, approximately 0.6 mile north of Alternative Subtransmission Alignment 1. Duration of views would be short to moderate. Views would range from partially screened by intervening trees and buildings to open and panoramic. Fieldstone Riding Club is approximately 1.3 miles northwest of Alternative Subtransmission Alignment 2, but views would be fully screened by intervening topography.

Shadowbrook Stables is located at 3678 Sunset Valley Road in unincorporated Ventura County, just north of Fieldstone Riding Club. The facility offers specialized training and instruction for the hunter, jumper, and equitation divisions, as well as horses for sale (Shadowbrook Stables, 2011). Attendance is low, estimated at 20 visitors per day (Brown, 2011). Shadowbrook Stables is adjacent to the Proposed Project and Alternative Subtransmission Alignment 3, approximately 0.7 mile north of Alternative Subtransmission Alignment 1. Duration of views would be short to

moderate. Views would range from partially screened by intervening trees and buildings to open and panoramic. Shadowbrook Stables is approximately 1.4 miles northwest of Alternative Subtransmission Alignment 2, but views would be fully screened by intervening topography.

Classic Equestrian Center, located at 2182 Tierra Rejada Road in unincorporated Ventura County, offers horse boarding and training, therapeutic riding, and horse shows (Classic Equestrian Center, 2011a). Classic Equestrian Center declined to provide attendance figures (Classic Equestrian Center, 2011b). Classic Equestrian Center is approximately 0.4 mile northeast of the Proposed Project and Alternative Subtransmission Alignment 3. Views of the Proposed and these alternatives would be partially to fully screened by intervening vegetation and structures, and of short duration. Classic Equestrian Center is approximately 1.0 mile west and 1.5 miles north of Alternative Subtransmission Alignments 1 and 2, respectively. Views of these alternative subtransmission alignments would be fully screened by intervening vegetation, structures, and topography.

CastleRock Farms, located at 15608 Tierra Rejada Road in unincorporated Ventura County, is a full service horse boarding and training facility that offers lessons for beginner to advanced competitive riders in all disciplines including 3-Day eventing, hunter/jumper, dressage, barrel racing, western pleasure and trail riding (CastleRock Farms, 2011a). Attendance is moderate estimated at approximately 100 visitors per day (CastleRock Farms, 2011b). CastleRock Farms is approximately 1.1 miles north of the Proposed Project and Alternative Subtransmission Alignments 2 and 3; however, views of the Proposed and these alternatives would be fully screened by intervening topography. CastleRock Farms is adjacent to Alternative Subtransmission and buildings to open and panoramic. Duration of views would be short to moderate.

Elvenstar equestrian center is located at 15618 Tierra Rejada Road in unincorporated Ventura County, just south of CastleRock Farms. Elvenstar offers a riding academy, boarding facilities, a training barn, and show stables (Elvenstar, 2011). The facilities are also used to host horse shows, birthday parties, girl scout troups, and spring, summer, and holiday camp (Mallory, 2011). Attendance is moderate, estimated at a few thousand visitors per year (Mallory, 2011). Elvenstar is approximately 1.0 mile north of the Proposed Project and Alternative Subtransmission Alignments 2 and 3; however, views of the Proposed and these alternatives would be fully screened by intervening topography. Elvenstar is adjacent to Alternative Subtransmission Alignment 1, and views would range from partially screened by vegetation and buildings to open and panoramic. Duration of views would be short to moderate.

Rancho Linda Mio Riding Club is a horse boarding and training facility located at 1550 Tierra Rejada Road in unincorporated Ventura County, just south of Elvenstar (Rancho Linda Mio, 2011). Attendance is moderate, estimated at approximately 60 visitors per day plus roughly six special events per year, each with approximately 150 visitors (Fitzpatrick, 2011). Rancho Linda Mio Riding Club is approximately 0.9 mile north of the Proposed Project and Alternative Subtransmission Alignments 2 and 3; however, views of the Proposed and these alternatives would be fully screened by intervening topography. Rancho Linda Mio Riding Club is adjacent to

Alternative Subtransmission Alignment 1, and views would range from partially screened by vegetation and buildings to open and panoramic. Duration of views would be short to moderate.

Underwood Family Farms

The Underwood Family Farms Moorpark location, at 3370 Sunset Valley Road in unincorporated Ventura County, is an active farm that offers a variety of recreational activities including: Pickyour-own Produce and Farmers Market; Easter on the Farm; Farm Camp; Fall Harvest Festival; Folk Festival; and Civil War Reenactment (Underwood Family Farms, 2011). (See Section 4.14, *Recreation*, for additional details.) The portion of the Proposed Project and Alternative Subtransmission Alignment 3 that parallels Sunset Valley Road would traverse parcels across the roadway from Underwood Family Farms. Attendance at the Farm is high, estimated at 200,000 to 300,000 visitors per year (Underwood, 2009). Recreational users traveling south on Sunset Valley Road to and from the Farm and users in one of the Farm's parking lots on Sunset Valley Road would have open and panoramic views of the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3. Viewers would also have open and panoramic views of the Proposed Project and Alternative Subtransmission Alignment 3 while driving north on Sunset Valley Road. Views of the Proposed Project and Alternative Subtransmission Alignment 3 from within the Farm complex would range from open to partially screened by structures and vegetation, and would range from short to moderate duration. Figure 4.1-2f, Photo 21, represents farm visitors' view from the Farm's entrance on Sunset Valley Road, looking south. Figure 4.1-2f, Photo 22, was taken north of Underwood Farm on Sunset Valley Road, looking north.

Ronald Reagan Presidential Library

The Ronald Reagan Presidential Library (Library) is located in the City of Simi Valley, approximately 0.2 mile east of Alternative Subtransmission Alignment 1. The portion of the Proposed Project and Alternative Subtransmission Alignment 3 visible from the Library would be approximately 1.9 miles to the west. Alternative Subtransmission Alignment 2 is approximately 0.35 mile south of the Library, though views of the alignment would be entirely obstructed by terrain. Attendance at the Library is approximately 400,000 visitors per year, not including special events (Cohea, 2009). Intervening topography and vegetation would screen views of the Proposed Project and Alternative Subtransmission Alignment 3 almost entirely; as such, despite the high number of views, viewer exposure would be considered low due to extremely low visibility. Library visitors would have open and unobstructed views of Alternative Subtransmission Alignment 1. **Figure 4.1-2f**, **Photo 23** and **Photo 24**, represents library visitors' view from the west lawn of the Library looking northwest and southwest, respectively.

Scenic Vistas

Designated scenic vistas in the vicinity of the Proposed Project and alternatives include six locations along Olsen Road in the City of Thousand Oaks. Olsen Road is a designated Scenic Corridor in the City of Thousand Oaks. The Scenic Highways Element of the City's General Plan describes the scenic qualities of the Olsen Road Scenic Corridor, including prominent vista points along Olsen Road (City of Thousand Oaks, 1974). Prominent vistas include:

- a. East of Pederson Road and West of Sunset Hills looking southwest: mid-range and distant views of residential development and hills to the southeast
- b. East of Pederson Road and West of Sunset Hills looking southeast: panorama of northern portion of the City, looking south
- c. East of Sunset Hills looking southeast: view of golf course and surrounding hills
- d. East of Erbes Road and West of Hwy 23 looking southwest: a brief but spectacular view of Tierra Rejada Valley and Oak Ridge mountains to the north
- e. East of Erbes Road and West of Hwy 23 looking northwest: panorama of golf course and adjacent hillsides and residential development
- f. East of Hwy 23 looking north and northwest: spectacular view of Tierra Rejada Valley, Oak Ridge and distant mountains to the north

(City of Thousand Oaks, 1974).

The Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 would not be visible from or within any of these scenic vista locations. Alternative Subtransmission Alignment 2 would be adjacent to all scenic vista points. However, these scenic vistas do not have designated stopping areas or lookout points. As such, views of the scenic vistas are limited primarily to motorists, pedestrians, and bicyclists on Olsen Road. As discussed above, traffic volumes are high on Olsen Road. Pedestrian volumes vary depending on the portion of the road, since sidewalks exist only in some locations. Scenic vista points (a), (b), (c) and (d) look south, while the poles would be on the northern side of Olsen Road; therefore, the poles would always be behind viewers looking out at the scenic vistas, and the subtransmission alignment would not be visible. Alternative Subtransmission Alignment 2 would be within the viewshed of two scenic vista points: (e) east of Erbes Road and West of Hwy 23 looking northwest, and (f) east of Hwy 23 looking north and northwest. Views of Alternative Subtransmission Alignment 2 would range from open and panoramic to partially screened by trees for viewers looking at the scenic vistas, particularly to viewers traveling east on Olsen Road. Duration of the view would be low for motorists and bicyclists, and moderate for pedestrians.

Visual Sensitivity

Visual sensitivity is a composite measurement of the overall susceptibility of an area or viewer group to adverse visual or aesthetic impacts, given the combined factors of landscape visual quality, viewer types, and exposure conditions. **Table 4.1-2** summarizes the visual sensitivity of the major viewer types that would be affected by the project alternatives.

TABLE 4.1-2SUMMARY OF VISUAL SENSITIVITY FINDINGSVIEWER TYPES, VISUAL EXPOSURES, AND VISUAL QUALITY

Viewer Type	Visual Quality View Exposure		Visual Sensitivity	Project Component	
Travel Routes			1		
Hwy 23	Representative (designated Scenic in City of Thousand Oaks; Eligible County Scenic)	Foreground and Middleground Distances Unobstructed and Partially Obstructed Views High Number of Viewers Short View Duration	Moderate- to-high	Proposed Project and all Alternal Subtransmission Alignments cros underneath.	
Moorpark Road	Representative (Eligible County Scenic)	Foreground and Middleground Distances Unobstructed and Partially Obstructed Views Moderate Number of Viewers Short View Duration	Moderate	te Proposed Project, Alternative Subtransmission Alignments 1 an cross. Proposed Project and Alternative Subtransmission Alignment 3 run parallel from a distance of 0.3 to 0.7 mile for approximately 1.0 mile.	
Read Road	Representative (Eligible County Scenic)	Foreground and Middleground Distances Unobstructed Views Low Number of Viewers Short View Duration	Moderate	Proposed Project and Alternative Subtransmission Alignment 1 run parallel and adjacent for approximately 1.3 miles. Alternative Subtransmission Alignment 3 runs parallel and adjacent for approximately 0.8 mile.	
Tierra Rejada Road	Representative	Foreground and Middleground Distances Unobstructed to Fully Obstructed Views Moderate Number of Viewers Short View Duration	Low	Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 would run perpendicul from a distance of between approximately one and 1.5 miles.	
Olsen Road	Representative (designated Scenic in City of Thousand Oaks)	Foreground Distance Unobstructed Views High Number of Viewers Short View Duration	Moderate- to-high	Proposed Project and all Alternativ Subtransmission Alignments cross Alternative Subtransmission Alignment 2 runs parallel and adjacent for 2.7 miles.	
Madera Road	Representative (Designated Scenic in City of Simi Valley)	Foreground Distance Unobstructed Views High Number of Viewers Short View Duration	Moderate	Alternative Subtransmission Alignment 2 runs parallel and adjacent for 2.2 miles.	
Park/Recreation					
McCrea Open Space Area	Distinct	Foreground Distance Unobstructed Views Low Number of Viewers Moderate View Duration	Low	Proposed Project and all alternatives are adjacent.	
Sunset Hills Open Space Area	Distinct	Foreground Distance No Views from Trails Low Number of Viewers No View Duration	Low	Proposed Project and all alternatives are adjacent.	
Canada Park	Representative	Foreground Distance Obstructed Views Moderate Number of Viewers Short View Duration	Low	Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 are approximately 0.6 mile north; Alternative Subtransmission Alignment 2 is approximately 0.1 mile to the south.	
Sinaloa Golf Course	Representative	Foreground Distance Open to Partially Obstructed Views Moderate Number of Viewers Short to Moderate View Duration	Moderate	Alternative Subtransmission Alignment 2 is adjacent.	

TABLE 4.1-2 (Continued) SUMMARY OF VISUAL SENSITIVITY FINDINGS VIEWER TYPES, VISUAL EXPOSURES, AND VISUAL QUALITY

Viewer Type	Visual Quality	View Exposure	Visual Sensitivity	Project Component	
Park/Recreation (co	ont.)	<u>.</u>	-	<u>-</u>	
Tierra Rejada Golf Club	Representative	Foreground Distance Low Partially Obstructed Views Moderate Number of Viewers Short View Duration		Proposed Project and Alternative Subtransmission Alignment 3 are approximately 0.5 mile southwest; Alternative Subtransmission Alignment 1 is approximately 0.5 mile east; Alternative Subtransmission Alignment 2 is approximately 1.5 miles south.	
Tom Barber Golf Center	Representative	Foreground and Middleground Distance Partially to Fully Obstructed Views Low to Moderate number of Viewers Short View Duration	Low	Proposed Project and Alternative Subtransmission Alignment 3 are approximately 0.5 mile southwest; Alternative Subtransmission Alignment 1 is approximately 0.5 mile west; Alternative Subtransmission Alignment 2 is approximately 1.5 miles south.	
Fieldstone Riding Club	Representative	Foreground and Middleground Distance Unobstructed and Partially Obstructed Views Low number of Viewers Short to Moderate View Duration	Moderate	Proposed Project and Alternative Subtransmission Alignment 3 are adjacent; Alternative Subtransmission Alignment 1 is approximately 0.6 mile south.	
Shadowbrook Stables	Representative	Foreground and Middleground Distance Unobstructed and Partially Obstructed Views Low number of Viewers Short to Moderate View Duration	Moderate	Proposed Project and Alternative Subtransmission Alignment 3 are adjacent; Alternative Subtransmission Alignment 1 is approximately 0.7 mile south.	
Classic Equestrian Center	Representative	Foreground and Middleground Distance Partially to Fully Obstructed Views Unknown number of Viewers Short to Moderate View Duration	Low- Moderate	Proposed Project and Alternative Subtransmission Alignment 3 are approximately 0.4 mile southwest; Alternative Subtransmission Alignment 1 is approximately 1.0 mile east; Alternative Subtransmission Alignment 2 is approximately 1.5 miles south.	
CastleRock Farms	Representative	Foreground and Middleground Distance Unobstructed to Fully Obstructed Views Moderate number of Viewers Short to Moderate View Duration	Moderate	Proposed Project and Alternative Subtransmission Alignments 2 and 3 are approximately 1.1 miles south; Alternative Subtransmission Alignment 1 is adjacent	
Elvenstar	Representative	Foreground and Middleground Distance Unobstructed to Fully Obstructed Views Moderate number of Viewers Short to Moderate View Duration	Moderate	Proposed Project and Alternative Subtransmission Alignments 2 and 3 are approximately 1.0 mile south; Alternative Subtransmission Alignment 1 is adjacent	
Rancho Linda Mio Riding Club	Representative	Foreground and Middleground Distance Unobstructed to Fully Obstructed Views Moderate number of Viewers Short to Moderate View Duration	Moderate	Proposed Project and Alternative Subtransmission Alignments 2 and 3 are approximately 0.9 mile south; Alternative Subtransmission Alignment 1 is adjacent	

TABLE 4.1-2 (Continued) SUMMARY OF VISUAL SENSITIVITY FINDINGS VIEWER TYPES, VISUAL EXPOSURES, AND VISUAL QUALITY

Viewer Type	Visual Quality	View Exposure	Visual Sensitivity	Project Component	
Park/Recreation (co	nt.)	<u>+</u>	-	<u>.</u>	
Underwood Family Farms	Representative	Foreground Distance Unobstructed and Partially Obstructed Views High number of Viewers Moderate View Duration	Moderate- to-High	Proposed Project and Alternative Subtransmission Alignment 3 are adjacent; Alternative Subtransmission Alignment 1 is approximately 0.3 mile south.	
Ronald Reagan Presidential Library	Distinct	Foreground and Middleground Distance Unobstructed and Partially Obstructed Views High number of viewers Short to Moderate View Duration	Moderate- to-High	Proposed Project and Alternative Subtransmission Alignment 3 are approximately 1.9 miles west; Alternative Subtransmission Alignment 1 is approximately 0.2 mile west.	
Scenic Vistas on Ol	sen Road				
E. of Pederson, W. of Sunset Hills looking southwest	Distinct	Foreground Distance Not in viewshed High Number of Viewers No View Duration	Low	Alternative Subtransmission Alignment 2 is adjacent.	
E. of Pederson, W. of Sunset Hills looking southeast	Distinct	Foreground Distance Not in viewshed High Number of Viewers No View Duration	Low	Alternative Subtransmission Alignment 2 is adjacent.	
E. of Sunset Hills looking southeast	Distinct	Foreground Distance Not in viewshed High Number of Viewers No View Duration	Low	Alternative Subtransmission Alignment 2 is adjacent.	
E. of Erbes, W. of Hwy 23 looking southwest	Distinct	Foreground Distance Not in viewshed High Number of Viewers No View Duration	Low	Alternative Subtransmission Alignment 2 is adjacent.	
E. of Erbes, W. of Hwy 23 looking northwest	Distinct	Foreground Distance Partially Obstructed Views High Number of Viewers Short View Duration	Moderate	Alternative Subtransmission Alignment 2 is adjacent.	
E. of Hwy 23 looking north and northwest	Distinct	Foreground Distance Partially Obstructed Views High Number of Viewers Short View Duration		Alternative Subtransmission Alignment 2 is adjacent.	

Regulatory Context

State

California Scenic Highway Program

In 1963, the California Legislature created the Scenic Highway Program to protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways. The State regulations and guidelines governing the Scenic Highway Program are found in the Streets and Highways Code, § 260 et seq. 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 travelers' enjoyment of the

view. No portion of the Proposed Project or alternatives would be visible from a Designated or Eligible State Scenic Highway (Caltrans, 2009).

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

In its General Plan, Ventura County dictates that "[c]onservation of scenic resources is most critical where the resources will be frequently and readily viewed, as from a highway, or where the resource is particularly unique" (Ventura County, 2010a). The following goals and policies identified in the Ventura County General Plan would be applicable to the Proposed Project and alternatives:

Resources Element

Goal 1.7.1, 1: Preserve and protect the significant open views and visual resources of the County.

Goal 1.7.1, 2: Protect the visual resources within the viewshed of lakes and State and County designated scenic highways, and other scenic areas as may be identified by an area plan.

Policy 1.7.2, 1: Notwithstanding Policy 1.7.2-2, discretionary development which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation measures are available and the decision-making body determines there are overriding considerations.

Public Facilities and Services Element

Policy 4.5.2, 1: New gas, electric, cable television and telephone utility transmission lines shall use or parallel existing utility rights-of-way where feasible and avoid scenic areas when not in conflict with the rules and regulations of the California Public Utilities Commission. When such areas cannot be avoided, transmission lines should be designed and located in a manner to minimize their visual impact.

Policy 4.5.2, 2: All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.

Policy 4.5.2, 3: Discretionary development shall be conditioned to place utility service lines underground wherever feasible.

Land Use Element

Open Space Goal 5, (1): Preserve for the benefit of all the County's residents the continued wise use of the County's renewable and nonrenewable resources by limiting the encroachment into such areas of uses which would unduly and prematurely hamper or preclude the use or appreciation of such resources.

Open Space Goal 5, (3): Retain open space lands in a relatively undeveloped state so as to preserve the maximum number of future land use options.

(Ventura County, 2010a).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The Scenic Highways Element of the City of Thousand Oaks General Plan identifies utility lines in its list of problems and opportunities for the City. Specifically, the Element states, "Visual pollution of the street scape [sic] is not wholly the result of controlled street graphics. Among the worst offenders are utility poles stalking right thorough the centers of communities and out into the rural areas. No real improvement in the appearance of the environment can be expected unless such utilities are relocated underground and the poles removed" (City of Thousand Oaks, 1974).

The following goals and policies identified in the City of Thousand Oaks General Plan would be applicable to the Proposed Project and alternatives:

General Goals and Policies

Goal: To enhance and preserve the spaciousness and attractiveness of the Conejo Valley.

Additional Policy, Aesthetics: As the City ages, it is important to maintain, improve and enhance the City's aesthetic appearance.

Open Space Element

Policy OS-1: Open space shall include those areas which are identified by the Conservation Element as necessary to preserve in an essentially undisturbed state, except for restoration and enhancement activities which may be desirable to improve the site's resource value, for purposes of natural resource protection.

Policy OS-25: Facilities necessary to serve visitors, such as trails, trailheads, access roads and parking lots, kiosks, restrooms, signage shall be designed and installed so as to have no impact on sensitive natural resources within the open space area, and minimal impact on non-sensitive resources. Where emergency facilities or public service and utility facilities must be located in a natural open space area, they and any necessary access roads shall be located and designed to minimize impacts.

Policy OS-30: Open space managers should work cooperatively with the utility companies, water agencies, and the Ventura County Flood Control District to assure that facilities subject to their jurisdiction are planned and designed in a manner which provides effective public service and also protects the natural environment.

(City of Thousand Oaks, 2000).

Conservation Element

Scenic Resources Policy CO-1: Future development within Thousand Oaks should reflect a sensitivity to its physical setting and natural scenic resources.

(City of Thousand Oaks, 1996).

Scenic Highways Element

Goal: To identify, establish, preserve and enhance a system of scenic highways within the City of Thousand Oaks.

Policy 5: Prevent the removal of mature trees without proper consideration of their scenic or historic value.

Policy 6: Enhance the visual character of the roadways themselves with particular attention to landscaping and the materials used within the roadway.

Policy 7: Provide for architectural and design review of proposed projects and adjoining yard walls within the corridor to ensure that they are compatible with existing urban and natural surroundings, and enhance the scenic character and quality of the highway corridor.

Policy 9: Coordinate program for undergrounding utility lines with the achievement of scenic corridors.

(City of Thousand Oaks, 1974).

City of Thousand Oaks Zoning Ordinance (Proposed Project and Alternative Subtransmission Alignments 1, 2, and 3; System Alternative B)

The City of Thousand Oaks Zoning Ordinance uses overlay zones to protect particular natural or cultural features, including scenic views. Overlay zones build on the underlying zoning, by establishing additional or stricter standards and criteria that apply in addition to the standards of the underlying zone districts. The City of Thousand Oaks is bounded by prominent natural land forms and knolls including, but not limited to, the Santa Monica Mountains, the Conejo Mountain, the Mount Clef Ridge, and the Conejo Ridge. The *Protected Ridgeline Overlay District (PR)* promotes the preservation of natural views and open space in the district with regulations to preserve natural lands forms, maintain and preserve open space, and protect the scenic backdrop to the City's major roadways (City of Thousand Oaks, 2009). The Proposed Project and all alternative subtransmission alignments would traverse parcels zoned *PR*, and the proposed Presidential Substation is located on a parcel zoned *PR*. Article 35 of the Zoning Ordinance would be applicable to the Proposed Project and alternatives. The following subsections would have implications for visual resources:

§9-4.3502. Protected ridgeline development standards.

Within the Protected Ridgeline Overlay Zone, no new structure or addition to an (a) existing structure shall be placed or constructed, no grading shall occur and, except as to meet fire clearance requirements, no native vegetation shall be removed within three hundred (300') feet horizontally or one hundred (100') feet vertically of the crest of a protected ridgeline. However, if because of the limited size of a parcel, the topography or other physical site constraints there is no suitable location for the addition to an existing structure or the development of one single family detached home on residential zoned parcel or a viable use on a commercial or industrial zoned parcel, minor encroachments into this area or development on the parcel may be authorized by the Planning Commission consistent with subsection (b) of this section. No subdivision map shall be approved creating a parcel or a lot within three hundred (300') feet horizontally or one hundred (100') feet vertically of the crest of a protected ridgeline, unless all development and grading activity on said parcel(s) or lot(s) is prohibited, or limited to antennae, open space uses, water reservoirs or similar uses of benefit to the general public.

- (b) If, because of the parcel's limited size or other physical or topographic constraints, development, grading or clearance of native vegetation can only occur within the restricted area of a Protected Ridgeline Overlay Zone the following development standards shall apply:
 - 1) Any structure shall be located on the portions of the parcel which are least visible from roadways depicted on the Circulation Element of the General Plan and existing developed areas.
 - 2) No structure shall be placed or constructed in such a way that it silhouettes against the skyline above the ridgeline when viewed from any roadway depicted on the Circulation Element of the General Plan.
 - 3) No grading or berming shall occur which alters the natural contours or changes the elevation of the crest of the ridgeline in order to create a pad.
 - 4) All buildings shall be low profile. No residential structure shall be higher than seventeen (17') feet measured from the finished grade at the center of the building wall to the highest roof elevation and any new dwelling unit, including any garage and accessory structures, shall not exceed, in total, two thousand (2,000) square feet. For existing structures, no alteration or addition to that structure shall raise the height or the elevation of the existing roof.
 - 5) All buildings shall be setback at least fifty (50') feet from the edge of the finished pad.
 - 6) Berms, rounded contour grading and landscaping shall be used when necessary to soften the visual impacts created by structures and grading.
 - 7) The grading, design, construction, vegetation clearance, landscaping and development shall sensitively conform to and fit into the natural terrain through creative development techniques, such as, but not limited to, split-level designs, terracing, use of native plant types, and natural blending architectural features (such as the angle of the roof line appearing as an extension of the adjacent downslope).
 - 8) Only low profile shaded street lighting, if needed, shall be used to reduce down slope light spillover and night glare.

(City of Thousand Oaks, 2009).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

The following policy and implementation measure identified in the City of Simi Valley General Plan, Circulation Element, would be applicable to the Proposed Project and alternatives:

Implementation Measure VII-T: Development shall comply with the provisions of the Scenic Roads Map and scenic roads standards to be developed by the City to preserve existing scenic features. Standards for landscaping, setbacks, medians, pathways, signing, grading, architectural and land use review shall be established as appropriate for each designated street and conform to requirements included in the California Department of

Transportation Traffic Manual. The City should continue efforts to obtain a State Scenic Highway designation for Route 118 from Kuehner Drive east to Topanga Canyon Boulevard.

Policy III-1.3: Highly visible public improvements should be designed and landscaped to blend into the environment.

Policy III-1.3.4: Utilities which cannot be feasible placed underground should be located and designed to product the lease visual and environmental impact on the community.

(Simi Valley, 1988).

4.1.2 Significance Criteria

According to Appendix G of the CEQA *Guidelines*, a project would cause an adverse impact to aesthetic resources if it would:

- a) Have a substantial adverse aesthetic effect on a scenic vista;
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- c) Substantially degrade the existing visual character or quality of the site and its surroundings; and
- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Definition and Use of Significance Criteria

An adverse visual impact may occur when: (1) an action perceptibly changes the existing physical features of the landscape that are characteristic of the region or locale; (2) an action introduces new features to the physical landscape that are perceptibly uncharacteristic of the region or locale, or become visually dominant in the viewshed; or (3) an action blocks or totally obscures aesthetic features of the landscape. The degree of visual impact depends on how noticeable the adverse change is. The noticeability of a visual impact is a function of the project features, context, and viewing conditions (angle of view, distance, and primary viewing directions). The key factors in determining the degree of visual change are visual contrast, project dominance, and view blockage.

Visual Contrast

Visual contrast is a measure of the degree of change in line, form, color, and texture that the project would create, when compared to the existing landscape. Visual contrast ranges from none too strong, and is defined as:

- None The element contrast is not visible or perceived
- Weak –The element contrast can be seen but does not attract attention

- Moderate The element contrast begins to attract attention and begins to dominate the characteristic landscape
- Strong The element contrast demands the viewer's attention and cannot be overlooked

Project Dominance

Visual dominance is a measure of a project feature's apparent size relative to other visible landscape features in the viewshed, or seen area.

View Blockage or Impairment

View blockage or impairment is a measure of the degree to which project features would obstruct or block views to aesthetic features due to the project's position and/or scale.

Overall Adverse Visual Impact

Overall adverse visual impact reflects the composite visual changes to both the directly affected landscape and from sensitive viewing locations (**Table 4.1-3**).

Visual Simulations

Visual simulations, presented as part of this aesthetic analysis, illustrate representative "before" and "after" visual conditions in the study area. In the text below, the evaluation of potential impacts associated with the Proposed Project is based, in part, on comparing the "before" and "after" visual conditions as portrayed in the set of simulations and assessing the degree of visual change that the Proposed Project would bring about. The significance determination is based on the evaluation criteria described above.

The simulations presented in this section illustrate the location, scale, and conceptual appearance of the Proposed Project as seen from six key public viewing locations. The simulation figure numbers and vantage point descriptions are presented in **Table 4.1-4**. Figure 4.1-1 depicts the simulation photo viewpoint locations for the visual simulations in **Figures 4.1-3** through **4.1-8**. Of note, the heights of the LWS pole structures in the simulations are in the middle of the range of possible pole height, and not the maximum potential height. For example, LWS pole range is 65 to 75 feet ags, whereas the poles in the simulation are 70 feet ags. The simulations do represent the maximum height of TSPs: the TSP range is 70 to 75 feet ags, and the simulation poles are 75 feet ags (SCE, 2011). Also, the simulations do not depict where trees would be trimmed or removed as part of proposed subtransmission alignment installation and/or maintenance.

The visual simulations are presented in color, two images per page, with the existing visual condition photograph on top of the page and a photo rendering visual simulation depicting the Proposed Project on the bottom of the page, with one exception. Figures 4.1-7a and 4.1-7b depict the existing visual condition of the proposed Presidential Substation site, and three visual simulations. Images were photographed in May and August of 2009 using a single lens reflex (SLR) camera. All the images use a 50mm lens which represents a horizontal view angle of 40 degrees, which is the "normal" field of view for the average human observer.

TABLE 4.1-3 GUIDELINES FOR DETERMINING ADVERSE VISUAL IMPACT SIGNIFICANCE

		Overall Visual Change				
Overall Visual Sensitivity	Low	Low to Moderate	Moderate	Moderate-to- high	High	
Low	Not Significant	Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	
Low to Moderate	Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	
Moderate	Adverse, but Not Significant	Adverse, but Not Significant	Adverse, but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	
Moderate-to- high	Adverse, but Not Significant	Adverse, but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant	
High	Adverse, but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant	Significant	

Not Significant impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.

Adverse but Not Significant Impacts are perceived as negative but do not exceed environmental thresholds.

Adverse and Potentially Significant Impacts are perceived as negative and may exceed environmental thresholds depending on project- and site-specific circumstances.

Significant impacts with feasible mitigation may be reduced to less than significant levels or avoided all together. Without mitigation or avoidance measures, significant impacts would exceed environmental thresholds.

Figure 4.1-3	Simulation A: View from Highway 23 looking southwest showing Tierra Rejada Valley		
Figure 4.1-4	Simulation B: View from Highway 23 looking south, showing proposed subtransmission alignment crossing		
Figure 4.1-5	Simulation C: View from corner of Moorpark Road and Read Road, looking east		
Figure 4.1-6	Simulation D: View from corner of Tierra Rejada Road and Moorpark Road, looking southeast		
Figure 4.1-7a	Simulation E: View from Olsen Road looking south toward the proposed Presidential Substation site, one to two years following construction		
Figure 4.1-7b	Simulation F: View from Olsen Road looking south toward the proposed Presidential Substation site, five to ten years following construction;		
	Simulation G: View from Olsen Road looking south toward the proposed Presidential Substation site, landscape at full growth		
Figure 4.1-8	Simulation H: View from Ronald Reagan Presidential Library looking west		

TABLE 4.1-4 VISUAL SIMULATIONS OF THE PROPOSED PROJECT



Existing view from Highway 23 looking southwest toward Tierra Rejada Valley



Simulation A: View from Highway 23 looking southwest toward Tierra Rejada Valley



Existing view from Highway 23, southbound looking south



Simulation B: View from Highway 23, southbound looking south



Existing view from corner of Moorpark Road and Read Road, looking east



Simulation C: View from corner of Moorpark Road and Read Road, looking east



Existing view from intersection of Tierra Rejada Road and Moorpark Road looking southeast



Simulation D: View from intersection of Tierra Rejada Road and Moorpark Road looking southeast



Existing view from Olsen Road looking south toward the proposed Presidential Substation site



Simulation E: View from Olsen Road looking south toward the proposed Presidential Substation site, one to two years following construction

Presidential Substation . 207584.02 Figure 4.1-7a

SOURCE: SCE, 2010



Simulation F: View from Olsen Road looking south toward the proposed Presidential Substation site, five to ten years following construction



Simulation G: View from Olsen Road looking south toward the proposed Presidential Substation site, landscape at full growth

SOURCE: SCE, 2010

Presidential Substation . 207584.02 Figure 4.1-7b



Existing view from Ronald Reagan Presidential Library looking west



Simulation H: View from Ronald Reagan Presidential Library looking west

4.1.3 Applicant Proposed Measures

No Applicant Proposed Measures have been identified by SCE to reduce Proposed Project impacts on aesthetic resources.

4.1.4 Impacts and Mitigation Measures

a) Have a substantial adverse effect on a scenic vista.

Impact 4.1-1: The Proposed Project would not have a substantial negative aesthetic effect on a scenic vista. *Less than significant* (Class III)

As described in the *Setting*, there are six designated scenic vistas in the vicinity of the Proposed Project, all located along the Olsen Road scenic corridor. However, the Proposed Project would not be visible within the viewshed of any of the vistas, because of intervening topography. Therefore, operations and maintenance of the Proposed Project would not have a substantial negative aesthetic effect on a scenic vista (No Impact).

Construction of the Proposed Project would include construction of the proposed Presidential Substation on Olsen Road, a double-circuit subtransmission line that would span the road, and trenching approximately 8,700 feet along Olsen Road to install a duct bank (starting at the proposed Presidential Substation site and terminating at Erbes Road). Trucks and other construction vehicles trucks traveling to and from the Proposed Project site would travel on Olsen Road. Construction trucks traveling on Olsen Road would have the potential to temporarily block views of the vistas for motorists, pedestrians and bicyclists traveling on the road, looking out towards the vistas. Construction crews working on the trenching portion of the project could also temporarily block views of the vistas. However, as discussed in the *Setting*, Olsen Road currently has a high volume of traffic, particularly the portion near the Hwy 23 on- and off-ramps. Therefore, views of the scenic vista are already routinely temporarily blocked by passing vehicles. The presence of additional constructions trucks, though adverse, would not represent a substantial change in the visual setting. Furthermore, impacts from the presence of construction crews along the road would be of short duration: approximately 13-20 months for the entire Proposed Project. As such, impacts would be temporary and less than significant.

Mitigation: None required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

As indicated in the visual setting, there are no officially designated State scenic highways in the vicinity of the Proposed Project; therefore, the Proposed Project would not affect scenic resources within a State Scenic Highway (No Impact).

However, there are three Eligible County Scenic Highways and numerous city-designated scenic highways in the vicinity of the Proposed Project. As discussed in the *Setting*, Hwy 23, Read Road, and Moorpark Road in unincorporated Ventura County are Eligible County Scenic Highways, and Hwy 23 and Olsen Road are designated Scenic Highways by the City of Thousand Oaks. The following viewpoint analysis represents views from or of designated scenic highways where the Proposed Project would be in close proximity to, or would cross, the designated or eligible scenic roads.

Impact 4.1-2: The Proposed Project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a county scenic highway. *Less than significant with mitigation* (Class II)

Highway 23

Figure 4.1-3 shows an existing and simulated view (Simulation A) from Hwy 23 looking southwest towards the Sunset Valley Road portion of the Proposed Project, capturing the perspective of a driver traveling south on Hwy 23. From this vantage point, the Proposed Project would replace an existing 16kV distribution line and associated wooden poles with a single-circuit 66 kV subtransmission line, composed of new light-weight-steel (LWS) poles ranging from 61 feet to 65 feet with a 954 Aluminum Conductor Steel Reinforced (ACSR) and polymer insulators. The existing 16 kV distribution line would be transferred or upgraded to the new 66 kV subtransmission poles. Upgrades to existing 16 kV distribution lines would involve installation of new conductors instead of re-hanging or burying the existing 16 kV distribution line. A telecommunication line would follow the same overhead alignment as the 16 kV distribution line. The LWS poles would consist of an all steel structure with a dulled galvanized finish. The poles and conductor would appear against an agricultural backdrop at a distance of approximately one-half mile. Row crops dominate the foreground, and a large stand of trees and buildings screen most views of the proposed subtransmission alignment. As shown in Simulation A, the new poles and overhead conductor would cause a nearly imperceptible increase in structure prominence and industrial character within the landscape, and would not attract attention. As such, the resulting visual contrast would be weak. The new features would not dominate the viewshed, nor would they obstruct or block views of the aesthetic features in the landscape. Overall visual change would be low. Taking into account Hwy 23's moderate-to-high visual sensitivity (i.e., Hwy 23 is a frequently traveled Eligible County Scenic Highway), the resulting visual impact to Hwy 23 from the Sunset Valley Road portion of the Proposed Project would be adverse but not significant.

Figure 4.1-4 shows an existing and simulated view (Simulation B) of the Proposed Project from Hwy 23 looking south to where the proposed subtransmission alignment would cross underneath Hwy 23. The proposed subtransmission alignment would approach Hwy 23 overhead and traverse underneath the highway once, at the boundary between unincorporated Ventura County and the City of Thousand Oaks. This portion of the proposed subtransmission alignment would generally involve replacing an existing 16kV distribution line and associated wooden poles with a double-circuit 66 kV subtransmission line, composed of Tubular Steel Poles (TSPs) with a

954 Aluminum Conductor Steel Reinforced (ACSR) and polymer insulators. The existing 16 kV distribution would be installed underground along or near portions of the 66 kV subtransmission alignment, and a telecommunication line would follow the same underground alignment as the 16 kV distribution line. The TSPs would consist of an all steel structure with a dulled galvanized finish. Installing the conductor underground would require the installation of an approximately 80-feet tall TSP riser pole near the end of Read Road, just west of Hwy 23, as well as an approximately 85-foot tall TSP riser pole on the east side of Hwy 23. In addition, stabilization of an existing dirt access road on the east side of Hwy 23 would require using a Hilfiker Wall (i.e., mechanically stabilized earth (MSE) wall, Gabion Retaining Walls) and reinforced geogrids, with a maximum height of 10.5 feet.

As shown in Simulation B, from this vantage point, the Proposed Project would appear against a backdrop of shrub-covered hills at a distance of approximately one-half mile. The retaining wall and the TSPs on either side of Hwy 23 would be the closest structures visible in this view. The backside of one freeway sign and front of a second freeway sign would also appear in the foreground as motorists continue on the highway, as well as antennae and satellites on the top of the ridgeline. Overall, given the hillside backdrop and few existing industrial features, the new poles, overhead conductors, and retaining wall would cause a noticeable increase in structure prominence and industrial character within the landscape, and would contrast with the form of natural landscape features. The resulting visual contrast would be moderate, in that the presence of the poles and wall would attract attention and would co-dominate the characteristic landscape. Overall visual change would be moderate. In consideration of the landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse and potentially significant. Implementation of Mitigation Measure 4.1-2a, requires that TSPs and LWS poles be made of self-weatherizing steel, which would oxidize to a natural-looking rust color within about one year. Rust-colored poles would resemble the existing wooden poles and would better blend with the background of trees and hillside, greatly reducing the appearance of visual change in the viewshed. Additionally, implementation of Mitigation Measure 4.1-2b requires the use of non-specular and non-reflexive materials for insulators and conductors. Implementation of these measures would result in a low to moderate visual change to the project area. Although the retaining wall would continue to contrast with the scenic backdrop, it would not dominate the landscape or demand attention, particularly as viewers would be exposed to it for a short distance and given the presence of other structures in the viewshed (i.e., highway signs, the highway median barrier, satellites and antenna). Visual impacts to Hwy 23 would be less than significant with mitigation.

Mitigation Measure 4.1-2a: For all structures that are visible from viewsheds where visual impacts are significant (i.e., Highway 23, Read Road, and Underwood Family Farms), SCE shall install tubular steel poles or light-weight steel poles made of self-weatherizing steel, which would oxidize to a natural-looking rust color within approximately one year.

Mitigation Measure 4.1-2b: The subtransmission line conductors shall be non-specular and non-reflective and the insulators shall be non-reflective and non-refractive.

Significant after Mitigation: Less than Significant.

Moorpark Road

The portion of the Proposed Project visible from Moorpark Road would include: (1) an overhead single-circuit 66 kV subtransmission line along the south side of Read Road heading east to the intersection of Sunset Valley Road and Read Road; and (2) an overhead single-circuit 66 kV subtransmission line along the west side of Sunset Valley Road from Tierra Rejada to Read Road. Both proposed subtransmission alignment segments would replace an existing 16kV distribution line and associated wooden poles within existing SCE franchise ROW. The existing 16 kV distribution line would be transferred or upgraded to the new 66 kV subtransmission poles. A telecommunication line would follow the same overhead alignment as the 16 kV distribution line. As depicted in Chapter 2, Project Description, Figures 2-9a through 2-9f, along Read Road approximately 23 wood/guy poles (29 to 79 feet above ground surface (ags)) and two TSPs (55-80 feet ags) would be replaced with approximately 17 LWS poles (approximately 65 feet ags), four TSP poles (65-100 feet ags) and one LWS riser-pole (height unknown). Along Sunset Valley Road, approximately 15 wood/guy poles (29 to 79 feet ags) would be replaced with approximately 10 LWS poles (61 feet ags), three LWS-riser poles (height unknown) and two TSPs (height unknown). The TSPs and LWS poles would consist of an all steel structure with a dulled galvanized finish. Motorists' views of the proposed subtransmission alignment from Moorpark Road would range from open and panoramic across the Tierra Rejada Greenbelt to partially screened by topography, including a low hill at the corner of Moorpark Road and Tierra Rejada Road. Drivers heading north on Moorpark Road would not see the ROW until just passing the Read Road turn-off, as views are entirely screened by hills.

Figure 4.1-5 shows an existing and simulated view of the Proposed Project from Moorpark Road looking east along Read Road. The Proposed Project would be most visible from Moorpark Road at this location. As seen from Simulation C, to motorists along Moorpark Road the Proposed Project would appear against a backdrop of trees, hillside and agricultural area. Additional utility lines run the length of the north side of Read Road, and would be in the foreground. Given the increased height of some structures and the fact that the new structures are steel instead of wood, the new poles and overhead conductors would cause a noticeable increase in structure prominence and industrial character within the landscape. Because the presence of the poles and conductors would be moderate. Overall visual change would be moderate. **Figure 4.1-6** shows a different perspective from Moorpark Road, from the intersection with Tierra Rejada Road looking southeast. As shown in Simulation D, the Proposed Project would be barely perceptible from this location, and overall visual change would be low. In consideration of Moorpark Road's moderate visual sensitivity, the resulting visual impact would be adverse but not significant.

Read Road

The Proposed Project would parallel Read Road on the south side for approximately 1.5 miles, within existing ROW. As noted above, the portion of the proposed subtransmission alignment along Read Road would involve replacing an existing 16kV distribution line and associated wooden poles with a single-circuit 66 kV subtransmission line. From Moorpark Road to Sunset Valley Road, approximately 23 wood/guy poles (29 to 79 feet ags) and two TSPs (55-80 feet ags) would be replaced with approximately 17 LWS poles (approximately 65 feet ags), four TSP poles

(65-100 feet ags) and one LWS riser-pole (height unknown). The existing 16 kV distribution line would be transferred or upgraded to the new 66 kV subtransmission poles, and a telecommunication line would follow the same overhead alignment as the 16 kV distribution line. At the junction of Sunset Valley Road and Read Road, the single-circuit subtransmission lines from Read Road and Sunset Valley Road would meet and become an overhead double-circuit subtransmission line continuing east on the south side of Read Road, to a point just west of Hwy 23. From the junction of Sunset Valley Road and Read Road to the eastern edge of Read Road, approximately 17 existing wooden poles (29 to 79 feet ags) would be replaced with 7 TSPs (70 to 75 feet ags) and 1 TSP riser (approximately 80 feet ags) to accommodate the underground subtransmission crossing of Hwy 23. The existing 16 kV distribution line would be transferred or upgraded to underground facilities, and a telecommunication line would follow the same underground alignment as the 16 kV distribution line. In addition, the minimum vegetation clearing requirement around the base of a 66 kV pole is approximately ten feet (radial area). Standard vegetation management (tree trimming) guidelines for an energized 66 kV conductor are twelve feet plus one year's growth. SCE's standards provide that adequate clearance between vegetation and energized conductors is maintained at all times, during all conditions, for a minimum of one year for the fastest known growing species in the electrical system.

Figure 4.1-5 shows an existing and simulated view (Simulation C) of the Proposed Project from Moorpark Road looking east along Read Road. As seen from the simulation, to motorists along Read Road the Proposed Project would appear against a backdrop of trees and sky, as motorists drive directly beneath the lines. Additional utility lines run the length of the north side of the road, and would be in the foreground. Given the fact that the new structures are steel instead of wood, the new poles and overhead conductors would cause a noticeable increase in structure prominence and industrial character within the landscape. Because the presence of the poles and conductors would demand attention, the resulting visual contrast would be strong. The poles would co-dominate the viewshed, along with tress and agricultural land. The overall visual change would be moderate to high. In consideration of Read Road's moderate visual sensitivity (e.g. it is an Eligible County Scenic Highway but has a low traffic volume), the resulting visual impact would be adverse and potentially significant. Implementation of Mitigation Measures 4.1-2a and 4.1-2b would reduce impacts to Read Road to less than significant

Impact 4.1-3: The Proposed Project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a city-designated scenic highway. *Significant unavoidable* (Class I)

Highway 23

The portion of Hwy 23 located to the south of the proposed subtransmission alignment is within the jurisdiction of the City of Thousand Oaks, and is a City-designated Scenic Highway. Visual impacts to Hwy 23, including the portion within the City of Thousand Oaks, are discussed under Impact 4.1-1, above.

Olsen Road

Olsen Road, a City of Thousand Oaks designated scenic highway, would be affected by the Proposed Project in multiple locations. First, the proposed Presidential Substation would be located on Olsen Road, just west of where Olsen Road becomes Madera Road. Construction of the proposed Presidential Substation, a new 66/16 kV low-profile distribution substation on an approximate 4-acre site, would involve installation/construction of: one 66 kV switchrack; 66 kV circuit breakers and disconnect switches; two 28 MVA, 66/16 kV transformers; two 16 kV, 4.8 MVAR capacitor banks; one 16 kV low-profile switchrack; one Mechanical and Electrical Equipment Room (MEER); one vault outside northwest corner of substation perimeter wall; four 16 kV distribution getaways; lighting; perimeter walls and gates; substation access driveway from Olsen Road; acceleration and deceleration lanes on Olsen Road; site drainage; and landscaping.

The second portion of the Proposed Project along Olsen Road would involve installation of a 66 kV double-circuit subtransmission line, including TSPs with polymer insulators, in existing ROW. The proposed subtransmission alignment would traverse Olsen Road at the southwest corner of the proposed Presidential Substation site, and travel west toward Read Road, replacing an existing 16 kV distribution line with wooden poles. The existing 16 kV distribution line would be installed underground along or near portions of the 66 kV subtransmission alignment, and a telecommunication line would follow the same underground alignment as the 16 kV distribution line. Motorists' views from Olsen Road would be open and panoramic but of short duration for both the proposed Presidential Substation and the proposed subtransmission alignment. Assuming a traffic speed of 55 miles per hour and a viewing length of 0.4 mile, views of the proposed Substation and proposed subtransmission alignment would be visible for approximately 30 seconds.

Third, construction would require trenching approximately 8,700 feet along Olsen Road to install a duct bank, starting at the proposed Presidential Substation site and terminating at Erbes Road. The trenching, at 24 inches wide and 60 inches deep, would be located in the existing on-street bike lane on the south side of Olsen Road, with construction activities proposed to last for approximately 11 months. Upon completion of the duct bank, the bike lane would be return to existing conditions.

Figure 4.1-7a shows an existing view of the proposed Presidential Substation site from the north side of Olsen Road looking south, and a simulated view of the proposed Presidential Substation one to two years following construction (Simulation E). **Figure 4.1-7b** shows simulated views of the proposed Presidential Substation five to ten years following construction (Simulation F), and upon full growth of landscaping (Simulation G). From this vantage point, the proposed Presidential Substation would appear against a backdrop of hillside covered with avocado trees, shrubs, and existing utility lines. The substation site would include an eight-foot-high perimeter wall that would surround the facility. Based on preliminary design, the wall would be a tan block wall approximately 8 feet high. Final design for the wall and landscaping would be done in consultation with the City of Thousand Oaks Planning Department. A band of at least three strands of barbed wire would be affixed near the top of the inside of the perimeter wall and would not be visible from the outside. Landscaping at the proposed Presidential Substation would be

designed to filter views for the surrounding community and other potential sensitive receptors. Plants would be installed and maintained outside the north and east perimeter walls; the south and west walls would be shielded from view due to topography. As discussed in Chapter 2, *Project Description*, prior to the start of substation construction, SCE would consult with the City of Thousand Oaks to develop an appropriate landscaping plan and perimeter wall design that would be submitted with the grading permit application for the project. The preliminary landscaping plan includes a mixture of groundcover, shrubs, and trees based on the City of Thousand Oaks guidelines and standards for landscape plantings. Proposed species include:

- *Cistus* "Sunset Gold", rockrose 1-2 feet high at installation, 3-4 feet high at maturity.
- *Festuca cinerea*, blue fescue 1 foot high at installation, 2 feet high at maturity
- *Ribes viburnifolium*, Catilina Perfume 1-2 feet high at installation, 3-4 feet high at maturity
- *Myrsine Africana*, African Boxwood 3-4 feet high at installation, 4-5 feet high at maturity
- *Geijera parviflora*, Australian willow 6-8 feet high at installation, 25-30 feet high at maturity

Given the hillside backdrop and few existing industrial features, the new substation, poles and overhead conductors would cause a noticeable increase in structure prominence and industrial character within the landscape. Particularly in the early years after construction (see Figures 4.1-7a and 4.1-7b), the resulting visual contrast would be moderate-high, because the presence of the poles and conductors would attract attention and dominate the characteristic landscape. The Proposed Project would partially obstruct views of the landscape backdrop, and would contrast with the form of natural landscape features, resulting in a moderate-to-high visual change. However, the location of the Substation on the side of the road, tucked into a low spot between two hills, would effectively block views of the Substation from motorists until the motorists were passing directly past the Substation. For this reason, the Substation would not demand the viewer's attention. Upon full growth of landscape plants, views of the perimeter fence and some poles would be partially screened by vegetation (see Figure 4.1-7b, Simulation G), and the visual change would be reduced to moderate. In consideration of the landscape's moderate-to-high visual sensitivity (e.g., Olsen Road is a highly traveled City of Thousand Oaks designated Scenic Highway), the resulting visual impact of the Proposed Project Presidential Substation would be adverse and potentially significant.

To motorists driving under the proposed subtransmission alignment on Olsen Road, the Proposed Project would appear against a backdrop of hills and sky. The new steel poles and overhead conductors would cause a noticeable increase in structure prominence and industrial character within the landscape. Because the presence of the poles and conductors would attract attention as motorists approach the structures and drive under them, the resulting visual contrast would be moderate. In consideration of Olsen Road's moderate-to-high visual sensitivity, the resulting visual impact would be adverse and potentially significant.

Implementation of Mitigation Measures 4.1-3a and 4.1-3b would require measures to reduce pole visibility (i.e., self-weatherizing steel or appropriate colors, finishes, textures, as well as non-specular and non-reflexive materials), to lessen views of the Proposed Project from sensitive viewers. However, even with implementation of Mitigation Measures 4.1-3a and 4.1-3b, in conjunction with SCE's proposed landscaping plan, the proposed subtransmission alignment would substantially alter the intrinsic character of the existing roadway view in terms of its composition and the general scale of landscape elements. As shown in Figures 4.1-7a and 4.1-7b, the poles reaching above the Substation would be viewed from a low vantage point by motorist, and would be against a backdrop of the sky. Implementation of the mitigation measures would not reduce this impact below a significant level; therefore the impact would remain significant unavoidable. Impacts related to the construction of the duct bank would be temporary and of short duration, and would be less than significant.

Mitigation Measure 4.1-3a: Implement Mitigation Measure 4.1-2b.

Mitigation Measure 4.1-3b: For all structures that are visible from Olsen Road, SCE shall install tubular steel poles or light-weight steel poles made of self-weatherizing steel, which would oxidize to a natural-looking rust color within about one year.

Alternately, in lieu of installing self-weatherizing steel poles SCE may install standard tubular steel or light-weight steel poles and apply surface coatings with appropriate colors, finishes and textures to most effectively blend the structures with the visible backdrop landscape. For structures that are visible from one or more sensitive viewing location, the darker color shall be selected, because darker colors tend to blend into landscape more effectively than lighter colors, which may contrast and produce glare. At locations where a tubular steel pole or light-weight steel pole would be silhouetted against the skyline, non-reflective, light-gray colors shall be selected to blend with the sky. SCE shall develop a *Structure Surface Treatment Plan* for the tubular steel poles, light-weight steel poles, and any other visible structures.

Significant after Mitigation: Significant and Unavoidable.

c) Substantially degrade the existing visual character or quality of the site and its surroundings.

A site specific discussion of each of the Proposed Project components is provided below.

Construction

Construction-related impacts to visual quality would result from the presence of construction equipment, materials and work crews at the proposed Presidential Substation site, along the proposed subtransmission alignment corridor and on local access roads and staging areas. Crews would be required to maintain clean work areas as they proceed along the line and would not leave any debris behind at any stage of the project. The construction impacts to visual quality would be relatively short-term, approximately 13-20 months in total, although impacts along the

subtransmission portion would be of shorter duration, spread out along different portions of the proposed subtransmission alignment.

Impact 4.1-4: Use of a temporary staging area during the construction period could result in adverse impacts to visual quality. *Less than significant* (Class III)

Construction staging for the Proposed Project would require a temporary marshalling yard. SCE anticipates using the Moorpark Substation (in the City of Moorpark), Thousand Oaks Service Center (in the City of Thousand Oaks), and/ or Pardee Substation (in the City of Santa Clarita) as a marshalling yard for parking and the storage of materials and equipment during construction. Materials and equipment typically staged at the marshalling yard could include, but would not be limited to, conductor reels, telecommunication line/fiber optic cable, wire stringing equipment, poles, line trucks, cross arms, insulators, and portable sanitation facilities. Material from the pole installation and removal such as poles and other debris would be temporarily stored at the marshalling yard as the material awaits salvage, recycling, or disposal. The staging area would be cleaned up and restored to preconstruction conditions after construction.

If neither the Moorpark Substation, the Thousand Oaks Service Center, nor the Pardee Substation can be used as a marshalling yard, SCE would consider other options which could include leasing an existing, approximately 3-acre commercial facility located within approximately 5 miles of the construction area. The site would be surrounded with temporary chain link fencing and screened from view from adjacent residences or businesses. Because the staging area would be visually screened using temporary screening fencing, and due to the temporary nature of the construction activities (approximately 13-20 months), the impact to the existing visual character in the substations' vicinity would be less than significant.

Mitigation: None required.

Impact 4.1-5: Construction of the proposed Presidential Substation could result in a temporary adverse impact to visual quality. *Less than significant with mitigation* (Class II)

Construction of the proposed Presidential Substation would include vehicles, heavy equipment, and workers that would be visible during construction activities. Substation equipment and associated facilities to be constructed include: one 66 kV switchrack; 66 kV circuit breakers and disconnect switches; two 28 MVA, 66/16 kV transformers; two 16 kV, 4.8 MVAR capacitor banks; one 16 kV low-profile switchrack; one Mechanical and Electrical Equipment Room (MEER); one vault outside northwest corner of substation perimeter wall; four 16 kV distribution getaways; lighting; perimeter walls and gates; substation access driveway from Olsen Road; acceleration and deceleration lanes on Olsen Road; site drainage; and landscaping. A contractor office trailer and equipment trailer would be placed within the proposed Presidential Substation construction area to be used for the duration of construction. The proposed Presidential Substation site is sloped on two sides and has a low spot near the center of the site that descends

to the north. At its lowest point (the culvert entrance to the corrugated steel pipe under Olsen Road), the elevation is approximately 41 vertical feet lower than the proposed finished grade. To prepare the site for construction, all existing vegetation would be cleared and a temporary chainlink fence would be installed around the perimeter. Nonetheless, portions of the Substation construction area could be visible above the fencing and/or through the fencing. Therefore, adverse visual impacts associated with construction at this site could occur during the approximately 13-20-month construction period. Implementation of Mitigation Measure 4.1-5 would reduce impacts to less than significant.

Outside the Substation perimeter walls, one vault and two underground duct banks would be constructed. The vault would be approximately 19 feet long, 8 feet wide and 9.5 feet deep, and would be installed outside the proposed perimeter wall, within the proposed Presidential Substation site. The first duct bank would be constructed from the vault approximately 80 feet northwest to a TSP located near the south side of Olsen Road. The second duct bank would be approximately 8,700 feet long from the Substation to an existing vault located at Olsen Road and Erbes Road. The duct bank would be constructed by trenching within the bike lane of Olsen road. Trenching would typically involve using a backhoe with a 24-inch bucket to excavate a trench approximately 24-inch wide by 60-inches deep. The trench would be finished as street and repaved in accordance with the city's permit requirements. The proposed duct bank would be constructed under the existing bike lane on Olsen Road and would be cleaned up and restored to preconstruction conditions after construction. Visual contrast would be weak, and the presence of work crews would not dominate the viewshed. As such, impacts outside the Substation perimeter walls would be adverse, but not significant.

Mitigation Measure 4.1-5: The temporary fencing used during construction at the Presidential Substation site shall incorporate aesthetic treatment through use of appropriate, non-reflective materials, such as chain link fence with light brown or green vinyl slats. SCE shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

Significant after Mitigation: Less than Significant.

Impact 4.1-6: Use of construction pulling/stringing set-up locations during the approximately 13-20 month construction period could result in temporary adverse impacts to visual quality. *Less than significant with mitigation* (Class II)

Conductor pulling/stringing set-up locations would be approximately 150 feet by 30 feet in size, and require level areas to allow for the maneuvering of the equipment. When possible, these locations would be located on existing level areas and existing roads to minimize the need for grading and cleanup. Typically, conductor pulling sites occur every 6,000 feet on flat terrain or less in rugged terrain, and at all turning points. Each pull site would be cleaned up and restored to preconstruction conditions after construction. The pulling/splicing sites would likely be visible

from adjacent roads, such as Olsen Road, Read Road, Sunset Valley Road, and Moorpark Road; however, views would be of short duration. Nonetheless, while the pulling/stringing set-up locations would only be used on a temporary basis, adverse visual impacts associated with operation of these temporary sites could occur during the approximately 13-20 month construction period.

Mitigation Measure 4.1-6: SCE shall not place equipment on the pulling/splicing sites any sooner than two weeks prior to the required use.

Significant after Mitigation: Less than Significant.

Impact 4.1-7: Construction of proposed modifications at the Royal and Moorpark substations could result in temporary adverse impacts to visual quality. *Less than significant* (Class III)

Construction of the proposed modifications at the Royal and Moorpark substations would include vehicles, heavy equipment, and workers that could be visible during construction activities. All construction activities would take place within the existing substation fences or walls. Walls, fences, and vegetation surrounding these sites would limit visibility of construction activities. It is anticipated that substation-related construction efforts would be less noticeable as compared to the proposed subtransmission alignment work since the substation modifications would occur within an area that is currently occupied by existing facilities and where maintenance and repair equipment routinely operate. Furthermore, due to the temporary nature of the construction activities (approximately 13-20 months), the impact to the existing visual character in the substations' vicinity would be less than significant.

Mitigation: None required.

Operations

Impact 4.1-8: The Proposed Project could substantially degrade the existing visual character or quality of the Proposed Project site and its surroundings from public views. *Significant unavoidable* (Class I)

Proposed Presidential Substation

Operational impacts associated with the proposed Presidential Substation would be viewed in the context of new structures at the Substation site. As discussed above, the Proposed Project would construct the proposed Presidential Substation, a new 66/16 kV low-profile distribution substation on an approximate 4-acre site on Olsen Road. The site is zoned *Residential Planned Development* (0.22 units allowed per net acre) – Single Family Detached Homes in a Protected Ridgeline

Overlay Zone (RPD-0.22U-SFD-PR) by the City of Thousand Oaks Zoning Ordinance. The *Protected Ridgeline Overlay* zoning designation promotes the preservation of natural views and open space in the district with regulations to preserve natural land forms, maintain and preserve open space, and protect the scenic backdrop to the City's major roadways (City of Thousand Oaks, 2009). Construction of the proposed Presidential Substation would include installation of: one 66 kV switchrack; 66 kV circuit breakers and disconnect switches; two 28 MVA, 66/16 kV transformers; two 16 kV, 4.8 MVAR capacitor banks; one 16 kV low-profile switchrack; one MEER; one vault outside northwest corner of substation perimeter wall; four 16 kV distribution getaways; lighting; perimeter walls and gates; substation access driveway from Olsen Road; acceleration and deceleration lanes on Olsen Road; site drainage; and landscaping.

These changes would constitute a significant visual change to the Substation site, which is currently undeveloped and representative of the scenic open spaces common to the project area. Due to hills located along Olsen Road which screen views of the proposed Presidential Substation, changes would be visible exclusively from an approximately 0.4 mile-long stretch of the road. Figures 4.1-7a and 4.1-7b present an existing view and visual simulations of the proposed Presidential Substation site as seen from westbound Olsen Road looking south. In this viewshed, an existing wood pole 16 kV distribution line is located on the south side of the roadway. From the perspective of a passing motorist, the Proposed Project would replace the existing wooden poles (34-71.5 feet) and 16 kV distribution lines with: an industrial substation partially screened by an eight-foot high tan block wall; an asphalt turning lane and driveway; 70-100-foot high TSPs and subtransmission lines; and new landscaping along the north and east perimeter walls, including a mixture of groundcover, shrubs, and trees (see Chapter 2, Project Description, for more information on landscaping.) As shown in the visual simulation in Figures 4.1-7a and 4.1-7b, some replacement poles would extend further into the sky than the existing poles, as the new poles would be both higher than the existing poles, and closer to Olsen Road. Figure 4.1-7b shows the proposed Presidential Substation at five to ten years of operation (Simulation F), and at full growth (Simulation G). As the surrounding landscaping matures over time, it would partially screen substation walls, poles, and the Substation from motorists.

A comparison of the "before" and "after images shows that the construction of the proposed Presidential Substation would result in a noticeable change to local roadway motorists. The presence of an industrial facility in a formerly open-space site would substantially alter the intrinsic character and composition of the existing view, particularly in the early years after construction. The location of the Substation along the side of the road, between two hillsides, would reduce motorist exposure to the site. Furthermore, as the landscaping matures, views of the Substation would become more screened by vegetation (see Figure 4.1-7b). Ultimately, the visual contrast would be moderate, as the Substation would attract attention, but would not demand the viewer's attention. In addition, the project would co-dominate the landscape with the surrounding hillsides. Overall visual change would consequently be moderate. However, in consideration of the site's scenic zoning designation, the resulting visual impact would be adverse and potentially significant.

Mitigation Measures 4.1-8a would require measures to reduce pole visibility (i.e., self-weatherizing steel or appropriate colors, finishes, textures, as well as non-specular and non-reflective materials),

to lessen views of the Proposed Project from sensitive viewers. However, even with implementation of Mitigation Measures 4.1-8a the Proposed Project would substantially alter the intrinsic character of the existing roadway view in terms of its composition and the general scale of landscape elements. As shown in Figures 4.1-7a and 4.1-7b, the poles reaching above the Substation would be viewed from a low vantage point by motorist, and could be against a backdrop of the sky. Implementation of this mitigation measures would not reduce this impact below a significant level; therefore the impact would remain significant and unavoidable.

Mitigation Measure 4.1-8a: Implement Mitigation Measure 4.1-2b and Mitigation Measure 4.1-3b.

Significant After Mitigation: Significant Unavoidable.

Proposed Subtransmission Alignment along Read Road from Moorpark Road to Sunset Valley Road

From the tie-in at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line on Moorpark Road, the Proposed Project would travel east along the south side of Read Road, an Eligible County Scenic Road, for approximately 0.8 mile to Sunset Valley Road. Potential visual impacts to Moorpark Road and Read Road are discussed above under Impact 4.1-2.

Proposed Subtransmission Alignment along Sunset Valley Road from Tierra Rejada Road to Read Road

From the tie-in point at Moorpark-Royal No. 2 66 kV subtransmission line on Tierra Rejada Road at Sunset Valley Road, the proposed subtransmission alignment would travel south along Sunset Valley Road for approximately 1.0 mile to Read Road. Sunset Valley Road is a two lane County road with unpaved shoulders that traverses the Tierra Rejada Greenbelt. Underwood Family Farms, a recreational area described above, is located at 3370 Sunset Valley Road. In this area of the Proposed Project, the primary affected viewer groups would be motorists along Moorpark Road, Read Road, Sunset Valley Road, Hwy 23 and Tierra Rejada Road, as well as visitors to Underwood Family Farm (discussed below). Private residential properties with views of Sunset Valley Road would also be affected. Potential visual impacts to Hwy 23, Moorpark Road and Read Road, Eligible County Scenic Highways, are discussed above under Impact 4.1-2.

The alignment would parallel Sunset Valley Road on the west side, replacing approximately 15 wood/guy poles (29-75 feet ags) and an associated 16 kV distribution line with approximately 10 LWS poles (61 feet ags), three LWS-riser poles (height unknown), two TSPs (height unknown) and a single-circuit subtransmission line. The new poles would extend further into the sky than the existing poles and would be steel rather than wood. The replacement would occur within existing ROW, though poles would be placed in slightly different locations.

As shown in the existing setting photographs (4.1-2f, Photo 21 and Photo 22), motorists' views of the alignment on Sunset Valley Road would be open and panoramic. Nevertheless, utility poles

and lines are currently features in the existing landscape. In addition to utility lines, features visible from the road include crops, ancillary farming equipment and structures, a chainlink fence, a nursery, a farm, rural residential areas and equestrian areas. Views from Sunset Valley Road are representative of the agricultural attributes generally present in the area. Motorists traveling on Sunset Valley Road would have views of the Proposed Project for a maximum of 1.0 mile, driving under and parallel to the alignment. The proposed subtransmission alignment would appear visible in the foreground, and would be taller and more prominent than the existing wooden poles, representing a moderate visual change. Nevertheless, the new lines would be seen in the context of the existing facilities, and low visual sensitivity on Sunset Valley Road (i.e., not a scenic road). Therefore, while impacts from replacement of existing poles would be adverse, impacts to motorists and local residents would be less than significant. The proposed subtransmission alignment would result in an incremental visual effect which would not substantially alter the intrinsic character or composition of the existing view.

Proposed Subtransmission Alignment along Read Road from Sunset Valley Road to the Proposed Substation

From the corner of Read Road and Sunset Valley Road, the proposed subtransmission alignment would travel east along the south side of Read Road for approximately three-quarters of a mile until the end of Read Road just west of Hwy 23. The alignment would continue east, traversing Hwy 23, and continue east from Hwy 23 for another three-quarter mile, crossing Olsen Road and connecting with the Proposed Project Presidential Substation. Impacts to Read Road (an Eligible County Scenic Highway), Hwy 23 (an Eligible County Scenic Highway and a City of Thousand Oaks designated Scenic Highway), and Olsen Road (a City of Thousand Oaks designated Scenic Highway) are analyzed under Impact 4.1-2.

Other Substations

Substation modifications at the Royal and Moorpark Substations would consist solely of electrical system and safety upgrades. Specifically, modifications at the substations would involve installation of upgraded relays and associated wiring, a relay rack, and/or switches. All substation work would occur on previously disturbed areas within the current footprint of the substations, within existing fence lines. The overall visual change to the substations would be negligible, and the visual character would not be altered. Modifications to the substations would not be noticeable to the public. Therefore, impacts would be less than significant.

Park and Recreation Areas

As described in the *Setting*, the McCrea Open Space Area and Sunset Hills Open Space Area have no trails overlooking the project area; as such, viewer exposure would be considered low due to the lack of visibility from designated trails. Recreational users at the Tierra Rejada Golf Club, Tom Barber Golf Center, and Classic Equestrian Center would have limited views of the Sunset Valley Road portion of the Proposed Project due to intervening topography and vegetation, and views would be from a distance of one-half mile. As such, visual sensitivity would be considered low. Overall visual change from these locations would be low to moderate, and consequently, impacts to these recreational areas would be less than significant. Recreational users would have no views of the Proposed Project from Canada Park, the Sinaloa Golf Course, CastleRock Farms, Elvenstar, and Rancho Linda Mio Riding Club, and there would be no impact to these viewsheds.

The Sunset Valley portion of the Proposed Project is the only component of the project that would be visible from the Ronald Reagan Presidential Library and Foundation. **Figure 4.1-8** presents a "before" and "after" view of the proposed subtransmission alignment as seen from the Library's west lawn, looking west. As seen in Simulation H, the LWS poles and single-circuit subtransmission line would be within background view, and would be barely discernible within this viewshed. As such, the Proposed Project would not substantially alter the visual character experienced from the Library; impacts would be less than significant.

Views from Underwood Family Farms, Fieldstone Riding Club, and Shadowbrook Stables would range from open and panoramic (at the entrances), to partially/fully screened by structures and vegetation (within the facilities). View duration would be short to moderate, as visitors would be exposed to views of the alignment for up to several hours, but would likely not be facing the alignment for most of the visit to the facility. Overall visual change, described above, would be moderate. For Underwood Family Farms in particular, the presence of the taller, LWS poles would have the potential to degrade the existing visual character or quality of the site during the farm's annual civil war reenactment. Given the visual sensitivity of Underwood Family Farms (moderate-to high), impacts to visual resource would be adverse and potentially significant. For Fieldstone Riding Club and Shadowbrook Stables, visual sensitivity was determined to be moderate; as such, impacts to these recreational facilities would be adverse but not significant.

Mitigation Measure 4.1-8b would require measures to reduce pole visibility (i.e., selfweatherizing steel or appropriate colors, finishes, textures) to mitigate visibility of the Proposed Project for sensitive viewers, including visitors to Underwood Family Farm. With implementation of Mitigation Measure 4.1-8c, the overall visual change would be low to moderate, and impacts to Underwood Family Farm visitors would be less than significant.

Mitigation Measure 4.1-8b: Implement Mitigation Measures 4.1-2a and 4.1-2b.

Significant after Mitigation: Less than Significant.

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

Impact 4.1-9: The Proposed Project would create new sources of light or glare that could adversely affect views in the project area. *Less than significant with mitigation* (Class II)

Construction

Construction activities would generally be scheduled during daylight hours (7:00 a.m. to 5:00 p.m.), minimizing the need for lighting. However, night construction activity may be required. If night

construction is required, temporary lighting would be required for security, safety, and operational reasons at the project facilities, including the staging area and pull/tensions sites. Night lighting could potentially result in impacts to visual resources by increasing ambient light to surrounding areas, creating distracting glare, and reducing sky or star visibility. Nearby land uses, including residences and businesses, provide some lighting of their own. However, a large portion of the Proposed Project would be located in a relatively undeveloped area with features that would result in increased lighting contrast when compared to the lighted areas of the developed areas. Therefore, nighttime lighting could have a potentially significant impact to nighttime views in the project vicinity. However, this impact would be temporary due to the relatively short duration of project construction (ten months), the fact that for subtransmission construction the work in any one location would be of much shorter duration (i.e., on an order of several days to two weeks), and that nighttime work would not be a routine occurrence. Furthermore, with implementation of Mitigation Measure 4.1-9a, which requires a *Construction and Operation Lighting Mitigation Plan* with the use of shielded lighting elements, directed fixtures, and motion or timing sensors, this impact would be reduced to less than significant.

Mitigation Measure 4.1-9a: SCE shall design and install all lighting at project facilities, including construction and storage yards and the staging area, such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a *Construction and Operation Lighting Mitigation Plan* to the CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the *Construction and Operation Lighting Mitigation Plan* is approved by the CPUC. The Plan shall include but is not limited to the following measures:

- Lighting shall be designed so exterior lighting is hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary, and to reduce glare.
- All lighting shall be of minimum necessary brightness consistent with worker safety.
- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.

Significant after Mitigation: Less than Significant.

Operations

Proposed Presidential Substation

Lighting at the proposed Presidential Substation would consist of approximately fifteen 120 volt incandescent lamps rated at 120 watts. These lights would be installed on switchracks and transformer racks. These lights would manually be turned on and off and would only be turned on during emergency work performed after dusk. Typically, the lights would be mounted at a height

of 7.5 feet above ground. Additionally, a beacon safety light would be installed on the Substation gate and be activated when the gate is opened.

Operation of the proposed Presidential Substation could potentially result in impacts to visual resources by increasing ambient light to surrounding areas, creating distracting glare, and reducing sky or star visibility. As discussed above, nearby land uses, including residences and businesses, provide some lighting of their own. However, the proposed Presidential Substation site is in an undeveloped area; any light and glare generated from the Substation would represent an increase from baseline conditions. Landscaping planned as part of the Proposed Project would provide some screening from potential glare created by the new equipment and lighting. However, lighting from the Proposed Project could still have a potentially significant impact to views in the project area. Implementation of Mitigation Measure 4.1-9b would require a *Construction and Operation Lighting Mitigation Plan* with the use of shielded lighting elements, directed fixtures, and motion or timing sensors. Mitigation Measure 4.1-9c would provide an additional measure to ensure that the Proposed Project is consistent with City of Thousand Oaks *Protected Ridgeline Overlay District* zoning requirements. With implementation of Mitigation Measures 4.1-9b and 4.1-9c, impacts would be reduced to less than significant.

Mitigation Measure 4.1-9b: Implement Mitigation Measure 4.1-9a.

Mitigation Measure 4.1-9c: Only low profile shaded street lighting, if needed, shall be used to reduce down slope light spillover and night glare.

Significant after Mitigation: Less than Significant.

Other Substation Areas

As discussed above, substation modifications at the Royal and Moorpark Substations would consist solely of electrical system and safety upgrades. Modifications at the substations would involve installation of upgraded relays and associated wiring, a relay rack, and/or switches. Modifications would not require installation of additional lighting. Because the new equipment to be installed would be of the same nature as the existing substations, it would blend in with the existing facilities and not result in a new source of glare. Therefore, new equipment at the Royal and Moorpark Substations would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Subtransmission Line

The Proposed Project does not propose new lighting along the proposed subtransmission alignment corridor. Therefore, no new sources of light would occur. However, the introduction of new poles and overhead conductors where none currently exist could be a noticeable visual change as seen from some viewing locations during the daytime. The new poles would be treated in a non-reflective finish. The new conductors and new insulators would be a potentially reflective surface which could cause glare. This effect could result in the new facilities appearing visible or prominent. This would be a potentially significant impact.

Mitigation Measure 4.1-9d: Implement Mitigation Measure 4.1-2b.

Significant after Mitigation: Less than Significant.

4.1.5 Alternatives

No Project Alternative

Under the No Project Alternative, no new facilities would be constructed, and existing facilities would not be altered, expanded, or demolished. Implementation of this alternative would not affect scenic vistas, scenic resources, or the existing visual character of the surrounding area, and would not create any additional source of light or glare (No Impact).

Alternative Subtransmission Alignment 1

Construction-related impacts associated with this alternative would be similar to the Proposed Project. This alternative would not require additional staging areas and would have a similar number of temporary pulling/splicing sites; therefore, implementation of Mitigation Measure 4.1-6 would reduce visual impacts from these temporary sites to less than significant (Class II). Impacts from night lighting would be the same as those for the Proposed Project. With implementation of Mitigation Measures 4.1-9a and 4.1-9c, impacts would remain less than significant (Class II). Impacts to scenic vistas would also be the same as the Proposed Project (Class III).

For operations, impacts at the proposed Presidential Substation site would be identical to the Proposed Project, and would remain significant and unavoidable even with implementation of Mitigation Measure 4.1-3b (Class I). Visual impacts to scenic roads would be generally similar to those for the Proposed Project. Alternative Subtransmission Alignment 1 would replace wooden poles in existing ROW with TSP and LWS poles, for approximately 2.5 miles along the same portion of Read Road and unincorporated County land east of Hwy 23 that is used by the Proposed Project. Visual impacts resulting from construction and operation of this segment would be similar to or less than those of the Proposed Project. Views of Alternative Subtransmission Alignment 1 as it crosses Hwy 23 would be identical to the Proposed Project, as shown in Figure 4.1-4 (Simulation B). Consequently, operation of Alternative Subtransmission Alignment 1 would have the same impact to the visual quality of Hwy 23 as the Proposed Project. Contrary to the Proposed Project, Alternative Subtransmission Alignment 1 would not parallel Sunset Valley Road. As such, views of Alternative Subtransmission Alignment 1 from Moorpark Road, Read Road, Tierra Rejada Road, and Sunset Valley Road would be less impacted than under the Proposed Project (Figures 4.1-7 and 4.1-8). Alternative Subtransmission Alignment 1 would cross Olsen Road twice, while the Proposed Project would only cross it once; as a result, Alternative Subtransmission Alignment 1 would have a slightly higher impact on Olsen Road. With implementation of Mitigation Measures 4.1-2a and 4.1-2b impacts to Hwy 23 and Read Road would be reduced to less than significant (Class II). However, even with implementation of Mitigation Measure 4.1-3b, impacts would still be significant from Olsen Road (Class I).

Impacts to recreational areas and parks would be the same as the Proposed Project for the McCrea Open Space Area and Sunset Hills Open Space Area (Class III), and Canada Park and Sinaloa Golf Course (No Impact). Views of Alternative Subtransmission Alignment 1 from the Tierra Rejada Golf Club, Fieldstone Riding Club, Shadowbrook Stables, Classic Equestrian Center, and the Underwood Family Farm would be less visible than those of the Proposed Project, because Alternative Subtransmission Alignment 1 does not parallel Sunset Valley Road. Implementation of Mitigation Measure 4.1-8c would reduce potential impacts to the Underwood Family Farm to less than significant (Class II).

Alternative Subtransmission Alignment 1 differs from the Proposed Project in that it proposes approximately 1.9 miles of new ROW north of the proposed Presidential Substation site. This new ROW would not follow any designated or eligible scenic roads; it would, however, be adjacent to three equestrian centers (CastleRock Farms, Elvenstar, and Rancho Linda Mio Riding Club), and would be visible within the viewshed of the Ronald Reagan Presidential Library from a distance of approximately 0.2 mile. As such, impacts to the views from the equestrian centers and the library would be greater than the Proposed Project. Implementation of Mitigation Measures 4.1-2a and 4.1-2b would reduce the visual change resulting from the construction of Alternative Subtransmission Alignment 1 to moderate. Given the moderate visual sensitivity of CastleRock Farms, Elvenstar, and Rancho Linda Mio Riding Club, impacts would be adverse but not significant. However, because of the moderate-to-high visual sensitivity of the Ronald Reagan Presidential Library, even a moderate visual change would result in a significant impact. Because the presence of Alternative Subtransmission Alignment 1 would substantially degrade the existing visual character of the site and its surroundings, impacts would be significant and unavoidable (Class I).

Alternative Subtransmission Alignment 2

Construction-related impacts associated with this alternative would be similar to the Proposed Project. This alternative would not require additional staging areas and would have a similar number of temporary pulling/splicing sites; therefore, implementation of Mitigation Measure 4.1-6 would reduce visual impacts from these temporary sites to less than significant (Class II). Impacts from night lighting would be the same as those for the Proposed Project. With implementation of Mitigation Measures 4.1-9a and 4.1-9b, impacts would be less than significant (Class II).

For operations, impacts to scenic vistas would be greater than the Proposed Project. Alternative Subtransmission Alignment 2 would parallel Olsen Road for approximately 2.7 miles, adjacent to all six designated scenic vistas discussed in the *Setting*. The first four vista points (traveling west to east) all face south, while the poles from Alternative Subtransmission Alignment 2 would be located primarily on the north side of Olsen Road. For these four vistas, the poles would be behind motorists, bicyclists, and pedestrians enjoying the scenic vistas, and entirely outside of the viewshed. Impacts would be less than significant (Class III). The two eastern-most vistas, located just west and just east of Hwy 23, look north. Alternative Subtransmission Alignment 2 poles would be within the viewshed of both vistas, partially blocking views of motorists and bicyclists. Pedestrians would not be expected in these areas, because there are no sidewalks and Olsen Road

is a busy road. Implementation of Mitigation Measures 4.1-2b and 4.1-3b for all poles that are visible from Olsen Road would reduce the impacts to these scenic vistas. However, the visual contrast would remain strong and the project could not be overlooked. Because the presence of pole structures would substantially degrade the existing visual character of the sites and their surroundings, impacts would be significant and unavoidable (Class I).

Impacts at the proposed Presidential Substation site would be identical to the Proposed Project, and would remain significant and unavoidable even with implementation of Mitigation Measure 4.1-3b (Class I). Alternative Subtransmission Alignment 2 would differ from the Proposed Project in that it would not cross, parallel, or be visible from Moorpark Road or Read Road (Eligible County Scenic Highways). Therefore, there would be no impact to these roads. Alternative Subtransmission Alignment 2 would place subtransmission poles and lines along approximately 2.7 miles of Olsen Road (designated Scenic Highway in the City of Thousand Oaks), and approximately 2.2 miles of Madera Road (designated Scenic Roadway in the City of Simi Valley). Impacts to these two roads would be greater than for the Proposed Project. Like the Proposed Project, despite implementation of Mitigation Measures 4.1-2b and 4.1-3b, impacts to the Olsen Road viewshed would be significant and unavoidable (Class I). On Madera Road, Alternative Subtransmission Alignment 2 would increase the presence of industrial features within the roadway. However, the alignment would only create a low to moderate visual change. Other utility lines and roadway features (e.g. light-posts, signs, and traffic signals) are established in the viewshed (see Figure 4.1-2d, Photos 14, 15, and 16). The construction of Alternative Subtransmission Alignment 2 would be seen but would not dominate the characteristic landscape or block scenic features. As such, impacts to the Madera Road viewshed would be less than significant (Class III).

Though Alternative Subtransmission Alignment 2 would be adjacent to different parts of the McCrea Open Space Area and Sunset Hills Open Space Area than the Proposed Project, impacts to these areas would still be less than significant (Class III). Unlike the Proposed Project, Alternative Subtransmission Alignment 2 would not be visible from Underwood Family Farms, Fieldstone Riding Club, Shadowbrook Stables, Classic Equestrian Center, or the Ronald Reagan Presidential Library, but would be visible from Canada Park and the Sinaloa Golf Course. Views of the alternative from Canada Park would be partially to fully screened by intervening structures and vegetation, and impacts would be less than significant (Class III). Alternative Subtransmission Alignment 2 would be adjacent to the Sinaloa Golf Course (see Figure 4.1-2e, Photos 19 and 20 for existing views), and recreational viewers would have open to partially screened views of the alignment, with some screening from vegetation. However, as discussed above, the alignment would only create a low to moderate visual change. Other utility lines and roadway features (e.g. light-posts, signs, and traffic signals) are established in the viewshed (see Figure 4.1-2d, Photos 14, 15, and 16). The construction of Alternative Subtransmission Alignment 2 would be seen but would not dominate the characteristic landscape or block scenic features. As such, impacts to the Sinaloa Golf Course would be less than significant (Class III).

Alternative Subtransmission Alignment 3

Construction-related impacts associated with this alternative would be similar to the Proposed Project. This alternative would not require additional staging areas and would have fewer temporary pulling/splicing sites. Implementation of Mitigation Measure 4.1-6 would reduce visual impacts from these temporary sites to less than significant (Class II). Impacts involved with trenching would be similar to the Proposed Project, but pole removal and installation would be reduced, maintaining more of the current visual character of the surrounding environment than the Proposed Project. Impacts from night lighting would be the same as those for the Proposed Project. With implementation of Mitigation Measures 4.1-9a and 4.1-9b, impacts would be less than significant (Class II).

Impacts associated with operation of Alternative Subtransmission Alignment 3 would be substantially less than those associated with the Proposed Project. Impacts at the proposed Presidential Substation site would be less than the Proposed Project because poles within the Substation and on Olsen Road would be eliminated. However, like the Proposed Project, impacts to the site would remain significant and unavoidable (Class I). Visual impacts to scenic roads would be less than those for the Proposed Project east of Sunset Valley Road because wooden poles in this segment would not be removed, and subtransmission facilities would be underground, eliminating the introduction of new industrial features within the viewshed as well as the need for tree removal. Impacts on the Read Road viewshed west of Sunset Valley Road would be substantially less than the Proposed Project (Class III), as would subtransmission alignment impacts to Hwy 23 and Olsen Road (No Impact). Specifically, the alternative subtransmission alignment would not be visible from either Hwy 23 or Olsen Road, and no retaining wall would be required on the east side of Hwy 23. Impacts to Moorpark Road and Tierra Rejada Road would be the same as the Proposed Project (Class III).

Impacts to recreational areas and parks would be similar to the Proposed Project: less than significant for the McCrea Open Space Area, Sunset Hills Open Space Area, Tierra Rejada Golf Club, Tom Barber Golf Center, Fieldstone Riding Club, Shadowbrook Stables, Classic Equestrian Center and the Ronald Reagan Presidential Library (Class III); and no impact to Canada Park and Sinaloa Golf Course. Like the Proposed Project, implementation of Mitigation Measure 4.1-8c would reduce potential impacts to the Underwood Family Farm to less than significant (Class II).

Alternative Substation Site B

Construction-related impacts associated with this alternative would be similar to the Proposed Project. Implementation of Mitigation Measure 4.1-6 would reduce visual impacts from temporary construction activities at the site to less than significant (Class II). Impacts from night lighting would be the same as those for the Proposed Project. With implementation of Mitigation Measures 4.1-9a and 4.1-9c, impacts would be less than significant (Class II). Like the proposed Presidential Substation, the alternative substation would have no impact to scenic vistas.

For operations, Alternative Substation Site B differs from the Proposed Project in that it is not located on a site with a scenic zoning designation. Alternative Substation Site B is located within

the jurisdiction of the City of Simi Valley and is zoned as *Residential – Low Density* with *Conditional Zoning* (City of Simi Valley, 2006). In addition, the site currently contains several abandoned concrete block buildings and structures, a garage, parking areas, light posts, ornamental vegetation, and industrial features including chain link fence and a radio antenna. These industrial features are part of the existing landscape. Like the Proposed Project, Alternative Substation Site B is located on a designated scenic road: Madera Road in the City of Simi Valley. View duration of the alternative substation would be longer than the Proposed Project, because Alternative Substation Site B would be elevated, located on the hillside on the northwest corner of Madera Road and North Country Club Road. Motorists at the stoplight on that corner would be exposed to views of Alternative Substation Site B for the duration of the stoplight. Alternative Substation Site B would also be more visible to members of the community and local residents. As discussed in the *Setting*, commercial buildings and a sidewalk are located directly across the street from Alternative Substation Site B would be open and panoramic to visitors and employees at the commercial buildings.

Nevertheless, because Alternative Substation Site B would replace an existing industrial facility, the presence of a new substation would not constitute a significant visual change to the site. With implementation of Mitigation Measure 4.1-10, impacts to scenic resources and impacts to visual quality would be less than significant (Class II).

Mitigation Measure 4.1-10: Prior to the start of the substation construction, SCE shall consult with the City of Simi Valley to develop an appropriate landscaping plan and perimeter wall design. The preliminary landscaping plan shall include a mixture of groundcover, shrubs, and trees based on the City of Simi Valley guidelines and standards for landscape plantings. Landscaping at the proposed substation site shall be designed to filter views for the surrounding community and other potential sensitive receptors. Plants shall be installed and maintained outside the south, east and west perimeter walls.

Significant after Mitigation: Less than Significant.

System Alternative B

Under System Alternative B, no new facilities would be constructed, and all changes would take place on and around existing facility footprints. Construction impacts would consequently be less than the Proposed Project and would be less than significant. Operation of this alternative would not affect scenic vistas, scenic resources, or the existing visual character of the surrounding area, and would not create any additional source of light or glare (No Impact).

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4.2 Agriculture and Forestry Resources

This section identifies and evaluates issues related to agriculture and forestry resources in the context of the Proposed Project and alternatives. It includes a description of existing land use conditions in relation to farmland designations, Williamson Act contracts, forest and timberland zoning, and related uses. A discussion of applicable State, local and regional plans and/or programs is also included.

4.2.1 Setting

Existing Agriculture Resources

Ventura County's agriculture is a vital industry in the local economy and consistently ranks among the most profitable in California. With a total gross production value of over 1.6 billion dollars in 2009, Ventura County ranks as both the ninth-leading California County in total crop value and as a top ten producer of agricultural commodities in the United States (Ventura County, 2008a; Ventura County, 2009). The top five products produced in Ventura County by total value are: strawberries, lemons, celery, tomatoes, and raspberries (Ventura County, 2008a).

According to the California Department of Conservation (CDC), there were 318,166 acres of agricultural land in Ventura County in 2008 (FMMP, 2011b). Approximately 28.1 percent of the County is agricultural land (Farm Bureau of Ventura County, 2011). The Proposed Project and alternatives would traverse parcels that are currently in agricultural use, ranging from avocado groves to grazing lands.

Important Farmland

To characterize the environmental baseline for agricultural resources, Important Farmland Maps produced by the CDC's Farmland Mapping and Monitoring Program (FMMP) were reviewed. Important Farmland maps show categories based on qualifying soil types, as determined by the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), as well as current land use. For the purpose of this environmental analysis and consistency with CEQA Appendix G and the Farmland Policy Act of 1981, Farmland includes FMMP map categories *Prime Farmland, Unique Farmland,* and *Farmland of Statewide Importance* (hereafter collectively referred to as Farmland), and any conversion of land within these categories is typically considered to be an adverse impact. These map categories are defined by the Department of Conservation's FMMP as follows (FMMP, 2011a):

Prime Farmland: Land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods.

Farmland of Statewide Importance: Land that is similar to *Prime Farmland* but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.

Unique Farmland: Land of lesser quality soils used for the production of specific high economic value crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. It is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Examples of crops include oranges, olives, avocados, rice, grapes, and cut flowers.

Table 4.2-1 shows the acres of Farmland in Ventura County in 2006 and 2008, as well as the amount of recent Farmland conversions. **Table 4.2-2** shows the miles of ROW of the Proposed Project and alternatives that would cross Farmland. Table 4.2-2 does not include Alternative Substation Site B or System Alternative B because neither of these alternatives would be located on Farmland.

Land Use Category	Total Acres Inventoried		2006–2008 Acreage Changes		
	2006	2008	Acres Lost	Acres Gained	Net Change
Prime Farmland	45,431	43,790	1,842	201	-1,641
Farmland of Statewide Importance	34,230	33,841	455	66	-389
Unique Farmland	28,583	28,643	890	950	60
Farmland Subtotal	108,244	106,274	3,187	1,217	-1,970

 TABLE 4.2-1

 FARMLAND CONVERSION FROM 2006–2008 IN VENTURA COUNTY

TABLE 4.2-2 FARMLAND AND WILLIAMSON ACT LAND CONTAINED IN THE ROW OF THE PROPOSED PROJECT AND ALTERNATIVES

	Total Miles of ROW					
	Proposed Project	Alternative Subtransmission Alignment 1	Alternative Subtransmission Alignment 2	Alternative Subtransmission Alignment 3		
Prime Farmland	1.3	0.7	0.0	1.3		
Farmland of Statewide Importance	0.0	0.0	0.0	0.0		
Unique Farmland	0.2	0.1	0.0	0.0		
Total	1.5	0.8	0.0	1.3		
Williamson Act Contracts	0.0	0.0	0.0	0.0		

SOURCE: FMMP, 2008; CDC, 2009

Williamson Act Contracts

Also known as the California Land Conservation Act, the Williamson Act is a State law passed in 1965 to preserve farmland and open space in exchange for property tax breaks to landowners. Sixteen million acres - or about half of the State's farmland - is under the Williamson contract, including approximately 10.41 percent of the land acreage in Ventura County (CSAC, 2009). (See *Regulatory Context*, below, for more information about the Williamson Act). Four parcels of land in unincorporated Ventura County in the vicinity of the Proposed Project are currently under a Williamson Act contract; however, those parcels are on the east side of Sunset Valley Road, and would not be traversed by the proposed subtransmission alignment (see **Figure 4.2-1** and Table 4.2-2).

Forest Land and Timberland

As discussed in Section 4.10, *Land Use and Planning*, the Proposed Project would be located primarily on land used for agriculture, open space, and rural residential development. There are no areas of forest land or timberland located within the project area, and the Proposed Project would not traverse any land zoned for timberland production or any land used for growing trees for commercial production of timber or other forest products.

Regulatory Context

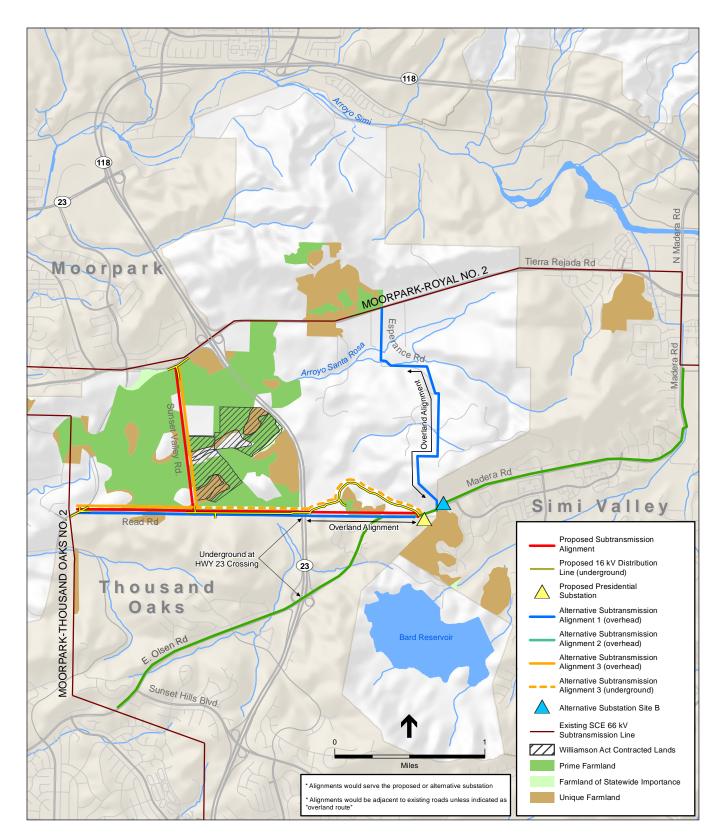
State

California Farmland Mapping and Monitoring Program

The CDC, under the Division of Land Resource Protection, has set up the FMMP. The FMMP monitors the conversion of the State's farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The FMMP is an informational service only and does not have regulatory jurisdiction over local land use decisions.

California Public Resource Code

The California Public Resources Code governs forestry, forests and forest resources, as well as range and forage lands, within the State. "Forest land" is defined by Public Resources Code §12220(g) as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Relatedly, "timberland" is defined by Public Resources Code §4526 as, "land, other than land owned by the federal government..., which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees."



SOURCE: SCE, 2010; FMMP, 2008; DOC, 2009

Presidential Substation Project . 207584.02 Figure 4.2-1 Important Farmland and Williamson Act Contracted Land

California Government Code

Chapter 6.7 of the California Government Code (§§51100-51155) regulates timberlands within the State. "Timberland production zone" is defined in §51104(g) as an area that has been zoned pursuant to Government Code §51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses. In this context, "compatible uses" include any use that "does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber" (Government Code §51104(h)). Watershed management, grazing and the erection, construction, alteration, or maintenance of electric transmission facilities are examples of compatible uses.

California Land Conservation Act of 1965 (Williamson Act), as amended

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) preserves open spaces and agricultural land in exchange for property tax breaks (Government Code §51200 et seq.). It discourages urban sprawl and prevents landowners from developing their property for the greater land value of commercial and/or residential uses. The Williamson Act is a State program implemented at the county level that allows agricultural landowners to contractually agree to retain land included in an agricultural preserve¹ in agricultural or and open space uses for a period of 10 years and, in return, to pay reduced property taxes. The term of the contract automatically renews each year unless not renewed or cancelled, so that the contract always has a 10 year period left.

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified in the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal 1.6.1-1: Preserve and protect irrigated agricultural lands as a nonrenewable resource to assure the continued availability of such lands for the production of food, fiber and ornamentals.

Policy 1.6.2-1: Discretionary development located on land designated as Agricultural and identified as Prime Farmland or Farmland of Statewide Importance on the State's Important Farmland Inventory, shall be planned and designed to remove as little land as possible from potential agricultural production and to minimize impacts on topsoil.

Policy 1.6.2-6: Discretionary development adjacent to Agricultural-designated lands shall not conflict with agricultural use of those lands.

An agricultural preserve defines the boundary of an area within which a city or county will enter into Williamson Act contracts with landowners: The boundary is designated by resolution of the board or city council having jurisdiction. Agricultural preserves must generally be at least 100 acres in size.

4.2 Agricultural and Forestry Resources

Goal 3.2.1-5(1): Open Space. Preserve for the benefit of all the County's residents the continued wise use of the County's renewable and nonrenewable resources by limiting the encroachment into such areas of uses which would unduly and prematurely hamper or preclude the use or appreciation of such resources.

Policy 4.5.2-2: All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.

(Ventura County, 2008b).

Ventura County Non-Coastal Zoning Ordinance (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

A portion of the proposed subtransmission alignment is located in unincorporated Ventura County, and traverses parcels zoned as *Agricultural Exclusive (A-E)*. The purpose of the *Agricultural Exclusive* zone is to preserve and protect commercial agricultural lands as a limited and irreplaceable resource, to preserve and maintain agriculture as a major industry in Ventura County and to protect these areas from the encroachment of nonrelated uses which, by their nature, would have detrimental effects upon the agriculture industry. Aboveground transmission lines and service yards are allowed in the *Agricultural Exclusive* zoning designation with a Conditional Use Permit (Ventura County, 2008c).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The Proposed Project and alternatives would not traverse any parcels in the City of Thousand Oaks designated for agriculture or forestry. While CPUC General Order No. 131 explains that local land use regulations would not apply to the Proposed Project, there are also no goals or policies identified in the City of Thousand Oaks General Plan that otherwise would be applicable to the Proposed Project and alternatives (City of Thousand Oaks, 1997; City of Thousand Oaks, 2009a).

City of Thousand Oaks Municipal Code: Zoning Ordinance (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

According to the Municipal Code's Zoning Ordinance, the proposed Presidential Substation site is located entirely within the jurisdiction of the City of Thousand Oaks and is zoned as *Residential Planned Development* (0.22 units allowed per net acre) – *Single Family Detached Homes in a Protected Ridgeline Overlay Zone* (*RPD-0.22U-SPD-PR*). In addition, a portion of the proposed subtransmission alignment would traverse City of Thousand Oaks parcels currently zoned as *Rural Exclusive - 5 acre average lot size* (*RE - 5AC*), *Open Space* (*OS*), and *Open Space-Protected Ridgeline Overlay Zone* (*OS-PR*). Agriculture is an allowed use in the Rural Exclusive zoning designation (City of Thousand Oaks, 2009b).The Municipal Code also addresses the preservation and protection of Landmark Trees and Oak Trees, as well as regulations pertaining to tree pruning. Refer to Section 4.4, *Biological Resources*, for a description of these Municipal Codes and analysis of potential impacts.

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following policies identified in the City of Simi Valley General Plan would otherwise be relevant to the Proposed Project and alternatives:

Policy III-2.16: Agricultural uses should be encouraged in buffer areas between Simi Valley and adjacent communities.

Policy III-2.17: Agricultural land uses devoted to the growing of crops should be situated to ensure compatibility with adjacent land uses; agricultural land uses devoted to the raising or maintaining of livestock should be buffered from higher density areas.

(City of Simi Valley, 1988).

Simi Valley Wood Ranch Specific Plan (Alternative Subtransmission Alignment 2)

The Simi Valley Wood Ranch Specific Plan implements the General Plan. The Wood Ranch Specific Plan discusses Madera Road, but does not discuss agriculture or forestry activity in the project area (City of Simi Valley, 2003).

City of Simi Valley Municipal Code: Zoning Ordinance (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

A portion of Alternative Subtransmission Alignment 2 would traverse City of Simi Valley parcels zoned as *Open Space (OS), Residential – Low Density (RL), Residential – Moderate Density (RMod), Residential – High Density (RH), Residential – Very High Density (RVH), Commercial Planned Development (CPD), and Commercial Recreation (CR).* In addition, Alternative Substation Site B is located within the jurisdiction of the City of Simi Valley and is zoned as *Residential – Low Density with Conditional Zoning (RL – CZ)* (City of Simi Valley, 2006).

The Municipal Code also addresses the preservation and protection of Mature Trees. Refer to Section 4.4, *Biological Resources*, for a description of this Municipal Code and analysis of impacts.

4.2.2 Significance Criteria

Based on Appendix G of the CEQA Guidelines, a project would cause an adverse impact to agriculture and forestry resources if it would:

- a) Convert *Prime Farmland*, *Unique Farmland*, or *Farmland of Statewide Importance* (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526) or timberland zoned Timberland Production (as defined by Government Code §51104(g);

- d) Result in the loss of forest land or conversion of forest land to non-forest use; or
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

4.2.3 Applicant Proposed Measures

No APMs have been identified by SCE to reduce potential impacts on agriculture and forestry resources.

4.2.4 Impacts and Mitigation Measures

Based on the *CEQA Guidelines*, the analysis considers whether the Proposed Project would result in impacts to Farmland. This impact analysis considers the potential agricultural effects of activities associated with the construction, operation, and maintenance of the Proposed Project, including modification of the Royal and Moorpark substations. The proposed modifications at the Royal and Moorpark substations would occur on previously disturbed areas within the existing footprint of the substations, and so the associated construction, operation and maintenance activities would have no impact to agriculture and forestry resources. Accordingly, this work is not further discussed in this section.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

Impact 4.2-1: Construction, operation and maintenance activities would result in the temporary impacts to designated Farmland. *Less than significant* (Class III)

Proposed Project construction would cause temporary disturbance to Farmland due to construction methods that would be used to complete the various components of the Proposed Project including subtransmission alignment construction, distribution line relocation, installation of telecommunication lines, and construction of the proposed Presidential Substation. Temporary impacts to Farmland could occur at construction sites including a temporary marshalling yard, work areas, conductor pulling/stringing set-up locations, and access routes to poles along the subtransmission line alignment.

No temporary impacts to Farmland would occur at the proposed Presidential Substation site, as the 4-acre Substation footprint is not designated Farmland. No temporary impacts would occur from the use of the temporary marshalling yard, as the marshalling yard would be located at the existing Moorpark Substation (in the City of Moorpark), Thousand Oaks Service Center (in the City of Thousand Oaks); Pardee Substation (in the City of Santa Clarita); and/or an approximately 3-acre commercial facility located within approximately 5 miles of the construction area. SCE would ensure that the constructing marshalling yard is zoned to allow the use of marshalling and/or staging yards; as such, it would not be an agricultural site.

As shown in Figure 4.2-1 and Table 4.2-2, approximately 1.5 miles of the proposed subtransmission alignment would traverse Prime Farmland and Unique Farmland, primarily along Read Road in the City of Thousand Oaks and Sunset Valley Road in unincorporated Ventura County, with a small pocket of Prime Farmland east of Hwy 23. Construction of the proposed subtransmission alignment including work areas, pull and tension sites, and pole access routes would consequently temporarily disturb Farmland in these locations.

However, construction of the Proposed Project would not result in disturbance of a substantial amount of Farmland. Poles on Read Road and Sunset Valley Road would be primarily adjacent to the roadway, minimizing the need for pole access roads and work areas on Farmland. Furthermore, conductor pulling/stringing set-up locations would be located on existing level areas and existing roads to minimize the need for grading and cleanup. Pulling/stringing set-up locations would be approximately 150 feet by 30 feet in size, and would occur every 6,000 feet or less. Finally, after the completion of construction, land prepared for work areas and pull and tension sites would be returned to pre-project agricultural use. Given the small amount of disturbed Farmland and the temporary nature of the disturbance, construction of the Proposed Project would not convert Farmland to non-agricultural use and impacts would be less than significant.

Mitigation: None required.

Impact 4.2-2: Construction, operation and maintenance activities would result in the permanent conversion of designated Farmland to non-agricultural use. *Less than significant* (Class III)

Construction of the Proposed Project would cause permanent disturbance to Farmland due to placement of eight TSPs and 19 LWS new poles on areas designated by the FMMP as Farmland. A 10-foot maintenance buffer would surround each pole, resulting in permanent disturbance of approximately 0.02 acre of Farmland (0.02 acre of *Prime Farmland* and less than 0.01 acre of *Unique Farmland*). Under the Proposed Project, 37 existing wood poles located on Farmland would be removed. Land covered by these existing poles that is not located within the maintenance area of new poles could be returned to productive agricultural use, resulting in less than 0.01 acre of reclaimed *Prime Farmland*. Therefore, the net impact of pole placement would be a conversion of 0.02 acre of Farmland.

Construction of the Proposed Project would also cause permanent disturbance to Farmland due to modification of an existing unpaved access road east of Hwy 23 to construct a new permanent access road. As described in Chapter 2, *Project Description*, grubbing and clearing would be required for use of an existing unpaved access road off of Olsen/Madera Road. Road construction would require the removal of approximately 13 avocado trees, resulting in the permanent conversion of approximately 0.04 acre of Farmland. No Farmland would be reclaimed as part of road construction.

As discussed in the setting, Ventura County contains 106,274 acres of Farmland. The permanent conversion of 0.06 acre of Farmland (0.02 acre from pole installation and 0.04 acre from road construction) would represent a loss of less than 0.0001 percent of County Farmland. Such a small loss would not constitute a substantial conversion of Farmland to non-agricultural use. Impacts would be less than significant.

Mitigation: None required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract.

The Proposed Project would not conflict with existing zoning for agricultural use. The proposed Presidential Substation site would be built on land which is not zoned for agricultural use. The proposed subtransmission alignment would be located within exiting ROW currently being used for 16 kV distribution lines in unincorporated Ventura County and the City of Thousand Oaks, and would not conflict with zoning designations in either of these jurisdictions (*A*-*E* in Ventura County and *RPD-0.22U-SPD-PR*, *RE - 5AC*, *OS*, and *OS-PR* in the City of Thousand Oaks) (No Impact). In addition, utility corridors are generally considered to be a compatible land use with agricultural land because the installation of overhead lines does not affect the continued use of the underlying ground for agricultural uses. See Section 4.10, *Land Use and Planning*, for further discussion on existing zoning and land use designations in the project area.

The Proposed Project also would not conflict with a Williamson Act contract as it would not traverse any land under contract. Therefore, there would be no impact related to Williamson Act contracts (No Impact).

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526) or timberland zoned Timberland Production (as defined by Government Code §51104(g).

As defined above, "forest land" means "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (Pub. Res. Code §12220(g)). Also as defined above, "timberland" means "land, other than land owned by the federal government..., which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees" (Pub. Res. Code §4526).

As discussed in Section 4.4, *Biological Resources*, the project site does not contain forest land or forest resources. The principal natural communities at the 4-acre proposed Presidential Substation site are coastal sage scrub, chamise chaparral and non-native grassland (Bonterra, 2008). Areas

west of the site are predominantly natural, and support the same vegetation communities with the addition of coastal sage scrub/coast prickly pear succulent scrub. The proposed subtransmission alignment is predominantly located adjacent to disturbed road corridors that support ruderal and disturbed habitat, agricultural land, ornamental vegetation and non-native grassland. A 600 foot long portion of the alignment located east of Hwy 23 traverses coastal sage scrub habitat.

Nevertheless, given the historical prevalence of oak trees in the vicinity of the project area (defined by City of Thousand Oak Municipal Code Chapter 14 as any oak tree of the Genus Quercus including, but not limited to, Valley Oak, California Live Oak and Scrub Oak) this analysis conservatively assumes that land in the project area could support 10-percent native tree cover. However, the proposed subtransmission alignment would be located in an established utility corridor in existing SCE ROW. Being located in SCE ROW would preclude the land from being managed for one or more forest resources; thus the proposed subtransmission alignment portion of the Proposed Project does not meet the definition of "forest land" or "timberland."

As discussed in Section 4.10, *Land Use and Planning*, the proposed Presidential Substation site would be located entirely within the jurisdiction of the City of Thousand Oaks, on land that is designated by the City of Thousand Oaks General Plan as *Residentially Developable Land*. The *Residentially Developable Land* designation is intended for residential uses at a density of 0.2 to 1.0 dwelling units per net acre. The site is zoned as *RPD-0.22U-SFD-PR*. This designation provides residential zoning for single-family dwellings. Residential development would not be a compatible use with management of forestry resources including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. As such, the proposed Presidential Substation portion of the Proposed Project also does not meet the definition of "forest land" or "timberland."

Finally, no portion of the Proposed Project would be located on land zoned Timberland Production Zone. Accordingly, the Proposed Project would not conflict with the existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production (No Impact).

d) Result in the loss of forest land or conversion of forest land to non-forest use.

As discussed under criterion d), there are no areas of forest land or timberland located within the project area, and the Proposed Project would not traverse any land used for growing trees for commercial production of timber or other forest products. As such, the Proposed Project would not result in a loss of forest land or conversion of forest land to non-forest use (No Impact).

4.2 Agricultural and Forestry Resources

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Impact 4.2-3: The Proposed Project would involve other changes in the existing environment which could impact agricultural production, and directly or indirectly result in conversion of Farmland to non-agricultural use. *Less than significant* (Class III)

Farmers in the project area rely on helicopters to provide crop dusting over Farmland. To successfully provide this service, pilots fly helicopters low over treetops in order to create turbulence. This turbulence exposes the bottom side of tree leaves, at which point the helicopter releases an oil mix to target pests. 16 kV wood distribution poles ranging in height from 35 feet to 65 feet exist where this activity takes place. The Proposed Project would replace the existing 16 kV distribution poles and conductor with TSPs ranging in height from 65 to 85 feet, and installation of 66 kV subtransmission conductor. The proposed subtransmission alignment would follow the same route as the old 16 kV distribution alignment. Although an increase in pole and conductor height could impede helicopters from dusting crops, crops could be dusted via alternate methods. Farmland typically dusted by helicopters would not be removed from agricultural production directly or indirectly, and there would be no conversion of Farmland.

The interactions between honeybees and subtransmission lines have been examined in scientific studies. Research studies have found behavioral changes in bees when subjected to elevated electric fields at levels greater than 345 kV. Although typical electric fields do not affect organism cellular and molecular function, external electric fields of a sufficiently elevated intensity can cause physical effects in whole organisms, because of force on hairs and hair-like structures, and potentially via small electric shocks. Honeybee hives exposed to electric fields higher than those projected for the Proposed Project can exhibit bee behavioral changes such as increased motor activity, redistribution of honeycomb material (propolis), lower foraging rates, and decreased winter survival. This could have an adverse affect on agriculture (Valberg, 2010). However, because the proposed subtransmission lines have electric fields much lower than 345 kV, operation of the Proposed Project is not expected to have an impact on honeybees or pollination.

Mitigation: None required.

4.2.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore no impacts to agriculture or forestry resources would occur.

Alternative Subtransmission Alignment 1

Impacts associated with Alternative Subtransmission Alignment 1 would be less than those associated with the Proposed Project. This alternative subtransmission alignment would not require additional staging areas and would have a similar number of temporary pulling/stringing set-up locations. As shown in Table 4.2-2, Alternative Subtransmission Alignment 1 would cross 0.6 mile less *Prime Farmland* than the Proposed Project, and 0.1 mile less *Unique Farmland*. Impacts to Farmland from pole installation would be correspondingly smaller, and would be less than significant. Like the Proposed Project, this alternative subtransmission alignment would require the removal of 13 avocado trees for access road construction east of Hwy 23, resulting in a less-than-significant impact to permanent Farmland conversion. Like the Proposed Project, this alternative subtransmission alignment would not conflict with existing zoning for agricultural use, or a Williamson Act contract, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. Finally, this alternative would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Alternative Subtransmission Alignment 2

Impacts associated with Alternative Subtransmission Alignment 2 would be less than those associated with the Proposed Project. As shown in Table 4.2-2, Alternative Subtransmission Alignment 2 would not cross *Prime Farmland*. *Farmland of Statewide Importance*, or *Unique Farmland*. No Farmland would be temporarily or permanently converted to non-agricultural use from the construction, operation or maintenance of this alternative subtransmission alignment (No Impact). Like the Proposed Project, this alternative subtransmission alignment would not conflict with existing zoning for agricultural use, or a Williamson Act contract, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. Finally, this alternative would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Alternative Subtransmission Alignment 3

Impacts associated with Alternative Subtransmission Alignment 3 would be less than those associated with the Proposed Project. This alternative subtransmission alignment would not require additional staging areas and would have similar locations for temporary pulling/stringing set-up locations. The alternative would cross same number of acres of *Prime Farmland* (1.3 acres), but would not cross *Unique Farmland*. Temporary impacts to Prime Farmland would be greater than the Proposed Project, due to trenching along Read Road, but would remain less than significant. Regarding permanent conversion of Farmland, Alternative Subtransmission Alignment 3 would require the installation of fewer poles on Read Road (*Prime Farmland*), and would not require the removal of 13 avocado trees for access road construction east of Hwy 23. Overall impacts would be less than significant. Like the Proposed Project, Alternative Subtransmission Alignment 3 would not conflict with existing zoning for agricultural use, or a Williamson Act contract, or involve other changes in the existing environment which, due to their location or nature, could result in

conversion of Farmland to non-agricultural use or forest land to non-forest use. Finally, this alternative would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Alternative Substation Site B

Impacts associated with Alternative Substation Site B would be the same as those associated with the proposed Presidential Substation site. Construction, operation and maintenance of Alternative Substation Site B would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. Implementation of this alternative also would not conflict with existing zoning for agricultural use. Alternative Substation Site B is located within the jurisdiction of the City of Simi Valley and is zoned as Residential - Low Density with Conditional Zoning (City of Simi Valley, 2006): Agricultural uses including crop production, horticulture, orchard production, vineyard production, and produce stand implementation are permitted, and farm animals are conditionally permitted use in this zone. However, the site currently contains several abandoned concrete block buildings and structures, a garage, parking areas, light posts, ornamental vegetation, and industrial features including chain link fence and a radio antenna. These industrial features are part of the existing landscape. Alternative Substation Site B also would not conflict with existing zoning for agricultural use, or a Williamson Act contract, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. Finally, this alternative would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

System Alternative B

Under System Alternative B, no new facilities would be constructed, and all changes would take place within existing facility footprints and would cause no impact to agriculture and forestry. Implementation of this alternative would not convert *Prime Farmland, Unique Farmland,* or *Farmland of Statewide Importance*, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. Implementation of System Alternative B also would not conflict with existing zoning for agricultural use, or a Williamson Act contract, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. Finally, this alternative would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

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4.3 Air Quality

This section evaluates the potential for the Proposed Project, as well as the alternatives, to impact regional and local air quality due to sources of air emissions during construction, operation, and maintenance activities.

4.3.1 Setting

Regional Topography, Meteorology, and Climate

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions which influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The study area is located in the City of Thousand Oaks in the southernmost portion of Ventura County within the South Central Coast Air Basin (SCCAB). Ventura County is comprised of coastal mountain ranges, the coastal shore, the coastal plain, and several inland valleys. The air above Ventura County often exhibits weak vertical and horizontal dispersion characteristics, which limit the dispersion of emissions and cause increased ambient air pollutant levels. Persistent temperature inversions prevent vertical dispersion. The inversions act as a "ceiling" that prevents pollutants from rising and dispersing. Mountain ranges act as "walls" that inhibit horizontal dispersion of air pollutants. The diurnal land/sea breeze pattern common in Ventura County recirculates air contaminants. Air pollutants are pushed toward the ocean during the early morning by the land breeze, and toward the east during the afternoon by the sea breeze. This creates a "sloshing" effect, causing pollutants to remain in the area for several days. Residual emissions from previous days accumulate and chemically react with new emissions in the presence of sunlight, thereby increasing ambient air pollutant levels (VCA PCD, 2003).

The study area typically has average maximum and minimum winter (i.e., January) temperatures of 62 degrees Fahrenheit (°F) and 43 °F, respectively, while average summer (i.e., July) maximum and minimum temperatures are 86 °F and 60 °F, respectively. Rainfall averages approximately 10 inches per year (WRCC, 2011).

Criteria Air Pollutants

The U.S. Environmental Protection Agency (USEPA) has identified criteria air pollutants that are a threat to public health and welfare. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria (see Regulatory Context discussion below). Below are descriptions of criteria pollutants that are a concern in the study area.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic compounds (ROC) and nitrogen oxides (NO_x). ROC and NO_x are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROC and NO_x under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is an air quality pollutant of concern because it acts as a respiratory irritant. NO₂ is a major component of the group of gaseous nitrogen compounds commonly referred to as NO_x. A precursor to ozone formation, NO_x is produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, NO_x emitted from fuel combustion is in the form of nitric oxide (NO) and NO₂. NO is often converted to NO₂ when it reacts with ozone or undergoes photochemical reactions in the atmosphere.

Carbon Monoxide

Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Particulate Matter

Particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter $(PM_{2.5})$ represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while

others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. According to a recent study by the California Air Resources Board (CARB), exposure to ambient PM_{2.5}, particularly diesel particulate matter (DPM), can be associated with approximately 14,000 to 24,000 premature annual deaths statewide (CARB, 2009). Particulates can also damage materials and reduce visibility.

Valley Fever

San Joaquin Valley Fever (formally known as Coccidioidomycosis) is an infectious disease caused by the fungus *Coccidioides immitis*. San Joaquin Valley Fever is also known as Valley Fever, Desert Fever, or Cocci. Infection is caused by inhalation of *Coccidioides immitis* spores that have become airborne when dry, dusty soil or dirt is disturbed by natural processes such as wind or earthquakes, or by human induced ground disturbing activities such as construction, farming, etc.

There are about 100,000 new cases of Valley Fever per year in the southwestern United States. The average number of reported new cases of Valley Fever in Ventura County before 1994 was 40 per year. In 1994, the year of the Northridge earthquake, the number of reported new cases of Valley Fever was 243. This increase was attributed to the great quantities of airborne dust generated by the Northridge earthquake (VCAPCD, 2003). From 1994 to 2002, the number of cases of Valley Fever decreased. The number of cases reported annually during that time period averaged less than 19. However, cases of Valley Fever increased by 600 percent in the spring of 2004, following major wildfires in Ventura County in the fall of 2003. About 14 cases per month were reported from the fall of 2003 to the spring of 2004, compared to an average of two cases per month before the October fires. At least 70 cases were reported during that time period, with two thirds of them in the eastern part of the County (Ventura County, 2010).

Existing Air Quality

The Ventura County Air Pollution Control District (VCAPCD)'s regional monitoring network measures the ambient concentrations of criteria pollutants. Existing levels of air quality in the study area can be inferred from ambient air quality measurements conducted by VCAPCD at its closest stations to the Proposed Project. The closest air quality monitoring stations are the City of Thousand Oaks Moorpark Road station and the City of Simi Valley Cochran Street station, approximately 3.5 miles southwest and 8 miles east-northeast of the proposed Presidential Substation site, respectively. The City of Thousand Oaks Moorpark Road station monitors ozone and PM_{2.5} and the City of Simi Valley's Cochran Street station monitors ozone, PM ₁₀, and PM _{2.5}. **Table 4.3-1** shows a five-year (2005 through 2009) summary of ozone and PM_{2.5} data monitored at the City of Thousand Oaks Moorpark Road station and PM₁₀ data monitored at the City of Simi Valley Cochran Street station. The data are compared to the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS).

4.3 Air Quality

		Monitoring Data by Year				
Pollutant	Standard	2005	2006	2007	2008	2009
Ozone						
Highest 1 Hour Average (ppm) ^a		0.109	0.096	0.112	0.103	0.109
Days over State Standard	0.09	2	2	2	1	4
Highest 8 Hour Average (ppm)		0.083	0.083	0.102	0.084	0.086
Days over State Standard	0.070	11	9	8	13	9
Days over National Standard	0.075	6	5	2	6	5
Particulate Matter (PM10)						
Highest 24 Hour Average (µg/m³) ^b		74.0	55.8	116.7	80.1	76.8
Days over State Standard	50	7	7	24	12	6
Days over National Standard	150	0	0	0	0	0
State Annual Average (µg/m ³)	20	24.5	21.9	28.5	26.6	25.5
Particulate Matter (PM _{2.5})						
Highest 24 Hour Average (µg/m ³)		27.8	28.4	31.5	27.8	21.7
Days over National Standard	35	0	0	0	0	0
State Annual Average (µg/m ³)	12	11.7	10.1	10.6	11.5	10.8

TABLE 4.3-1 AIR QUALITY DATA SUMMARY (2005-2009) FOR THE STUDY AREA

NOTES:

^appm = parts per million

 $\mu g/m^3 = micrograms$ per cubic meter.

SOURCE: CARB, 2011

As shown in Table 4.3-1, the State 1-hour ozone standard was exceeded between one and four times per year during the 2005 through 2009 period. The State 8-hour ozone standard was exceeded between eight and 13 times per year, while the national eight-hour ozone standard was exceeded between two and six times per year during the 5-year period. The 24-hour State PM_{10} standard was exceeded between six and 24 times each year, and there were no exceedances of the federal 24-hour PM_{10} standard recorded during the 5-year period. The annual average PM_{10} concentrations exceeded the State standard each of the 5 years. There were no exceedances of the $PM_{2.5}$ standards during the 2005 through 2009 period.

Sensitive Receptors

For the purposes of this air quality analysis, sensitive receptors are generally defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and daycare centers. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions sources, and/or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress

and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, which results in greater exposure to ambient air quality.

Proposed Project

There are several residents along Adirondack Court, approximately 600 feet south of the proposed Presidential Substation site. There are also residents located farther south and east of the Substation site, along Fresh Meadows Road and Shoal Creek Court. The Tudor Time Child Care Center is located approximately 300 feet east of the site. The proposed subtransmission alignment along Read Road would pass within 50 feet of a few single family residences as well as within 50 feet of the Enclave Estates residential subdivision along Read Road just west of Hwy 23. The underground distribution and telecommunications would be installed within 50 feet of one residence.

Alternative Subtransmission Alignment 1

The portion of Alternative Subtransmission Alignment 1 that is the same as the proposed subtransmission alignment along Read Road would pass within 50 feet of a few single family residences as well as within 50 feet of the Enclave Estates residential subdivision along Read Road just west of Hwy 23. The part of Alternative Subtransmission Alignment 1 along Esperance Road would also be within 100 to 200 feet of at least two residences.

Alternative Subtransmission Alignment 2

Alternative Subtransmission Alignment 2 would be within 100 feet of several dozen residential receptors located north and south of East Olsen Road and Madera Road. In addition to residential receptors, the Tutor Time Child Care Center is within 50 feet of the alignment and the eastern end of the alignment is approximately 1,300 feet south-southwest of Madera Elementary School in the City of Simi Valley.

Alternative Subtransmission Alignment 3

The portion of Alternative Subtransmission Alignment 3 that is the same as the proposed subtransmission alignment along Read Road would pass within 50 feet of a few single family residences as well as within 50 feet of the Enclave Estates residential subdivision along Read Road just west of Hwy 23. In addition, the underground portion of Alternative Subtransmission Alignment 3 east of Hwy 23 would be within 50 feet of one residence.

Alternative Substation Site B

Alternative Substation Site B would be located along Madera Road approximately 150 feet across the street from the Tutor Time Child Care Center. The site would also be within 600 feet of residential receptors along Fresh Meadows Road. In addition, there is one residence approximately 1,000 feet north of the site along Presidential Drive.

System Alternative B

System Alternative B would require upgrades at existing Royal, Thousand Oaks, and Potrero substations. Royal and Potrero substations are surrounded by commercial uses; however, Thousand Oaks Substation is surrounded by multi- and single-family residences as close as 35 feet from the substation, and Pinecrest School is approximately 300 feet to the east of the substation.

Regulatory Context

Air quality within the SCCAB is addressed through the efforts of various federal, State, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The air pollutants of concern and agencies primarily responsible for improving the air quality within the SCCAB and the pertinent regulations are discussed below.

Criteria Air Pollutants

Regulation of air pollution is achieved through both CAAQS and NAAQS as well as emission limits for individual sources of air pollutants. As required by the federal Clean Air Act, the USEPA has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, NO₂, Sulfur dioxide (SO₂), particulate matter (i.e., PM₁₀, PM_{2.5}), and lead. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

To protect human health and the environment, the USEPA has set "primary" and "secondary" maximum ambient thresholds for all six criteria pollutants. Primary thresholds were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards (i.e., CAAQS) for most of the criteria air pollutants. **Table 4.3-2** presents both sets of ambient air quality standards (i.e., national and State) and provides a brief discussion of the related health effects and principal sources for each pollutant. California has also established State ambient air quality standards for sulfates, hydrogen sulfide, and vinyl chloride; however, air emissions of these pollutants are not expected under the Proposed Project or alternatives and are not further discussed in this EIR.

Ventura County is classified as a non-attainment area for the State one-hour ozone standard as well as the State and federal eight-hour ozone standards. Ventura County is also a non-attainment area relative to the State PM_{10} and $PM_{2.5}$ standards. For all other criteria pollutants, Ventura County is classified as either unclassified or as attainment with respect to State and federal standards (VCAPCD, 2011a).

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources	
Ozone	1 Hour 8 Hour	0.09 ppm 0.070 ppm	_ 0.075 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when ROC and NO _x react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.	
Carbon Monoxide	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, CO interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Incomplete combustion of fuels; primarily from internal combustion engines, primarily gasoline-powered motor vehicles.	
Nitrogen Dioxide	1 Hour Annual	0.18 ppm 0.030 ppm	0.100 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.	
Sulfur Dioxide	1 Hour 3 Hour 24 Hour	0.25 ppm 0.04 ppm	0.075 ppm 0.5 ppm –	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.	
Respirable Particulate Matter (PM ₁₀)	24 Hour Annual	50 μg/m ³ 20 μg/m ³	150 μg/m ³ –	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).	
Fine Particulate Matter (PM _{2.5})	24 Hour Annual	_ 12 μg/m³	35 µg/m ³ 15.0 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO_x , SO_2 , and organics.	
Lead	Monthly Rolling 3-month Average Quarterly	1.5 μg/m ³ – –	– 0.15 μg/m ³ 1.5 μg/m ³	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.	

TABLE 4.3-2 STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

ppm = parts per million μ g/m³ = micrograms per cubic meter

SOURCE: CARB 2010 and VCAPCD, 2003

Federal

The USEPA is responsible for implementing the myriad programs established under the federal Clean Air Act, such as establishing and reviewing the NAAQS and judging the adequacy of State Implementation Plans (SIPs), but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

State

CARB is responsible for establishing and reviewing the State standards, compiling the California SIP and securing approval of that plan from USEPA, conducting research and planning, and identifying toxic air contaminants. CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles, and oversees the activities of California's air quality management districts, which are organized at the county or regional level. County or regional air quality management districts are primarily responsible for regulating stationary sources at industrial and commercial facilities within their geographic areas and for preparing the air quality plans that are required under the federal Clean Air Act and California Clean Air Act.

California's Diesel Risk Reduction Plan / Diesel Fuel Regulations

As part of California's Diesel Risk Reduction Plan, CARB has passed numerous regulations to reduce diesel emissions from vehicles and equipment that are already in use. Combining these retrofit regulations with new engine standards for diesel fueled vehicles and equipment, CARB intends to reduce DPM emissions by 85 percent from year 2000 levels by 2020. California Diesel Fuel Regulations (13 Cal. Code Regs. §§2281-2285; 17 Cal. Code Regs. §93114) provide standards for motor vehicle fuels and diesel fuel.

Ventura County Air Pollution Control District

The Proposed Project and alternatives are located in the SCCAB, which encompasses Ventura, San Luis Obispo, and Santa Barbara Counties. The VCAPCD has jurisdiction over the Ventura County portion of the SCCAB. VCAPCD programs include the adoption of regulations and policies, as well as implementation of education and public outreach programs. The VCAPCD is responsible for attaining and/or maintaining air quality in Ventura County within federal and State air quality standards. Specifically, the VCAPCD has the responsibility to monitor ambient air pollutant levels throughout Ventura County and to develop and implement strategies to attain the applicable federal and State standards.

Rule 55 – Fugitive Dust

Rule 55 prohibits emissions of fugitive dust from any applicable source such that the dust remains visible beyond the midpoint (width) of a public street or road adjacent to the property line of the emission source or beyond 50 feet from the property line if there is not an adjacent public street or road. This rule also prohibits emissions of fugitive dust from any applicable source such that the dust causes 20 percent opacity or greater during each observation and the total duration of

such observations (not necessarily consecutive) is a cumulative three minutes or more in any one hour. The rule prohibits persons from engaging in earth-moving activities in a manner that creates visible dust emissions over 100 feet in length. Additionally, no person shall allow track-out to extend 25 feet or more in length unless at least one of the following three control measures is utilized: 1) track-out area improvement; 2) track out prevention; and 3) track-out removal.

2007 Air Quality Management Plan

The 2007 Ventura County Air Quality Management Plan (2007 AQMP), adopted by the VCAPCD Board on May 13, 2008, presents Ventura County's strategy for attaining the federal 8-hour ozone standard as required by the federal Clean Air Act Amendments of 1990. The 2007 AQMP also presents the VCAPCD's Triennial Assessment and Plan Update required by the California Clean Air Act of 1988. The 2007 AQMP contains an attainment demonstration (photochemical modeling and weight of evidence analyses) showing that Ventura County will attain the federal 8-hour ozone standard by June 15, 2013, the deadline for serious 8-hour ozone nonattainment areas.

The 2007 AQMP contains a Reasonable Further Progress demonstration, a Motor Vehicle Conformity Budget for transportation conformity purposes, an emissions inventory and emission forecasts, and a local control strategy containing several new and "further study" emission control measures. The new control measures are proposed revisions to existing VCAPCD rules that VCAPCD staff has found practicable for Ventura County pursuant. The 2007 AQMP also incorporates CARB's State Strategy to achieve the additional emission reductions needed for all areas of the State, including Ventura County, to attain the federal 8-hour ozone standard (VCAPCD, 2011b).

4.3.2 Significance Criteria

According to Appendix G of the CEQA Guidelines, a project would result in a significant impact if it would:

- a) Conflict with or obstruct implementation of the applicable air quality plan.
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- d) Expose sensitive receptors to substantial pollutant concentrations.
- e) Create objectionable odors affecting a substantial number of people.

4.3.3 Applicant Proposed Measures

Southern California Edison (SCE) has proposed the following applicant proposed measure (APM) to minimize emissions from Proposed Project activities.

• **APM AIR-01:** Prepare a Worker Environmental Awareness Plan that provides instruction on the Ventura County Air Pollution Control District Fugitive Dust and Ozone Precursor Control Measures to the construction labor force prior to start of construction.

4.3.4 Impacts and Mitigation Measures

Approach to Analysis

This analysis presents the potential air quality impacts associated with the construction, operations, and maintenance of the Proposed Project and has been prepared in accordance with the *Ventura County Air Quality Assessment Guidelines* (VCAPCD, 2003), which identifies significance thresholds for air pollutant emissions based on standards set by the VCAPCD and CARB. Criteria pollutant emissions from construction equipment exhaust and generation of particulate matter (fugitive dust) are the primary concerns in evaluating short-term air quality impacts. Long-term impacts associated with criteria pollutants, however, would be negligible since emissions-related activities associated with Proposed Project operations would be limited to periodic maintenance and inspection trips. Both short-term construction emissions and long-term operational emissions that would be associated with the Proposed Project have been estimated and are presented and discussed below.

a) Conflict with or obstruct implementation of the applicable air quality plan.

The Proposed Project would be located in the SCCAB under the jurisdiction of the VCAPCD. The most recent air quality plan for the Ventura County portion of the SCCAB is the 2007 AQMP, which was released in 2008. Construction of the Proposed Project would be conducted in compliance with applicable federal, State, and local requirements. Long-term operations of the Proposed Project would result in air pollutant emissions from an estimated three to four trips per month for inspection and maintenance purposes. Exhaust emissions from this small number of annual trips would not conflict with the 2007 AQMP. Furthermore, the Proposed Project would not induce or cause population growth (see Section 4.12, *Population and Housing*), and therefore would not affect population growth assumptions that were considered when developing the 2007 AQMP. Therefore, the Proposed Project would not conflict with or obstruct the implementation of the applicable air quality plan (No Impact).

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact 4.3-1: Project construction activities would generate ozone precursor emissions that could contribute substantially to a violation of ozone air quality standards. *Significant unavoidable* (Class I)

Construction of the Proposed Project would generate emissions of criteria air pollutants over a construction period of approximately 13 to 20 months. Exhaust emissions would result from vehicular traffic generated by construction activities, as well as from construction equipment and machinery. Emission levels for the various construction activities would vary with the type of equipment, duration of use, operation schedules, and size of the construction labor force.

As part of the CPUC's permit application process, SCE provided construction emissions estimates for the majority of construction activities that would be associated with the Proposed Project. It should be noted that at the time the emission estimates were prepared, the Proposed Project did not include the underground open trench subtransmission installation, the Hwy 23 undercrossing, or the underground distribution and telecommunication; therefore, SCE's emission estimates do not include emissions related to those activities. Exhaust emissions were estimated using emission factors from CARB's EMFAC2007 and Offroad2007 emissions models (see Appendix C for details associated with the Proposed Project emission estimates).

To estimate peak daily construction emissions that would be associated with construction of the Proposed Project, a reasonable worst-case scenario was developed in order to identify the types of construction activities that would overlap in schedule and would contribute to the combined total maximum daily emissions. For the purposes of this analysis, it is assumed that the construction activities associated with grading for the Presidential Substation, open trench activities for underground installation of the subtransmission line, subtransmission line steel pole framing and setting, tubular steel pole (TSP) footing and installation, and material deliveries for the subtransmission line would overlap in schedule, representing the peak day construction scenario. As discussed above, open trench construction emissions were not included in the SCE's emission estimates for the project; therefore, ESA has independently estimated the daily emissions that would be associated with the open trench underground subtransmission line construction activities (see Appendix C, Table 29). For consistency, ESA used the same general methods and emissions factors that SCE used for its emission estimates.

Table 4.3-3 presents the estimated peak day construction emissions that would be associated with the Proposed Project. As indicated in the table, grading the proposed Presidential Substation site would be the most air polluting construction activity associated with the Proposed Project given the volume of material handling and hauling that would occur on a daily basis. However, because Substation grading would start at the beginning of the construction phase and would occur over a relatively short duration (i.e., approximately three to four months), it is reasonable to assume that substation grading activities would not occur at the same time as the underground subtransmission line installation activities associated with the Hwy 23 undercrossing nor would it occur at the same time as the installation of the underground distribution and telecommunications.

	Peak Day Emissions (Ib/day)					
Emission Sources	ROC	NO _x	со	PM ₁₀	PM _{2.5}	
Substation Grading	9.4	92.5	41.2	4.4	4.1	
Open Trench Subtransmission Line Installation	6.1	52.5	23.5	2.6	2.3	
Steel Pole Framing and Setting	6.6	51.0	25.9	2.8	2.5	
TSP Footing and Installation	6.2	54.5	23.0	2.7	2.4	
Subtransmission Line Material Delivery	0.5	2.4	2.5	0.2	0.2	
Total Maximum Daily Emissions	28.8	252.9	116.1	12.7	11.5	
VCAPCD Thresholds	25	25				
Significant Impact?	Yes	Yes	No	No	No	

TABLE 4.3-3 PROPOSED PROJECT PEAK DAY CONSTRUCTION EXHAUST EMISSION ESTIMATES

NOTES: See Appendix C for all assumptions and emissions factors used to estimate the peak day construction emissions for the Proposed Project. It is assumed that construction activities related to the proposed subtransmission line undercrossing of Hwy 23, and the underground distribution and telecommunication would commence after Substation grading is complete. Peak day emissions associated with the subtransmission line undercrossing of Hwy 23, and the underground distribution and telecommunication are assumed to be similar to or less than those estimated for Substation grading.

The VCAPCD has adopted CEQA thresholds of significance for ozone precursors that are 25 pounds per day for ROC and 25 pounds per day for NO_x. The VCAPCD has determined that an exceedance of the threshold for either or both of the precursors indicates that a project would individually and cumulatively jeopardize attainment of ozone standards, and would result in a significant adverse impact on air quality. The *Ventura County Air Quality Assessment Guidelines* recommend that construction-related ROC and NO_x emissions not be counted towards the two significance thresholds, since these emissions are temporary. However, the guidelines also indicate that construction activities exceed the 25 pounds per day threshold (VCAPCD, 2003). In addition, the VCAPCD recently provided a comment letter on a Draft EIR for a high profile CEQA review of a landfill project in the County that suggests that the VCAPCD considers mitigated ROC and NO_x emissions should not be considered less than significant (VCAPCD, 2009).

Therefore, as the Lead Agency for the review of the Proposed Project, the CPUC has elected to use the VCAPCD thresholds of significance to assess the significance of short-term construction equipment exhaust emissions. As indicated in Table 4.3-3, Proposed Project construction-related NO_x and ROC emissions would be more than the significance threshold, resulting in a significant impact. Therefore, implementation of Mitigation Measure 4.3-1, which requires a 20 percent reduction in construction-related NO_x and ROC emission levels compared to the most recent CARB fleet average, shall be required.

With regard to the estimated CO, PM_{10} , and $PM_{2.5}$ exhaust emissions presented in Table 4.3-3, these mass emissions would not exceed any VCAPCD established significance criteria and would be dispersed throughout the study area at the proposed Presidential Substation site and along the proposed subtransmission alignments, as well as along the roads that would be used to access the

Proposed Project. Therefore, CO, PM_{10} , and $PM_{2.5}$ exhaust emissions generated by the Proposed Project would not be expected to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Associated impacts for CO, PM_{10} , and $PM_{2.5}$ would therefore be less than significant.

Mitigation Measure 4.3-1: For off-road construction equipment of more than 50 horsepower and on-road diesel fueled vehicles, SCE shall ensure achievement of a Project-wide fleet-average 20 percent NO_x and 20 percent ROC reduction compared to the most recent CARB fleet average. A Construction Equipment NO_x and ROC Reduction Plan to achieve these reductions shall be submitted to CPUC for review and approval prior to commencement of construction activities. Construction activities cannot commence until the plan has been approved. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as such become available.

Implementation of Mitigation Measure 4.3-1 would reduce the Proposed Project-related NO_x and ROC exhaust emissions identified in Table 4.3-3 by up to 20 percent. This would reduce the maximum day NO_x and ROC emissions to approximately 202 pounds and 23 pounds, respectively. Therefore, although ROC emissions would be reduced to less than significant, NO_x emissions would not be reduced to below the significance level of 25 pounds. The construction-related NO_x impact would remain significant and unavoidable.

Significance after Mitigation: Significant Unavoidable.

Impact 4.3-2: Project construction activities would generate fugitive dust emissions of criteria pollutants that could contribute substantially to an existing or projected air quality violation. *Less than significant with mitigation* (Class II)

Construction-related activities would generate dust from earthmoving, excavation, vehicle travel on paved and unpaved surfaces, and other activities over the 13 to 20 month construction period. Emissions of fugitive dust would vary according to the level and type of construction activity, silt content of soil, and prevailing weather. While most of the heavier dust particles would settle on or near the construction site, smaller dust particles would tend to remain suspended longer in the air, increasing particulate levels in the study area.

As part of the CPUC's permit application process, SCE provided construction-related fugitive dust emissions estimates for the Proposed Project. The fugitive dust emissions were estimated using methods identified by CARB, USEPA, and the South Coast Air Quality Management District (SCAQMD) (see Appendix C for details associated with the Proposed Project emission estimates). To estimate peak daily fugitive dust emissions that would be associated with construction of the Proposed Project, a reasonable worst-case scenario was developed in order to identify the types of construction activities that would overlap in schedule and would contribute to the combined total maximum daily emissions. For the purposes of this analysis, it is assumed that the construction activities associated with substation grading, open trench subtransmission line installation, subtransmission line steel pole framing and setting, TSP footing and installation, and material deliveries for the subtransmission line would overlap in schedule, representing the peak daily construction scenario. The estimated peak day construction-related fugitive dust emission that would be associated with the Proposed Project is 255 pounds per day of PM_{10} and 28 pounds per day of $PM_{2.5}$. The vast majority of these emissions would be associated with vehicle travel on paved and unpaved surfaces.

The California Vehicle Code §23114 requires all trucks shall be required to cover their loads. In addition, the *Ventura County Air Quality Assessment Guidelines* recommends that lead agencies for projects that could generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property, identify the project as one that would cause a significant adverse air quality impact. To assess the significance of dust related impacts, the VCAPCD recommends minimizing fugitive dust, especially during grading and excavation operations, rather than quantifying fugitive dust emissions.

SCE has committed to implementing APM AIR-1, which requires the development of a Worker Environmental Awareness Plan to provide instruction on the VCAPCD Fugitive Dust control measures to the construction labor force prior to start of construction. However, APM AIR-1 does not identify the control measures and does not specifically require the implementation of the measures. Therefore, to strengthen the intent of APM AIR-1, Mitigation Measure 4.3-2, which defines the VCAPCD dust control measures, shall be implemented to insure that the Proposed Project would not result in a significant impact related to the generation of fugitive dust.

Mitigation Measure 4.3-2: SCE shall reduce construction-related fugitive dust emissions by implementing the following VCAPCD dust control measures. SCE shall require all contractors to comply with the following requirements:

- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
- All soil and fill haul trucks shall be required to have covered loads.
- All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
- Graded and/or excavated inactive areas of the construction site shall be monitored by the mitigation monitor at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned

for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.

- Signs shall be posted at the proposed Presidential Substation work site limiting traffic to 15 miles per hour or less.
- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the mitigation monitor in determining when winds are excessive.
- Adjacent public streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
- Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

Significance after Mitigation: Less than Significant.

Impact 4.3-3: Operations and maintenance activities would generate emissions of criteria pollutants. *Less than significant* (Class III)

Operations and maintenance of the Proposed Project would not result in new stationary sources of criteria pollutants nor would it increase criteria pollutant emissions from existing stationary sources. Mobile source emissions-related activities associated with Proposed Project operations would be limited to approximately three to four monthly maintenance and inspection trips. Mobile source exhaust emissions were estimated using emission factors from CARB's EMFAC2007 emissions model (see Appendix C for details associated with the Proposed Project emission estimates). Proposed Project operations would result in the generation of substantially less than one pound per day of each of the criteria pollutants on inspection/maintenance days. Therefore, increases in criteria pollutant emissions from operations of the Proposed Project would be negligible and impacts would be less than significant.

Mitigation: None required.

4.3 Air Quality

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard.

Impact 4.3-4: Construction activities would result in emissions of NO_x that would be cumulatively considerable. *Significant unavoidable* (Class I)

Ventura County is designated as non-attainment for ozone and PM_{10} standards. Long term operations of the Proposed Project would result in negligible emissions of ozone precursors (NO_x and ROC) and PM₁₀, which would not be cumulatively considerable (see Impact 4.3-3 discussion above). Construction activities associated with the Proposed Project, as described in the Impact 4.3-1 and 4.3-2 discussions, could have a temporary impact on regional and localized air quality through short-term increases in ozone precursors and PM₁₀, which could be cumulatively significant when combined with other projects described in Section 3.6, *Cumulative Projects*.

The VCAPCD has determined that an exceedance of the threshold for either NO_x or ROC indicates that a project would cumulatively jeopardize attainment of ozone standards. Proposed Project emissions of ROC would not exceed the VCAPCD significance threshold with implementation of Mitigation Measure 4.3-1, therefore, Proposed Project-related ROC emissions would not be cumulatively considerable and cumulative impacts related to ROC emissions would be less than significant. Mitigation Measure 4.3-1 would help reduce NO_x emissions; however, NO_x emissions would continue to exceed the VCAPCD significance threshold; therefore, emissions of NO_x during construction of the Proposed Project would be cumulatively considerable and NO_x -related cumulative impacts on regional and localized air quality from the Proposed Project and other projects would be significant and unavoidable.

To assess the significance of construction-related PM_{10} impacts, the VCAPCD recommends minimizing fugitive dust rather than quantifying PM_{10} emissions. Implementation of Mitigation Measure 4.3-2 would ensure that PM_{10} emissions that would be associated with construction of the Proposed Project would be minimized to the extent that the emissions would not be cumulatively considerable. Therefore, PM_{10} -related cumulative impacts on regional and localized air quality from Proposed Project and other projects would less than significant.

Mitigation Measure 4.3-4: Implement Mitigation Measures 4.3-1 (Construction Equipment NO_x Reductions) and 4.3-2 (Fugitive Dust Mitigation Plan).

Implementation of Mitigation Measures 4.3-1 and 4.3-2 would reduce emissions of criteria pollutants; however, not all potential significant impacts from construction emissions would be mitigated. Therefore, when considered with other projects, construction of the Proposed Project would result in a cumulatively considerable net increase in NO_x and associated impacts would be significant and unavoidable (Class I).

Significance after Mitigation: Significant and Unavoidable.

d) Expose sensitive receptors to substantial pollutant concentrations.

Impact 4.3-5: The Proposed Project would generate emissions of TACs, potentially exposing sensitive receptors to harmful pollutant concentrations. *Less than significant* (Class III)

Construction of the Proposed Project would result in temporary and short-term diesel exhaust emissions from on-site heavy duty equipment and from material deliveries and debris hauling. Particulate exhaust emissions from diesel-fueled engines (DPM) were identified as a toxic air contaminant (TAC) by the CARB in 1998. Construction of the Proposed Project would result in the short-term generation of DPM emissions from the use of off-road diesel equipment required for site grading and excavation and other construction activities, and from construction material deliveries and debris hauling using on-road heavy-duty trucks. Long-term sources of DPM emissions associated with the Proposed Project would be limited to one off-site periodic daily truck trip related to inspection and maintenance activities.

The dose to which receptors are exposed is the primary factor affecting health risk from TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period when assessing TACs (such as DPM) that have only cancer or chronic non-cancer health effects (OEHHA, 2003). However, such health risk assessments should be limited to the duration of the emission-producing activities associated with the project.

With the exception of the proposed Presidential Substation site, the majority of Proposed Project DPM emissions would be associated with transmission line and distribution line/telecommunications construction, which would proceed at a linear pace and would not expose any one receptor along the corridors for an extended period of time. The total $PM_{2.5}$ emissions from on-site equipment that would be required to construct the proposed Presidential Substation would be 0.16 ton over the estimated 13 month construction period (see Appendix C Table 1 for total $PM_{2.5}$ emissions associated with construction equipment exhaust¹). Because these emissions are minor and would occur over a total of only 13months compared to the 70-year exposure used in health risk assessments, the health risk from the short-term DPM emissions would be negligible, and this impact would be less than significant.

Mitigation: None required.

¹ PM2.5 exhaust emissions are conservatively used here as a surrogate for DPM.

Impact 4.3-6: Construction activities could potentially exposing local sensitive receptors to *coccidioides immitis* spores. *Less than significant* (Class III)

Exposure to Valley Fever (*Coccidioidomycosis*) from soil disturbed during construction of the Proposed Project would be less than significant impact. Construction activities that include ground disturbance would have the potential to release *coccidioides immitis* spores. However, it is likely that much of the population of Ventura County has already been exposed to Valley Fever and would continue to be exposed because of the various earthmoving activities that occur with construction activities throughout the region. Many people who are exposed do not develop symptoms. Given the endemic nature of the disease and the number of earthmoving activities in the County (e.g., grading and excavation for new residential, commercial, and industrial development, and surface mining operations), it is not possible to attribute a specific case of Valley Fever to a specific earthmoving activity. Nevertheless, Valley Fever can be debilitating and even fatal in some cases. Based on the following, Valley Fever-related impacts associated with the Proposed Project would not be significant:

- Numerous ground-disturbing activities occur continually throughout the County as part of a variety of activities that include, but are not limited to, major and minor construction projects, surface mining/quarrying operations, and agricultural operations. Such ground-disturbing activities represent a continual source of spores that contribute to the low number of Valley Fever cases reported each year. Construction activities associated with the Proposed Project would result in similar localized ground disturbing activities to those that occur continually within the County.
- Based on analysis by the Centers for Disease Control and Prevention of the Valley Fever outbreak associated with the January 1994 Northridge earthquake, as well as a subsequent outbreak following the wildfires in the fall of 2003, a major ground-disturbing event (e.g., another major earthquake or wildfire) is required to release a large number of spores over a wide area for a significant outbreak of Valley Fever to occur (Ventura County, 2010).

Since ground-disturbing activities such as those that would be associated with construction of the Proposed Project are currently occurring throughout Ventura County and the number of cases of Valley Fever reported in the County is low each year, construction of the Proposed Project would not represent an increased risk to public health. In addition, implementation of Mitigation Measure 4.3-2 (see above), which requires implementation of VCAPCD fugitive dust control measures, would ensure that fugitive dust that could contain *coccidioides immitis* spores would be controlled to the maximum extent feasible. Valley Fever-related impacts would be less than significant.

Mitigation: None required.

e) Create objectionable odors affecting a substantial number of people.

Impact 4.3-7: Construction and operation of the Proposed Project would not create objectionable odors. *Less than significant* (Class III)

Operation of the Proposed Project would not create odorous emissions. However, Proposed Project construction would include sources, such as diesel equipment, which could result in the creation of objectionable odors. Since the construction activities would be temporary and spatially dispersed, and generally take place in rural areas, these activities would not affect a substantial number of people. Therefore, impacts from odors generated by construction of the Proposed Project would be less than significant.

Mitigation: None required.

4.3.5 Alternatives

No Project Alternative

Under the No Project Alternative, the construction, operations, and maintenance related impacts that would result under the Proposed Project, as discussed in Section 4.3.4, would not occur. There would be no impact under the No Project Alternative.

Alternative Subtransmission Alignment 1

Under Alternative Subtransmission Alignment 1, short-term construction activities could result in slightly lower overall criteria pollutant emissions compared to the construction emissions that would result under the Proposed Project. Although this alternative would include a longer subtransmission line from the Moorpark-Royal No. 2 line, compared to the proposed subtransmission alignment along Sunset Valley Road, it would not require existing distribution to be relocated underground. However, it is assumed that the maximum amount of daily construction activities under this alternative would be similar to the maximum daily activities that would occur under the Proposed Project; therefore, the maximum day construction emissions would likely be similar to those estimated for the Proposed Project presented in Table 4.3-3. Like the Proposed Project, construction activities under Alternative Subtransmission Alignment 1 would result in significant unavoidable individual and cumulative impacts associated with short-term generation of NO_x. Moreover, Alternative Subtransmission Alignment 1 would not conflict with the 2007 AQMP, and would result in less than significant impacts related to operations and maintenance, exposing sensitive receptors to DPM, *coccidioides immitis* spores, and odors.

Alternative Subtransmission Alignment 2

Under Alternative Subtransmission Alignment 2, short-term construction activities could result in slightly lower overall criteria pollutant emissions compared to the construction emissions that would result under the Proposed Project. Although this alternative would include longer lengths

of subtransmission source lines, compared to the lengths of the proposed subtransmission alignments, it would not require existing distribution to be relocated underground. However, it is assumed that the maximum amount of daily construction activities under this alternative would be similar to the maximum daily activities that would occur under the Proposed Project; therefore, the maximum day construction emissions would likely be similar to those estimated for the Proposed Project presented in Table 4.3-3. As under the Proposed Project, construction activities under Alternative Subtransmission Alignment 2 would result in significant and unavoidable individual and cumulative impacts associated with short-term generation of NO_x. Moreover, Alternative Subtransmission Alignment 2 would not conflict with the 2007 AQMP, and would result in less than significant impacts related to operations and maintenance, exposing sensitive receptors to DPM, *coccidioides immitis* spores, and odors.

Alternative Subtransmission Alignment 3

Under Alternative Subtransmission Alignment 3, short-term construction activities could result in slightly lower overall criteria pollutant emissions compared to the construction emissions that would result under the Proposed Project because the double circuit subtransmission line would be installed underground along the same route as the Proposed Project underground distribution and telecommunication lines. Under this alternative there would be no need for the Proposed Project double circuit overhead line or the relocation of the overhead distribution line east of Sunset Valley Road. Although the trench for the alternative double circuit 66 kV subtransmission line would be slightly deeper (i.e., about 20 inches deeper) compared to the trench that would be required for the distribution and telecommunication lines under the Proposed Project, which would require addition hours for earth moving equipment, the width of the trench would be the same as under the Proposed Project. The additional equipment hours required for the deeper trench would likely be more than offset by the elimination of the need for the proposed overhead double circuit 66 kV line and relocation of the overhead distribution 16 kV line. However, the maximum day construction emissions would likely be similar to those estimated for the Proposed Project presented in Table 4.3-3. Like the Proposed Project, construction activities under Alternative Subtransmission Alignment 3 would result in significant and unavoidable individual and cumulative impacts associated with short-term generation of NO_x. Moreover, Alternative Subtransmission Alignment 3 would not conflict with the 2007 AQMP, and would result in less than significant impacts related to operations and maintenance, exposing sensitive receptors to DPM, coccidioides immitis spores, and odors.

Alternative Substation Site B

Under Alternative Substation Site B, short-term construction activities would result in similar overall criteria pollutant emissions compared to the construction emissions that would result for the proposed Presidential Substation. Although the development at the Alternative Substation Site B would require complete demolition of all existing structures associated with the previous Ventura County Sherriff's Department, this site would require considerably less cut and fill construction activities compared to the proposed Presidential Substation. The additional equipment hours required for the demolition activities would likely be offset by the reduced

equipment hours for cut and fill activities compared the proposed Presidential Substation site. Like the Proposed Project, construction activities under the Alternative Substation Site B would result in significant and unavoidable individual and cumulative impacts associated with shortterm generation of NO_x. Moreover, Alternative Substation Site B would not conflict with the 2007 AQMP, and would result in less than significant impacts related to operations and maintenance, exposing sensitive receptors to DPM, *coccidioides immitis* spores, and odors.

System Alternative B

Under the System Alternative B, short-term construction activities would result in substantially less criteria pollutant emissions compared to the construction emissions that would result for the Proposed Project. Construction activities under this alternative would primarily be associated with replacing the existing transformers at Royal, Thousand Oaks, and Potrero substations with new transformers. There could also be a need to replace and/or add some distribution equipment at the substations. It is anticipated that peak day construction emissions under the System Alternative B would be similar to the peak daily emissions estimated for the proposed Presidential Substation civil work (see Appendix C Table 7). Peak day NO_x emissions under this alternative are estimated to be approximately 22 pounds, which would exceed the significance threshold of 20 pounds. However, implementation of Mitigation Measure 4.3-1 (see Impact 4.3-2 discussion above) would reduce NO_x emissions by 20 percent, to approximately 18 pounds. Therefore, construction impacts under the System Alternative B would be mitigated to less than significant associated with short-term generation of NO_x on an individual and cumulative basis. Moreover, the System Alternative B would not conflict with the 2007 AQMP, and would result in less than significant impacts related to operations and maintenance, exposing sensitive receptors to DPM, coccidioides immitis spores, and odors.

References – Air Quality

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4.4 Biological Resources

4.4.1 Setting

Introduction

This section describes the existing environment the Proposed Project and alternatives. In addition to the proposed Presidential Substation and subtransmission alignments, the setting considers project staging areas, access roads, ancillary facilities, and adjacent habitat that could reasonably be affected by project activities. This section identifies potential impacts to for wildlife, botanical, and wetland resources and proposes mitigation measures to reduce potential project impacts to a level of less than significant.

The setting information presented herein was compiled from available scientific literature and database searches, coordination with resource experts, in-house staff expertise, and multi-year field surveys. Reference sources include the following:

- California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) (CDFG, 2011)
- The California Native Plant Society (CNPS) online database (CNPS, 2011)
- Proponent's Environmental Assessment (PEA) (Southern California Edison [SCE], 2008)
- Biological Constraints Survey (Bonterra, 2008)
- Results of the Focused Presence/Absence Surveys for the Coastal California Gnatcatcher (Bonterra, 2010a)
- Special Status Plant Surveys (Bonterra, 2009)
- Results of the Riverside Fairy Shrimp Habitat Assessment Survey (Bonterra, 2010b)
- Jurisdictional Delineation Report (Bonterra, 2010c)

Field reconnaissance surveys of the Proposed Project and alternatives were performed by Environmental Science Associates (ESA) ecologist Mitchell Jenkins and senior wildlife biologist Brian Pittman (Certified Wildlife Biologist) on February 10, 2009, and again on April 20, 2009 by ESA senior ecologist Greg Ainsworth.

The study area for the Proposed Project and alternatives included a 50-foot buffer from proposed facilities and transmission line routes during general biological surveys and focused surveys for coastal California gnatcatcher (*Polioptila californica californica*), rare plants, and Riverside fairy shrimp (*Streptocephalus woottoni*), and the immediate project footprint for jurisdictional wetlands.

Regional

The Proposed Project and alternatives are located in southeast Ventura County in the Tierra Rejada Valley. Portions of the Proposed Project and alternatives are situated in the cities of

Thousand Oaks and Simi Valley (Figure 2-1) on the Thousand Oaks and Simi USGS 7.5 minute quadrangles. The project region is within the California Floristic Provence, Southwestern California region which includes portions of the San Gabriel and Tehachapi Mountains within the Western Transverse Ranges and South Coast subregions (Hickman, 1993). Soils include a mix of sandy clay loams of the Calleguas-Arnold complex, Cibo clays and San Andreas sandy loams. The landscape is composed of open, natural areas, agriculture, and urban development that are set within a hilly topography with elevations that range between 600 and 1,000 feet above mean sea level. Average annual rainfall for this area is approximately 13.2 inches.

Natural Communities and Wildlife Habitat

Vegetation Community Descriptions

Vegetation communities are assemblages of plant species that occur together in the same area, which are defined by species composition and relative abundance. To characterize plant communities, vegetation series were mapped using the Sawyer and Keeler-Wolf (1995) classification system. These communities also share a relationship with wildlife habitat types, which were generally classified and evaluated using CDFG's *Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988).

Fifteen vegetation types occur in the study area for the Proposed Project and alternatives. The distribution of these natural communities and developed areas was described by Bonterra (2008) and independently verified by ESA biologists. The vegetation types that occur in the project area include coastal sage scrub, coastal sage scrub/coast prickly pear succulent scrub, coastal sage, chaparral scrub, chamise chaparral, non-native grassland, freshwater marsh, willow riparian scrub, mule fat scrub, oak woodland, California walnut woodland, agriculture, ornamental/developed, ruderal (disturbed), and disturbed areas. This section describes the vegetation types that occur at the location of the Proposed Project and alternative alignments, with natural communities described in greater detail in following subsection. The vegetation communities that were identified in the study area are described below.

Non-native Grassland

This vegetation type occurs in patches throughout the study area and is dominated by non-native annual grasses including foxtail chess (*Bromus madritensis* ssp. *rubens*), wild oat (*Avena fatua*) and ripgut grass (*Bromus diandrus*). Grasslands in the project area consist of both disturbed and relative intact habitat. Disturbed areas that have been subject to ongoing residential and agricultural pressures occur adjacent to Read Road and Sunset Valley Road.

Coastal Sage Scrub and Disturbed Coastal Sage Scrub (Venturan Coastal Sage Scrub)

These vegetation types occur throughout the study area. Coastal sage scrub is the predominant vegetation type at the proposed Presidential Substation site. This vegetation type is dominated by interior flat-topped buckwheat (*Eriogonum fasciculatum* var. *foliosum*) and black sage (*Salvia mellifera*). California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), saw-toothed goldenbush (*Hazardia squarrosa*), Mexican elderberry (*Sambucus mexicana*) and bush

monkeyflower (*Mimulus aurantiacus*) occur in lesser amounts. The density and quality of coastal sage scrub vary across the project area, with some areas of relatively undisturbed sage scrub and some sage scrub/grassland ecotone. Disturbed coastal sage scrub has a large component of flat-topped buckwheat and black sage, and is dominated by non-native grasses and forbs (e.g., black mustard, tocalote [*Centaurea melitensis*], and ripgut brome [*Bromus diandrus*]) or has been thinned to reduce the potential fire hazard.

Coastal Sage Scrub/Coast Prickly Pear Scrub

This vegetation type is dominated by California sagebrush, interior flat-topped buckwheat, and coast prickly pear (*Opuntia littoralis*). This vegetation occurs immediately southeast of the Proposed Presidential Substation site but does not occur within the immediate project area (i.e., the area where direct or indirect effects would occur).

Coastal Sage Chaparral Scrub

This vegetation type is dominated by California sagebrush, interior flat-topped buckwheat, black sage, and sugarbush (*Rhus ovata*). Small patches of this vegetation type were identified at the proposed Presidential Substation site and along Alternative Subtransmission Alignment 1.

Chamise Chaparral

This vegetation type is dominated by chamise (*Adenostoma fasciculatum*) with lesser amounts of black sage, hoary leaf ceanothus (*Ceanothus crassifolius*), scrub oak (*Quercus berberidifolia*), and toyon (*Heteromeles arbutifolia*). This vegetation type was identified along Alternative Subtransmission Alignment 1.

Mule Fat Scrub

This vegetation type is dominated by mule fat (*Baccharis salicifolia*) with poison hemlock (*Conium maculatum*) and cocklebur (*Xanthium strumarium*). A small patch was identified on Esperance Road within the Alternative Subtransmission Alignment 1.

Disturbed

Disturbed areas are widespread though the study area and consist of active dirt roads, road shoulders, bare ground, and cleared land with little to no vegetation.

Agriculture

This habitat is common on the alignments and consists of various orchard crops and annual row crops with no native vegetation species.

Ornamental/Developed

Developed and ornamental habitat occurs throughout the study area and includes hardscape features such as roads and buildings, and also planted ornamental vegetation. Other areas that support ornamental and developed habitat include golf course fairways and associated landscaping, and landscaped residences. Ornamental species observed in these areas include eucalyptus trees (*Eucalyptus* spp.), Peruvian pepper trees (*Schinus molle*), pine trees (*Pinus* spp.), fountain grass (*Pennisetum setaceum*), oleander (*Nerium oleander*), and turf grass.

Ruderal

This vegetation type describes habitat that is subject to continual or repeat disturbance and consequently supports only sparse growth of weedy species. Ruderal areas are often dominated by sparse growth of non-native species including wild oat (*Avena* sp.), ripgut brome, foxtail chess, and black mustard (*Brassica nigra*).

Vegetation Communities in the Proposed Project Area

Proposed Presidential Substation

The principal natural communities at the 4 acre proposed Presidential Substation site are coastal sage scrub, chamise chaparral and non-native grassland (Bonterra, 2008). Areas west of the site are predominantly natural, and support the same vegetation communities with the addition of coastal sage scrub/coast prickly pear succulent scrub. A privately owned avocado orchard borders the site to the south and east, with Lake Bard Water Filtration Plant farther south. The site is bordered to the north by Olsen Road.

Proposed Subtransmission Alignment

The proposed subtransmission alignment is predominantly located adjacent to disturbed road corridors that support ruderal and disturbed habitat, agricultural land, ornamental vegetation and non-native grassland. A 600 foot long portion of the alignment located east of Hwy 23 traverses coastal sage scrub habitat. An unpaved road exists through this area that provides access to the existing powerline alignment.

The new line would span the natural and developed habitat with minimal disturbance to habitat to accommodate poles. Permanent habitat disturbance on the pole alignment would occur at pole installation sites and areas where new unpaved access roads are proposed (Figure 2-10). These activities would principally occur within disturbed and ruderal habitat, but also within coastal sage scrub, agricultural areas, and non-native grassland (Bonterra, 2008). Adjacent habitat that would be spanned or otherwise avoided includes ornamental trees, willow riparian scrub, mule fat scrub, freshwater marsh, California walnut woodland, and coastal sage chaparral scrub. Temporary habitat disturbances to developed (roadway) and coastal sage scrub habitat would occur at bore construction sites on both sides of Hwy 23 (see Figure 2-13) and within the underground distribution and telecommunication line alignment (Bonterra, 2008).

The portion of the alignment that parallels Sunset Valley Road is within disturbed roadside habitat within active agricultural lands. A portion of the alignment is adjacent to Arroyo Santa Rosa, which is maintained as a barren wash within 150 feet of the alignment.

Royal and Moorpark Substations

Upgrades to subtransmission facilities at the Royal and Moorpark Substations would occur as part of the Proposed Project and alternatives. The existing facilities to be upgraded are located in fully developed areas within existing fence lines.

Alternatives

Alternative Subtransmission Alignment 1

Alternative Subtransmission Alignment 1 has the same alignment as the Proposed Project along Read Road until reaching the proposed Presidential Substation site. Alternative Subtransmission Alignment 1 would trend northerly from the proposed Presidential Substation site towards Esperance Road and connect to the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection of Tierra Rejada Road and Esperance Road. This portion of the overhead alternative subtransmission alignment parallels existing paved and unpaved roads. Habitat that occurs on this 1.9 mile segment includes ornamental/developed areas, non-native grassland, disturbed and undisturbed coastal sage scrub, ruderal areas, and chamise chaparral. Existing land uses within these areas include undeveloped open space, agriculture, and rural residential development.

Alternative Subtransmission Alignment 2

Alternative Subtransmission Alignment 2 consists of two segments that parallel Olsen Road and Madera Road. Poles would be placed on the road shoulder within areas that support natural and disturbed habitat. The Olsen Road segment would be located primarily on the north side of the road within coastal sage scrub, non-native annual grassland, ruderal habitat and developed areas. On Madera Road, the alignment would also traverse coastal sage scrub, non-native annual grassland, and ruderal and developed areas.

Alternative Subtransmission Alignment 3

The setting for Alternative Subtransmission Alignment 3 is same as the Proposed Project.

Alternative Substation Site B

About half of the site is developed and supports a paved asphalt parking lot and buildings, with remaining portions consisting of landscaping with ornamental trees and shrubs, and bare ground.

Sensitive Plant Communities

Several plant communities that occur in the study area are characterized as sensitive by CDFG. Sensitive natural communities that occur in the study area and would not necessarily be affected by the Proposed Project include freshwater marsh, California walnut woodland, and willow riparian scrub. The distribution of these sensitive communities, as referenced below, was identified during general and focused biological surveys that were conducted for the project (Bonterra, 2008).

Freshwater Marsh

This vegetation type is located within a drainage containing open water with aquatic herbs in the duckweed family (*Lemnaceae*) and cattails (*Typha* sp.). A small marsh area was identified in Arroyo Santa Rosa near the proposed subtransmission alignment on Sunset Valley Road.

Southern California Black Walnut Woodland

This vegetation type occurs in small patches, principally near riparian corridors, and is dominated by coast live oak (*Quercus agrifolia*) and Southern California black walnut (*Juglans californica*). Non-native grasses dominate the understory with small amounts of mule fat. Small patches that may be spanned by the Proposed Project were identified on Read Road and in the overland section of the Proposed Project and Alternative Subtransmission Alignment 1.

Willow Riparian Scrub (Southern Willow Scrub)

This vegetation type is dominated by arroyo willow (*Salix lasiolepis*) with lesser amounts of mule fat. The herbaceous plant layer is dominated by non-native grasses including ripgut grass, foxtail chess and rabbitsfoot grass (*Polypogon monspeliensis*). This vegetation type was identified in two small patches adjacent to Alternative Subtransmission Alignment 2 on Olsen Road, just east of Hwy 23 and east of Wood Ranch Parkway.

Wildlife Movement and Corridors

The concept of wildlife corridors addresses the linkage between large blocks of habitat that allow safe movement of mammals and other ground dwelling wildlife species, birds, and invertebrates from one habitat area to another. Definitions of a wildlife corridor vary but corridors may include large elements such as refuge systems or natural parks as well as small elements such as underpasses, or greenbelts within otherwise urbanized areas. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix that connects two or more large blocks of habitat (Beier and Noss, 1998). Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor use and wildlife movement patterns varies greatly among species and geographic regions.

The Proposed Project and alternative are located within an area that has features conducive to a wildlife corridor connecting larger areas of open space in the north (e.g., the Santa Clara River and Los Padres National Forest), east (e.g., the Simi Hills), and west (Las Posas Hills and south to the Santa Monica Mountains). The regional area within which the Proposed Project and alternatives are located was described by the South Coast Missing Linkages Project as a potentially important north-south migration corridor for a number of important species indicative of overall ecosystem health (Penrod et al., 2006). Ongoing projects in the area by the National

Parks Service, CalTrans, the Santa Monica Mountains Conservancy, and others have been working to improve the functionality of the area as a wildlife corridor in connecting the areas mentioned above.

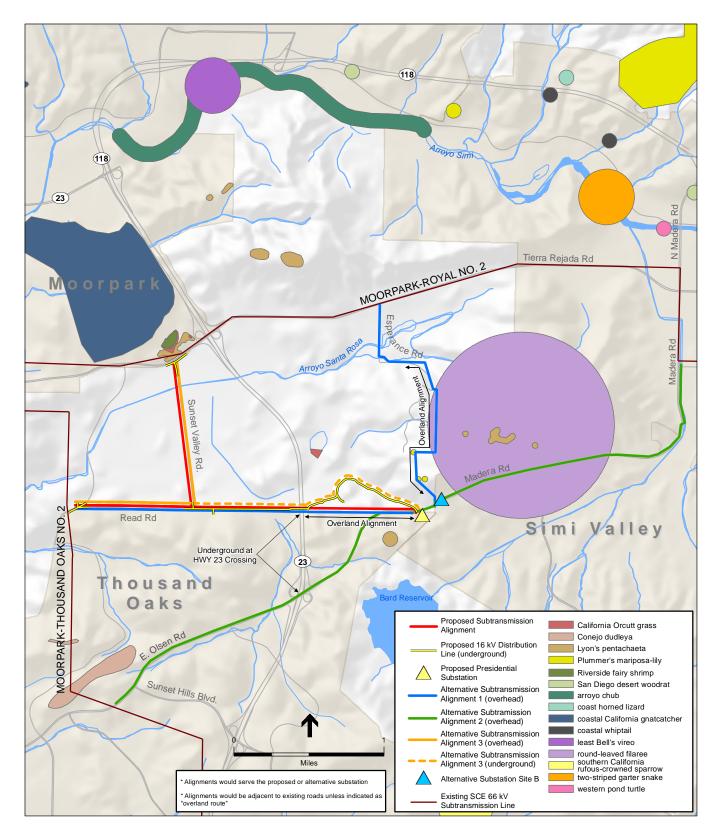
Existing barriers to wildlife movement in the area include Hwy 23, Olsen Road, Madera Road and Tierra Rejada Road. Wildlife movement corridors have also been reduced in the regional project area by the conversion of natural lands for agriculture and large scale development projects. The Proposed Project and alternatives have a relatively small footprint and are for the most part, adjacent to existing developed features.

Special-Status Species

A comprehensive list of special-status plant and wildlife species that occur in the study area was compiled to assess the likelihood of species occurrence and potential project impacts to these species. Some of these receive specific protection defined in federal or state endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special-status species" in this EIR, following a convention that has developed in practice but has no official sanction. The various categories encompassed by the term, and the legal status of each, are discussed in the *Regulatory Context* discussion within this section.

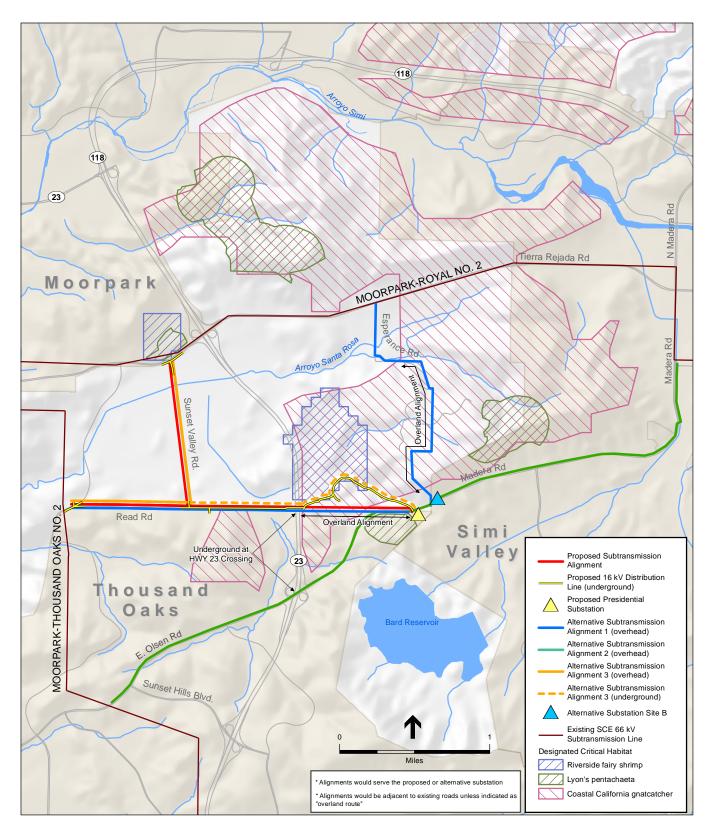
Special-status plant and wildlife species that are known or have potential to occur in the study area, and designated critical habitat for these species, are discussed below. Critical habitat is further described in the Biological Resources *Regulatory Setting* discussion below. **Figure 4.4-1** and **Figure 4.4-2** displays known occurrences of special-status plant and wildlife species in the study area, and designated critical habitat, respectively. A list of special-status species reported or expected to occur within the study area as well as information pertaining to natural communities of special concern was compiled on the basis of data in the PEA (SCE, 2008), Bonterra (2008) biological study, CNDDB (CDFG, 2011), CNPS online database (CNPS, 2011), field surveys and other available scientific databases. The list is intended to be comprehensive and the "Potential for Occurrence" designations apply to species and habitats in the study area that would not necessarily be impacted by the Proposed Project or alternatives. Further information was gathered during site visits to determine the potential presence of conditions that could support any of the special-status species identified in **Table 4.4-1**.

Based upon this information, special-status species that have at least a moderate to high potential to occur in the project area and could be exposed to project-related impacts (i.e., species or habitat that is either known or with a high potential to occur in the study area) are described below.



SOURCE: SCE, 2010; CNDDB, 2011

Presidential Substation Project . 207584.02 Figure 4.4-1 Special-Status Species within the Study Area



Presidential Substation Project . 207584.02 Figure 4.4-2 Critical Habitat within the Study Area

SOURCE: SCE, 2010; USFWS, 2011

4.4 Biological Resources

TABLE 4.4-1 SPECIAL-STATUS SPECIES KNOWN OR WITH POTENTIAL TO OCCUR IN THE STUDY AREA

	Listing		Potential for Species Occurrence in the Project Area						
Common Name Scientific Name	Status: Fed/State/ CNPS	General Habitat	Proposed Substation	Proposed Subtransmission Alignment	Alternative Subtransmission Alignment 1	Alternative Subtransmission Alignment 2	Alternative Subtransmission Alignment 3	Alternative Substation Site B	
Invertebrates								1	
		F	EDERAL OR STATE THRE	ATENED AND ENDANGE	ERED SPECIES				
Riverside fairy shrimp Streptocephalus woottoni	FE/	Vernal pools, deep long lived pools in seasonal grasslands possibly interspersed with chaparral or coastal sage scrub vegetation.	Absent, no habitat	Absent, no habitat. Partly within critical habitat (CH); though PCEs are not present ¹	Absent, no habitat	Absent, no habitat	Absent, no habitat Partly within CH; though PCEs are not present	Absent, no habitat Partly within CH; though PCEs are not present	
Fish			1	T	1	'	'	1	
			FEDERAL OR STATE	SPECIES OF SPECIAL C	ONCERN				
Arroyo chub Gila orcuttii	/CSC	Prefers warm water, pool habitats with sand and mud bottoms.	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	
Amphibians									
			FEDERAL OR STATE	SPECIES OF SPECIAL C	ONCERN				
Western spadefoot Spea hammondii	/CSC	Grassland, coastal sage scrub, and other habitats with open sandy or gravely soils. Frequents washes, floodplains and alkali flats. Breeds in quiet streams and seasonal ponds.	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	
Reptiles									
			FEDERAL OR STATE	SPECIES OF SPECIAL C	ONCERN				
Western pond turtle Actinemys marmorata	/CSC	Lakes, ponds, reservoirs, and slow- moving streams and rivers, primarily in foothills and lowlands	Absent, no habitat	Low Potential, limited suitable habitat near riparian habitat	Absent, no habitat	Absent, no habitat	Low Potential, limited suitable habitat near riparian habitat	Absent, no habitat	
Coast (San Diego) horned-lizard Phrynosoma coronatum blainvillii	/CSC	Scrubland, grasslands, forests and woodlands	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Absent, no habitat	

¹ Primary Constituent Elements, or PCEs, are formally defined for a federally listed species when critical habitat is designated for that species. They include those physical and biological features that are considered essential to the conservation of the species, and that may require special management considerations or protection.

TABLE 4.4-1 (Continued) SPECIAL-STATUS SPECIES KNOWN OR WITH POTENTIAL TO OCCUR IN THE STUDY AREA

Common Name Scientific Name	Listing	Potential for Species Occurrence in the Project Area							
	Status: Fed/State/ CNPS	General Habitat	Proposed Substation	Proposed Subtransmission Alignment	Alternative Subtransmission Alignment 1	Alternative Subtransmission Alignment 2	Alternative Subtransmission Alignment 3	Alternative Substation Site B	
Reptiles (cont.)				1					
			FEDERAL OR STATE SPI	ECIES OF SPECIAL CON	CERN (cont.)				
Two-striped garter snake <i>Thamnophis</i> <i>hammondii</i>	/CSC	Wetlands, freshwater marsh and riparian habitats with perennial water.	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	
Birds	1			1		'	'	1	
		F	EDERAL OR STATE THRE	ATENED AND ENDANGE	RED SPECIES				
Swainson's hawk Buteo swainsoni	/ST	Forages over grasslands and ruderal vegetation in the region during migration	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent, no habitat	
Bank swallow <i>Riparia riparia</i>	/ST	Nests colonially in vertical banks cliffs and bluffs along ocean, rivers, streams and lakes. Occurs in a variety of open water habitats during migration.	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	
Coastal California gnatcatcher Polioptila californica californica	FT/CSC	Obligate resident of coastal sage scrub habitats	Moderate Potential, suitable habitat present; one juvenile detected in sage scrub habitat about 1,100 feet from the site	Low Potential, habitat present south of Read Road, though birds not detected during protocol-level surveys.	Present, habitat present south of Read Road, though not detected during protocol-level surveys; detected at two locations along Esperance Road.	Low Potential, habitat present south of Read Road, though not detected during protocol-level surveys.	Low Potential, habitat present south of Read Road, though birds not detected during protocol-level surveys.	Absent, no habitat	
Least Bell's vireo Vireo bellii pusillus	FE/SE	Riparian habitats dominated by willows with dense understory	Absent, no habitat	Absent, no habitat	Absent, no habitat	Low Potential, limited suitable habitat	Absent, no habitat	Absent, no habitat	

4.4 Biological Resources

TABLE 4.4-1 (Continued) SPECIAL-STATUS SPECIES KNOWN OR WITH POTENTIAL TO OCCUR IN THE STUDY AREA

Common Name Scientific Name	Listing Status: Fed/State/ CNPS		t Area					
		General Habitat	Proposed Substation	Proposed Subtransmission Alignment	Alternative Subtransmission Alignment 1	Alternative Subtransmission Alignment 2	Alternative Subtransmission Alignment 3	Alternative Substation Site B
Birds (cont.)								
			FEDERAL OR STATE	SPECIES OF SPECIAL C	ONCERN			
Golden eagle <i>Aquila chrysaetos</i>	/WL, CFP, B&GEPA	Grasslands, deserts, savannas and open forest and shrub habitats. Requires large areas of open country for foraging. Nests primarily restricted to rugged mountain areas with large trees or on cliffs	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Low Potential (nesting), limited suitable foraging and nesting habitat	Low Potential (nesting), limited suitable foraging and nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Low Potential (nesting), limited suitable foraging and nesting habitat	Absent, no habitat
Burrowing owl Athene cunicularia	/CSC	Open dry grasslands, deserts and scrublands with low-growing vegetation. Depends on burrowing mammals, notably California ground squirrel.	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Low Potential, limited suitable habitat	Absent, no habitat
Coastal cactus wren Campylorhynchus brunneicapillus sandiegensis	/CSC	Coastal sage scrub, alluvial sage scrub habitats with appropriate <i>Opuntia</i> spp.	Low Potential (nesting), May nest in nearby prickly pear scrub, which is absent from the site.	Low Potential (nesting), limited suitable habitat	Absent, no habitat			
Northern harrier Circus cyaneus	/CSC	Nests on the ground in wide variety of wetland and upland habitats, forages in grassland, marsh, scrub and riparian vegetation types.	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent, no habitat
White-tailed kite Elanus leucurus	/CFP	Nests in oaks, willows, and sycamores, forages in grassland, and open scrub vegetation types.	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Low Potential (nesting), limited suitable foraging and nesting habitat	Low Potential (nesting), limited suitable foraging and nesting habitat	Low Potential (nesting), limited suitable foraging and nesting habitat	Low Potential (nesting), limited suitable foraging and nesting habitat	Absent, no habitat
American peregrine falcon Falco peregrinus anatum	/CFP	Variety of habitats, particularly wetlands, and coastal areas, prefers high cliffs or building ledges for nesting	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent (nesting), limited suitable foraging habitat, no nesting habitat	Absent, no habitat
Loggerhead shrike Lanius ludovicianus	/CSC	Grasslands and other dry open habitats.	Moderate Potential, suitable nesting habitat present	Moderate Potential, suitable nesting habitat present	Moderate Potential, suitable nesting habitat present	Moderate Potential, suitable nesting habitat present	Moderate Potential, suitable nesting habitat present	Absent, no habitat

TABLE 4.4-1 (Continued) SPECIAL-STATUS SPECIES KNOWN OR WITH POTENTIAL TO OCCUR IN THE STUDY AREA

	Listina		Potential for Species Occurrence in the Project Area							
Common Name Scientific Name	Status: Fed/State/ CNPS	General Habitat	Proposed Substation	Proposed Subtransmission Alignment	Alternative Subtransmission Alignment 1	Alternative Subtransmission Alignment 2	Alternative Subtransmission Alignment 3	Alternative Substation Site B		
Mammals	1									
			FEDERAL OR STATE	SPECIES OF SPECIAL C	ONCERN					
Pallid bat Antrozous pallidus	/CSC	Deserts, grasslands, shrublands, woodlands and forests. Open dry habitats with rocky areas for roosting. Roost sites must protect bats from high temperature. Sensitive to disturbance of roost sites.	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no roosting habitat		
Western mastiff bat <i>Eumops perotis</i>	/CSC	Open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, chaparral. Roosts in crevices in cliff faces, buildings, trees and tunnels.	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no roosting habitat	Absent, no habitat		
San Diego desert woodrat <i>Neotoma lepida</i> <i>intermedia</i>	/CSC	Coastal scrub of southern California, San Diego to San Luis Obispo Cos. Moderate to dense canopies preferred, abundant in areas with rock outcrops and rocky cliffs and slopes.	Moderate Potential , suitable habitat present.	Moderate Potential, suitable habitat present	Moderate Potential, suitable habitat present	Moderate Potential, suitable habitat present	Moderate Potential, suitable habitat present	Absent, no habitat		
Plants	1									
		F	EDERAL OR STATE THRE	ATENED AND ENDANG	ERED SPECIES					
Braunton's milk- vetch Astragalus brauntonii	FE//1B.1	Closed cone coniferous forest, coastal scrub, chaparral, disturbed areas, recent burns gravelly clay soils overlaying granite or limestone. 2-640m.	Absent, Not detected during surveys	Absent, Not detected during surveys	Moderate Potential, habitat present on alternative alignment	Low Potential, limited suitable habitat	Absent, no habitat	Absent, no suitable habitat; not identified during surveys.		
Agoura Hills dudleya Dudleya cymosa ssp. agourensis	FT//1B.2	Rocky soils in chaparral and cismontane woodlands. 200-500m	Absent, Not detected during surveys	Absent, Not detected during surveys	Low Potential, habitat present on alternative	Low Potential, limited suitable habitat	Absent, no habitat	Absent, no suitable habitat; not identified		

Conejo dudleya

Dudleya parva

FT/--/1B.2

Coastal scrub, valley and foothill

60-450m.

grassland. Clayey or volcanic soils, rocky slopes and grassy hillsides.

surveys

Absent, Not

detected during

surveys

Absent, Not

detected during

habitat

Low Potential,

limited suitable

alignment

alternative

alignment

Low Potential,

habitat present on

Absent, no

not identified

during surveys.

Absent, no habitat

during surveys.

suitable habitat;

4.4 Biological Resources

TABLE 4.4-1 (Continued) SPECIAL-STATUS SPECIES KNOWN OR WITH POTENTIAL TO OCCUR IN THE STUDY AREA

	Listing Status: Fed/State/ CNPS	s: te/	Potential for Species Occurrence in the Project Area						
Common Name Scientific Name			Proposed Substation	Proposed Subtransmission Alignment	Alternative Subtransmission Alignment 1	Alternative Subtransmission Alignment 2	Alternative Subtransmission Alignment 3	Alternative Substation Site B	
Plants (cont.)	1			-					
		FED	ERAL OR STATE THREAT	ENED AND ENDANGERE	D SPECIES (cont.)				
California Orcutt grass Orcuttia californica	FE/SE/ 1B.1	Vernal pools	Absent, no habitat; not detected during surveys	Absent, no habitat; not detected during surveys	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	
Lyon's pentachaeta Pentachaeta lyonii	FE/SE/ 1B.1	Chaparral, valley and foothill grassland. Edges of clearings in chaparral, ecotones between shrub and grassland or edges of firebreaks. 30-630m.	Absent, nearby records; not detected during surveys	Absent, Not detected during surveys	Moderate Potential, habitat present on alternative alignment	Low Potential, limited suitable habitat	Absent, no habitat; not detected during surveys	Absent, no habitat; not detected during surveys	
	I		FEDERAL OR STATE	SPECIES OF SPECIAL C	ONCERN	1			
Round-leaved filaree California macrophylla	//1B.1	Clay soils in cismontane woodlands and valley and foothill grasslands. 15-1200m	Absent, Not detected during surveys	Absent, Not detected during surveys	Moderate Potential, habitat present on alternative alignment	Low Potential, limited suitable habitat	Absent, no habitat	Absent, no habitat	
Plummer's mariposa lily Calochortus plummerae	//1B.2	Coastal scrub, chaparral, valley and foothill grassland. Rocky and sandy sites, of granitic or alluvial material, often common after fire. 90-1600m	Absent, Not detected during surveys	Absent, Not detected during surveys	Moderate Potential, habitat present on alternative alignment	Moderate Potential, suitable habitat present.	Absent, suitable habitat is present.	Absent, no habitat	
Santa Susana tarplant Deinandra minthornii	//1B.2	Chaparral, coastal scrub. Sandstone outcrops and crevices in shrubland 280-760m.	Absent, Not detected during surveys	Absent, Not detected during surveys	Moderate Potential, habitat present on alternative alignment	Moderate Potential, suitable habitat present.	Absent, suitable habitat is present.	Absent, no habitat	
Conejo buckwheat Eriogonum crocatum	//1B.2	Chaparral, coastal sage scrub, valley and foothill grassland. Volcanic rocky outcrops. 50-580m.	Absent, Not detected during surveys	Absent, Not detected during surveys	Moderate Potential, habitat present on alternative alignment	Moderate Potential, suitable habitat present.	Absent, suitable habitat is present.	Absent, no habitat	

TABLE 4.4-1 (Continued) SPECIAL-STATUS SPECIES KNOWN OR WITH POTENTIAL TO OCCUR IN THE STUDY AREA

Common Name Scientific Name	Listing Status: Fed/State/ CNPS		Potential for Species Occurrence in the Project Area						
		General Habitat	Proposed Substation	Proposed Subtransmission Alignment	Alternative Subtransmission Alignment 1	Alternative Subtransmission Alignment 2	Alternative Subtransmission Alignment 3	Alternative Substation Site B	
Plants (cont.)									
			FEDERAL OR STATE SPI	ECIES OF SPECIAL CON	CERN (cont.)				
Mesa horkelia Horkelia cuneata ssp. puberula	//1B.1	Chaparral, cismontane woodland, coastal sage scrub. Sandy or gravelly sites. 10-810m	Absent, Not detected during surveys	Absent, Not detected during surveys	Absent, no habitat	Absent, no habitat	Absent, no habitat	Absent, no habitat	
Chaparral nolina Nolina cismontana	//1B.2	Chaparral, coastal scrub. Sandstone and shale substrates, also gabbro soils. 140-1275m.	Absent, Not detected during surveys	Absent, Not detected during surveys	Moderate Potential, habitat present on alternative alignment	Moderate Potential, suitable habitat present.	Absent, suitable habitat is present	Absent, no habitat	
FE = Listed as End	l Bald Eagle Pre langered by the eatened by the		= Listed as Threatene	ed by the State of Califor d by the State of Californ f Special Concern	nia Lis	l ifornia Native Plant Sc tt 1B = Plants rare, thre elsewhere	ciety (CNPS): atened, or endangered ir	n California and	

SOURCES: CNPS, 2011; CDFG, 2011; Bonterra, 2008; 2009; 2010a; 2010b; 2010c

Special-Status Plants

Several special-status plant species are reported near the Proposed Project and alternatives based on the results of the literature review described above. Five federally and/or State-listed Endangered or Threatened species are reported from the vicinity of the Proposed Project and alternatives: Braunton's milk-vetch (*Astragalus brauntonii*), Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*), Conejo dudleya (*Dudleya parva*), California Orcutt grass (*Orcuttia californica*), and Lyon's pentachaeta (*Pentachaeta lyonii*) (Table 4.4-1).

Suitable habitat for California Orcutt grass (vernal pools) is not present in the study area. Suitable habitat is present for Braunton's milk-vetch, Agoura Hills dudleya, Conejo dudleya and Lyon's pentachaeta; though only Lyon's pentachaeta is reported near the study area (CDFG, 2011). Table 4.4-1 summarizes the status and expected distribution of each special-status plant species reported in the vicinity of the project. Listed plant species that occur in the regional area discussed in greater detail below.

In addition to the listed plant species, those appearing on CNPS Lists 1A, 1B, or 2 are considered to meet the criteria of CEQA Guidelines §15380 and effects to these species are considered significant in this EIR, though only List 1B species occur near the study area. Additionally, plants identified on CNPS Lists 1A, 1B, or 2 meet the definition of §1901, Chapter 10 (Native Plant Protection Act) and §2062 and §2067 (California Endangered Species Act) of the California Fish and Game Code as rare or endangered species. As identified in Table 4.4-1, five non-listed special-status plants were identified with potential to occur in the study area: round-leaved filaree (*California macrophylla*), Plummer's mariposa lily (*Calochortus plummerae*), Santa Susana tarplant (*Deinandra minthornii*), Conejo buckwheat (*Eriogonum crocatum*) and Chaparral nolina (*Nolina cismontana*).

Habitat evaluations and focused botanical surveys were performed on the proposed Presidential Substation site and proposed subtransmission alignment for the five listed plants discussed above and for all locally-occurring non-listed plant species on the CNPS Lists 1A, 1B, or 2. The results of those surveys are reported in Table 4.4-1. Focused botanical surveys were not performed for the portion of Alternative Subtransmission Alignment 1 that does not coincide with the Proposed Project, nor for the Alternative Subtransmission Alignments 2 or 3.

Braunton's milk-vetch

Braunton's milk-vetch is a federally-listed Endangered species and a CNPS List 1B.1 species. This perennial herb occurs in disturbed areas in carbonate soils in chaparral at elevations below 1,500 feet elevation (Munz, 1968). In the vicinity of the Proposed Project, this species has been reported along Albertson Fire Road, approximately 2.5 miles from the Proposed Project area. A general plant and wildlife survey was completed during the typical January through August blooming period for this species and focused botanical surveys were also conducted during the blooming period (CNPS, 2011; Bonterra, 2009). This species was not observed during surveys of the Proposed Project, or Alternative Substation Site B. On November 14, 2006, the USFWS designated critical habitat for Braunton's milk-vetch approximately 3,300 acres in Ventura, Los Angeles, and Orange Counties, California (USFWS, 2006). The Proposed Project and alternatives are not within designated critical habitat for this species.

Agoura Hills Dudleya

Agoura Hills dudleya is a federally-listed Threatened species and a CNPS List 1B.2 species. This perennial herb generally occurs in rocky soils between 600 and 1,500 feet elevation. In the vicinity of the Proposed Project, this species has been reported along Hwy 23 between Potrero Road and Carlisle Road (CDFG, 2011). Suitable habitat for Agoura Hills dudleya is present in portions of the Proposed Project area. This species was not observed during surveys of the project area, or Alternative Substation Site B. Low quality habitat is available on portions of Alternative Subtransmission Alignment 1 located north of the proposed Presidential Substation site, and perhaps in undisturbed habitat along Alternative Subtransmission Alignment 2.

Conejo Dudleya

Conejo dudleya is a federally-listed Threatened species and a CNPS List 1.B.2 species. This perennial herb generally occurs in rocky soils and rock outcrops between 120 and 1,350 feet elevation in coastal sage scrub and valley and foothill grasslands (CNPS, 2011). In the vicinity of the Proposed Project, this species has been reported between Moorpark Road and Olsen Road at the head of the Arroyo Santa Rosa (CDFG, 2011). This species was not observed during surveys of the proposed Presidential Substation site, proposed subtransmission alignment, or Alternative Substation Site B. Low quality habitat is available on portions of Alternative Subtransmission Alignment 1 located north of the proposed Presidential Substation site, and perhaps in undisturbed habitat along Alternative Subtransmission Alignment 2.

California Orcutt Grass

California Orcutt grass is a federal and State-listed Endangered species and a CNPS List 1B.1 species. This annual grass occurs in vernal pools below 2,500 feet elevation (Hickman, 1993). In the vicinity of the Proposed Project this species has been reported from USGS Thousand Oaks and the Tierra Rejada Valley 7.5-minute quadrangles (CDFG, 2011). Vernal pool habitat is absent from the study area and this species was not observed during focused botanical surveys.

Lyon's Pentachaeta

Lyon's pentachaeta is a federal and State-listed Endangered species and a CNPS List 1B.1 species. This annual herb occurs in rocky, clay soils in chaparral, coastal sage scrub and valley and foothill grasslands between 100 and 2,000 feet elevation (CNPS, 2011). This species was reported in 1992 in disturbed coastal scrub/cactus scrub approximately 500 feet southwest of the proposed Presidential Substation footprint (Figure 4.4-1) (CDFG, 2011). Several focused botanical surveys were conducted in search of this species (Bonterra, 2009). A reference site was visited prior to conducting focused surveys to verify the blooming period of this species. Previous studies detected this species in the study area; however, this species was not observed during surveys of the proposed Presidential Substation site; proposed subtransmission alignment, or Alternative

Substation Site B. Low quality habitat is present on portions of Alternative Subtransmission Alignment 1 located north of the proposed Presidential Substation site, and also in roadside habitat along Alternative Subtransmission Alignment 2. The high number of individuals found in a nearby reference population (350 to 400 plants in April 2010, and 300 to 400 plants in May 2010) suggests adequate rainfall, locally, to detect this species (Bonterra, 2009).

On November 14, 2006, the USFWS published the Final Rule designating critical habitat for Lyon's pentachaeta (USFWS, 2006). This designation includes approximately 3,396 acres in Ventura, Los Angeles, and Orange Counties, California. The Proposed Project is located near, but outside of Subunit 1C of the Simi Valley Critical Habitat Unit for this species.

Special-Status Wildlife

The following federally and/or State-listed Endangered or Threatened species have been reported in or near the study area: Riverside fairy shrimp, Swainson's hawk (*Buteo swainsoni*), American peregrine falcon (*Falco peregrinus anatum*), least Bell's vireo (*Vireo bellii pusillus*), bank swallow (*Riparia riparia*), and coastal California gnatcatcher (Table 4.4-1). Suitable habitat for the Riverside fairy shrimp and bank swallow does not occur in study area. Similarly, breeding habitat for the Swainson's hawk and American peregrine falcon does not occur in the study area. Suitable habitat for the coastal California gnatcatcher is available at the proposed Presidential Substation site and Alternative Subtransmission Alignment 1; however, 2010 protocol-level surveys concluded that this species is absent from the project site. There is a low likelihood that least Bell's vireo may occur within roadside riparian habitat on Alternative Subtransmission Alignment 2. Focused least Bell's vireo surveys were not performed on this alignment. Table 4.4-1 provides a summary of the listed species that occur in the project vicinity, including listing status and likelihood of occurrence in the study area. These species are discussed in further detail below.

In addition to species formally listed by the resource agencies, multiple species reported near the study area are granted protection as "special-status species" under §15380 of CEQA (see the *Regulatory Context* discussion). The following special-status wildlife species are considered unlikely within the study area due to unsuitable habitat conditions and/or known species distribution: arroyo chub (*Gila orcutti*), western spadefoot (*Spea hammondii*), and two-striped garter snake (*Thamnophis hammondii*). As described in Table 4.4-1, the following non-listed special-status species may be encountered in portions of the Proposed Project and alternatives study areas due to the presence of suitable habitat and known species distribution: western pond turtle (*Actinemys marmorata*), coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillii*), northern harrier (*Circus cyaneus*), white tailed-kite (*Elanus leucurus*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*) and San Diego desert woodrat (*Neotoma lepida intermedia*).

Riverside Fairy Shrimp

Riverside fairy shrimp is a federally-listed Endangered species. This species inhabits deep, longlived pools in seasonal grasslands, some of which are interspersed among chaparral or coastal sage scrub vegetation (Eriksen and Belk, 1999). Riverside fairy shrimp have been identified north of the northern portion of the proposed subtransmission alignment (CDFG, 2011). Based on the findings of a 2010 habitat assessment survey for Riverside fairy shrimp, the Proposed Project area was found to lack habitat conditions for this species (Bonterra, 2010b). These findings were corroborated during reconnaissance-level biological surveys by ESA. Therefore, Riverside fairy shrimp is not expected to occur on the study area.

On April 12, 2005, the USFWS published a Final Rule designating approximately 306 acres of land in Ventura, Orange, and San Diego counties as critical habitat for Riverside fairy shrimp (USFWS, 2005). The portion of the proposed subtransmission alignment near the intersection of Sunset Valley Road and Tierra Rejada Road is located within designated critical habitat for this species (Unit 1A). A second critical habitat unit (Unit 1B) is located to the north of the proposed subtransmission alignment to the east of Hwy 23 (Figure 4.4-2). Portions of the study area that traverse designated critical habitat lack the principal constituent elements for Riverside fairy shrimp, which include: pool complexes, associated watersheds that provide water to fill the pools, and impermeable surface or subsurface soil components known to support vernal pool habitat (USFWS, 2004).

Swainson's Hawk

Swainson's hawk is a State-listed Threatened species. This species forages over grassland and ruderal vegetation in the region during migration to and from South America. Listing status refers to nesting individuals. This species may utilize the area for foraging during migration but is not expected to nest within the study area because it is outside this species' breeding range.

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally-listed Threatened species and a California Species of Special Concern. In California, this subspecies is an obligate resident of coastal sage scrub vegetation types. This species has been reported approximately 1 mile from the Proposed Project and alternatives (CDFG, 2011). Focused surveys to determine the presence of this species were conducted 14 times during the summer and autumn of 2008 (Bonterra, 2008) and 9 times in 2010 (Bonterra, 2010a).

Moderately suitable habitat for this species occurs in the coastal sage scrub and disturbed coastal sage scrub on the proposed Presidential Substation site; however, use of this area was not detected during focused surveys. A juvenile California gnatcatcher was detected from coastal sage scrub/coastal prickly pear succulent scrub habitat located about 1,100 feet southwest of the proposed Presidential Substation site (Bonterra, 2010a). Surveys did not detect this species on the proposed subtransmission alignment, Alternative Subtransmission Alignment 2, Alternative Subtransmission Alignment 3, or at Alternative Substation Site B. The species was observed at two separate locations within Alternative Subtransmission Alignment 1 near Esperance Road. High quality habitat is present in this portion of this alternative alignment.

On December 19, 2007, the USFWS designated 197,303 acres of critical habitat for the coastal California gnatcatcher in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San

Diego Counties, California (USFWS, 2007). A portion of the proposed subtransmission alignment and each alternative subtransmission alignment traverse designated critical habitat; however, only Alternative Subtransmission Alignment 1 appears to provide the primary constituent elements of critical habitat for this species. Scrub habitat on the overland alignment portion of the Proposed Project, and Alternative Subtransmission Alignments 1 and 3, would not be substantially altered by the Proposed Project or alternatives (Figure 4.4-2).

Bank Swallow

Bank swallow is a State-listed Threatened species. This species breeds in lowland areas along coasts, rivers, streams, lakes, reservoirs, and wetlands (Garrison, 1998). Bank swallows forage over wetlands, open water, grasslands, riparian woodlands, agricultural areas, shrublands, and occasionally upland woodlands. This species record comes from an 1864 collection of bank swallow eggs in the vicinity of Lake Sherwood (CDFG, 2011). This species is not expected to nest in the study area due to the lack of suitable nesting habitat.

Least Bell's Vireo

Least Bell's vireo is a federal and State-listed Endangered species. The least Bell's vireo breeds primarily in riparian habitats dominated by willows with dense understory vegetation (USFWS, 1986). A dense shrub layer 2 to 10 feet above the ground is the most important habitat characteristic for this species (Kus, 2002; Franzreb, 1989). Marginally suitable habitat for this species is present within the Alternative Subtransmission Alignment 2, in the riparian vegetation along Olsen Road just east of Hwy 23 (which may be spanned under this alternative).

On February 2, 1994, the USFWS published a final critical habitat for the least Bell's vireo, designating approximately 37,560 acres of land in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties, California (USFWS, 1994). The Proposed Project and alternatives are not within designated critical habitat for this species.

American Peregrine Falcon

American peregrine falcon is a California fully Protected species. This species forages in a variety of habitats nesting on cliff faces within range of foraging areas. American peregrine falcon may sporadically forage in the study area; however, suitable cliffs or other nesting habitat do not occur in the study area.

Jurisdictional Waters of the U.S., Including Wetlands

Wetlands are ecologically productive habitats that support a rich variety of both plant and animal life. They are recognized as important natural systems because of their value to fish and wildlife, and their functions as storage areas for flood flows, groundwater recharge, nutrient recycling and water quality improvement. Wetlands are defined as areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to saturated soils.

A jurisdictional delineation was conducted for the Proposed Project in 2009 (Bonterra, 2010c). Based on the jurisdictional delineation report, a total of 0.04 acre of "Waters of the U.S." and

0.05 acre of jurisdictional area under Regional Water Quality Control Board and CDFG jurisdiction occurs at the proposed Presidential Substation site and may be affected by the Proposed Project. One drainage occurs in the footprint of the Proposed Project. The total area drained would remain relatively unchanged and the flow would be directed through a culvert under the fill (and thereby under the new substation) which would connect to an existing culvert under Olsen Road.

Along the proposed subtransmission alignment and alternative subtransmission line alignments, the relatively small footprint of the pole sites and the long spans between poles would allow avoidance of jurisdictional areas. Jurisdictional habitat does not occur at Alternative Substation Site B.

Regulatory Context

Many biological resources in California are protected and/or regulated by a variety of laws and policies administered by federal, state, and/or local agencies. The following is an overview of the key agencies, regulations, and policies relevant to the Proposed Project and alternatives.

Federal

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service administers the Federal Endangered Species Act (FESA) (16 U.S. Code [USC] 153 et seq.), the Migratory Bird Treaty Act (MBTA) (16 USC 703–711), and the Bald and Golden Eagle Protection Act (16 USC 668).

Federal Endangered Species Act. Under the FESA, the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as Threatened or Endangered (16 USC§1533(c)). Two federal agencies oversee the FESA: the USFWS has jurisdiction over plants, wildlife, and resident fish, while the National Oceanic and Administrative Administration/ National Marine Fisheries Service (NOAA Fisheries/NMFS) has jurisdiction over anadromous fish and marine fish and mammals. FESA §7 mandates that all federal agencies consult with the USFWS and NOAA Fisheries/NMFS to ensure that federal agency actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. The FESA prohibits the "take"² of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

FESA §10 requires the issuance of an "incidental take" permit before any public or private action may be taken that would potentially harm, harass, injure, kill, capture, collect, or otherwise hurt (i.e., take) any individual of an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan that would offset the take of individuals that may occur, incidental to implementation of a project by providing for the overall preservation of the affected species through specific mitigation measures.

² The FESA definition of the term "take" is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct.

Critical Habitat. USFWS designates critical habitat for listed species under FESA. Critical habitat designations are specific areas within a geographic region that are occupied by a species and determined to be critical to its survival in accordance with FESA. Agencies that propose, fund, or issue a permit for a project that may affect a federally listed species or critical habitat must prepare a Habitat Conservation Plan as part of an application for a permit from the USFWS. The designated critical habitat in the study area is shown on Figure 4.4-2 and illustrates areas that have greater potential of supporting federally-listed species in the region. Designated critical habitat for coastal California gnatcatcher, Riverside fairy shrimp occur in the immediate project area. Designated critical habitat for California Orcutt grass, and Lyon's pentachaeta do not occur in the project area.

Protection of Nesting Birds - Migratory Bird Treaty Act. The MBTA (16 USC §703 Supp. I, 1989) prohibits the killing, possessing, or trading migratory birds, bird parts, eggs, and nests, except in accordance with regulations prescribed by the Secretary of the Interior.

U.S. Army Corps of Engineers

Clean Water Act, §404. The U.S. Army Corps of Engineers (Corps) administers §404 of the Clean Water Act (CWA). §404 regulates activities in wetlands and "other waters of the United States (U.S.)." Wetlands are a subset of "waters of the U.S." that are defined in the Code of Federal Regulations (CFR) (33 CFR 328.3[a]; 40 CFR 230.3[s]) as:

- 1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide.
- 2. All interstate waters including interstate wetlands. (Wetlands are defined by the federal government [33 CFR 328.3(b), 1991] as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soil conditions.)
- 3. All other waters—such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds—the use, degradation, or destruction of which could affect interstate or foreign commerce. This includes any waters with the following current or potential uses:
 - a. That are or could be used by interstate or foreign travelers for recreational or other purposes,
 - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce, or
 - c. That are used or could be used for industrial purposes by industries in interstate commerce.
- 4. All impoundments of waters otherwise defined as waters of the United States under the definition.
- 5. Tributaries of waters identified in paragraphs (1) through (4).

- 6. Territorial seas.
- 7. Wetlands next to waters identified in paragraphs (1) through (6).
- 8. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding the Clean Water Act jurisdiction remains with the U. S. Environmental Protection Agency (328.3[a][8] added 58 CFR 45035, August 25, 1993).

State

CEQA Guidelines §15380

Although Threatened and Endangered species are protected by specific federal and State statues, CEQA Guidelines §15380(b) provides that a species not listed by FESA or CESA may be considered rare or endangered if it can be shown to meet certain criteria for rarity. These criteria have been modeled after the definition of FESA and the section of California Fish and Game Code (FGC) discussing rare or endangered plants or animals. This section was included in the CEQA Guidelines primarily for situations in which a public agency is reviewing a project that may have a significant effect on a candidate species that has not yet been listed by CDFG or USFWS. CEQA provides the ability to protect species from potential project impacts until the respective agencies have the opportunity to designate the species protection.

CEQA also specifies the protection of other locally or regionally significant resources, including natural communities or habitats. Although natural communities do not presently have legal protection, CEQA requires an assessment of such communities and potential project impacts. Natural communities identified by CDFG as sensitive are considered to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general and area plans often identify natural communities.

California Department of Fish and Game

The CDFG administers a number of laws and programs designed to protect fish and wildlife resources under FGC, such as the California Endangered Species Act (FGC §2050, et seq.), Fully Protected Species (FGC §3511), Native Plant Protection Act (FGC §§1900–1913), Lake and Streambed Alteration Agreement Program (FGC §§1600–1616) as well as manages the California Species of Special Concern list.

California Endangered Species Act. In 1984, California implemented its own Endangered Species Act (CESA) which prohibits the take of state-listed Endangered and Threatened species; although, habitat destruction is not included in the state's definition of take. Section 2090 requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. The CDFG administers the act and authorizes take through California FGC §2081 agreements (except for designated "Fully Protected Species"). Unlike its federal counterpart, CESA protections apply to candidate species that have been petitioned for listing.

Regarding listed rare and endangered plant species, CESA defers to the California Native Plant Protection Act (see below).

Fully Protected Species - Fish and Game Code §3511. Fully Protected Species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. The designation of Fully Protected status was the State's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Its "no take" provision is still applicable.

Native Plant Protection Act. California FGC §§1900–1913, also known as the Native Plant Protection Act, is intended to preserve, protect, and enhance endangered or rare native plants in California. The act directs CDFG to establish criteria for determining what native plants are rare or endangered. Under §1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more cause. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens. The act also directs the California Fish and Game Commission to adopt regulations governing the taking, possessing, propagation, or sale of any endangered or rare native plant.

Riparian Communities in California. Riparian communities have a variety of functions, including providing high-quality habitat for resident and migrant wildlife, streambank stabilization, and runoff water filtration. Throughout the U.S., riparian habitats have declined substantially in extent and quality compared with their historical distribution and condition. These declines have increased concerns about dependent plant and wildlife species, leading federal agencies to adopt policies to arrest further loss.

Lake and Streambed Alteration Program. The CDFG regulates activities that would interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream. California FGC §1602 requires notification of CDFG for lake or stream alteration activities. If, after notification is complete, the CDFG determines that the activity may substantially adversely affect an existing fish and wildlife resource, the CDFG has authority to issue a Lake and Streambed Alteration Agreement under §1603 of the California Fish and Game Code. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. These may include avoidance or minimization of heavy equipment use within stream zones, limitations on work periods to avoid impacts to wildlife and fisheries resources, and measures to restore degraded sites or compensate for permanent habitat losses.

Species of Special Concern. CDFG maintains lists for candidate-endangered species and candidate-threatened species. California candidate species are afforded the same level of protection as listed species. California also designates Species of Special Concern, which are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species or Fully Protected Species, but may be added to official lists in the future. CDFG intends the Species of Special Concern list to be a management tool for consideration in future land use decisions.

Fish and Game Code §3503. California FGC Section 3503.5 provides that it is unlawful to take, possess, or destroy any birds in the orders 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 adopted pursuant thereto. Construction activities that result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment and/or reproductive failure are considered a "take" by CDFG. Any loss of eggs, nests, or young or any activities resulting in nest abandonment would constitute a significant project impact.

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goal and policies identified in the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives:

1.5.1 Goal: Preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include endangered, threatened or rare species and their habitats, wetland habitats, coastal habitats, wildlife migration corridors and locally important species/communities.

1.5.2 Policies

- 1. Discretionary development which could potentially impact biological resources shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.
- 2. Discretionary development shall be sited and designed to incorporate all feasible measures to mitigate any significant impacts to biological resources. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.
- 3. Discretionary development that is proposed to be located within 300 feet of a marsh, small wash, intermittent lake, intermittent stream, spring, or perennial stream (as identified on the latest USGS 7½ minute quad map), shall be evaluated by a County approved biologist for potential impacts on wetland habitats. Discretionary development that would have a significant impact on significant wetland habitats shall be prohibited, unless mitigation measures are adopted that would reduce the impact to a less than significant level; or for lands designated "Urban" or "Existing Community," a statement of overriding considerations is adopted by the decision-making body.
- 4. Discretionary development shall be sited a minimum of 100 feet from significant wetland habitats to mitigate the potential impacts on said habitats. Buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100 foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened or rare plants or animals, and compatibility of the proposed development with the wildlife use of the

wetland habitat area. The requirement of a buffer (setback) shall not preclude the use of replacement as a mitigation when there is no other feasible alternative to allowing a permitted use, and if the replacement results in no net loss of wetland habitat. Such replacement shall be "in kind" (i.e. same type and acreage), and provide wetland habitat of comparable biological value. On-site replacement shall be preferred wherever possible. The replacement plan shall be developed in consultation with California Department of Fish and Game.

- 5. The CDFG, USFWS, National Audubon Society and the CNPS shall be consulted when discretionary development may affect significant biological resources. The National Park Service shall also be consulted regarding discretionary development within the Santa Monica Mountains or Oak Park Area.
- 6. Based on the review and recommendation of a qualified biologist, the design of road and floodplain improvements shall incorporate all feasible measures to accommodate wildlife passage.

(County of Ventura, 2008).

Ventura County Tree Protection Ordinance (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

Ventura County identifies the following trees in its Tree Protection Ordinance: alder (*Alnus* spp.), ash (*Fraxinus* spp.), bay (*Umbellularia californica*), cottonwood (*Populus* spp.), elderberry (*Sambucus* spp.), big cone Douglas fir (*Pseudotsuga macrocarpa*), white fir (*Abies concolor*), juniper (*Juniperus californica*), maple (*Acer macrophyllum*), oak, pine, sycamore (*Platanus* spp.), and walnut (*Juglans* spp.). Size requirements for protected status vary by species. The ordinance designates trees with a single trunk 90 inches in diameter or with multiple trunks totaling 72 inches in diameter as heritage trees. In addition, the ordinance designates any trees identified by the County or a city as a landmark, or identified on the Federal or California Historic Resources Inventory to be of historical or cultural significance (i.e., historical trees).

The Ventura County Tree Protection Ordinance includes permit exemptions for tree pruning and trimming by public utilities for purposes of protecting the public and maintaining adequate clearance from public utility conduits and facilities. In addition, the ordinance provides for ministerial permits for tree removal or alteration when a tree interferes with public utilities facilities (Ventura County, 2011).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following policies identified in the City of Thousand Oaks General Plan would otherwise be relevant to the Proposed Project and alternatives:

Policy CO-21: The City shall encourage the proper management, conservation and protection of native plant communities throughout the City's Planning Area, including developed areas and remaining undeveloped open space lands.

Policy CO-22: Consumptive land uses or practices (e.g., off-road vehicle use, hunting, trapping) that are incompatible with the long-term survival and viability of resident and migratory wildlife populations shall be discouraged.

Policy CO-23: Critical wildlife habitat resources such as movement corridors, surface water impoundments, streams and springs should be given special consideration for preservation, restoration or enhancement, in order to maintain the biological productivity and ecological integrity of natural open space areas.

Policy CO-24: In order to reduce the potential for devastating wildfires and the resulting damage they cause to both natural ecosystems and urban environments, appropriate fuel management and prescribed burning programs should be conducted on a selective basis, including the periodic monitoring of any potentially adverse effects on animal habitats and air quality.

(City of Thousand Oaks, 1996).

City of Thousand Oaks Municipal Code Chapter 24: Landmark Tree Preservation and Protection (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

Chapter 24 sets forth the policy of the City of Thousand Oaks to require the preservation of all healthy landmark trees, unless otherwise exempt or a reasonable and conforming use of the property justifies the removal, cutting, pruning and/or encroachment into the protected zone of a landmark tree (Thousand Oaks, 1994). "Landmark tree" is defined by the municipal code as a tree that because of its size, age, or unique and irreplaceable values to the community needs to be preserved and safeguarded as symbolic of the City's heritage, beauty and image. Landmark trees include specimens of the following species which have reached the designated maturity:

- California Sycamore which exceed twelve (12") inches in diameter when measured at a point four and one-half (4 1/2') feet above the natural grade at the base of the tree (diameter breast height [DBH]);
- California Bay Laurel which exceed eight (8") inches in diameter at DBH;
- California Black Walnut which exceed eight (8") inches in diameter at DBH; and
- Photinia, California Holly or Toyon which exceeds eight (8") inches in diameter at DBH

Landmark trees also include all designated historic trees, as well as any tree, of any type, designated as a landmark tree by the Planning Commission or City Council.

The City of Thousand Oaks reviews permit applications to remove Oak and Landmark trees based on several criteria. Typically, applicants are homeowners or multifamily landlords; the City does not often receive permits for new developments, as it is nearly built out. Before an application can be approved, applicants must hire a private consultant/arborist to inventory trees on the site, make findings, and issue recommendations. Once the application has been deemed complete, City staff makes a site visit to determine the appropriateness of removal and, in turn, issue staff recommendations. If work is permitted and occurs, an arborist must verify the tree(s) were properly removed or protected, and must send a memo to the City. A permit is not required to cut or remove protected trees if one or more of the following conditions are met:

- 1. Trees damaged by thunderstorms, windstorms, floods, earthquakes, fires, or other natural disasters and determined to be dangerous by a peace officer, fireman, civil defense official, or code enforcement officer in their official capacity;
- 2. When removal is determined necessary by fire department personnel actively engaged in fighting a fire;
- 3. Trees planted, grown and/or held in for sale as part of a licensed nursery business;
- 4. Trees within the property boundaries of an occupied single-family detached dwelling; provided, that the parcel in question is smaller than two (2) acres;
- 5. City of Thousand Oaks staff in maintaining public property.

A permit may be approved under the ordinance if one or more of the following conditions are met:

- 1. Cutting or removing limbs is required to maintain or aid a tree's health, balance, or structure;
- 2. Tree is in poor or failing health;
- 3. Tree is likely to fall;
- 4. Impossible to reasonably mitigate tree interference with utilities, pedestrian accessibility, or existing structures;
- 5. Presence of tree prevents reasonable and conforming use of the site.

The ordinance does not mandate a specific number or cumulative DBH inches to be replaced per each tree removed or injured. However, conditions of approval may require (1) replacement trees be added to the subject property, (2) relocation of trees on- or off-site, (3) replacement of trees on- or off-site, (4) adoption of approved maintenance program, or (5) payment of a fee or donation of boxed tree to the City if replacement not possible on- or off-site.

An individual or party removing or cutting a protected tree without a permit may be responsible to replace the Landmark or Landmark tree by donating two or more trees of reasonably equivalent size and value. Other fines and penalties may be applied at the discretion of the City.

(City of Thousand Oaks, 1994).

City of Thousand Oaks Municipal Code, Chapter 14: Oak Tree Preservation and Protection (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

This chapter sets forth the policy of the City of Thousand Oaks to require the preservation of all healthy oak trees, unless otherwise exempt from this chapter or reasonable and conforming use of the property justifies the removal, cutting, pruning and/or encroachment into the protected zone

of an oak tree. Oak tree is defined as any oak tree of the Genus Quercus including, but not limited to, Valley Oak, California Live Oak and Scrub Oak, regardless of size (Thousand Oaks, 2010).

The Code states that no person shall cut, remove, encroach into the protected zone, or relocate any oak tree on any public or private property within the City, unless a valid oak tree permit has been issued by the City pursuant to the provisions of this chapter and the oak tree preservation and protection guidelines.

An oak tree permit may authorize the removal, cutting, or encroachment within the protected zone of one or more oak trees subject to the conditions set forth in said permit. An oak tree permit may also authorize future maintenance of oak trees within the permit area, such as pruning, within parameters established in an oak tree maintenance program approval in conjunction with the oak tree permit. Activities included within an approved oak tree maintenance program may be undertaken in compliance with said program without the filing and approval of a separate oak tree permit application. Provided, however, an oak tree not covered by the initial oak tree permit may not be encroached upon without approval of a subsequent oak tree permit or modification to the original permit.

A permit is not required to cut, remove, or encroach within the protected zone of any oak tree(s) under the following circumstances:

- 1. Trees that do not exceed two (2") inches in diameter when measured at a point four and a half (4 1/2') feet above the tree's natural grade;
- 2. Ground plane improvements that are proposed between the dripline and the protected zone limit;
- 3. Clearance pruning that involves removal of live branches that do not exceed two (2") inches in diameter, except in conjunction with' any new construction activity;
- 4. Deadwooding;
- 5. When removal is determined necessary by fire department personnel engaged in fighting a fire;
- 6. Trees planted or grown in containers and held for sale as part of a licensed nursery business;
- 7. Any encroachment, pruning, or removal deemed necessary by an authorized agent of the City for public safety purposes; or
- 8. Tree(s) verified by the City as an owner-planted oak tree through an applicable permit procedure, provided said tree(s) are not part of a City-approved landscape plan.

An oak tree permit may be approved based upon one of the following findings by the decision maker:

1. The condition or location of the oak trees requires cutting to maintain or aid its health, balance, structure, or to maintain adequate clearance from existing structures;

- 2. The condition of the tree(s) with respect to disease, danger of falling, proximity to existing structures, high pedestrian traffic areas such as parking lots, pedestrian walkways or interference with utility services cannot be controlled or remedied through reasonable preservation and/or preventative procedures and practices;
- 3. A permit may be approved when necessary to remove, relocate, cut or encroach into the protected zone of an oak tree to enable the reasonable and conforming use of the subject property, which is otherwise prevented by the presence of the tree. Reasonable use of the property shall be determined in accordance with the Oak Tree Preservation and Protection Guidelines; or
- 4. Approval of the request is not contrary to or in conflict with the general purpose and intent of this chapter.

(City of Thousand Oaks, 2010).

City of Thousand Oaks Municipal Code, Chapter 28: Tree Pruning (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

This chapter provides standards for pruning of trees planted pursuant to a City approved landscape plan, in order to protect the health and aesthetic value of such trees. Trees that are well maintained have better structure minimizing the potential for failure, and also enhance the aesthetic character of the property and the City. Pruning regulations are as follows:

- 1. It shall be unlawful to prune greater than twenty-five (25%) percent of the foliage or crown of a tree subject to this chapter as determined by the City's Arborist, during a calendar year.
- 2. It shall be unlawful to prune a tree that results in topping or lion's tailing.
- 3. It shall be unlawful to use climbing spurs except when limbs are more than a throwline distance apart and there is no other means of climbing the tree, or when the bark is thick enough to prevent damage to the cambium. The use of climbing spurs on palm trees is permitted.
- 4. Exceptions to these regulations may be granted by the Community Development Department for good cause and where the requested pruning does not adversely affect the aesthetics or health of the tree(s).

Pruning Permits may be issues if the following requirements are met:

- 1. A pruning permit to prune greater than twenty-five (25%) percent of a tree's foliage or canopy within an annual growing season may be issued after review by the Community Development Director or designee. All applications must include justification by a certified arborist or other professional as approved by the City, for the reason more than twenty-five (25%) percent of the tree's foliage or canopy must be pruned. The justification for the pruning shall be evaluated by the City's Arborist.
- 2. The Community Development Department is hereby authorized to collect an application processing fee, where applicable, and appeal fee, as set by Council resolution, to offset the cost of processing.

(City of Thousand Oaks, 2009).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goal and policies identified in the City of City of Simi Valley General Plan Conservation/Open Space Element would otherwise be relevant to the Proposed Project and alternatives:

Goal IV-2: Preserve the existing plant resources and wildlife habitat and encourage the provision of additional landscaping.

Policy IV-2.1: Mature trees as defined in the Tree Preservation Ordinance and tree rows of significant aesthetic or historic quality should be preserved consistent with public health and safety.

Policy IV-2.I.I: Public and private projects should be planned so that significant trees will not be damaged or destroyed.

Policy IV-2.I.2: Provisions should be made to protect permanently the City's most significant landmark trees and tree rows.

Policy IV-2.I.3: Mature trees as defined by the Tree Preservation Ordinance and tree rows on vacant or underdeveloped property should not be removed unless public health and safety reasons dictate otherwise.

Policy IV-2.3: Require that all healthy mature trees not within a required right-of-way removed as a result of construction activity be replaced with the equivalent value of landscaping in excess of normal planting requirements.

Policy IV-2.6: Development should be sensitive to the preservation and protection of wildlife and vegetation which is indigenous to Simi Valley, consistent with the public health, safety or general welfare.

Policy IV-2.6.1: Habitat known to support a diversity of wildlife should be preserved.

Policy IV-2.6.2: Habitat critical to the preservation of rare or endangered species should be identified and protected from adverse impacts of development.

Policy IV-2.6.3: Riparian habitat outside of the valley floor or adjacent to the western end of the Arroyo Simi should be preserved and protected to the fullest extent practical, consistent with the public health, safety or general welfare.

Policy IV-2.6.4: Areas important to the movement of wildlife should be identified and protected from adverse impacts of development. Priority should be given to areas near the east end of Simi Valley which allow the movement of animal s to and from the Santa Susana Mountains and the Simi Hills habitat areas. In addition, consideration should be given to the west end of Simi Valley which is potentially a wildlife movement corridor serving the Simi Hills and the Santa Susana Mountains.

Policy IV-2.6.S: Projects outside of the valley floor should be designed to include measures which avoid isolating areas of wildlife habitat from larger habitat areas.

(City of Simi Valley, 1988).

City of Simi Valley Municipal Code Chapter: Mature Tree Preservation Ordinance (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

Simi Valley Municipal Code Section 9-38 protects mature, healthy trees in the City of Simi Valley, to help foster an image of beauty, tranquility, and stability for future generations. A Mature Tree is defined as any living native oak tree that has a diameter of 5 inches or more, or a tree of any other species that has a diameter of 9.5 or more inches as measured 4.5 feet above the root crown. All Mature Native Oak Trees are protected. Mature Trees of other species are protected, except those located in the yards of single-family homes. Mature Trees that are located within the public right-of-way may only be removed by authority of the City's Public Works Department.

To remove a Mature Tree on multi-family residential, commercial, industrial, or vacant property, a Tree Removal Permit must first be obtained from the City. Permit approval requires the filing of an application form and payment of a fee. Permit applicants must also provide evidence that the tree:

- 1. Is diseased or poses a threat of collapse;
- 2. Interferes with utilities or an addition to an existing single-family residence;
- 3. Prevents the reasonable development of the property;
- 4. Is not the only protected tree in a neighborhood;
- 5. Is on a property that is overcrowded with mature trees;
- 6. Interferes with the construction of public improvements;
- 7. Is unsuitable for use in an urban area; or
- 8. Is damaging surrounding pavement or structures.

(City of Simi Valley, 2006).

4.4.2 Significance Criteria

Based on Section 15065 and Appendix G of the CEQA Guidelines, the Proposed Project would result in a significant impact on the environment if it would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS (including List 1A, 1B, and 2 plant species of the CNPS Inventory).
- b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.
- c) Have a substantial adverse effect on federally protected wetlands as defined by \$404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, other approved local, regional, or state habitat conservation plan.

CEQA §15380 provides that a plant or animal species may be treated as "Rare or Endangered" even if not on one of the official lists if, for example, it is likely to become endangered in the foreseeable future. As species of plants and animals become restricted in range and limited in population numbers, species may become listed or candidates for listing as Endangered or Threatened and become recognized under CEQA as a significant resource. Examples of such species include the burrowing owl; which is a California Species of Special Concern.

In conducting the following impact analysis, three principal components of the CEQA Guidelines outlined above were considered:

- Magnitude of the impact (e.g., substantial/not substantial);
- Uniqueness of the affected resource (i.e., rarity of the resource); and
- Susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource).

The evaluation of the significance of the following impacts considered the interrelationship of these three components.

4.4.3 Applicant Proposed Measures

SCE proposes the following APMs to minimize impacts on biological resources from the Proposed Project. The impact analysis assumes that the applicable APM would be implemented to reduce biological impacts as discussed below.

APM-BIO-01: Minimize Impacts to Coastal Sage Scrub. To the extent feasible, the Proposed Project would be designed to avoid or minimize impacts to coastal sage scrub. Mitigation measures and compensation for impacts to coastal sage scrub would be developed in consultation with USFWS and CDFG to reduce the impacts to less than significant.

APM-BIO-02: Minimize Impacts to Jurisdictional Drainages. A jurisdictional drainage delineation would be conducted [completed in July, 2010; see Bonterra, 2010c] to describe and map the extent of resources under the jurisdiction of the Corps, the RWQCB, and/or the CDFG following the guidelines presented in the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. As appropriate, SCE would secure a Streambed Alteration Agreement from the CDFG, and Clean Water Act §404 and §401 permits from the Corps and LARWQCB, respectively, prior to disturbing the jurisdictional drainage.

SCE may propose additional APMs following receipt of results of focused surveys that would be conducted as part of the Proposed Project and consultation with appropriate agencies.

4.4.4 Impacts and Mitigation Measures

Approach to Analysis

This section identifies potential impacts to the biological resources in the vicinity of the project area from implementation of the Proposed Project while Section 4.4.6, *Alternatives*, below, identifies potential impacts associated with the alternatives. For both sections, the impact analysis focuses on foreseeable changes to baseline conditions in the context of the significance criteria presented herein. This analysis includes an evaluation of the potential direct and indirect effects of the Proposed Project and alternatives. Definitions and examples of these effects within the context of biological resources are provided below.

- **Direct Effects.** Direct or primary effects are those effects that are caused by the project and occur at the same time and place (CEQA Guideline Section 15358). Examples of these types of effects to biological resources include incidental take during construction, elimination of related activities.
- **Indirect Effects.** Indirect or secondary effects are those effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable (CEQA Guideline Section 15358). Examples of these types of effects to biological resources include the discharge of sediment or chemicals that adversely affect water quality downstream of the project site, an increase in human activity during project operations, and potential growth-inducement effects.

The Proposed Project has the potential to have direct and indirect effect on biological resources. These potential effects include construction-related disturbance to wetlands, disturbance of natural habitats, and impacts to special-status plant and wildlife species and their habitat. Mitigation measures were developed to reduce the level of significance of potential impacts. These measures focused first on minimization and avoidance of biological resources where possible. Where impacts could not be avoided, compensation for potential impacts was proposed.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.

Construction

Impact 4.4-1: Construction activities associated with the Proposed Project could result in adverse impacts to the following federal and/or State-Listed Endangered or Threatened plant species: Braunton's milk-vetch, Agoura Hills dudleya, Conejo dudleya, and Lyon's pentachaeta as well as other non listed special-status species. *Less than significant with mitigation* (Class II)

Based on the findings of protocol-level botanical surveys, rare plants do not occur in the footprint or in areas adjacent to the Proposed Project. As a result, the Proposed Project would not have a direct impact on special-status plants. Indirect impacts could feasibly occur as a result of non-native weeds or invasive plants becoming established within areas disturbed by project activities and/or transported into the project area on vehicles and construction equipment, respectively. The following measure shall be implemented to minimize the spread of noxious weeds.

Mitigation Measure 4.4-1: SCE and or its contractors shall develop and implement a Noxious Weed and Invasive Plant Control Plan consistent with standard BMPs (see for example: Department of Transportation, State of California (Storm Water Quality Handbook - Project Planning and Design Guide [Caltrans, 2010]; and Construction Site Best Management Practices Manual [Caltrans, 2003]). The Plan shall be reviewed and approved by the Ventura County Office of the Agricultural Commissioner and the CPUC. At a minimum, the Plan shall address any required cleaning of construction vehicles to minimize spread of noxious weeds and invasive plants.

Significance after Mitigation: Less than Significant.

Impact 4.4-2: Construction activities associated with the Proposed Project could result in adverse impacts to the following special-status wildlife species, if present: western pond turtle, coast horned lizard, Swainson's hawk, American peregrine falcon, coastal California gnatcatcher, and San Diego desert woodrat. *Less than significant with mitigation* (Class II)

Habitat for several special-status wildlife species that were identified in the vicinity of the study area does not occur in or near the Proposed Project footprint. Species for which habitat was not identified in or near the Proposed Project footprint include Riverside fairy shrimp, arroyo chub, western spadefoot, bank swallow, and least Bell's vireo (Table 4.4-1). No direct or indirect impacts to these species are anticipated from the Proposed Project.

A limited amount of foraging habitat for several special-status bird species occurs in the vicinity of the Proposed Project, and these species could sporadically forage near the Proposed Project. Swainson's hawk, golden eagle, white-tailed kite, and American peregrine falcon are not expected to nest in the immediate area of the Proposed Project. The project area is outside of the breeding range for Swainson's hawk. Suitable nest sites for golden eagle, white-tailed kite, and peregrine falcon do not occur near the Proposed Project. As a result, no direct or indirect impacts to nesting individuals of these species are expected.

The coast (San Diego) horned lizard and San Diego desert woodrat may occur at the proposed Presidential Substation site or on the proposed subtransmission alignment in association with sage scrub and associated nearby habitat. There is a low possibility that the western pond turtle could be sporadically encountered near aquatic (i.e., stream) habitat on the proposed subtransmission alignment. If encountered within the alignment these species could be subject to unintended harm or fatality during project construction. The implementation of Mitigation Measure 4.4-2a would reduce impacts to these species to less than significant. About 3.5 acres of coastal sage scrub habitat on the proposed Presidential Substation site is suitable to support coastal California gnatcatcher and would be removed by the Proposed Project. Protocol-level surveys were performed in this area in 2008 and again in 2010, and gnatcatchers were not observed on or adjacent to the site. However, a juvenile California gnatcatcher was detected about 1,100 feet from the site in association with coast sage scrub/coast prickly pear succulent scrub habitat. On the basis of this finding, there is potential that coastal California gnatcatcher could breed on the Proposed Presidential Substation site at a later date. Protocol-level surveys for coastal California gnatcatcher surveys also considered the proposed subtransmission alignment; however, this species was not detected and is considered absent from the alignment. Because the gnatcatcher was not identified on the Proposed Presidential Substation site during protocol-level surveys and the site is outside of designated critical habitat for this species, the USFWS and CDFG may concur with survey findings and not require compensation for coastal sage scrub habitat losses.

SCE has proposed the implementation of APM-BIO-01 to minimize project impacts to coastal sage scrub habitat through project design.

Designated critical habitat for coastal California gnatcatcher occurs on the proposed subtransmission alignment. The implementation of Mitigation Measure 4.4-2a and 4.4.-2b would reduce impacts to Coastal California gnatcatcher to less than significant.

Mitigation Measure 4.4-2a: Within areas that provide potentially suitable habitat, SCE and/or its contractors shall perform preconstruction surveys within 24 hours of initial ground disturbance to identify the potential presence of western pond turtle, coast horned lizard and San Diego desert woodrat within work areas. If any of these species are identified during surveys of the immediate project footprint, individuals shall be relocated from work areas by an individual who is authorized by CDFG to undertake species relocation. A suitable relocation area shall be identified and approved by CDFG prior to preconstruction surveys.

Mitigation Measure 4.4-2b: Where impacts to coastal sage scrub cannot be avoided (e.g., at the proposed Presidential Substation site), SCE and/or its contractors shall contact CDFG and the USFWS to coordinate coastal scrub avoidance measures that have been incorporated into the project design, and determine if additional measures are needed to reduce impacts to coastal California gnatcatcher habitat. Avoidance measures may include limiting the seasonal timing of work outside the breeding so that active gnatcatcher nesting is not disrupted during construction, limiting project disturbances to the smallest possible area in or near areas with suitable habitat, and providing environmental training to construction workers. In addition, the following actions will be carried out:

- Coastal sage scrub shall be restored at a 1:1 ratio in areas where it is temporarily disturbed.
- A qualified ecologist shall prepare a restoration and mitigation plan in coordination with CDFG to mitigate for temporarily impacts to coastal sage scrub habitat. The plan shall include a full description of microhabitat conditions necessary for each affected species, seed germination and planting requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and

enhancement sites, success and performance criteria, and monitoring requirements, as well as measures to ensure long-term sustainability. The mitigation plan shall apply to portions of the project alignment that support restored coastal sage scrub habitat (e.g. at the proposed subtransmission alignment).

Significance after Mitigation: Less than Significant.

Impact 4.4-3: Construction activities may impact common or protected nesting migratory birds. *Less than significant with mitigation* (Class II)

Construction activities associated with the Proposed Project, such as grading, preparation of temporary work areas, pull and tension sites, and access roads; operation of heavy equipment; installation and removal of poles/towers; and conductor installation, could disturb nesting birds and cause nest site abandonment and/or reproductive failure through an increase in noise, human presence and/or removal of habitat. Special-status birds that may nest in the project area include burrowing owl, loggerhead shrike, and coastal cactus wren, though the protective provisions of the Migratory Bird Treaty Act also apply to common bird species.

Indirect impacts from human disturbances and construction noise could cause nest abandonment, death of young, or loss of reproductive potential at active nests located near project sites. These impacts would be significant. Implementation of Mitigation Measure 4.4-3, which provides preconstruction breeding bird surveys and avoidance requirements for active nests, would reduce impacts on nesting birds to a less-than-significant level.

Mitigation Measure 4.4-3: SCE and/or its contractors shall implement the following measures to avoid impacts on nesting raptors and other protected birds for construction activities that are scheduled during the breeding season (February 1 through August 31):

1. No more than two weeks before construction within each new construction area, a qualified wildlife biologist shall conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction sites. If active nests are not identified, no further action is necessary. If active nests are identified, a no-disturbance buffer shall be created around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers are 300 to 500 feet for raptors and 150 to 250 feet for other nesting birds (e.g., waterfowl and songbirds), depending upon species. The size of these buffer zones and types of construction activities that are allowed in these areas could be further modified during construction in coordination with CDFG and shall be based on existing and anticipated levels of noise and disturbance.

Significance after Mitigation: Less than Significant.

4.4 Biological Resources

Operations

Impact 4.4-4: Operation of new transmission lines could impact raptors as a result of electrocution or collision. *Less than significant with mitigation* (Class II)

Poles and powerlines pose a danger to raptors as a result of electrocution and collision hazards, and are a recognized source of raptor mortality. Powerline electrocution is the result of two interacting factors: raptor behavior and pole design. Raptors are opportunistically attracted to powerlines because they provide perch sites for hunting, resting, feeding, territorial defense, or as nesting structures. Many standard designs of electrical industry hardware place conductors and groundwires close enough together that raptors can touch them simultaneously with their wings or other body parts, causing electrocution. Raptors and other birds may also collide with powerlines, which can be difficult for birds to detect for various reasons such as during night flight or during inclement weather conditions. The type and magnitude of such impacts, and strategies to avoid conflicts between birds and new transmission lines have been well described by the Edison Electric Institute's Avian Power Line Interaction Committee (APLIC). The APLIC (2005) characterizes potential impacts as follows:

"Birds are generally electrocuted by transmission lines by due to environmental factors such as topography, vegetation, available prey and other, behavioral or biological factors influence avian use of power poles and inadequate separation between energized conductors or energized conductors and grounded hardware can provide two points of contact.

Raptors and other large birds are opportunistic and may use power poles for a number of purposes, such as nest sites, high points from which to defend territories, and perches from which to hunt. Some structures are preferred by birds because they provide considerable elevation above the surrounding terrain, thereby offering a wide field of view. Electrocution can occur when a bird completes an electric circuit by simultaneously touching two energized parts or an energized part and a grounded part of electrical equipment. Most electrocutions occur on medium-voltage distribution lines (4-34.5 kV), in which the spacing between conductors may be small enough to be bridged by birds. Poles with energized hardware, such as transformers, can be especially hazardous, even to small birds, as they contain numerous, closely-spaced energized parts.

"Avian-safe" structures are those that provide adequate clearances to accommodate a large bird between energized and/or grounded parts. Consequently, 60 inches of horizontal separation, which can accommodate the wrist-to-wrist distance of an eagle (which is approximately 54 inches), is used as the standard for raptor protection Likewise, vertical separation of at least 48 inches can accommodate the height of an eagle from its feet to the top of its head (which is approximately 31 inches). Because dry feathers act as insulation, contact must be made between fleshy parts, such as the wrists, feet, or other skin, for electrocution to occur. In spite of the best efforts to minimize avian electrocutions, some degree of mortality may always occur due to influences that cannot be controlled, e.g. weather."

The implementation of Mitigation Measure 4.4-4 would reduce potential impacts to a less-thansignificant level. **Mitigation Measure 4.4-4:** SCE shall follow APLIC guidelines for avian protection on powerlines. SCE and/or its contractors shall use current guidelines to reduce bird mortality from interactions with powerlines. The APLIC (2005) and USFWS recommend the following:

- Provide 60-inch minimum horizontal separation between energized conductors or energized conductors and grounded hardware;
- Insulate hardware or conductors against simultaneous contact if adequate spacing is not possible;
- Use pole designs that minimize impacts to birds, and;
- Shield wires to minimize the effects from bird collisions

Significance after Mitigation: Less than Significant.

b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.

Two CDFG sensitive natural communities were identified in the project area and would be avoided or spanned by the Proposed Project. These include a small area of freshwater marsh in Arroyo Santa Rosa near the proposed subtransmission alignment on Sunset Valley Road, and a small patch of southern California black walnut woodland that would be spanned on Read Road and in the overland section of the Proposed Project. Additionally, a small patch of willow riparian scrub occurs adjacent to the Alternative Subtransmission Alignment 2 on Olsen Road, just east of Hwy 23 and would be avoided. No direct or indirect project impacts are anticipated to these sensitive natural communities (No Impact).

Impact 4.4-5: Construction of the proposed subtransmission alignment could impact designated critical habitat for coastal California gnatcatcher. *Less than significant with mitigation* (Class II)

A portion of the proposed subtransmission alignment west of the Proposed Presidential Substation site between Olsen Road and Hwy 23 is within designated critical habitat for coastal California gnatcatcher, as well as a small portion of the subtransmission source line route along Read Road west of Hwy 23 (see Figure 4.4-1). Within this area, the alignment would follow an existing powerline alignment, and would not substantially disturb or diminish the quality of existing sage scrub habitat; however, temporary habitat impacts may be expected associated with the removal of existing poles and access to new pole locations. The implementation of Mitigation Measure 4.4-2a and 4.4-2b, above, would reduce impacts to coastal sage scrub to a less-than-significant level.

Mitigation Measure 4.4-5: Implementation of Mitigation Measure 4.4-2a and 4.4-2b.

Significance after Mitigation: Less than Significant.

c) Effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Impact 4.4-6: Construction activities could impact jurisdictional waters of the United States and waters of the State, including drainages and seasonal wetlands. *Less than significant with mitigation* (Class II)

The proposed subtransmission alignment is not expected to directly or indirectly impact jurisdictional wetlands in the project area. Identified features would be avoided with a suitable upland construction buffer (e.g., at least 50 feet); therefore, no direct impacts were identified to these features. Drainages that would be spanned by the Proposed Project include Arroyo Santa Rosa and several ditches along Olsen Road.

The proposed Presidential Substation would impact approximately 0.05 acre of seasonal wetlands and associated habitat under the jurisdiction of CDFG and 0.04 acre of isolated waters under the jurisdiction of the RWQCB and Corps (Bonterra, 2010c). As identified in APM-BIO-02, a §401 Water Quality Certification is required from the RWQCB and a §404 permit is required from the Corps prior to commencement of work filling this drainage. In addition, if drainages on the project site meet the criteria established by §1600 of the California FGC, the CDFG may require a Lake and Streambed Alteration Agreement prior to any modification of the bed, bank, or channel of streambeds. The Proposed Presidential Substation is expected to cause a direct, permanent impact to State and federal jurisdictional wetlands, with little opportunity for on-site mitigation.

Implementation of Mitigation Measure 4.4-6 would reduce impacts to jurisdictional wetlands to a less than significant level.

Mitigation Measure 4.4-6a: SCE and/or its contractors shall through project design, avoid jurisdictional waters of the U.S. and waters of the State. This includes minimizing the footprint during construction of poles for the proposed subtransmission line and spanning drainages that occur within the alignment.

Mitigation Measure 4.4-6b: In the event of any project changes that involve ground disturbance outside of the boundary of the existing wetland delineation, a new wetland delineation shall be performed.

Mitigation Measure 4.4-6c: Where jurisdictional wetlands and other waters cannot be avoided, e.g., at the Proposed Presidential Substation site, to offset temporary and permanent impacts that occur as a result of the project, restoration, enhancement or compensatory mitigation shall be provided through the following mechanisms:

- To compensate for wetland impacts from the Proposed Presidential Substation, wetland enhancement and/or restoration shall be performed at a suitable off-site drainage or stream that is suitable to CDFG, RWQCB, and the Corps. Wetland mitigation and/or enhancement shall be provided at a minimum 2:1 replacement ratio in one of several nearby unnamed intermittent drainages to offset wetland losses.
- If temporary impacts are anticipated to wetlands, a Wetland Mitigation and Monitoring Plan shall be developed by a qualified biologist or wetland scientist in

coordination with CDFG, RWQCB and the Corps that details mitigation and monitoring obligations for temporary impacts to wetlands and other waters as a result of construction activities. The Plan shall quantify the total acreage lost, monitoring and reporting requirements, and site specific plans to compensate for wetland losses resulting from the project at the ratios described above. The Plan shall be submitted to the appropriate regulatory agencies for approval. The Plan and documentation of such agency approval shall be submitted to the CPUC prior to construction.

Significance after Mitigation: Less than Significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Impact 4.4-7: The Proposed Project could interfere substantially with the movement of any native upland wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. *Less than significant* (Class III)

The Proposed Project is located within an area that has natural features conducive to a wildlife corridor connecting larger areas of open space in the north, east, and west. The project area was identified by the South Coast Missing Linkages Project (Penrod et al., 2006) as a potentially important north-south migration corridor for a number of important species indicative of overall ecosystem health. Given the small size of the Proposed Project and its adjacency to existing urban development, the Proposed Project is not expected to greatly hinder regional wildlife movement between these larger areas of open space, or to significantly alter current patterns of wildlife movement. A single 3-foot diameter culvert at the proposed Presidential Substation site extends under Olsen Road and may facilitate the local movement of local mammals such as gray fox (Urocyon cinereoargenteus), coyote (Canis latrans), striped skunk (Mephitis mephitis), and opossum (Didelphis virginiana). A similar culvert crossing is present in similar scrub habitat about 700 feet west of the proposed Presidential Substation site and would not be affected by the project. Thus, wildlife species that may currently use the culvert would have the continued ability to cross beneath Olsen Road via the other culvert. The 4-acre substation would be positioned immediately adjacent to existing development, which minimizes encroachment into natural habitat and allows continued local wildlife movement.

Mitigation: None required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Three local jurisdictions have ordinances protecting trees: Ventura County, the City of Thousand Oaks and the City of Simi Valley. Impacts to trees identified in local ordinances may occur during construction of the Proposed Project, principally along Read Road. The existing subtransmission line that would be replaced on Read Road spans about 5 dozen large trees of

various species. Presumably, the proposed subtransmission alignment would follow a similar alignment and the removal of an undetermined number of individual trees may be needed to accommodate the new pole locations. Based on a review of digital aerial photographs, the number of large trees that occur within the alignment appears to be fewer than 20.

Prior to construction, SCE and/or its contractors would identify any trees that would interfere with the construction of the Proposed Project and would consult with local municipalities prior to any tree alteration or removal. If protected trees cannot be avoided, SCE shall consult with a certified arborist and obtain permits consistent with the conditions of the local agency. Any tree replacement would be provided consistent with the requirements of the relevant agency or municipality. Thus, construction of the Proposed Project would not conflict with local policies and ordinances protecting trees (No Impact).

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan.

No Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) are known to exist in the area. Therefore, there would be no impact.

4.4.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore no impacts would occur to biological resources (No Impact).

Alternative Subtransmission Alignment 1

Portions of the alignment that parallel Alternative Subtransmission Alignment 1 have been surveyed for wetlands and special-status plants and wildlife species. The construction-related impacts associated with this portion of the alternative would be similar to those for the Proposed Project. Mitigation measures that are required to reduce impacts in these areas to less than significant levels (i.e., Mitigation Measures 4.4-1, 4.4-2, 4.4-2b, 4.4-3, and 4.4-6 a, b and c) would apply to Alternative Subtransmission Alignment 1.

Similar to the Proposed Project, Alternative Subtransmission Alignment 1 could affect specialstatus wildlife species that are all or partly dependent upon coastal sage scrub habitat. Potential impacts to coast horned lizard and San Diego desert woodrat could occur on the Esperance Road segment, and would be incrementally greater than impacts described for the Proposed Project. Unlike the Proposed Project, this alternative traverses portions of designated critical habitat for coastal California gnatcatcher where this species has been identified. The implementation of Measure 4.4-2a would reduce impacts to these species to less than significant; however, formal consultation with the USFWS may be required to resolve the incrementally greater habitat impacts from this alternative.

Operations-related impacts associated with this alternative would be similar to the Proposed Project. Mitigation Measure 4.4-4 would be applicable to reduce operational impacts to less than significant levels.

Impact 4.4-7: Construction activities associated with Alternative 1 could result in adverse impacts to special-status plants species in portion of the alignment located north of the proposed Presidential Substation site. *Less than significant with mitigation* (Class II)

Alternative Subtransmission Alignment 1 differs from the Proposed Project in that it proposes approximately 1.85 miles of new ROW north of the proposed Presidential Substation site. This area has not been surveyed for rare plants and there is a moderate potential that several rare plant species may occur on or near the proposed subtransmission alignment based on the availability of potentially suitable habitat. Special-status plants are not known from the alignment; however, the extent of potential rare plant impacts cannot be known without focused botanical surveys. The implementation of Mitigation Measures 4.4-7a and 4.4-7b, which require surveys for special-status plants and the implementation of appropriate avoidance measures, would reduce the potential impact to a less-than-significant level.

Mitigation Measure 4.4-6a: In portions of the alignment that have not been surveyed for special-status plants, SCE and/or its contractors shall complete focused plant surveys following CDFG and USFWS special-status plant survey guidelines. Surveys shall document the location, extent, and size of rare plant populations in the study area for each project component, and shall be used to inform the planned avoidance of special-status plant populations whenever possible.

Based on focused plant survey findings, to the extent feasible, the final project design shall minimize impacts on known special-status plant populations within and adjacent to the construction footprints, with complete avoidance of any federal or State-listed plant species. SCE and/or its contractors shall design facilities to avoid sensitive plant populations whenever possible, shall install exclusion fencing around sensitive plant populations with as large a buffer as possible to minimize the potential for direct and indirect impacts.

Mitigation Measure 4.4-6b: Where avoidance of non-listed plant species is not feasible, SCE and/or its contractors shall compensate for the loss through plant salvage and replanting, as follows:

• A qualified ecologist shall develop a Restoration and Mitigation Plan according to CDFG guidelines and in coordination with CDFG. At minimum, the plan shall include collection of complete plants or reproductive structures (as appropriate) from affected plants, a full description of microhabitat conditions necessary for each affected species, seed germination requirements, proposed restoration techniques for temporarily disturbed occurrences, an assessment of potential transplant and enhancement sites, a description of performance criteria, and a monitoring program to follow the progress of transplanted individuals.

Significance after Mitigation: Less than Significant.

Alternative Subtransmission Alignment 2

Alternative Subtransmission Alignment 2 has a similar geographic setting to the proposed subtransmission alignment. Construction-related impacts associated with this alternative would be similar to those for the proposed subtransmission alignment. Unlike the proposed subtransmission alignment, Alternative Subtransmission Alignment 2 is entirely adjacent to existing roadways. This alternative alignment has not been surveyed for rare plants and there is a moderate potential that several special-status plant species may occur on or near the proposed alignment based on the availability of potentially suitable habitat (see Table 4-4.1). The implementation of Mitigation Measure 4.4-7a and 4.4-7b would reduce this potential project effect to special-status plants to less than significant.

Mitigation measures that are required for the proposed subtransmission alignment (i.e., Mitigation Measures 4.4-1, 4.4-2, 4.4-2b, 4.4-3, and 4.4-6 a, b and c) would reduce potential impacts to less than significant on Alternative Subtransmission Alignment 2.

Impact 4.4-8: Construction activities associated with Alternative Subtransmission Alignment 2 could result in less than significant impacts to least Bell's vireo, a federal and State listed Endangered species. *Less than significant with mitigation* (Class II)

Moderately suitable habitat for least Bell's vireo was identified in association with riparian habitat at one location on Alternative Subtransmission Alignment 2 (Bonterra, 2008). This riparian area is associated with a single unnamed drainage that traverses Olsen Road. The proposed alternative would be located near, or would span the riparian corridor, with poles located greater than 50 feet from the corridor. The implementation of Mitigation Measure 4.4-8 would reduce impacts to least Bell's vireo and their habitat to less than significant.

Mitigation Measure 4.4-7: SCE and/or its contractors shall design Alternative Subtransmission Alignment 2 to avoid all impacts to riparian habitat, with poles located greater than 50 feet from the riparian corridor. Because impacts to riparian habitat would be avoided, compensatory mitigation is not required. Additionally, in the absence of a focused assessment to document the presence or absence of least Bell's vireo, construction activities near the identified drainage shall occur outside the February 1 through August 31 breeding season described in Mitigation Measure 4.4-3.

Similar to the proposed subtransmission alignment, operation-related impacts associated with this alternative would be minimal. Mitigation Measure 4.4-4 would be applicable to reduce operational impacts to less-than-significant levels.

Alternative Subtransmission Alignment 3

Construction-related impacts associated with this alternative would be similar to the Proposed Project. However, no pole replacement or construction would be required between the intersection of Sunset Valley Road and Read Road and the substation. As a result, no tree removal along Read Road between Sunset Valley Road and Hwy 23 would be required. Construction of access roads and removal of 13 avocado trees east of Hwy 23 would not be required. Below grade construction would be similar to the Proposed Project.

Alternative Substation Site B

The Alternative Substation Site B is located within a similar geographic setting to that of the Proposed Project; however, due to the previous development of Alternative Substation Site B, there are fewer biological resources present. Because Alternative Substation Site B is fully developed and landscaped, construction and operation at this location would have fewer impacts to biological resources than the Proposed Project. Activities at this site would not affect special-status plants or wildlife species, wetlands, or other sensitive biological resources. Breeding birds that may nest in site landscaping could be affected by the Proposed Project, though would not include special-status bird species. Other impacts are anticipated to be less than significant. Operation-related impacts associated with this alternative would be similar to the Proposed Project.

System Alternative B

There will be no significant impacts to biological resources associated with this alternative.

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4.5 Cultural Resources

This section is based on the following cultural resources studies conducted for the Proposed Presidential Substation Project: *Phase I Cultural and Paleontological Resources Assessment*, *Proposed Southern California Edison Presidential Substation Project* (Rockman et al., 2009); *Supplemental Cultural Resources Survey for Southern California Edison Presidential Substation Project, Ventura County* (Honey, 2010); and *Testing Report and Evaluation of Archaeological Sites CA-VEN-744 and CA-VEN-1571, Southern California Edison Presidential Substation Project, Ventura County, California* (Sander et al, 2010).

This section presents the environmental setting and impact assessment for cultural and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious or any other reason. For analysis purposes, cultural resources may be categorized into three groups: archaeological resources, historic resources, and contemporary Native American resources. Under CEQA, paleontological resources, although not necessarily associated with past human activity, are grouped within cultural resources.

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric-era (before the introduction of writing in a particular area) or historic-era (after the introduction of writing). The majority of such places in California are associated with either Native American or Euro-American occupation of the area. The most frequently encountered prehistoric or historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic-era archeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic architectural resources are standing structures of historic or aesthetic significance that are generally 50 years of age or older (i.e., anything built in the year 1961 or before). In California, historic resources considered for protection tend to focus on architectural sites dating from the Spanish Period (1529-1822) through the early years of the Depression (1929-1930), although there has been recent attention paid to WWII and Cold War era facilities. Earlier historic resources are often associated with archaeological deposits of the same age.

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values. These locations are sometimes hard to define and traditional culture often prohibits Native Americans from sharing these locations with the public. Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

4.5.1 Setting

Environmental Setting

This environmental and cultural setting is derived primarily from the *Phase I Cultural and Paleontological Resources Assessment, Proposed Southern California Edison Presidential Substation Project* (Rockman et al., 2009).

The study area is located within the western Transverse Ranges, in the Ventura Basin. The Ventura Basin is bounded to the north by the Santa Susana Mountains, to the west by the unnamed hills separating Simi Valley from the Tierra Rejada Valley and Little Simi Valley, and to the south and east by the Simi Hills. The topography of the project area varies from fairly flat topography in the northern and western project area, to rolling hills in the eastern and southern project area. Elevations range from 620 to 1,100 feet above mean sea level. The Arroyo Simi, located northeast of the project area and flowing southwest, is the most significant drainage near the project area, while a few other intermittent drainages occur south of Tierra Rejada Road. Springs may have also historically occurred along the numerous fault lines that cross the region.

While the majority of the project area today is developed or covered by non-native plants, prehistorically, the project area would have supported several native plant communities, including native grassland on the valley floor, coastal sage scrub on the lower and drier hill slopes, and chaparral at higher elevations and on north-facing slopes. Animals once present within the project area included bear, mountain lions, bobcats, badgers, coyotes, mule deer, and gray foxes.

Paleontological Setting

The project area is underlain by a variety of sediments, including younger Quaternary Alluvium, the Oligocene to Miocene Sespe formation (terrestrial origin), Miocene marine Topanga Formation, Miocene Conejo Volcanics (marine and terrestrial), and Pliocene to Pleistocene Saugus Formation (marine and terrestrial) (McLeod, 2008). The proposed Presidential Substation site is underlain primarily by Conejo Volcanics, with portions of the Topanga and Sespe Formations near the southern extent. The proposed subtransmission alignment is underlain primarily by Quaternary Alluvium in the lower elevations and Conejo Volcanics in the upper elevations.

Cultural Setting

Prehistoric Setting

The prehistory of the project area can be divided into three broad chronological units: the Paleoindian Period (ca. 13,000 to 11,000 years before present [B.P.]), the Archaic Period (11,000 to 3,500 years B.P.), and the Late Prehistoric Period (3,500 years B.P. to A.D. 1769).

It is not definitively known when human habitation in California first began, though radiocarbon dates from the Arlington Springs Woman site on Santa Rosa Island prove a human presence in the region by about 13,000 years B.P. (Glassow et al., 2007). This first period of human occupation is characterized by small groups of nomadic hunter-gatherers. The Paleoindian assemblage included a limited collection of rough and simplistic tool types, each used for multiple tasks or purposes; key artifacts within the later Paleoindian Period assemblage are fluted projectile points. Evidence from the Surf site near the mouth of the Santa Ynez River indicates that earliest inhabitants of the Santa Barbara Channel area collected shellfish and produced flake tools using local chert (Glassow et al., 2007).

The Archaic Period represents a continuation of earlier Paleo-Indian traditions in conjunction with an increase in population size, a change in subsistence strategy, and the development of new technologies. In the Early Archaic (11,000 to 8,000 years B.P.), a shift in subsistence and settlement strategies occurred, illustrating the abandonment of Paleoindian traditions for a more diverse exploitation of a broader natural environment, including a more successful utilization of coastal chaparral zones. Around 9,000 years B.P., the population of the Santa Barbara Channel area began to expand. Occupation at this time seems to have concentrated along the coast, although this pattern could in fact be related to a lack of well-preserved inland sites (Glassow et al., 2007). Known inland sites from this period are CA-LAN-225, on Las Virgenes Creek, and CA-VEN-536.

Milling equipment is first observed in the archaeological record by about 7,500 years B.P., a period identified as the Millingstone Horizon (Glassow et al., 2007). Archaeologically the Millingstone Horizon is identified by a more diversified stone tool assemblage in addition to the continued use of basic Early Archaic forms, and included fine-worked projectile points, a large number of milling slabs, as well as the prevalence of ornamental and ceremonial objects. By 6,000 years B.P., mortars and pestles began to appear in household assemblages. This may signify an increased dependence on new food sources such as acorns and starchy tubers. Increases in shell beads, ritual objects, changing mortuary practices, and evidence of increasing trade across the channel between the islands and the mainland, all point to a corresponding increase in social complexity between 7,000 and 4,000 years B.P.

Between 4,000 and 2,000 years B.P., new technologies such as the use of asphaltum (tar), net weights, and fishhooks, came into use, suggesting an intensification in fishing and coastal trade and a focus on a maritime economy (Glassow et al., 2007). Increasing numbers of permanent settlements along the coast also led to competition for resources.

The Late Prehistoric period is associated with the group known as the Chumash. Two important technological advances were achieved in the Late Prehistoric Period, around 1,500 years B.P.: the

introduction of the *tomol* (plank canoe) and the bow and arrow. The *tomol* allowed for passage into deeper waters, facilitating trade and the procurement of large fish and sea mammals. By the time the Spanish arrived in the 16th century, the Chumash had developed a complex culture with a ranked society, complex trade networks, and a monetary economy based on shell beads. At that time, the Chumash had the most complex political and economic system in all of western North America (Glassow et al. 2007).

Ethnographic Setting

The primary ethnographic group present in the vicinity of the project area at the time of Spanish contact was the Chumash. Kroeber (1925) identifies the Chumash as "predominantly a coast people" that "were more nearly maritime in their habits than any other Californian group". Chumash territory included the Topanga and Malibu areas in the south, north to the approximate location of Morro Bay and east across the coastal range toward the San Joaquin Valley. Several of the northern Channel Islands were also included within Chumash territory. The project area lies within the southern end of Ventureño Chumash, near the border with Fernandeño Gabrielino to the south. Three Chumash villages were known to have existed in the Simi Valley at the time of Spanish contact, named *Shimiyi, Kimishax*, and *Ta'apu*. The closest to the project area was *Shimiyi* (or *Shimiji*), located near the northeastern extent of the project area.

Chumash society consisted of tribal groups lead by a single chief who was responsible for the management and distribution of tribal resources. Chumash settlement sites included established village sites with large, circular residential huts of willow or pole construction and covered with tule mats or thatch. Also present within a Chumash village was a large ceremonial lodge or sweathouse. Along with more permanently settled villages, temporary short-term camps were established by the Chumash for use during resource foraging excursions.

The Chumash represented a complex society with a strict social order, with a well-established and prosperous system of trade, and standardized money exchange in the form of shell beads. With settlements along the Channel Islands, the Chumash were master maritime navigators, having developed the *tomol*, wooden plank canoes, to ferry people and trade goods between the islands and the mainland. Other key cultural items representative of the Chumash are finely crafted basketry of all forms, sizes, and decorations. Chumash peoples made use of their diverse environment, capitalizing upon a wide range of natural and animal resources for food and as raw material for the crafting of function tools and non-functional, ornamental items (Kroeber, 1925). Burial practices of the Chumash involve mourning ceremonies and permanent cemeteries near to villages. Personal items of the deceased as well as other offerings or objects were typically placed into the grave, prior to the completion of burial.

Historic Period

The first appearance of European explorers within the vicinity of the project area marks the beginning of the historic period. The expedition of Juan Bautista de Anza (1775–1776), which preceded the establishment of Mission San Buenaventura (1782), was the first Spanish expedition to reach the project area. A member of this expedition, Santiago Pico, received a grant of 113,000 acres, El Rancho Simi, in 1795.

In the late 18th century, the Spanish began establishing missions in California and forcibly relocating and converting native peoples. Mission San Buenaventura and Mission San Fernando (established 1797) were the nearest missions to the project area. Disease and hard labor took a toll on the native populations. The Chumash population declined from 8,000 at the time of Spanish contact to 2,500 in the year 1831. In addition, native economies were disrupted, trade routes were interrupted, and native ways of life were significantly altered.

By the early 1800s Spanish control over the area known as Alta California was weakening, eventually leading to the establishment of the independent Republic of Mexico in 1821. Shortly after the transition to Mexican governmental control, by the 1830s, the mission system was secularized, leading to the transition of mission lands to privately owned ranchos or land grants. In 1846 the United States attempted to usurp western territories, thus beginning the Mexican-American War. As a result of this conflict Alta California, along with other regions in the presentday American Southwest, became American territories.

From the 1860s through the 1950s, Simi Valley was primarily an agricultural region. Rancho Simi was purchased by the Philadelphia and California Petroleum Company in the 1860s. The Simi Land and Water Company was founded in the 1880s (Rockman et al., 2009). The town of Simi Valley came into being in the 1880s, known as the Simi Colony or Simiopolis. The Southern Pacific Railroad reached Simi Valley in 1904, and the City of Simi Valley saw substantial expansion after World War II.

Methods and Results

Cultural Resources

Cultural resources studies were conducted in several phases for the Proposed Project and alternatives. In 2008, a Phase I study, including records search and pedestrian survey, was conducted (Rockman et al., 2009). In 2010, an additional Phase I study was conducted for a newly added Proposed Project component (underground telecommunication and 16kV distribution lines and access roads located north of Read Road) (Honey, 2010). Also in 2010, Phase II archaeological testing was conducted at two archaeological sites within the project area (Sander et al., 2010). These efforts are described below by type of study (records search, Native American contact, Phase I survey, and Phase II testing).

Records Search

A project-specific records search of the California Historical Resources Information System – South Central Coastal Information Center (SCCIC) was performed in July, 2008 and May, 2010 (Rockman et al., 2009; Honey, 2010). The records search included an examination of previous survey coverage and reports, historic maps, and known cultural resources within a 1-mile radius of the Proposed Project and alternatives. Other sources that were reviewed included the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources (California Register), the National Register of Historic Places (National Register), and the California State Historic Resources Inventory. In addition, historical research was conducted at the Strathearn Historical Park and Museum and at the archives of the Simi Valley Public Library.

The records search revealed that 48 previous cultural resources studies have been conducted within the footprint of the Proposed Project and alternatives, covering approximately 70 percent of this area. Twenty-two of these studies covered portions of the Proposed Project itself.

Forty-seven cultural resources have previously been recorded within a 1-mile radius of the Proposed Project and alternatives. These include 36 prehistoric archaeological resources, four historic-era archaeological resources, one historic architectural resource, four multi-component (prehistoric and historic) resources, and two resources of unknown age. Two of the 47 previously recorded resources (CA-VEN-744 and -1571) are located within the proposed 66 kV subtransmission alignment. Both resources are prehistoric archaeological sites and are described in detail below.

Sites Located within the Project Area

CA-VEN-1571: This archaeological site is an extensive prehistoric lithic and groundstone distribution located within the alignment of the proposed subtransmission alignment and Alternative Subtransmission Alignments 1 and 3, first recorded in 1998 by Ancient Enterprises (Ancient Enterprises, 1998). Phase II archaeological testing investigations were conducted in 1999 and identified midden deposits to a depth of 60 centimeters below the ground surface and extending over an area of 17,500 square meters, and recovered nearly 2,500 lithic, bone, and other artifacts (Whitley, 1999). The site was recommended as eligible for the California Register and has been preserved as Open Space by the City of Thousand Oaks. As a part of the Project, in 2010, the portion of the site within the project area was subject to further Phase II archaeological testing (see below).

In 2003, a cultural deposit, later designated CA-VEN-1778, was discovered during trenching at a housing development south of CA-VEN-1571 (W & S Consultants, 2003). The site was subject to Phase II archaeological testing and was proposed as being "ancillary" to CA-VEN-1571. Site CA-VEN-1778 is located approximately 600 feet south of the proposed subtransmission alignment.

CA-VEN-744: This archaeological site is a prehistoric lithic scatter and bedrock mortar, located within the Proposed Project. The site was first recorded in 1977 as a lithic scatter measuring 100 feet in diameter and consisting of chert, andesite, and basalt lithic artifacts (Meighan, 1977). At the time of the 2008 Phase I study, site CA-VEN-744 had never been assessed for its eligibility to the California Register. As a part of the Project, in 2010, the site was subject to Phase II archaeological testing and evaluated for its significance (see below).

Native American Contact

Contact was made with the Native American Heritage Commission (NAHC) in July, 2008, in order to request a search of their Sacred Lands File (SLF) for the project area. The NAHC did not indicate that there were any known Native American cultural or sacred sites within the project area.

Follow-up contact was conducted with all individuals and groups indicated by the NAHC as having affiliation with the project area. Follow-up contact consisted of a letter sent via certified mail describing the Proposed Project and a map indicating the project area. Recipients were requested to reply with any information they are able to share about Native American resources that might be affected by the Proposed Project. To date two replies have been received. Beverly Salazar-Folkes expressed concern about the sensitivity of the project area for Chumash artifacts. Patrick Tumamait also called to express concern about the sensitivity of the project area. Both Ms Salazar-Folkes and Mr. Tumamait requested that ground-disturbing activities be monitored.

Phase I Archaeological Survey

A Phase 1 archaeological survey was conducted in July and August, 2008, by PCR Services Corporation. The survey included the proposed Presidential and alternative substation locations, the proposed subtransmission alignment, and all alternative subtransmission alignments. A 100-foot buffer area on either side of each alternative subtransmission alignments was also surveyed. Where access and ground visibility permitted, the survey area was inspected for evidence of cultural and paleontological resources. Open areas were surveyed using parallel pedestrian transects of 33 to 50 feet. In developed areas, where the ground surface was paved or landscaped, less intensive survey methods were used.

About 30 percent of the project area was not systematically surveyed due to restricted access or development. In areas of development, systematic survey was not feasible due to the fact that the ground surface was paved and therefore not visible. The open space areas in the northern portion of Alternative Subtransmission Alignment 1 (an approximately 1.5 mile segment) were not surveyed due to restricted access. Ground visibility was generally low throughout the rest of the survey corridor, ranging from zero to 25 percent along most of the Proposed Project. The majority of Alternative Subtransmission Alignment 1 and over half of the Alternative Subtransmission Alignment 2 survey areas were either not surveyed or had low (less than 25 percent) ground visibility. No new cultural resources were recorded within the project area.

Site CA-VEN-744 was relocated during the survey. About 20 pieces of flaked stone debitage and numerous fragments of marine shell were observed. The bedrock milling feature was not relocated.

No surface evidence of site CA-VEN-1571 was observed during the 2008 pedestrian survey; however, ground visibility was poor during the survey due to dense vegetation. The area surrounding CA-VEN-1571 was also noted to be within a housing development.

An additional Phase 1 pedestrian survey was conducted on May 29, June 16, and June 19, 2010, for the 16 kV distribution line, access roads north of Read Road, and an additional pole replacement location south of Moorpark Road (Honey, 2010). Survey was conducted in transects measuring 15 meters (49 feet) wide. Survey of the 16kV distribution line and access roads included a 30-meter (98-foot) buffer on either side of the project area. Survey of the pole replacement location included a 30-meter (98-foot) radius around the proposed tower pole location (Honey, 2010).

One isolated prehistoric artifact was recorded during the 2010 pedestrian survey (temporary field designation CG-PRES-ISO-01). The isolate, a granitic mano, was recorded within the project area, 2 meters (6.5 feet) from the proposed 16 kV distribution line. No other artifacts or cultural material was observed in the vicinity of the mano. The isolate has not yet been assigned a primary number. As an isolated artifact, the granitic mano is not eligible for listing in the California Register and is not considered a historic resource or unique archaeological resource under the California Environmental Quality Act (CEQA).

No historic architectural resources were identified during the Phase I surveys.

Phase II Archaeological Testing

Two archaeological sites, CA-VEN-744 and CA-VEN-1571, are located within the project area. At the time of the initial Phase I survey, site CA-VEN-744 had never been assessed for its eligibility to the California Register. Therefore, in 2010 Phase II archaeological testing was conducted at the site in order to determine whether the site contained sufficient data to qualify as significant and eligible for listing in the California Register. Site CA-VEN-1571 had been previously subject to archaeological testing and recommended eligible for listing on the California Register; however, the portions of the site deemed significant lie outside of the project area. Although the site had not been successfully relocated during the 2008 pedestrian survey, in April, 2010, evidence of CA-VEN-1571 was observed at the location where the site had been previously recorded (Sander et al, 2010). Site CA-VEN-1571 was also subject to Phase II testing to determine if portions of the site situated within the project area contain sufficient data to contribute to the site's eligibility to the California Register.

Surface collection and testing of sites CA-VEN-744 and CA-VEN-1571 was conducted between April 15 and May 11, 2010 (Sander et al, 2010).

Surface collection at site CA-VEN-744 resulted in the identification of over 300 lithic artifacts, as well as a metate fragment, fire-affected rock, shellfish fragments, and animal bone. Thirty shovel test pits (STPs) were excavated, 14 of which contained cultural material. Three test units were excavated, all of which yielded cultural material. A feature was encountered within one unit, consisting of stacked native rocks, groundstone artifacts, and midden-rich sediments (Sander et al, 2010). Excavation of the unit was terminated at the level of the groundstone artifacts. The function of the feature is unknown.

Phase II archaeological testing indicated that site CA-VEN-744 is eligible for listing in the California Register under Criterion 4. A large number of artifacts and one subsurface feature were recorded. Including surface collection, 476 lithic artifacts (primarily debitage), were recorded, along with a number of faunal remains and shellfish fragments. Analysis of faunal and shellfish remains has yielded information on local animal food sources. The site retains subsurface integrity, and has yielded a diverse assemblage of flaked stone artifacts. The site "has the potential to address questions regarding chronology, lithic reduction strategies, and settlement-subsistence systems in the region" (Sander et al, 2010:32).

In contrast to site CA-VEN-744, only 8 artifacts were recorded on the surface of site CA-VEN-1571 within the project area (Sander et al, 2010). Thirty-three STPs were excavated, of which only 7 contained cultural material. Of the 11 test units excavated at the site, 9 contained cultural material. However, subsurface features were not encountered and the portion of the site within the project area did not appear to retain integrity. Including surface collection, 33 lithic artifacts (primarily debitage), were recorded, along with a small number of faunal remains, shellfish fragments, and modern metal and glass fragments. These artifacts appear to have eroded from the main site area located to the south of the project area (Sander et al, 2010).

Site CA-VEN-1571 had previously been recommended eligible for listing in the California Register under Criterion 4, and remains eligible (Whitley, 1999). However, the significant portion of the site is located 450 feet south of the project area. Phase II testing conducted in 2010 revealed that the portion of the site within the project area "lacks sufficient density, diversity and integrity, and therefore does not contain data that contributes to the significance of VEN-1571" (Sander et al, 2010:32).

Paleontological Resources

Records Check

Research was conducted to determine whether sensitive paleontological resources could be affected by the Proposed Project or alternatives. A search of the Natural History Museum of Los Angeles's specimen and locality data was performed by Dr. Sam McLeod in 2008. The search of this data resulted in the identification of the following formations that underlie the project area (Rockman et al., 2009): Quaternary Alluvium, Sespe Formation, Topanga Formation, Conejo Volcanics, and the Saugus Formation. Quaternary Alluvium does not generally contain significant vertebrate fossils, but may be underlain by older Quaternary Alluvium, which is sensitive for paleontological resources. The Topanga Formation (marine), Saugus Formation (marine), and Sespe Formation (terrestrial) are all considered paleontologically sensitive. The Conejo Volcanics are not paleontologically sensitive.

Three fossil localities have been previously identified within Quaternary Alluvium north of Alternative Subtransmission Alignment 2 on Madera Road. The localities are LACM 6107 (fossil horse, *Equus*), LACM 153 (*Artiodactyla*), and LACM 7455 (a rare nearly complete mastodon skeleton, *Mammut*).

Six fossil localities have been identified within the Sespe Formation near Alternative Subtransmission Alignment 2 near Madera Road, southeast of the Ronald Reagan Presidential Library. These localities, LACM 6995 through 7000, have yielded a wide range of vertebrate fossils, including hedgehog (*Erinaceidae*), rabbit (*Archaeolaginae*), deer mouse (*Leidymys*), pocket mouse (*Perognathus*), squirrels (*Miospermophilus* and *Nototamias*), two-toed ungulate (*Nanotragulus*), and carnivores.

Two fossil localities from the Topanga Formation have been recorded. LACM 6949, Bonito Shark (*Isurus planus*), was recorded west of State Highway 23 and south of Read Road. LACM 7265 is located along the southern portion of Esperance Road, north of the Alternative Substation Site B, and consists of marine vertebrate fossils including eagle ray (*Myliobatidae*), bull shark (*Carcharhinus*), tiger shark (*Galeocerdo*), and dolphin (*Odontoceti*).

Field survey

A paleontological survey was carried out in July, 2008, concurrent with the initial Phase I archaeological survey (Rockman et al., 2009). During this survey, a marine fossil shell conglomerate was identified on the surface along the Alternative Subtransmission Alignment 2, in an area along the boundary between the Sespe Formation and the Conejo Volcanics. In addition, exposures of fossiliferous sediments were observed along the proposed subtransmission alignment along Read Road; at the eastern extent of the proposed subtransmission alignment; and the northern and southern extents of Alternative Subtransmission Alignment 1.

Regulatory setting

Federal

The Proposed Project requires federal permits, including a permit from the Corps under Section 404 of the Clean Water Act, and as such must be in compliance with Section 106 of the National Historic Preservation Act (NHPA).

Archaeological resources are protected through the NHPA of 1966, as amended (16 USC 470f), and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the National Register. Under the NHPA, a find is considered significant if it meets the National Register listing criteria at 36 CFR 60.4.

First authorized by the Historic Sites Act of 1935, the National Register was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 §60.2). The National Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

- A. Are associated with events that have made a significant contribution to the broad patterns of our history;
- B. Are associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing (U.S. Department of the Interior 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (U.S. Department of the Interior, 1995). The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

State

California Register of Historical Resources

The California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change." (California Public Resources Code [PRC] §5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (California PRC §5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, State, and/or federal level under one or more 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; or
- 4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally determined eligible for the National Register.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (Those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register).
- Individual historical resources.
- Historical resources contributing to historic districts.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a Proposed Project would have a significant effect on archaeological resources. CEQA is codified in Public Resources Code §21000 et seq. As defined in §21083.2 of CEQA a "unique" archaeological resource is 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:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition, the CEQA Guidelines recognize that certain historical resources may also have significance. The Guidelines recognize that a historical resource includes: (1) a resource listed in or determined eligible for listing in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC §5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC §5024.1(g); and (3) 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 by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. If a lead agency determines that an archaeological site is a historical resource, the provisions of §21084.1 of CEOA and §15064.5 of the State CEOA Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the State CEQA Guidelines, then the site is to be treated in accordance with the provisions of CEQA \$21083, which is as a unique archaeological resource. The State CEOA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (State CEQA Guidelines §15064.5(c)(4)).

Local

Ventura County (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

Specific policies within the current General Plan for the County of Ventura that apply to cultural resources include:

Goal 1.8.1 (1): Identify, inventory, preserve and protect the paleontological and cultural resources of Ventura County (including archaeological, historical and Native American resources) for their scientific, educational and cultural value.

Goal 1.8.1 (2): Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.

Policy 1.8.2 (1): Discretionary developments shall be assessed for potential paleontological and cultural resource impacts, except when exempt from such requirements by CEQA. Such assessments shall be incorporated into a countywide paleontological and cultural resource data base.

Policy 1.8.2 (2): Discretionary development shall be designed or re-designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical or paleontological consultants, depending on the type of resource in question.

Policy 1.8.2 (3): Mitigation of significant impacts on cultural or paleontological resources shall follow the Guidelines of the State Office of Historic Preservation, the State Native American Heritage Commission, and shall be performed in consultation with professionals in their respective areas of expertise.

Policy 1.8.2 (4): Confidentiality regarding locations of archaeological sites throughout the County shall be maintained in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

Policy 1.8.2 (5): During environmental review of discretionary development the reviewing agency shall be responsible for identifying sites having potential archaeological, architectural or historical significance and this information shall be provided to the County Cultural Heritage Board for evaluation.

City of Thousand Oaks (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The City of Thousand Oaks General Plan contains the following applicable goals, policies, and actions concerning cultural resources:

Goal: The City shall preserve and protect archaeological resources for future generations and the Conejo Valley's cultural heritage.

Policy CO-32: All information or maps on file with the City pertaining to the location of previously recorded archaeological sites within the Thousand Oaks Planning Area shall remain confidential unless specifically authorized to be released to the public by the local Native American Indian Council.

Policy CO-33: Management of cultural resources such as archaeological sites, historic structures or places shall emphasize resource protection and preservation.

Policy CO-34: The preferred method for preserving any previously recorded archeological site shall be by deed restriction as permanent "open space", in order to prevent any future development or use that might otherwise adversely impact these resources.

Policy CO-35: Decisions pertaining to the disposition of archaeological, historical and cultural resources shall be made in concert with recognized public agencies, groups or individuals having jurisdiction, expertise or interest in these matters, including but not limited to the State Office of Historic Preservation, Thousand Oaks Cultural Heritage Board and local Native American Indian Council, including other designated representatives and affected property owners.

Implementation Measure 1: Continue to conduct archaeological field surveys as deemed to be necessary, while utilizing comprehensive resource management procedures to test, salvage, stabilize and store locally excavated artifacts.

Implementation Measure 2: Support the efforts of local citizens, appointed committees or other designated public agencies and private institutions that are working to conserve archaeological and historic resources. Full public discussion shall be encouraged prior to any action being taken.

City of Simi Valley (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

The City of Simi Valley General Plan contains the following applicable goals, policies, and actions concerning cultural resources.

Goal: Preserve, to the greatest extent feasible, significant archaeological and historical features of the community.

Policy IV-3.1: Features of cultural and historical significance to the community should be identified by the City and preserved to the extent feasible.

Policy IV-3.2: Significant archaeological and paleontological sites shall be identified and preserved intact whenever possible.

Implementation Measure IV-CC: Areas proposed for development will be investigated for artifacts on the ground surface by the City. Should subsurface materials suspected of having an archaeological nature be discovered, the developer shall be required to cease all excavation and grading in the immediate area. The find shall be left untouched until a qualified professional archaeologist is contacted and called to evaluate and make recommendations to the City as to disposition, mitigation and salvage in compliance with the California Environmental Quality Act.

Paleontological Resources

Federal

A variety of federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes federally owned or federally managed lands or involves a federal agency license, permit, approval, or funding. Federal legislative protection for paleontological resources stems from the Antiquities Act of 1906 (PL 59-209; 16 United States Code 431 et. seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands.

State

Paleontological resources are also afforded protection by CEQA. Appendix G (Part V) of the *CEQA Guidelines* provides guidance relative to significant impacts on paleontological resources, stating that a project will normally result in a significant impact on the environment if it will "...disrupt or adversely affect a paleontologic resource or site or unique geologic feature, except as part of a scientific study." Section 5097.5 of the Public Resources Code specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

Local

Ventura County (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The Ventura County General Plan contains several goals and policies related to paleontological resources. These are detailed above.

City of Thousand Oaks (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The City of Thousand Oaks General Plan contains no goals or policies related to paleontological resources.

City of Simi Valley (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

The City of Simi Valley General Plan contains one policy related to paleontological resources, Policy IV-3.2, which is detailed above.

Professional Standards

The Society for Vertebrate Paleontology (SVP) has established standard guidelines for acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation (SVP, 1995). Most practicing professional paleontologists in the nation adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most California State regulatory agencies accept the SVP standard guidelines as a measure of professional practice.

4.5.2 Significance Criteria

According to Appendix G of the *CEQA Guidelines*, a project is considered to have a significant impact if it would:

- (a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 (a resource that is either listed or eligible for listing on the California Register of Historical Resources, or a local register of historic resources, or is determined by the lead agency to be historically significant);
- (b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to \$15064.5 (i.e., an 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 contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person);
- (c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- (d) Disturb any human remains, including those interred outside of formal cemeteries.

CEQA provides that a project may cause a significant environmental effect where the project could result in a substantial adverse change in the significance of a historical resource (Public Resources Code, §21084.1). *CEQA Guidelines* §15064.5 defines a "substantial adverse change" in the significance of a historical resource to mean physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be "materially impaired" (CEQA Guidelines, §15064.5[b][1]).

CEQA Guidelines, §15064.5(b)(2), defines that the significance of a historic resources is "materially impaired" when a project:

- (A) 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 of Historical Resources; or
- (B) 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 §5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of §5024.1(g) of the Public Resources Code, 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
- (C) 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 of Historical Resources as determined by a lead agency for purposes of CEQA.

4.5.3 Applicant Proposed Measures

SCE proposes the following Applicant Proposed Measures (APMs) to minimize impacts to cultural resources from the Proposed Project. The impact analysis assumes that the following APMs related to cultural resources and paleontological resources would be implemented as discussed below.

APM CUL-1: Cultural Resources Treatment Plan. SCE will develop a Cultural Resources Treatment Plan that would define appropriate actions necessary to lessen or avoid potential impacts to sites CA-VEN-1571 and CA-VEN-744.

APM CUL-2: Installation of Geotextile Type Fabric along Access Road. Prior to construction, SCE will address the drivability of the access road leading to site CA-VEN-744. In the event that the road is determined to be inadequate for transporting of equipment, SCE would design and implement the placement of geotextile-type fabric and fill soil along the road prior to access road usage. The placement of the geotextile-type fabric and fill soil would protect the archaeological site from potential impacts such as increased displacing of artifacts of the existing site surface due to vehicle traffic and road maintenance.

APM CUL-3: Capping of Archaeological Site on Potential Impact Areas. Prior to installation of the subtransmission structure located at site CA-VEN-744, SCE will cap the portions of the site that have the potential to be impacted. To cap the site, SCE will place geotextile-type fabric on the surface of the archaeological site and then spread imported fill soil or other suitable material over the geotextile-type fabric. The capping will prevent future erosion of the site surface as a result of SCE's ingress and egress for maintenance and inspection activities. The archaeological site cap will not be removed after construction.

APM CUL-4: Construction of Earthen Pad. SCE will install an earthen pad adjacent to the existing subtransmission structure location. The earthen pad is necessary to support heavy equipment required to install the subtransmission structure safely, while preserving archaeological site CA-VEN-744 from potential construction related impacts. The earthen pad area will be covered by geotextile-type fabric and then overlaid by "honey comb structure." The honey comb structure will be filled with imported fill soil. The earthen pad would not be removed after construction and will be utilized for maintenance activities.

APM CUL-5: Fencing of an Environmentally Sensitive Area. SCE would install an Environmentally Sensitive Area (ESA) fence to protect portions of archaeological sites CA-VEN-744 and CA-VEN-1571 from potential impacts.

APM CUL-6: Native American Monitoring. SCE will retain the services of a Chumash Native American representative to conduct monitoring activities during work carried out within sites CA-VEN-744 and CA-VEN-1571 and in their vicinity. The Native American representative will be present during any archaeological excavations and during project construction in those areas determined by SCE's project archaeologist as having the potential to contain archaeological resources.

APM CUL-7: Archaeological Monitoring. A qualified archaeologist will be on site to monitor ground-disturbing activities within or in the vicinity of sites CA-VEN-744 and CA-VEN–1571. If archaeological resources were identified during construction activities, construction would be halted in that area and away from the discovery, until a qualified archaeologist assesses the significance of the resource. The archaeologist would recommend appropriate measures to record, preserve or recover the resources.

APM-PAL-01: Develop and Implement a Paleontological Monitoring Plan. A project paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists shall be retained by SCE to develop and implement Paleontological Monitoring Plan prior to the start of ground disturbing activities at the Proposed Project substation site. As part of the Paleontological Monitoring Plan, the project paleontologist shall establish a curation agreement with an accredited facility prior to the initiation of ground-disturbing activities. The Paleontological Monitoring Plan shall also include a final monitoring report. If fossils are identified, the final monitoring report shall contain an appropriate description of the fossils, treatment, and curation.

APM-PAL-02: Paleontological Monitoring. A paleontological monitor shall be on site to observe ground-disturbing activities within the paleontologically sensitive formations at the Proposed Project substation site. If fossils are found during ground-disturbing activities, the paleontological monitor shall be empowered to halt the ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment.

In addition, as described in Section 2.7.2, Worker Environmental Awareness Training, SCE would include instructions that would guide construction crews on the procedures to follow if cultural resources were uncovered during construction.

4.5.4 Impacts and Mitigation Measures

Analysis Approach

Impacts on cultural resources could result from ground-disturbing activities and/or damage, destruction, or alteration of historic structures. Ground-disturbing activities include project-related excavation, grading, trenching, vegetation clearance, the operation of heavy equipment, or other surface and sub-surface disturbance that could damage or destroy surficial or buried archaeological resources including prehistoric and historic remains or human burials.

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

Impact 4.5-1: Project construction could cause an adverse change in the significance of a historical resource [inclusive of archaeological resources] which is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or a local register of historic resources. *Less than significant with mitigation* (Class II)

Project construction could potentially impact site CA-VEN-1571. The site was subject to archaeological testing in 1999 and was found to be eligible for the California Register, and therefore a historical resource under CEQA. Subsequent testing in 2010 indicated that although the site remained eligible for the California Register, the portion of the site within the project area did not retain integrity and had little data potential, and therefore did not contribute to the site's eligibility for listing in the California Register. Therefore, implementation of the Proposed Project would not impact those portions of site CA-VEN-1571 that are known to contribute to its eligibility.

However, it is possible that Proposed Project construction could uncover previously unknown intact archaeological deposits of site CA-VEN-1571. Mitigation Measure 4.5-1, in conjunction with APM CUL-1, would create an archaeological treatment and discovery plan that would define appropriate actions to lessen or avoid impacts to site CA-VEN-1571. APMs CUL-5 through CUL-7 would create an environmentally sensitive area (ESA) around site CA-VEN-1571 and require Native American and archaeological monitoring during construction within and in the vicinity of the site. With this mitigation measures and APMs incorporated, impacts to site CA-VEN-1571 would be less than significant.

Project construction could potentially impact site CA-VEN-744. The site was subject to archaeological testing in 2010 and was found to be eligible for the California Register, and therefore a historical resource under CEQA. Impacts to the site could result from excavation during installation of the new TSP, the movement of heavy machinery and vehicles around the site during construction, and continued use of vehicles around the site along access roads and during future maintenance activities.

Mitigation Measure 4.5-1, in conjunction with APM CUL-1, would create an archaeological treatment and discovery plan that would define appropriate actions to mitigate or avoid direct impacts to site CA-VEN-744. SCE has proposed APM CUL-1, which would create a treatment plan for those portions of the site that cannot be avoided during Proposed Project implementation. SCE has also proposed APMs CUL-2 through CUL-4, which would permanently cap other portions of the site that could potentially be indirectly impacted during construction; permanently cap those access roads within site boundaries that would be rehabilitated and used during construction; and construct a permanent earthen pad on which to place the heavy equipment needed to install the new TSP. APMs CUL-5 through CUL-7 would create an environmentally sensitive area around site CA-VEN-744 and require Native American and archaeological monitoring during construction within and in the vicinity of the site. With the incorporation of Mitigation Measure 4.5-1 and these APMs, significant impacts to site CA-VEN-744 would be mitigated to a less-than-significant level.

Mitigation Measure 4.5-1: A qualified archaeologist shall be retained to serve as lead archaeologist and shall prepare a Cultural Resources Treatment and Discovery Plan prior to issuance of a grading permit. The Cultural Resources Treatment and Discovery Plan shall address the implementation of protective measures (as detailed in APMs CUL-2 through CUL-5), archaeological monitoring, and procedures for discovery of cultural resources. The Cultural Resources Treatment and Discovery Plan shall provide detailed plans for data recovery for those components of eligible resource CA-VEN-744 that cannot be avoided during project implementation, and for the capping of those portions of site CA-VEN-744 that may be indirectly impacted. The plan shall also address the creation of Environmentally Sensitive Areas within sites CA-VEN-744 and CA-VEN-1571. The Cultural Resources Treatment and Discovery Plan shall also state that if significant portions of either site are encountered during project implementation outside of protected areas, Proposed Project redesign should be considered in order to avoid impacts to significant areas. If avoidance is infeasible, then data recovery shall be implemented.

The Cultural Resources Treatment and Discovery Plan shall detail the duration and locations of archaeological and Native American monitoring during project implementation and shall provide for discretionary modifications to monitoring procedures by the lead archaeologist based on observations made by the monitor as construction progresses. The Cultural Resources Treatment and Discovery Plan shall also create measures for the accidental discovery of archaeological resources during project implementation.

Operation and Maintenance

The portion of site CA-VEN-1571 located within the project area was found to not contribute to the site's eligibility for listing in the California Register. Therefore, operation and maintenance of the Proposed Project would not impact those portions of site CA-VEN-1571 that are known to contribute to its eligibility.

As discussed above, any impacts to site CA-VEN-744 that might occur during operation and maintenance of the Proposed Project would be mitigated by the placement of a permanent soil cap on top of the SCE access roads that run through the site and a permanent earthen platform that could be used to support heavy equipment. Therefore, operation and maintenance of the Proposed Project would have a less-than-significant impact to historical resources.

Significance after Mitigation: Less than Significant.

b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5.

Impact 4.5-2: Project construction could adversely impact a unique archaeological resource. *Less than significant with mitigation* (Class II)

The Proposed Project is located in an area of elevated sensitivity for prehistoric archaeological resources, as evidenced by the large number of prehistoric sites in close proximity to the Proposed Project (47 sites within 1 mile), including two sites that have been evaluated as eligible

for listing on the California Register (CA-VEN-744 and CA-VEN-1571, discussed above). Since the nature of the Proposed Project would involve ground-disturbing activities that may extend into undisturbed soil, it is possible that such actions could unearth, expose, or disturb subsurface archaeological resources that were not immediately observable on the surface.

In addition, pedestrian survey along the Proposed Project was subject to poor ground visibility, which could have obscured artifacts on the ground surface. Ground visibility ranged from 0 to 25 percent along most of the Proposed Project. The segment of the Proposed Project subtransmission line that runs from Tierra Rejada Road south to Read Road had 0 to 5 percent visibility. The east-west trending segment of the proposed subtransmission alignment from Moorpark Road to the proposed Presidential Substation site, as well as the substation site itself, had ground visibility ranging from 0 to 25 percent.

Construction related to the Proposed Project could impact buried or otherwise obscured archaeological resources. Implementation of Mitigation Measures 4.5-2a and 4.5-2b, would require archaeological and Native American monitoring of ground-disturbing activities and provide for measures in the event of inadvertent discovery of archaeological resources and would reduce the impact to currently unknown archaeological resources to less than significant.

Mitigation Measure 4.5-2a: Prior to issuance of a grading permit, an archaeological monitor shall be retained by SCE and/or its contractors to monitor all ground-disturbing activities, including grading, excavation, vegetation clearance and grubbing, and implementation of cultural resources protective measures (i.e. site capping, pad construction). The procedures for monitoring shall be outlined in the Cultural Resources Treatment and Discovery Plan as described in Mitigation Measure 4.5-1, and shall include provisions for discretionary modifications to monitoring procedures by the lead archaeologist based on observations made by the monitor as construction progresses.

The monitor shall be a qualified archaeologist and shall work under the supervision of an archaeologist who meets the Secretary of the Interior's professional qualification standards for archaeology. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated.

Due to the sensitivity of the project area for Native American resources, at least one Native American monitor shall also monitor ground-disturbing activities in the project area, including the implementation of protective measures and data recovery. Selection of monitors shall be made from the Native American Heritage Commission list provided for the Project.

Mitigation Measure 4.5-2b: If archaeological resources are encountered at any point during Proposed Project implementation, SCE and/or its contractors shall cease all activity within 50 feet of the find until the find can be evaluated by a qualified archaeologist. If the archaeologist determines that the resources may be significant, and if avoidance is determined to be infeasible, the archaeologist shall notify the lead agency and shall follow procedures outlined in the Cultural Resources Treatment and Discovery Plan (Mitigation Measure 4.5-1), in consultation with the lead agency and with appropriate Native American representatives (if the resources are prehistoric or Native American in nature).

Operations and Maintenance

Operation and maintenance of the Proposed Project would have no impact on archaeological resources.

Significance after Mitigation: Less than Significant.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact 4.5-3: The project could adversely affect unidentified paleontological resources. *Less than significant with mitigation* (Class II)

Construction related to the Proposed Project could impact sensitive paleontological resources. The proposed Presidential Substation site is underlain primarily by Conejo Volcanics, with portions of the Topanga and Sespe Formations near the southern extent. The proposed subtransmission alignment is underlain primarily by Quaternary Alluvium in the lower elevations and Conejo Volcanics in the upper elevations.

The Conejo Volcanics are igneous in origin, and thus have virtually no potential to contain significant fossils. The Topanga Formation, Sespe Formation, and Saugus Formation are known to be paleontologically sensitive, and fossil localities from the Topanga and Sespe Formations have been recorded in close proximity to the Proposed Project. Younger Quaternary Alluvium typically does not contain fossils; however, excavations into Older Quaternary Alluvium can uncover significant fossils. Several localities from this sediment have been recorded near the project area. The Topanga Formation, Sespe Formation, Saugus Formation, and Older Quaternary Alluvium should be considered paleontologically sensitive. Eleven fossil localities have been recorded in the vicinity of the Proposed Project and alternatives.

During paleontological field survey for the Proposed Project, exposures of fossiliferous sediments were observed along the proposed subtransmission alignment along Read Road and at the eastern extent of the proposed subtransmission alignment.

Paleontological resources could be impacted during construction at the proposed Presidential Substation site or proposed subtransmission alignment. Damage to or destruction of a significant paleontological resource could be a significant impact. APMs PAL-01 and PAL-02 would create a monitoring plan and require paleontological monitoring at the proposed Presidential Substation site. However, portions of the proposed subtransmission alignment are also paleontologically sensitive, as evidenced by the identification of exposures of fossiliferous sediments along the proposed subtransmission alignment during field survey. Therefore, Mitigation Measure 4.5-3 is proposed, which would require the implementation of APMs PAL-01 and PAL-02 for all paleontologically sensitive portions of the project area. This measure would reduce impacts to a less than significant level.

Operations and Maintenance

Operation and maintenance would not impact paleontological resources.

Mitigation Measure 4.5-3: Applicant Proposed Measures PAL-01 and PAL-02 shall be implemented for all paleontologically sensitive portions of the project area. The Paleontological Mitigation Plan, as described in Applicant Proposed Measure PAL-01, shall be based on prior paleontological evaluations, shall identify paleontologically sensitive formations within the project area, and shall address the locations of and procedures for paleontological resources monitoring, including the identification of specific paleontological monitoring locations; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils; and the preparation of a final mitigation report.

All earth moving activities within those formations identified as sensitive within the Paleontological Mitigation Plan shall be monitored on a full-time basis, unless the project paleontologist determines that sediments are previously disturbed or there is no reason to continue monitoring in a particular area due to other depositional factors, which would make fossil preservation unlikely or deemed scientifically insignificant. In the event fossils are exposed during earth moving, construction activities shall be redirected to other work areas until the procedures outlined in the Paleontological Mitigation Plan have been implemented or the paleontologist determines work can resume in the vicinity of the find.

Significance after Mitigation: Less than Significant.

d) Disturb any human remains, including those interred outside of formal cemeteries.

Impact 4.5-4: Project construction could result in damage to previously unidentified human remains. *Less than significant with mitigation* (Class II)

The high level of prehistoric activity in the area, evidenced by the large number of prehistoric sites near or within the Proposed Presidential Substation project area, suggests that burials could be present. In the event that human remains were discovered during subsurface activities, the human remains could be inadvertently damaged, which could be a significant impact. However, with implementation of Mitigation Measure 4.5-3, in conjunction with Mitigation Measures 4.5-1 through 4.5-2b, and APMs CUL-1 through CUL-7, this impact would be reduced to less than significant.

Mitigation Measure 4.5-4: If human remains are uncovered during construction, SCE and/or its contractors shall immediately halt all work, contact the Ventura County Coroner to evaluate the remains, and follow the procedures and protocols set forth in §15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, SCE shall contact the NAHC, in accordance with Health and Safety Code §7050.5, subdivision (c), and PRC5097.98 (as amended by AB 2641). Per PRC 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development

activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendents regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Operations and Maintenance

Operation and maintenance of the Proposed Project would have no impact on human remains.

Significance after Mitigation: Less than Significant.

4.5.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore there would be no impacts related to Cultural Resources (No Impact).

Alternative Subtransmission Alignment 1

With respect to CEQA criterion (a), construction-related impacts associated with this alternative would be similar to the Proposed Project. Site CA-VEN-1571 and CA-VEN-744, historical resources under CEQA, could potentially be impacted by construction associated with Alternative Subtransmission Alignment 1. However, with the incorporation of APMs CUL-1 through CUL-7 and Mitigation Measure 4.5-1, impacts would be less than significant (Class II). As with the Proposed Project, operation and maintenance of Alternative Subtransmission Alignment 1 would not impact historical resources.

With respect to CEQA criterion (b), Alternative Subtransmission Alignment 1 has a similar sensitivity for archaeological resources as the Proposed Project. Construction related to Alternative Subtransmission Alignment 1 could impact buried cultural resources. However, an undeveloped portion of Alternative Subtransmission Alignment 1 has not been subject to archaeological survey due to access restrictions; this segment should be surveyed prior to ground disturbing activities (Mitigation Measure 4.5-Alt1-1).

As with the Proposed Project, implementation of Mitigation Measures 4.5-2a and 4.5-2b would provide for archaeological monitoring and for measures in the event of inadvertent discovery of archaeological resources and would reduce the impact to currently unknown archaeological resources to less than significant (Class II). Operation and maintenance of the Alternative Subtransmission Alignment 1 would have no impact on cultural resources.

Mitigation Measure 4.5-Alt1-1: The portion of Alternative Subtransmission Alignment 1 that has not been subject to archaeological survey shall be surveyed prior to any ground-disturbing activities.

With respect to CEQA criterion (c), the paleontological setting for the Alternative Subtransmission Alignment 1 is similar to that of the Proposed Project. Two fossil localities have been identified along Alternative Subtransmission Alignment 1 in the Topanga Formation, and the paleontological sensitivity of the alignment is high. As a result, impacts to paleontological resources would be similar to those for the Proposed Project. However, implementation of Mitigation Measure 4.5-3 would ensure that impacts to paleontological resources are less than significant (Class II). Operation and maintenance of Alternative Subtransmission Alignment 1 would not impact paleontological resources.

With respect to CEQA criterion (d), given the high archaeological sensitivity, the potential to encounter and impact buried human remains for Alternative Subtransmission Alignment 1 would be similar to the Proposed Project. However, Mitigation Measure 4.5-4 would reduce impacts to a less than significant level (Class II). Operation and maintenance of Alternative Subtransmission Alignment 1 would not impact human remains.

Alternative Subtransmission Alignment 2

With respect to CEQA criterion (a), construction-related impacts associated with this alternative would be less than the Proposed Project. There are no known historical resources within the Alternative Subtransmission Alignment 2. Construction, operation and maintenance of Alternative Subtransmission Alignment 2 would not impact historical resources (No Impact).

With respect to CEQA criterion (b), alternative Subtransmission Alignment 2 has a similar sensitivity for archaeological resources as the Proposed Project. Construction related to Alternative Subtransmission Alignment 2 could impact buried cultural resources. As with the Proposed Project, implementation of Mitigation Measures 4.5-2a and 4.5-2b would provide for measures in the event of inadvertent discovery of archaeological resources and would reduce the impact to currently unknown archaeological resources to less than significant (Class II). Operation and maintenance of Alternative Subtransmission Alignment 2 would have no impact on cultural resources.

With respect to CEQA criterion (c), the paleontological setting for the Alternative Subtransmission Alignment 2 is similar to that of the Proposed Project. Six fossil localities have been identified along Alternative Subtransmission Alignment 2 in the Sespe Formation, and the paleontological sensitivity of the alignment is high. As a result, impacts to paleontological resources would be similar to those for the Proposed Project. However, implementation of Mitigation Measure 4.5-3 would mitigate impacts to paleontological resources to a less-than-significant level (Class II). Operation and maintenance of Alternative Subtransmission Alignment 2 would not impact paleontological resources.

With respect to CEQA criterion (d), given the high archaeological sensitivity, the potential to encounter and impact buried human remains for Alternative Subtransmission Alignment 2 would be similar to the Proposed Project. However, Mitigation Measure 4.5-4 would reduce impacts to a less than significant level (Class II). Operation and maintenance of Alternative Subtransmission Alignment 2 would not impact human remains.

Alternative Subtransmission Alignment 3

With respect to CEQA criterion (a), construction-related impacts associated with this alternative would be similar to the Proposed Project. Site CA-VEN-1571 and CA-VEN-744, historical resources under CEQA, could potentially be impacted by construction associated with Alternative Subtransmission Alignment 3. However, with the incorporation of APMs CUL-1 through CUL-7, and Mitigation Measure 4.5-1, impacts would be reduced to less than significant (Class II). As with the Proposed Project, operation and maintenance of Alternative Subtransmission Alignment 3 would not impact historical resources.

With respect to CEQA criterion (b), Alternative Subtransmission Alignment 3 has a similar archaeological sensitivity compared to the Proposed Project. As with the Proposed Project, implementation of Mitigation Measures 4.5-2a and 4.5-2b would provide for measures in the event of inadvertent discovery of archaeological resources and would reduce the impact to currently unknown archaeological resources to less than significant (Class II). Operation and maintenance of the Alternative Subtransmission Alignment 3 would have no impact on cultural resources.

With respect to CEQA criterion (c), the paleontological setting for the Alternative Subtransmission Alignment 3 alignment is similar to that of the Proposed Project. Two fossil localities have been identified along Alternative Subtransmission Alignment 3 in the Topanga Formation, and the paleontological sensitivity of the alignment is high. As a result, impacts to paleontological resources would be similar to those for the Proposed Project. However, implementation of Mitigation Measure 4.5-3 would mitigate impacts to paleontological resources to a less-than-significant level (Class II). Operation and maintenance of Alternative Subtransmission Alignment 3 would not impact paleontological resources.

With respect to CEQA criterion (d), given the high archaeological sensitivity, the potential to encounter and impact buried human remains for Alternative Subtransmission Alignment 3 would be similar to the Proposed Project. However, Mitigation Measure 4.5-4 would reduce impacts to a less than significant level (Class II). Operation and maintenance of Alternative Subtransmission Alignment 3 would not impact human remains.

Alternative Substation Site B

With respect to CEQA criterion (a), construction-related impacts associated with this alternative would be less than the Proposed Project. There are no known historical resources within the Substation Alternative Substation Site B project area. Construction, operation and maintenance of Alternative Substation Site B would not impact historical resources (No Impact).

With respect to CEQA criterion (b), Alternative Substation Site B has a slightly lower sensitivity for archaeological resources than the Proposed Project. No cultural resources have been recorded within the vicinity of the Alternative Substation Site B, which is located on an already developed area. However, since construction of the alternative substation would require ground-disturbing activities, construction related to Alternative Substation Site B could impact buried or otherwise

obscured cultural resources. As with the Proposed Project, implementation of Mitigation Measure 4.5-2a and 4.5-2b would provide for archaeological and Native American monitoring and for measures in the event of inadvertent discovery of archaeological resources and would reduce the impact to currently unknown archaeological resources to less than significant (Class II). Operation and maintenance of Alternative Substation Site B would have no impact on cultural resources.

With respect to CEQA criterion (c), the paleontological setting for Alternative Substation Site B is similar to that of the Proposed Project. As a result, impacts to paleontological resources would be similar to those for the Proposed Project. However, implementation of Mitigation Measure 4.5-3 would mitigate impacts to paleontological resources to a less-than-significant level (Class II). Operation and maintenance of Alternative Substation Site B would not impact paleontological resources.

With respect to CEQA criterion (d), the potential to encounter and impact buried human remains for Alternative Substation Site B would be slightly less than the Proposed Project. However, in the case of inadvertent discovery, Mitigation Measure 4.5-4 would reduce impacts to a less than significant level (Class II). Operation and maintenance of Alternative Substation Site B would not impact human remains.

System Alternative B

With the implementation of the System Alternative B, no new facilities would be constructed, and all changes would take place on existing facility footprints. Implementation of this alternative would not impact historical resources, unique archaeological resources, Native American resources, or paleontological resources. Therefore, the System Alternative B would have no impact on cultural resources (No Impact).

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4.6 Geology, Soils, Seismicity, and Mineral Resources

This section evaluates whether construction, operations, and maintenance of the proposed Presidential Substation Project and alternatives would result in potential adverse impacts related to local geology, existing soil conditions, or seismicity. The evaluation and analysis of geology, soils, faulting and seismicity are based, in part, on review of various geologic maps and reports. The primary sources include available resources from the United States Geological Survey (USGS) and the California Geological Survey (CGS). Both short-term and long-term project effects are analyzed to determine their significance under CEQA. When Proposed Project impacts are determined to be significant or potentially significant, mitigation measures to avoid or reduce those impacts are identified. Also described here are the existing conditions in the project area (proposed substation site and transmission lines) and the regulations relevant to the Proposed Project.

4.6.1 Setting

Regional Geology

The project area is located in the Transverse Ranges Geomorphic Province of southern California. The Transverse Ranges is one of 11 geomorphic provinces recognized in California. Each province displays unique, defining features based on geology, faults, topographic relief and climate (California Geological Survey, 2002). The Transverse Ranges are an east-west trending series of steep mountain ranges and valleys. The province extends offshore to include San Miguel, Santa Rosa, and Santa Cruz islands. Its eastern extension, the San Bernardino Mountains, has been displaced due to fault movement along the San Andreas Fault. Petroleum-rich sedimentary rocks from the Cenozoic [65 million years ago (mya) to present] have been folded and faulted, making the province an important oil-producing area of the United States (CGS, 2002).

Project Area Geology

The Proposed Project is located in the Santa Monica Mountains, bounded by the San Fernando Valley to the north and the Los Angeles Basin to the south. The geology of the surrounding Santa Monica Mountains is dominated by a sequence of Tertiary-age (65 mya to 1.8 mya) sedimentary and volcanic rocks. These include the Tertiary Modelo Formation and the upper part of the Topanga Formation, other minor Tertiary rocks, and Miocene-age (34 mya to 5 mya) volcanic and intrusive igneous rocks (Yerkes and Campbell, 1995).

The majority of the Proposed Project is underlain by Quaternary-age (1.8 mya to present) alluvium (material deposited by moving water), as documented by the CGS (Yerkes and Campbell, 2005). These deposits are late Holocene (10,000 years ago to present), alluvial materials, comprised of unconsolidated gravel, sand and silt in active or recently active streambeds. In addition to the alluvium, the Proposed Project area includes outcrops of the Miocene-age Conejo Volcanics. These volcanic rocks are comprised of basalt, andesitic basalt, and dacite in thick sequences from past volcanic eruptions. The rocks are fine-grained, incoherent

and crumbly where weathered and susceptible to erosion. Geologic maps show volcanic rocks underlying much of the project site. In addition to the volcanic rocks, maps show the southern portion of the Substation site underlain by the Oligocene-age Sespe Formation. The Sespe Formation is composed mostly of friable sandstone. The unit also contains some conglomeratic zones and some thin strata of a silty claystone.

Site Topography

The northerly portions of the study area lie at the lower elevations, with the northerly end of Sunset Valley Road at about approximately 614 feet relative to Mean Sea Level (MSL). Sunset Valley Road crosses the slight relief of Tierra Rajada Valley, whereas much of the remaining portions of the study area are in a rolling hillside terrain with elevations ranging up to approximately 1,000 feet (MSL).

Soils

Based on Soil Survey information from the United States Department of Agriculture Natural Resources Conservation Service (2011), soils designated as Cibo Clay (CmE) and the Calleguas-Arnold complex (CbF2) underlie the Substation site. The CmE is a well-drained residual (i.e., developed in place) soil derived from the weathering of igneous rocks. The CbF2 is a well-drained residual soil derived from the weathering of sedimentary rocks.

The Alternative Substation B site is indicated to be underlain by soils designated as CmE, the Hambright very rocky loam (HaG), and the San Benito clay loam (ScF2). The CmE also occurs on the proposed Presidential Substation site and is discussed above. The HaG is a well-drained residual soil derived from the weathering of igneous rock and the ScF2 is a well-drained residual soil derived from the weathering of calcareous shale.

Regional Faulting and Seismic Hazards

This section characterizes the regional existing faults, describes historic earthquakes, estimates the likelihood of future earthquakes, and describes probable ground-shaking effects. The primary sources of information for this section are publications prepared by the USGS and the CGS.

Earthquake Terminology and Concepts

Earthquake Mechanisms and Fault Activity

Faults are planar features within the earth's crust that have formed to release stresses caused by the dynamic movements of the earth's major tectonic plates. An earthquake on a fault is produced when these stresses overcome the inherent strength of the earth's crust and the rock ruptures. The rupture causes seismic waves to propagate through the earth's crust, producing the ground-shaking effect known as an earthquake. The rupture also causes variable amounts of slip along the fault, which may or may not be visible at the earth's surface. It is important to note that faults are pervasive features in rocks, and occur even in areas of little-to-no earthquake activity. This is because over geologic time scales the areas where tectonic stresses build up are always changing; thus, faults are more often evidence of past tectonic activity than indicators of a current earthquake hazard.

Geologists commonly use the age of offset rocks as evidence of fault activity—the younger the displaced rocks, the more recently earthquakes have occurred. To evaluate the likelihood that a fault will produce an earthquake, geologists examine the magnitude and frequency of recorded earthquakes and evidence of past displacement along a fault. An *active* fault is defined by the State of California as a fault that has had surface displacement within Holocene time (last 10,000 years).

Earthquake Magnitude

A way to determine the size of an earthquake along a fault is to measure the energy released using a network of seismographs, which record the amplitude and frequency of the seismic waves it generates. The Richter Magnitude (M) for an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. M magnitudes vary logarithmically, with each whole number step representing a ten-fold increase in the amplitude of the recorded seismic waves. While M was historically the primary measure of earthquake magnitude, seismologists now use the Moment Magnitude (Mw) scale as the preferred way to measure earthquakes. The Mw scale is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the style of movement or displacement across the fault. Although the formulae of the scales are different, they both contain a similar continuum of magnitude values, except that Mw can reliably measure larger earthquakes and do so from greater distances.

Seismic Context

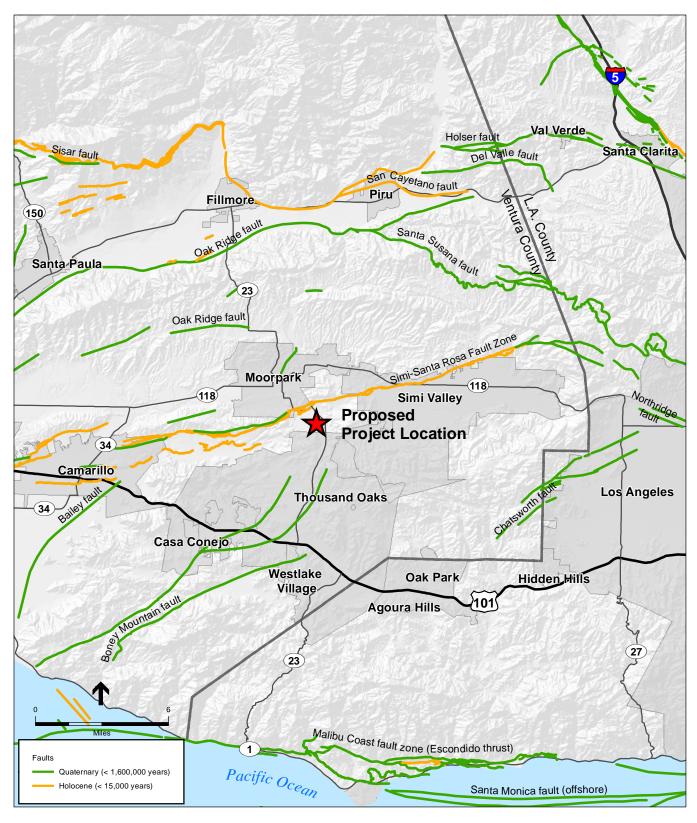
The Proposed Project is located in a seismically active area, as is the majority of southern California. The approximate locations of major active and potentially active faults in the southern California region and their geographic relationship to the site are shown on **Figure 4.6-1**. In general, it is active faults that are considered to have the higher potential to be a significant seismic source. Major active fault zones within approximately 100 kilometers (62 miles) of the Proposed Project are included in **Table 4.6-1**. The nearest active fault is the Simi-Santa Rosa Fault, with a west-southwest trending strand mapped near the northerly terminus of the proposed subtransmission alignment along Sunset Valley Road. Also, the northerly portion of the Sunset Valley corridor is located within a State of California Earthquake Fault Zone that has been established around the Simi-Santa Rosa Fault. The Simi-Santa Rosa Fault is capable of generating an earthquake of magnitude 7.0 (Cao et al., 2003).

Seismic Hazards

The following discussion identifies the seismic hazards for the project area and provides the initial context for further evaluation in the impact analysis.

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different strands of the same fault. Ground rupture is



SOURCE: SCE, 2010; ESRI, 2009; USGS/CGS, 2009

Presidential Substation Project . 207584.02 Figure 4.6-1 Regional Faults

Fault	Distance miles	Maximum Moment Magnitude ^{a,b}
Simi-Santa Rosa	0	7.0
Santa Susana	8	6.7
Oak Ridge (Onshore)	9	7.0
San Cayetano	11	7.0
Northridge (E. Oak Ridge)	13	7.0
Holser	14	6.5
Malibu Coast	14	6.7
Ventura-Pitas Point	19	6.9
Santa Monica	20	6.6
Anacapa-Dume	20	7.5
San Gabriel	20	7.2
Sierra Madre (San Fernando)	20	6.7
Verdugo	23	6.9
Santa Ynez (East)	24	7.1
Palos Verdes	25	7.3
Middle Ridge-Arroyo Parida-Santa Ana	25	7.2
Oak Ridge (Offshore)	25	7.1
Hollywood	27	6.4
Red Mountain	28	7.0
Newport-Inglewood (L.A. Basin)	30	7.1
Sierra Madre	30	7.2
Channel Island Thrust (eastern)	32	7.5
Compton Thrust	35	6.8
San Andreas-Carrizo	35	7.4
Raymond	36	6.5
San Andreas-Mojave	38	7.4
Elysian Park Thrust	39	6.7
Big Pine	39	6.9
Garlock (West)	40	7.3
Santa Cruz Island	43	7.0
Clamshell-Sawpit	48	6.5
Pleito Thrust	48	7.0
North Channel Slope	49	7.4
Santa Ynez (West)	49	7.1
Whittier	50	6.8
San Jose	56	6.4
White Wolf	59	7.3

TABLE 4.6-1 MAJOR REGIONAL ACTIVE FAULTS WITHIN 100 KILOMETERS (62 MILES) OF THE PROPOSED PROJECT

a b

Blake,2001 The reported potential maximum magnitudes are Maximum Moment Magnitudes rather than Richter Scale Magnitudes, a scale that is generally no longer used.

considered more likely along active faults, which are referenced in Figure 4.6-1. The only portion of the Proposed Project located within an Alquist-Priolo Earthquake Fault Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act, is the northerly portion of the proposed subtransmission alignment along Sunset Valley Road. Because that feature is not a structure for human occupancy (2,000 person hours per year) the Alquist-Priolo Act does not apply to this project.

Ground Shaking

As discussed above, the project site lies in a seismically active area. A major earthquake in the area would produce strong ground-shaking effects throughout the region. Earthquakes on active or potentially active faults, depending on magnitude and distance from the project area, could produce a range of ground-shaking intensities within the project area. One of the primary tools that seismologists use to describe ground-shaking hazard is a probabilistic seismic hazard assessment (PSHA). The PSHA for the State of California takes into consideration the range of possible earthquake sources (including such worse-case scenarios as described above) and estimates their characteristic magnitudes to generate a probability map for ground-shaking. The PSHA maps depict values of peak horizontal ground accelerations (PGA) that have a 10 percent probability of being exceeded in 50 years. This probability level allows engineers to design buildings for ground motions that have a 90% chance of not occurring in the next 50-years, making buildings safer than if they were simply designed for the most likely events.

According to a probabilistic seismic hazard model for California (CGS, 2008b) PGA having a 10 percent probability of exceedance in 50 years (1 in 475 chance of occurring) can be estimated for the project area to be approximately 0.5g (50 percent of gravity) to 0.60g¹ (Peterson et al. 1996, CGS, 1997a, updated 2001). For comparison purposes, the maximum peak acceleration value recorded during the Loma Prieta earthquake was in the vicinity of the epicenter, near Santa Cruz, at 0.64 g. These ground accelerations could result in severe ground shaking, which would be widely felt. This level of ground shaking is likely to induce significant ground deformations such as liquefaction or lateral spread in alluvial soils, such as those present along portions of the existing transmission alignment. Historical earthquakes of magnitude 6.0 or greater with epicenters within approximately 100 kilometers (62 miles) of the study area are shown in **Table 4.6-2**.

Liquefaction

Liquefaction is a transformation of soil from a solid to a liquefied state, during which saturated soil temporarily loses strength resulting from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose- to medium-density sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. One particular ground failure is termed lateral spreading, which is the horizontal displacement of surficial blocks of sediments resulting from liquefaction in a subsurface layer that occurs on slopes ranging between 0.3 and 3 percent and commonly displaces the surface by several meters to tens of meters.

¹ Value is expressed as a fraction of the acceleration due to gravity (g). Gravity (g) is 9.8 meters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

Date	Magnitude (M)	Approximate Distance to Epicenter (miles)	
December 21, 1812	7.1	62	
September 5, 1883	6.0	62	
October 23, 1916	6.0	45	
June 29, 1925	6.2	55	
July 21, 1952	7.7	53	
July 21, 1952	6.4	52	
February 9, 1971	6.4	26	
January 17, 1994	6.7	16	

TABLE 4.6-2 HISTORICAL EARTHQUAKES

Research and historical data indicate that granular soils and non-plastic silts that are saturated by relatively shallow groundwater (generally less than 50 feet) are susceptible to liquefaction. Areas of shallow groundwater are discussed in (Section 4.9, *Hydrology and Water Quality*). Based on State of California Seismic Hazard Zones the Substation site is not underlain by liquefiable soils. Potentially liquefiable soils (alluvium) are mapped where the northerly portion of the Alternative Subtransmission Alignment 2 would cross the lower lying areas, particularly near the north end.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, poorly-compacted, and variable sandy sediments above the water table) due to the rearrangement of soil particles during prolonged ground-shaking. Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different amounts). Areas underlain by artificial fill would be susceptible to this type of settlement.

Geologic Hazards

A geologic hazard is a geologic condition, either natural or man-made, that poses a potential danger to life and property. A discussion of possible geologic hazards in the study area is presented in the following sections.

Accelerated Soil Erosion

Erosion is the wearing away of soil and rock by processes, such as mechanical or chemical weathering; mass wasting; and/or the action of waves, wind, and water. Excessive or accelerated soil erosion can occur in areas of concentrated runoff over erodible soils, especially where denuded of vegetation. Erosional features, such as rills or gullies, may eventually lead to damage of building foundations and roadways. In the project area, areas that are susceptible to erosion are those that would be exposed during the construction phase. Typically, the soil erosion potential is

reduced once the soil is graded and covered with concrete, structures, asphalt, vegetation, or slope protection. While runoff and erosion behavior can be estimated from the mapped soil series, the actual susceptibility to erosion would vary based on site-specific conditions, and how storm water runoff is managed. The possibility of substantial and accelerated erosion is further discussed in Section 4.6.4, *Environmental Impacts and Mitigation Measures*, as well as Section 4.9, *Hydrology and Water Quality*.

Expansive Soils

Expansive soils possess a "shrink-swell" behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Clay minerals such as smectite, bentonite, montmorillonite, beidellite, vermiculite, and others are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near-surface soils, the higher the potential for significant expansion. The greatest effects occur when there are significant or repeated moisture content changes. Expansions of 10 percent or more in volume are not uncommon. This change in volume can exert enough force on a building or other structure to cause cracked foundations, floors, and basement walls. Structural damage typically occurs over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. The presence of expansive soils can typically only be determined through site-specific analysis. Expansive soils in Ventura County are primarily associated portions of the Ojai Valley, the Camarillo Hills, and areas around the City of Moorpark (SCE, 2008).

Landslides and Slope Failure

Ground failure is dependent on the slope and local geology as well as the amount of rainfall, human activities such as excavation, or seismic activity. A slope failure is a mass of rock, soil, and debris displaced downslope by sliding, flowing, or falling. Landslide-susceptible areas are characterized by steep slopes and weak or unfavorably oriented geologic units. Debris flows consist of a loose mass of rocks and other granular material that, if saturated and present on a slope, can move downslope. The rate of rock and soil movements can vary from a slow creep over many years to a sudden mass movement. Landslides occur throughout California, but the density of incidents increases in zones of active faulting.

Based on State of California Seismic Hazard Zones maps an area prone to earthquake induced slope failure is mapped in the southerly portions of the proposed Presidential Substation site. Also, an area prone to slope failure is mapped just south of Read Road, between Sunset Valley Road and Hwy 23. Also, a landslide inventory map used to make the Seismic Hazard Zones map indicates two possible landslides at or just south of the proposed subtransmission alignment between Hwy 23 and East Olsen Road. Pre-existing landslides or areas prone to earthquake induced landslides have not been mapped elsewhere along the proposed subtransmission alignments.

Existing Mineral Resources

The primary mineral resources extracted in Ventura County include sand, gravel, and crushed rock (aggregate), and petroleum. Various minerals other than aggregate and petroleum are, or have been, extracted in Ventura County including expansible shale known as "Lockwood Clay", gypsum, gold, decorative rock, asphalt, borates and limestone. However, none of these other mineral deposits have been recognized as being of Statewide significance nor do they play a major role in the County economy (County of Ventura, 2010).

Per the Surface Mining and Reclamation Act (SMARA) Ventura County's mineral resources are classified as one of several different mineral resource zone categories, based upon the relative knowledge concerning the resource's presence and the quality of the material (County of Ventura, 2010). In the project area, land is zoned *MRZ-1* and *MRZ-3*, which are defined as:

- *MRZ-1* Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone shall be applied where well developed lines of reasoning, based upon economic, geologic principles and adequate data demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight.
- *MRZ-3* Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

There are no mineral resources mining permits or petroleum fields in the vicinity of the Proposed Project (County of Ventura, 2010), and the presence of commercial grade minerals in the project area was not indicated in the literature reviewed. Also, mining operations or mining prospects were not observed during geologic field reconnaissance.

Regulatory Context

Federal

Occupational Safety and Health Administration (OSHA) Regulations

Excavation and trenching are among the most hazardous construction operations. The Occupational Safety and Health Administration's (OSHA) Excavation and Trenching standard, Title 29 of the Code of Federal Regulations (CFR), Part 1926.650, covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area. Construction phases of the Proposed Project would be required to comply with OSHA regulations.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zones Act), signed into law in December 1972, requires the delineation of zones along active

faults in California. The main purpose of the Alquist-Priolo Act is to prevent the construction of buildings to be used for human occupancy (i.e., 2,000 person hours or more per year) on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future ground surface displacement. Surface fault rupture is not necessarily restricted to the area within a Fault Rupture Hazard Zone, as designated under the Alquist-Priolo Act. The project area is in a seismically active area surrounded by many earthquake faults. The only fault zoned under the Alquist-Priolo Act is the Simi-Santa Rosa Fault Zone, which intersects the northernmost proposed subtransmission alignment along Sunset Valley Road. The Proposed Project extends into the Alquist-Priolo zone but does not cross the main trace of the fault.

Seismic Hazards Mapping Act

The State Department of Conservation, CGS, provides guidance with regard to seismic hazards. Under the CGS Seismic Hazards Mapping Act, seismic hazard zones are to be identified and mapped to assist local governments for planning and development purposes. The intent of the Act is to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other types of ground failure, and other hazards caused by earthquakes. California Division of Mines and Geology (now the CGS) Special Publication 117 Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS, 2008a) provides guidance for evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations. The project area contains areas zoned under the Seismic Hazard Mapping Act as susceptible to earthquake-induced landslides and liquefaction; these areas are discussed below.

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. 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 building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for inclusion into building codes. 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.

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 (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC. Project elements including structures and grading must comply with the CBC.

Surface Mining and Reclamation Act

The primary State law concerning conservation and development of mineral resources is SMARA, as amended to date. SMARA is found in the California PRC, Division 2, Chapter 9, § 2710, et seq.

Depending on the region, natural resources can include geologic deposits of valuable minerals used in manufacturing processes and the production of construction materials. SMARA was enacted in 1975 to limit new development in areas with significant mineral deposits. SMARA calls for the State geologist to classify the lands within California based on mineral resource availability. In addition, the California Health and Safety Code requires the covering, filling, or fencing of abandoned shafts, pits and excavations (California Health and Safety Code s§24400-03). Furthermore, mining may also be regulated by local government, which has the authority to prohibit mining pursuant to its general plan and local zoning laws.

SMARA states that the extraction of minerals is essential to the continued economic well-being of the State and to the needs of society, and that reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety. The reclamation of mined lands permits the continued mining of minerals and provides for the protection and subsequent beneficial use of the mined and reclaimed land. Surface mining takes place in diverse areas where the geologic, topographic, climatic, biological, and social conditions are significantly different, and reclamation operations and the specifications therefore may vary accordingly (PRC §2711).

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified in the Ventura County, City of Thousand Oaks, City of Simi Valley General Plan would otherwise be relevant to the Proposed Project and alternatives:

2.1 General Goals, Policies and Programs

Goal 2.1.1 (1): Identify all major hazards and other physical constraints to development in Ventura County, and convey this information to all appropriate parties.

Goal 2.1.1 (2): Protect public health safety and general welfare from identified hazards and potential disasters.

Goal 2.1.1 (3): Shield public and private property and essential facilities from identified hazards and potential disasters.

Goal 2.1.1 (4): Minimize loss of life, injury, damage to structures, and economic and social dislocations resulting from identified hazards and potential disasters.

Policy 2.1.2 (1): Applicants for land use and development permits shall provide all necessary information relative to identified hazards that may affect or be affected by their proposed project. Applicants shall also specify how they intend to mitigate identified hazards.

Policy 2.1.2 (2):All geologic and soil engineering reports submitted with land use and development permit applications, including recommendations for measures to eliminate or mitigate possible hazards, shall be signed by qualified personnel registered and certified by the State in the appropriate discipline, such as Professional Engineers and/or Certified Engineering Geologists.

Policy 2.1.2 (3): Essential facilities, special occupancy structures and hazardous materials storage facilities shall be designed and constructed to resist forces generated by earthquakes, gravity, precipitation, fire and winds.

Policy 2.1.2 (4): Develop, maintain and enhance mutual training and aide agreements with other public agencies, and cooperatively plan to prevent and respond to regional emergencies.

2.2 Fault Rupture

Goal 2.2.1: Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from fault rupture.

2.2.2 Policies

Policy 2.2.2 (1): Detailed geologic investigations performed by Certified Engineering Geologists are required for all proposed habitable structures in Earthquake Fault Hazard Zones as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Development will not be allowed unless the investigation confirms that the proposed habitable structures are not subject to fault rupture hazard. Proposed developments that are located at the ends of the Earthquake Fault Hazard Zones may be required, at the discretion of the Public Works Agency Certified Engineering Geologist, to be evaluated for earthquake fault rupture hazards.

Policy 2.2.2 (2): No habitable structures shall be located across or on any active fault zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Furthermore, no habitable structures shall be located within 50 feet of the mapped trace of an active fault unless an appropriate geologic investigation and report demonstrates that the site is not subject to fault rupture hazard.

Policy 2.2.2 (3): All development projects involving construction within Earthquake Fault Hazard Zones shall be reviewed by the Public Works Agency Certified Engineering Geologist in accordance with the requirements of the Alquist-Priolo Earthquake Fault Zoning Act and the policies and criteria established by the State pursuant to said Act.

Policy 2.2.2 (4): Land in Earthquake Fault Hazard Zones and potentially active fault areas should, where feasible, be designated Open Space or Agriculture on General Land Use Maps.

Policy 2.2.2 (5): Roads, streets, highways, utility conduits, and oil and gas pipelines, shall be planned to avoid crossing active faults where feasible. When such location is unavoidable, the design shall include measures to reduce the effects of any fault movement as much as possible.

2.3 Ground Shaking

Goal 2.3.11: Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from ground shaking.

Policy 2.3.2: All structures designed for human occupancy shall incorporate engineering measures to mitigate against risk of collapse from ground shaking.

2.4 Liquefaction

Goal 2.4.1: Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from liquefaction.

Policy 2.4.2: Prior to the issuance of building or grading permits for essential facilities, special occupancy structures, two-story single family residences, or hazardous materials storage facilities located within areas prone to liquefaction, a geotechnical report that includes a seismic analysis and evaluation of liquefaction in accordance with the State of California Guidelines shall be prepared in order to assess the liquefaction potential and provide recommendations for mitigation.

2.8 Expansive Soils

Goal 2.8.1: Minimize the risk of damage to structures from the effects of expansive soils

2.8.2 Policies

Policy 2.8.2 (1): Construction must conform to established standards of the Ventura County Building Code, adopted from the California Building Code.

Policy 2.8.2 (2): A geotechnical report, prepared by a registered civil engineer and based upon adequate-soil testing of the materials to be encountered as the sub-grade elevation shall be submitted to the County Surveyor, Environmental Health Division and Building and Safety for every applicable subdivision and Building Permit applications (as required by the California Building Code).

2.9 Subsidence

Goal 2.9.1: Minimize the risk of damage to structures, transportation corridors, and infrastructure from the effects of subsidence

Policy 2.9.2: Structural design of buildings and other structures shall recognize the potential for hydrocompaction subsidence and provide mitigation recommendations for structures that may be affected. (Ventura County, 2008)

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The following goals and policies/programs identified in the City of Thousand Oaks General Plan Safety Element would be applicable to the Proposed Project and alternatives: *Goal 2.2.1 (1):* Safeguard life, limb, health, property, and the public welfare by establishing minimum requirements for regulating grading and procedures by which such requirements may be enforced.

Goal 2.2.1 (2): Provide minimum standards to safeguard life or limb, health, property and the public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, demolition, and maintenance of all buildings and structures within the City and certain equipment specifically regulated therein.

Grading/Building Construction

Policy 2.2.2 (1): Require any alteration, grading, excavation or fill activity to comply with the City Grading Ordinance.

Policy 2.2.2 (2): Require that all construction be in accordance with the most current version of the Uniform Building Code and Title 8, Chapter 1 of the Municipal Code which incorporates the UBC with specific amendments.

Policy 2.2.2 (3): Perform site-specific geologic and engineering investigations for new developments as specified in the UBC and Municipal Code. Prohibit grading or relocation of earth on land having a natural slope greater than 25% unless approval is obtained from the Planning Commission or City Council and a grading permit has been obtained from the City Engineer (M.C. 7-3.07).

Policy 2.2.2 (4): Continue to regulate grading during the rainy season (November-April) in order to control erosion and protect life and property from damage due to flooding or erosion associated with grading activities.

Liquefaction

Policy 2.2.2 (5): Conduct soils investigations to evaluate hazards potential for proposed developments in areas of potential liquefaction.

Landslides and Debris Flows

Policy 2.2.2 (6): Require that all development activities provide a setback from potentially unstable areas or from the margins of potential debris flows channels and depositional areas as identified through engineering and geologic studies.

Policy 2.2.2 (7): Require drainage plans designed to direct runoff away from unstable areas. Where washouts or landslides have occurred on public or private roads, require that road reconstruction meet the conditions of appropriate geologic and engineering reports and provide for adequate engineering supervision.

Policy 2.2.2 (8): In general, prohibit building sites within the flowline or discharge areas of hillside swales or channels. Building may be able to occur near smaller swales and channels given appropriate mitigation measures.

Policy 2.2.2 (9): In an area of known slope stability or debris flow hazards, require developers and/or subdividers of a parcel or parcels to record a Notice of Geologic Hazards with the County Recorder describing the potential hazards on the parcel and the level of prior geologic investigation conducted.

Policy 2.2.2 (10): Require project modifications, including but not limited to hazard mitigation, project redesign, elimination of building sites and development of building and

septic system envelopes, building setbacks and foundation and drainage requirements as necessary in order to mitigate landslide and debris flow hazards.

Policy 2.2.2 (11): Require that special findings be made for all development permits where potentially hazardous conditions exist indicating how public health and safety is to be protected.

Expansive Soils

Policy 2.2.2 (12): Require the preparation of a preliminary soils report, prepared by a registered civil engineer and based upon adequate test borings, for every subdivision and every individual lot where expansive soils have been identified.

Policy 2.2.2 (13): Require the developers and/or subdividers of a parcel or parcels in an area of known highly expansive soils hazard to record a Notice of Geologic Hazards with the County Recorder describing the potential hazards on the parcel and the level of prior geologic investigation conducted.

Policy 2.2.2 (14): Require project modifications, including but not limited to hazard mitigation, project redesign, elimination of building sites, building envelopes and drainage and foundation requirements as necessary in order to mitigate hazards associated with expansive soils.

Policy 2.2.2 (15): Require that special findings be made for all development permits where potentially hazardous conditions exist indicating how public health and safety is to be protected.

(City of Thousand Oaks, 1996).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

The following goals and policies identified in the City of Simi Valley General Plan would be applicable to the Proposed Project and alternatives:

Development within the unincorporated hillside management areas in the County including those within the planning area, is regulated by the Ventura County Building Code, and Chapters 6 and 7 of the Ventura County Land Development Manual Division. All building, grading, and excavation must comply with Appendix 33 of the County Building Code. Chapter 18 of the County Building Code also provides development standards associated with expansive soils. The City of Simi Valley is regulated by the requirements set forth by the CBC, and local amendments to the CBC are set forth in the Simi Valley Municipal Code, §8-1.01.

Simi Valley Municipal Code. Development within hillside areas is regulated by the City's Hillside Performance Standards, as set forth in Chapter 9-32 of the Simi Valley Development Code. These standards serve as a comprehensive planning program established by the City to address special problems associated with long-term planning of hillside and canyon development. The Hillside Performance Standards implement the provisions of the General Plan as they relate to the preservation of hillside areas, the retention of scenic and recreational resources of Simi Valley, and to further enhance public health, safety, or welfare by regulation development in

hillside areas. Design guidelines related to grading, slope design, and ridge line development are provided in this Chapter, as well as requirements for geologic and soils engineering reports for any area proposed for development within the jurisdiction of the performance standards.

Simi Valley Multi-Hazard Mitigation Plan. The primary goal related to geologic and seismic hazards as identified in the Simi Valley Multi-Hazard Mitigation Plan is to reduce deaths, injuries, structural damage and losses from earthquakes and other geologic hazards. This can be achieved by developing a comprehensive approach to reducing earthquake-induced structural damage; protecting existing assets with the highest relative vulnerability to earthquakes; acquiring and maintaining information about vulnerability of assets from earthquakes; establishing and maintaining closer working relationships with federal, state, and local governments and districts; and encouraging other organizations to incorporate hazard mitigation activities (City of Simi Valley, 2007).

4.6.2 Significance Criteria

Significance criteria, or thresholds, listed in Appendix G of the CEQA Guidelines area used to determine the significance of potential impacts due to the Proposed Project. Based on these criteria, a project would have a significant geology-, soils-, or mineral-related effect on the environment if it would:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist (CGS) for the area or based on other substantial evidence of a known fault.
 - ii. Strong seismic ground shaking.
 - iii. Seismic-related ground failure, including liquefaction.
 - iv. Landslides.
- b) Result in substantial soil erosion or the loss of topsoil.
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code of 1994, creating substantial risks to life or property.
- e) 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 wastewater.
- f) 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.
- g) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.6.3 Environmental Impacts and Mitigation Measures

Impact Analysis

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.

In the event of a large earthquake on one of the Southern California area active faults, seismic ground-shaking and related ground failures could affect the Proposed Project. However, all structures in California are subject to the standards set forth in the CBC, which requires engineers to develop seismic design criteria that reflect the nature and magnitude of maximum ground motions that can be reasonably expected. These seismic design criteria allow engineers to apply appropriate building codes and design foundations and structures to withstand the effects of earthquakes. Seismic hazards are further discussed for each sub-item below:

Impact 4.6-1: Ground surface rupture of an active fault could damage proposed improvement and pose a hazard to the public or structures. *Less than significant (Class III)*

The northerly portion of the proposed subtransmission alignment along Sunset Valley Road is within an Earthquake Fault Hazard Zone as delineated by the State of California. The main fault trace of the Simi-Santa Rosa Fault, the fault on which the Earthquake Fault Hazard Zone was established, is mapped further to the north. While the northern-most section of the proposed subtransmission alignment would not cross the active trace, its presence within the fault hazard zone could translate to an increased risk of surface fault rupture because rupture can sometimes occur on a strand or splay that is associated with the main fault trace. Compliance with provisions of the Alquist-Priolo Earthquake Fault Zoning Act would not be required for the Proposed Project because there are no proposed human-occupancy structures. Nevertheless, if surface fault rupture did occur across an active trace of the fault, the subtransmission line crossing could fail due to excess lateral or vertical stresses. As discussed in the Project Description, SCE would conduct a design-level geotechnical investigation to address potential seismic hazards and the evidence of faulting. The geotechnical investigation would identify the locations where the subtransmission line approaches or crosses fault traces and the potential maximum surface fault offsets at those locations. If the seismic analysis determines that there would be a potential for surface fault rupture to occur, the project engineers would develop recommendations for fault line crossing, which would allow the subtransmission line and tower to accommodate fault displacement. Engineering transmission and subtransmission lines to cross active faults is a commonplace practice in California and there are several proven remedies that can allow lateral and vertical displacement from surface fault rupture without line failure. Given that a design-level geotechnical study would be conducted as part of the Proposed Project to evaluate potential fault displacement and the seismic design criteria developed from the study would be feasible and incorporated into the final project designs, this impact would be less than significant.

Mitigation: None required.

Impact 4.6-2: Strong seismic ground shaking can damage substation and subtransmission structures. *Less than significant (Class III)*

The Proposed Project is located in a seismically-active region of California in relative close proximity to active earthquake fault zones (see Table 4.6-1, above). A large earthquake on any of the active fault systems could cause ground shaking throughout the region. Ground shaking intensity would vary depending on causative fault and magnitude of the temblor. Strong ground shaking could upset unsecured equipment and damage fixed components in the proposed substation, possibly leading to temporary service interruptions. Aboveground subtransmission lines and poles would also respond to ground shaking but the potential for collapse would be low due to modern engineering. As discussed in the Project Description, SCE would conduct a design-level geotechnical study to determine the degree of seismic ground motion and develop structural designs to withstand that ground motion. The substation structures would be designed consistent with the Institute of Electrical and Electronics Engineers (IEEE) 693, Recommended Practices for Seismic Design of Substations and the subtransmission alignment would be designed consistent with CPUC G.O. 95 to withstand seismic loading. Design of substations and above ground subtransmission lines in seismically active regions is common in California and considered standard engineering practice. Considering the seismic evaluation that would be conducted as part of the Proposed Project and seismic design criteria applied to constructing the proposed facilities, this impact would be less than significant.

Mitigation: None required.

Impact 4.6-3: Seismic-related ground failure, including liquefaction, can cause damage to structural improvements and, subsequently, create hazardous conditions. *Less than significant (Class III)*

Liquefaction or other modes of ground failure associated with liquefaction (such as lateral spread) occur when saturated soils with a low clay content (primarily silts and sands) are subjected to very strong to violent ground shaking. In addition, liquefaction potential increases in areas of a shallow groundwater table and (for lateral spreading) large exposed soil-faces. The Proposed Project components (substation and subtransmission lines) are not located in an area determined by the State of California (Seismic Hazard Mapping Act of 1990) as susceptible to liquefaction. The proposed Presidential Substation site and proposed subtransmission alignment are generally underlain by fine-grained clay loams and are therefore not susceptible to failure during strong ground shaking. Additionally, lateral spreading would not occur on exposed soil faces because the soils are not considered liquefiable. However, detailed soil properties would be evaluated as part of geotechnical study completed as a proposed preconstruction activity (see Section 2.7.1). Given the low potential for liquefaction in the project area, impacts relating to seismic-related ground failure would be less than significant impact.

Mitigation: None required.

Impact 4.6-4: An earthquake-induced landslide could damage proposed Presidential Substation site or proposed subtransmission alignment resulting in create hazardous conditions. *Less than significant (Class III)*

The CGS Seismic Hazard Zones map identifies the southern portion of the proposed Presidential Substation site as an area susceptible to earthquake-induced landslides (CDMG, 1997a, updated 2001). According to the PEA, this feature was likely a surficial slide associated with friable sandstone of the Sespe Formation (SCE, 2008, citing Webber, 1984). Additionally, the CGS mapped an area of potential earthquake-induced landslides near the subtransmission alignment along Read Road between Sunset Valley Road and Hwy 23. Based on the geology in that area, the landslide appears associated with Conejo Volcanics geologic unit. While these areas are mapped as susceptible to earthquake-induced slope failure, it does not necessarily mean that a failure would occur during a future earthquake. The project specific design-level geotechnical study would evaluate the areas of identified slope instability that appear to hinder project construction, operation, or maintenance and provide recommendations for slope stabilization strategies or reinforcement requirements for subtransmission structures. Slope stabilization methods could include soil conditioning, re-contouring, or slope material removal and replacement. Slope stability assessment and development of slope reinforcement methods would be an element of the geotechnical evaluation performed by SCE as a preconstruction activity. Given that the areas of potential earthquake-induced landslides would be reviewed during the design level geotechnical study and stabilized prior to construction, this impact would be less than significant.

Mitigation: None required.

b) Results in substantial soil erosion or the loss of topsoil.

Impact 4.6-5: Ground disturbance by man-made activities can result in accelerated erosion and the loss of topsoil. *Less than significant (Class III)*

There is a certain rate of soil erosion that occurs naturally in the environment; however, the preliminary stages of construction, especially initial site grading, finds loose soil exposed to the erosive forces of rainfall and high winds. In addition to causing sedimentation problems in storm drain systems, rapid storm water runoff can initiate or increase the size of rills and gullies, and potentially undermine engineered soils beneath foundations and paved surfaces. Loss of topsoil from an agricultural resource perspective is discussed in Section 3.2, *Agricultural Resources*. Soil erosion from a water quality perspective is discussed in Section 4.9, *Hydrology and Water Quality*. This discussion addresses soil erosion as a potential geotechnical and engineering issue, where accelerated erosion may undermine constructed facilities, or restrict or compromise storm water drainage pipes.

Because both the Cibo Clay (CmE) and Calleguas-Arnold complex (CbF2) soil series are well drained (US Department of Agriculture, 2009) and the Proposed Presidential Substation site is on sloping ground, accelerated erosion is considered an issue under normal conditions. Soil survey data indicates the hazard of soil loss from non-surfaced roads and trails for both soil series is moderate to slight.

However, when thoroughly wet, denuded of vegetation and under precipitation from longduration storms, runoff and erosion potential increase significantly. The Cibo Clay belongs to hydrologic group C, and the Calleguas-Arnold complex belongs to hydrologic group D (USDA, 2011). These groups indicate that the soils would have a slow to very slow infiltration rate and high runoff potential. Even on flat ground, both soils could experience accelerated erosion via sheet flow, rilling or gullying. Rilling and erosional gullies are most likely to form along the side slopes of irrigation ditches or berms, where runoff velocities increase. If not properly managed, soils prone to accelerated erosion could undermine foundations, utility lines and access roads.

Because the Proposed Presidential Substation site is sloping and underlain by well-drained soils, accelerated erosion could occur. During construction, erosion control measures would be implemented, utilizing BMPs, to avoid or minimize soil erosion and off-site deposition, as discussed in Section 4.9, *Hydrology and Water Quality*. Measures to be implemented would include scheduling or limiting activities to certain times of the year; installing sediment barriers along the perimeter of the site, such as silt fence and fiber rolls; maintaining equipment and vehicles used for construction; tracking controls, such as stabilizing entrances to the construction site, and developing and implementing a spill prevention and cleanup plan. These measures that serve to address soil erosion for water quality concerns also would prevent or minimize the development of erosion rills or gullies. Given required erosion controls at construction sites, accelerated soil erosion during construction would be less than significant.

During operation, accelerated erosion would be prevented or minimized because SCE would direct all drainage to control features, as necessary. Accelerated erosion at the Proposed Presidential Substation site would be minimized by rock surfacing (1 to 1.5 inch per SCE standard), which would slow the velocity of storm water runoff and allow rainfall to percolate into the subsurface. Considering that erosion controls would be implemented during construction and would be part of the proposed Presidential Substation project, accelerated soil erosion impacts would be less than significant.

Mitigation: None required.

c) Located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Impact 4.6-6: Adverse conditions could arise if the project components where located on an unstable soil unit or in an area that would become unstable as a result of the proposed Presidential Substation project and potentially result in lateral spreading, subsidence, or collapse. *Less than Significant (Class III)*

Based on the understanding of local geology of the project area and the required improvements, the proposed Presidential Substation site and proposed subtransmission alignments would be placed on competent geologic materials. These materials would be evaluated by a geotechnical engineer during the design-level phase of the Proposed Project. Refer to Impact 4.6-3 with respect

to liquefaction. The Proposed Project does not involve the extraction of fluids that might cause ground subsidence. Other elements of the Proposed Project require the stabilization of the existing dirt access road on the east side of Hwy 23. Strategies to stabilize and improve the dirt road east of Hwy 23 are standard civil engineering methods and include the construction of an MSE Wall, a 10.5 foot gabion retaining wall, and reinforced geogrids. Engineering the road reinforcement in that manner would reduce the potential for failure of the dirt access road. Given the competent nature of the geologic materials underlying the project area and the design-level geotechnical investigation, this impact would be less than significant.

Mitigation: None required.

d) Located on expansive soil, which is defined in the 2007 California Building Code, creating substantial risks to life or property.

Impact 4.6-7: Structural improvements, especially concrete slabs, placed on expansive soils can be subject to distress and damage. *Less than Significant (Class III)*

Expansive soils are likely present in the project area and the extent and potential effects of the expansive soils, if present, would be analyzed during the design-level geotechnical investigation. Such an investigation is necessary to properly design and construct proposed improvements in light of potential shrink-swell soils. Expansive soil is a common issue that is readily identified during a geotechnical soil assessment and remedied with standard engineering practices. If expansive soils are identified during the design-level geotechnical study, the condition can be corrected by removal and replacement with non-expansive material. Because this is a standard geotechnical engineering condition that can be corrected during preconstruction design, this would be a less than significant impact.

Mitigation: None required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The Proposed Project would not include any components that would include construction of any septic tank or other wastewater disposal system into soils. Accordingly, there would be no potential impact to soils in the project area from wastewater disposal (No Impact).

f) 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.

Extraction operations exist outside the Proposed Project area. There are no known economically viable sources of rock materials in the immediate project area. In addition, there are no known

unique geologic features identified within the project area. Therefore, the Proposed Project would not result in the loss of mineral or unique geologic features and there would be no impact (No Impact).

g) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

The Proposed Project would not be located in an area currently used to extract known mineral resources, or on land delineated as a locally-important mineral resource recovery site. Therefore, the Proposed Project would not result in the loss of availability of locally-important minerals (No Impact).

4.6.4 Alternatives

No Project Alternative

Under the No Project Alternative there would be no impacts to geology, soils, or mineral resources.

Alternative Subtransmission Alignment 1

Alternative Subtransmission Alignment 1 would cross hilly terrain and would encounter an additional area west of Esperance Drive mapped by the CGS as susceptible to earthquake-induced landslide hazards. As discussed above, it is not known whether these areas would fail during an earthquake but additional slope stability assessment would be necessary during the design-level geotechnical investigation. Based on recommendations of the geotechnical engineer or engineering geologist, either the slope would require stabilization or structural reinforcement requirements would be necessary for the subtransmission facilities. In addition to the Esperance Drive slope instability, Alternative Subtransmission Alignment 1 would also involve addressing the potential earthquake-induced landslide area located on Read Road between Sunset Valley Road and Hwy 23. Alternative Subtransmission Alignment 1 would likely involve more issues with slope instability than the Proposed Project but like the Proposed Project, the issues could be adequately addressed with standard engineering practices for slope stabilization typical in this region of California and thus remain less than significant (Class III). Other geological and seismic technical issues remain the same as those for the Proposed Project.

Alternative Subtransmission Alignment 2

Alternative Subtransmission Alignment 2 requires placement of facilities in areas mapped by the CGS as susceptible to liquefaction and earthquake-induced landslides. From its easternmost starting point on Madera Road, the alternative subtransmission alignment follows within a mapped liquefaction hazard zone and remains within that zone until it passes the intersections of

Madera Road and Country Club Drive. Along East Olsen Road between the proposed Presidential Substation site and Hwy 23, Alternative Subtransmission Alignment 2 is within areas mapped by the CGS as susceptible to earthquake-induced landslides. While the engineering challenge to design and construct Alternative Subtransmission Alignment 2 would not be insurmountable, this alternative subtransmission alignment would likely require additional geotechnical analysis and testing to characterize the subsurface conditions and construct in potentially liquefiable material and potentially unstable slopes. Geotechnical solutions to overcome liquefiable soils and landslides are considered standard engineering practice in California and methods to improve ground for construction have been proven effective elsewhere. The need for seven pull and tension sites may require additional grading however, as no new or improved access roads are necessary, there would be a lesser need for geotechnical support structures such as retaining walls and engineered fill. Implementation of Alternative Subtransmission Alignment 2 would require similar geotechnical evaluation and design methods and no new mitigation measures are necessary. Potential geologic and seismic impacts of this alternative subtransmission alignment would be less than significant (Class III).

Alternative Subtransmission Alignment 3

As Alternative Subtransmission Alignment 3 would be underground from the corner of Sun Valley Road and Read Road, slope stabilization of the mapped earthquake-induced landslide site on Read Road may not require stabilization. The undergrounding of the proposed subtransmission alignment and no pole replacement would possibly reduce the need for geotechnical evaluation of pole foundations but this may be balanced by the need to evaluate the subsurface materials in order to trench 20 additional inches. Overall, from a geotechnical perspective, Alternative Subtransmission Alignment 3 is similar to the Proposed Project and does not present additional geologic or seismic impacts nor does it require new mitigation. Geotechnical concerns for this alternative subtransmission alignment would be addressed through the design-level geotechnical evaluation that the proponent would complete as preconstruction activity. Potential geologic and seismic impacts of this alternative subtransmission alignment would be less than significant (Class III).

Alternative Substation Site B

While the proposed Presidential Substation site is located in an area susceptible to earthquakeinduced landslides and would require considerable fills, Alternative Substation Site B is not in an area mapped as a landslide hazard area and would require more excavation and hillside cut slopes. Geotechnical analysis required for the alternative substation site would be completed during the design-level geotechnical assessment that SCE would conduct as a preconstruction activity. The geotechnical analysis would determine design parameters such as cut and fill quantities, slope safety factors, slope retention specifications, and would inform the final grading plan. Geotechnical issues that would arise in the design of the alternative substation site reflect standard engineering issues and the design geotechnical engineer would provide recommendations to overcome site or geologic material limitations. Overall, the level of geotechnical analysis and the number of potential issues at the proposed Presidential Substation site compared to the Alternative Substation Site B are of equal magnitude. The geotechnical limitations at the Alternative Substation Site B would not represent significant environmental issues and because it is not in an earthquake hazard zone for landslides, could have fewer impacts. Nevertheless, impacts associated with this alternative site would be less than significant.

System Alternative B

The System Alternative B (i.e., upgrade the existing substations with non-standard equipment) would not require geotechnical and seismic considerations because a new site would not be developed. However, some geotechnical work may be required to determine whether the existing foundation soils and pads can adequately support increased the weight of new equipment. Certain structural considerations may be required to determine the support needed to reduce the potential for toppling during a seismic event. No slope stability analysis or additional slope grading would be required and it is possible that geotechnical data developed when the original site was developed could be adequate for design of improvements under the System Alternative B. No significant impacts are anticipated in regards to this alternative.

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4.7 Greenhouse Gas Emissions

This section evaluates the potential for the Proposed Project, as well as the alternatives, to result in impacts associated with greenhouse gas (GHG) emissions during construction, operation, and maintenance activities.

4.7.1 Setting

Background on Greenhouse Gases and Climate Change

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are causing global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long term global temperature increases. What GHGs have in common is that they allow sunlight to enter the atmosphere, but trap a portion of the outward-bound infrared radiation, which warms the air. The process is similar to the effect greenhouses have in raising the internal temperature, hence the name GHGs. Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the Earth's temperature; however, emissions from human activities such as fossil fuel-based electricity production and the use of motor vehicles have elevated the concentration of GHGs in the atmosphere. It generally is believed that this accumulation of GHGs is contributing to global climate change.

The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because the different GHGs have different warming potential and CO₂ is the most common reference gas for climate change, GHG emissions often are quantified and reported as CO₂ equivalents (CO₂e). For example, SF₆ is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF₆, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG with 23,900 times the global warming potential as CO₂. Therefore, an emission of one metric ton of SF₆ could be reported as an emission of 23,900 metric tons CO₂e. Large emission sources are reported in million metric tons¹ of CO₂e.

Some of the potential effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2009). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2007):

¹ A metric ton is 1,000 kilograms; it is equal to approximately 1.1 U.S. tons and approximately 2,204.6 pounds.

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

The California Air Resources Board (CARB) estimated that in 2008, California produced 478 million gross metric tons of CO_2e emissions (CARB, 2010). CARB found that transportation was the source of 37 percent of the State's GHG emissions; followed by electricity generation at 24 percent, and industrial sources at 19 percent.

Regulatory Context

Federal

The federal Clean Air Act (CAA) requires the USEPA to define national standards to protect U.S. public health and welfare. The federal CAA does not specifically regulate GHG emissions; however, GHGs are pollutants that can be regulated under the federal CAA. There are currently no federal regulations that set ambient air quality standards for GHGs.

State

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which set forth a series of target dates by which Statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32 – California Global Warming Solutions Act

California Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, requires CARB to establish a Statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt regulations by January 1, 2008, that identify and require selected sectors or categories of emitters of GHGs to report and verify their Statewide GHG emissions, and CARB is authorized to enforce compliance with the program. Under AB 32, CARB also was required to adopt, by January 1, 2008, a Statewide GHG emissions limit equivalent to the Statewide GHG emissions levels in 1990, which must be achieved by 2020. CARB established this limit, in

December 2007, at 427 million metric tons of CO_2e . This is approximately 30 percent below forecasted "business-as-usual" emissions of 596 million metric tons of CO_2e , and about 10 percent below average annual GHG emissions during the period of 2002 through 2004 (CARB, 2009).

By January 1, 2011, CARB was required to adopt rules and regulations (to be implemented by January 1, 2012), to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 permits the use of market-based compliance mechanisms to achieve those reductions. AB 32 also requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts.

In June 2007, CARB directed staff to pursue 37 early strategies for reducing GHG emissions under AB 32. The broad spectrum of strategies that were developed, including a Low Carbon Fuel Standard, regulations for refrigerants with high global warming potentials, guidance and protocols for local governments to facilitate GHG reductions, and green ports, reflects that the serious threat of climate change requires action as soon as possible.

In addition to approving the 37 GHG reduction strategies, CARB directed staff to further evaluate early action recommendations made at its June 2007 meeting, and to report back to CARB within six months. The general sentiment of CARB suggested a desire to try to pursue greater GHG emissions reductions in California in the near-term. Since the June 2007 CARB hearing, CARB staff has evaluated all 48 recommendations submitted by stakeholders and several internally-generated staff ideas and published the *Expanded List of Early Action Measures To Reduce Greenhouse Gas Emissions In California Recommended For Board Consideration* in September 2007 (CARB, 2007). CARB adopted nine Early Action Measures for implementation, including Ship Electrification at Ports, Reduction of High Global-Warming-Potential Gases in Consumer Products, Heavy-Duty Vehicle Greenhouse Gas Emission Reduction (Aerodynamic Efficiency), Reduction of Perfluorocarbons from Semiconductor Manufacturing, Improved Landfill Gas Capture, Reduction of Hydroflourocarbon-134a from Do-It-Yourself Motor Vehicle Servicing, Sulfur Hexaflouride Reductions from the Non-Electric Sector, a Tire Inflation Program, and a Low Carbon Fuel Standard.

Climate Change Scoping Plan

In December 2008, CARB approved the AB 32 Scoping Plan outlining the State's strategy to achieve the 2020 GHG emissions limit (CARB, 2009). This Scoping Plan, developed by CARB in coordination with the Climate Action Team (CAT), proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. The measures in the Scoping Plan will continue to be developed over the next year and are scheduled to be in place by 2012. The Scoping Plan expands the list of the nine Early Action Measures into a list of 39 Recommended Actions contained in Appendices C and E of the Scoping Plan. These measures are presented in **Table 4.7-1**.

4.7 Greenhouse Gas Emissions

TABLE 4.7-1 RECOMMENDED ACTIONS OF CLIMATE CHANGE SCOPING PLAN

T-1 Transportation Pavley I and II – Light-Duty Vehicle GHG Standards T-2 Transportation Low Carbon Fuel Standard (Discrete Earl Action) T-3 Transportation Regional Transportation (Statedard GHG Targets) T-4 Transportation Ship Electrification at Ports (Discrete Early Action) T-6 Transportation Goods-movement Efficiency Measures T-7 Transportation Medium and Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action) T-8 Transportation Medium and Heavy-Duty Vehicle Hybridization T-9 Transportation Medium and Heavy-Duty Vehicle Hybridization T-9 Transportation Medium and Heavy-Duty Vehicle Hybridization E-2 Electricity and Natural Gas Increase Combined Heat and Power Use by 30,000 gigawatt hour (GWh) E-3 Electricity and Natural Gas Energy Efficiency CR-1 Electricity and Natural Gas Solar Water Heating GB-1 Green Buildings Green Buildings Water Water Water Revery User Water Heating Water Water Water Revery Efficiency W-1 Water </th <th>ID #</th> <th>Sector</th> <th>Strategy Name</th>	ID #	Sector	Strategy Name	
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	H-6	High Global Warming Potential Gases		
A-1 Agriculture Methane Capture at Large Dairies	H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	
	A-1	Agriculture	Methane Capture at Large Dairies	

SOURCE: CARB, 2009

In addition, the Scoping Plan identifies challenges to meeting future electrical demand, including building transmission lines for renewables and modernizing electricity infrastructure.

CEQA Guidelines Revisions

In 2007, the State Legislature passed Senate Bill 97 (SB 97), which required amendment of the State CEQA Guidelines to incorporate analysis of, and mitigation for, GHG emissions from projects subject to CEQA. The California Natural Resources Agency adopted these amendments on December 30, 2009, and they took effect March 18, 2010.

The amendments add §15064.4 to the CEQA Guidelines. This new section specifically addresses the potential significance of GHG emissions. §15064.4 calls for a "good-faith effort" to "describe, calculate or estimate" GHG emissions; §15064.4 further states that the analysis of the significance of any GHG impacts should include consideration of the extent to which the project would increase or reduce GHG emissions; exceed a locally applicable threshold of significance; and comply with "regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions." The new *Guidelines* also state that a project may be found to have a less-than-significant impact on GHG emissions if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (§15064(h)(3)). Importantly, however, the *CEQA Guidelines* do not require or recommend a specific analytical methodology or provide quantitative criteria for determining the significance of GHG emissions.

4.7.2 Significance Criteria

Based on *CEQA Guidelines* §15064.4 and §15064.7(c), as well as Appendix G, a project would cause adverse impacts associated with GHG emissions if it would:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

4.7.3 Applicant Proposed Measures

SCE has not proposed APMs to minimize GHG-related impacts.

4.7.4 Impacts and Mitigation Measures

Approach to Analysis

The Ventura County Air Pollution Control District (VCAPCD) currently does not have adopted GHG thresholds of significance for CEQA review projects (Thomas, 2011). Therefore, as the lead agency for the Proposed Project, the CPUC has elected to use an approach to the determination of significance of GHG emissions based on the GHG significance thresholds adopted by the

SCAQMD. The SCAQMD has adopted an operational significance threshold of 10,000 metric tons CO₂e per year for stationary sources (SCAQMD, 2008). Given the Proposed Project's close proximity to the SCAQMD, the CPUC believes that the SCAQMD's significance threshold is the most applicable air district-adopted GHG significance threshold for the Proposed Project.

As noted above, the SCAQMD's adopted GHG significance threshold is intended for long-term operational GHG emissions. However, the SCAQMD has developed guidance for the determination of significance of GHG construction emissions that recommends that total emissions from construction be amortized over 30 years and added to operational emissions and then compared to the applicable significance threshold (SCAQMD, 2008). This analysis of the Proposed Project applies SCAQMD's guidance with regard to the assessment of construction-related GHG emissions.

There is no qualified climate action plan for Ventura County that would be applicable to the Proposed Project. However, the Proposed Project's potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions is assessed by examining any potential conflicts with the GHG reduction goals set forth in AB 32, including the potential for the Proposed Project to conflict with the 39 Recommended Actions identified by CARB in its Climate Change Scoping Plan.

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

Impact 4.7-1: The Proposed Project would result in emissions of greenhouse gases that could contribute to global climate change. *Less than significant* (Class III)

The Proposed Project would result in both short-term construction emissions of GHG and longterm operational emissions of GHG. Construction of the Proposed Project would occur over an approximately 13 to 20 month period. Construction activities would result in exhaust emissions from vehicular traffic, as well as from construction equipment and machinery. As part of the permit application process for the Proposed Project, SCE provided GHG construction emission estimates for various construction activities that would be associated with the Proposed Project. Exhaust emissions in the form of CO₂ were estimated using emission factors from CARB's EMFAC2007 and Offroad2007 emissions models (see Appendix C for details associated with the Proposed Project construction emission estimates). SCE's CO₂ construction emission estimate for the Proposed Project is 928 metric tons.

It should be noted that SCE's estimated emissions did not include those that would be associated with the proposed underground subtransmission alignment installation activities related to the Hwy 23 crossing or the installation of the underground distribution line and telecommunications cable. Based on the overall equipment hours that would be required to complete these activities (see Project Description Table 2-5), it is estimated that total Proposed Project construction emissions would be approximately 25 to 30 percent higher than SCE's estimate. In addition, SCE's emissions estimate includes only CO_2 emissions. Construction equipment and vehicles would also generate other GHGs, including CH_4 and N_2O . However, using methods identified by

the California Climate Action Registry (CCAR, 2009), the CO₂e emissions that would account for CH₄ and N₂O would represent a less than one percent increase compared to the estimate of only CO₂ emissions. For a conservative analysis, it is assumed that the total CO₂e emissions that would be associated with construction of the Proposed Project would be approximately 30 percent higher than the CO₂ emissions estimate provided by SCE (to account for the non-CO₂ GHGs as well as the undergrounding activities not included in SCE's emission estimates). Therefore, it is estimated that total construction emissions that would be associated with the Proposed Project would be approximately 1,206 metric tons CO₂e.

Operational GHG emissions that would be associated with the Proposed Project would include vehicular exhaust related to periodic maintenance and inspection activities and SF_6 leakage from circuit breakers at the proposed Presidential Substation. SCE has estimated that long-term vehicle exhaust that would be associated with the Proposed Project would be approximately two tons CO_2 per year (see Appendix C for details associated with the Proposed Project operations emission estimate). This emission estimate does not include CH_4 or N_2O emissions; however, the increase in CO_2e that would be attributable to these emissions would be a negligible addition to the SCE estimate. Regarding SF_6 circuit breaker leakage at the proposed Presidential Substation, SCE estimates that five new circuit breakers would each have a capacity of approximately 30 pounds of SF_6 , for a total of 150 pounds SF_6 . The USEPA estimates that leaking circuit breakers manufactured in 1999 and later emit less than one percent of the SF_6 nameplate capacity (USEPA, 2006). The SF_6 leak rate would therefore be approximately 1.5 pounds per year, or approximately 16 metric tons CO_2e per year. Therefore, the total operational emissions that would be generated by the Proposed Project would be approximately 18 metric tons CO_2e per year.

As indicated above, total GHG construction emissions in the form of CO₂e would be approximately 1,206 metric tons. These emissions amortized over a 30-year period equal approximately 40 metric tons per year. Adding 40 metric tons CO₂e to the operational emissions of 18 metric tons CO₂e per year gives the total Proposed Project annual GHG emissions of approximately 58 metric tons CO₂e per year, which would be substantially less than the SCAQMD's significance threshold of 10,000 metric tons CO₂e per year for stationary sources. Therefore, the GHG emissions that would be generated by the Proposed Project would not significantly contribute to global climate change. Impacts would be less than significant.

Mitigation: None required.

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

Impact 4.7-2: The Proposed Project could conflict with CARB's Climate Change Scoping Plan. *Less than significant with mitigation* (Class II)

The Proposed Project could conflict with certain GHG reduction goals set forth in AB 32, including the 39 Recommended Actions identified by CARB in its Climate Change Scoping Plan.

4.7 Greenhouse Gas Emissions

Table 4.7-1 presents the 39 Recommended Actions identified to date by CARB in its Climate Change Scoping Plan. Of the 39 measures identified, those that would be considered to be applicable to the Proposed Project would primarily be those actions related to transportation and high global warming potential gases. Consistency of the Proposed Project with these measures has been evaluated by each source-type measure below:

Scoping Plan Measure T-7: Heavy-Duty Vehicle GHG Emission Reduction (Aerodynamic Efficiency). This measure requires existing trucks/trailers to be retrofitted with the best available technology and/or CARB approved technology. This measure has been identified as a Discrete Early Action, which means that it began to be enforceable starting in 2010. Technologies that reduce GHG emissions and improve the fuel efficiency of trucks may include devices that reduce aerodynamic drag and rolling resistance. The requirements would apply to California and out-of-State registered trucks that travel to California. This measure would require in-use trucks and trailers to comply through a phase-in schedule starting in 2010 and achieve 100 percent compliance by 2014. Construction of the Proposed Project and the associated use of heavy-duty vehicles for hauling would be expected to be complete by approximately June 2012, which would be prior to the scheduled 100 percent compliance of the recommended measure. Therefore, the potential for the Proposed Project to conflict with compliance of this recommended action would be negligible.

Scoping Plan Measure H-6: High Global Warming Potential Gas Reductions from Stationary Sources – SF_6 Leak Reduction and Recycling in Electrical Applications. This measure will reduce emissions of SF_6 within the electric utility sector and at particle accelerators by requiring the use of best achievable control technology for the detection and repair of leaks and the recycling of SF_6 . On February 9, 2011, the State of California Office of Administrative Law (OAL) approved nine of the ten proposed sections for the SF_6 regulation. The approved regulations establish maximum annual SF_6 emission rates for gas insulated switchgear, starting in 2012 at 10 percent of the owners' total equipment capacity averaged over 2011. The emission rates will steadily decline by 1 percent per year until 2020, at which time the maximum annual SF_6 emission rate would be set at 1 percent. The OAL disapproved proposed regulation §95356 because it failed to meet the clarity standard pursuant to Government Code §11349.1. The primary component of §95356 of the proposed regulation would require gas insulated switchgear owners to annually report their SF_6 emissions and emission rate to CARB.

Utilities and other affected entities would comply by using leak detection and repair (LDAR) abatement equipment to reduce system leakage. The proposed performance standard would mandate and enhance current voluntary federal SF_6 recycling standards. The proposed Presidential Substation would include installation of a new circuit breaker that would contain SF_6 . Pursuant to Mitigation Measure 4.7-1 (see below), SCE would be required to install a circuit breaker with low SF_6 leak rates and monitor the SF_6 -containing circuit breaker consistent with the intent of Scoping Plan Measure H-6. Implementation of Mitigation Measure 4.7-1 would ensure that the Proposed Project would not conflict with the intent of Measure H-6.

Mitigation Measure 4.7-2: SCE shall ensure that the circuit breakers installed at the proposed Presidential Substation have a guaranteed SF_6 annual leak rate of no more than 0.5 percent by volume. SCE shall provide CPUC with documentation of compliance, such

as specification sheets, prior to installation of the circuit breakers. In addition, SCE shall annually monitor the SF_6 -containing circuit breakers at the proposed Presidential Substation for the detection and repair of leaks. SCE shall annually report its Presidential Substation-related SF_6 emissions to the CPUC until a regulation is approved by the State of California Office of Administrative Law that approves a regulation requiring annual reporting of SF_6 emissions to the CARB.

Significance after Mitigation: Less than Significant.

4.7.5 Alternatives

No Project Alternative

Under the No Project Alternative, the GHG-related impacts that would result under the Proposed Project, as discussed in Section 4.7.4, would not occur. There would be no impact under the No Project Alternative.

Alternative Subtransmission Alignment 1

Under Alternative Subtransmission Alignment 1, short-term construction activities could result in slightly lower overall GHG emissions compared to the construction emissions that would result under the Proposed Project. Although this alternative would include approximately 0.8 mile longer length of subtransmission alignment from the Moorpark-Royal No. 2 line, compared to the proposed subtransmission alignment along Sunset Valley Road, it would not require existing distribution to be relocated underground. Total emissions, including those associated with construction, operation, and maintenance, would continue to be less than significant. Like the Proposed Project, construction activities under Alternative Subtransmission Alignment 1 would result in a less-than-significant impact with mitigation related to potential conflicts with CARB's Climate Change Scoping Plan.

Alternative Subtransmission Alignment 2

Under Alternative Subtransmission Alignment 2, short-term construction activities could result in slightly lower overall GHG emissions compared to the construction emissions that would result under the Proposed Project. Although this alternative would include approximately 1.0 mile longer length of the alternative subtransmission alignments compared to the lengths of the proposed subtransmission alignments, it would not require existing distribution to be relocated underground. Total emissions, including those associated with construction, operation, and maintenance, would continue to be less than significant.

Alternative Subtransmission Alignment 3

Under Alternative Subtransmission Alignment 3, short-term construction activities could result in slightly lower overall GHG emissions compared to the construction emissions that would result under the Proposed Project because the double circuit subtransmission line would be installed

4.7 Greenhouse Gas Emissions

underground along the same route as for the Proposed Project underground distribution line and telecommunications cable. Under this alternative subtransmission alignment, there would be no need for the Proposed Project double circuit overhead line or the relocation of the existing distribution line east of Sunset Valley Road. Although the trench for the alternative double circuit 66 kV line would be slightly deeper (i.e., about 20 inches deeper) compared to the trench that would be required for the relocated distribution line and the fiber optic cable under the Proposed Project (which would require addition hours for earth moving equipment), the width of the trench would be the same as under the Proposed Project. The additional equipment hours required for the deeper trench would likely be more than offset by the elimination of the need for the proposed overhead double circuit 66 kV line and relocation of the existing distribution line. Total GHG emissions, including those associated with construction, operation, and maintenance, would be less than significant.

Alternative Substation Site B

Under Alternative Substation Site B, short-term construction activities would result in similar overall GHG emissions compared to the construction emissions that would result for the proposed Presidential Substation. Although the development at the Alternative Substation Site B would require complete demolition of all existing structures associated with the previous Ventura County Sherriff's Department buildings and infrastructure, this site would require considerably less cut and fill construction activities compared to those that would be required for the proposed Presidential Substation. The additional equipment hours required for the demolition activities would likely be offset by the reduced equipment hours for cut and fill activities compared to those that would be needed for the proposed Presidential Substation site. Total GHG emissions, including those associated with construction, operation, and maintenance, would be less than significant. Like the Proposed Project, operational activities under the Alternative Substation Site B would result in a less-than-significant impact with mitigation related to potential conflicts with CARB's Climate Change Scoping Plan.

System Alternative B

Under the System Alternative B, short-term construction activities would result in substantially less GHG emissions compared to the construction emissions that would result for the Proposed Project. Construction activities under System Alternative B would primarily be associated with replacing the existing transformers at Royal, Thousand Oaks, and Potrero substations with new transformers. There could also be a need to replace and/or add some distribution equipment at the substations. It is anticipated that total GHG emissions under System Alternative B would be similar to the total emissions estimated for the Proposed Project associated with Substation civil work (see Appendix C Tables 1 and 2). Total GHG emissions under this alternative are estimated to be approximately 60 metric tons, which would be approximately seven percent of the total GHG emissions estimated for the Proposed Project. Total GHG emissions, including those associated with construction, operation, and maintenance, would be less than significant.

References – Greenhouse Gas Emissions

- California Air Resources Board (CARB), 2007. Expanded List of Early Action Measures To Reduce Greenhouse Gas Emissions In California Recommended For Board Consideration, September 2007.
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- CARB, 2010. California Greenhouse Gas Inventory for 2002-2008 by Category as defined in the Scoping Plan, last updated May 12, 2010.
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- Intergovernmental Panel on Climate Change (IPCC), 2007. Climate Change 2007: Working Group II: The Scientific Basis.
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- Thomas, Chuck, 2011. Telephone communication between Chuck Thomas, Plan Development and Environmental Review Supervisor, Ventura County Air Pollution Control District and Matthew Fagundes, ESA, May 19, 2011.U.S. Environmental Protection Agency (USEPA), 2006. SF6 Leak Rates from High Voltage Circuit Breakers – U.S. EPA Investigates Potential Greenhouse Gas Emissions Source. IEEE Power Engineering Society General Meeting, Montreal, Quebec, Canada, June 2006.

4.8 Hazards and Hazardous Materials

This section evaluates the potential hazardous materials and public health impacts of the Proposed Project and alternatives. This analysis includes a review of SCE's Phase I Environmental Site Assessment Report that was prepared for the Proposed Project by the Engineering Group of SCE's Corporate Environment, Health & Safety Division. This Phase 1 Environmental Site Assessment Report was prepared in conformance with requirements outlined in American Society for Testing and Materials (ASTM) Standard Practice E 1527-05 and 40 CFR, and is included as Appendix F in the PEA (SCE, 2008). The Phase 1 Environmental Site Assessment Report also includes a review of the State of California's EnviroStor database. In addition to toxic substances, this section also addresses potential safety hazards associate with the Proposed Project and alternatives related to public use airports and private airstrips, as well as the risk associated with exposing people or structures to wildland fires, and the potential to interfere with emergency response or emergency evacuation plans. The CPUC generally provides information about electric and magnetic fields (EMF) in its environmental documents, including this EIR, to inform the public and decision makers. However, the CPUC does not consider EMF, in the context of CEOA, as an environmental impact because there is no agreement among scientists that EMF creates a potential health risk and because CEQA does not define or adopt standards for defining any potential risk from EMF. Information about EMF generated by transmission lines is provided in Chapter 2, Project Description, and in Appendix B.

4.8.1 Setting

Existing Contamination

Materials and waste may be considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability), corrode other materials (corrosivity), or react violently, explode, or generate vapors when mixed with water (reactivity). The term "hazardous material" is defined by the State of California, Health and Safety Code, Chapter 6.95, §25501(o) as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment. In some cases, past industrial or commercial uses on a site can result in spills or leaks of hazardous materials and petroleum to the ground; thus, resulting in soil and groundwater contamination. Federal and State laws require that soils having concentrations of contaminants such as lead, gasoline, or industrial solvents that are higher than certain acceptable levels, must be handled and disposed as hazardous waste during excavation, transportation, and disposal. The CCR, Title 22, §66261.20-24 contains technical descriptions of characteristics that would cause soil to be classified as a hazardous waste. The use of hazardous materials and disposal of hazardous wastes are subject to numerous laws and regulations at all levels of government.

Proposed Project

SCE used the services of Environmental FirstSearch to conduct a regulatory database search in the vicinity of the Proposed Project. This database review searched records that are listed on

agency files for the documented use, storage, generation, or releases of hazardous materials and/or petroleum products. The database search reviews lists generated by federal, State, and county regulatory agencies for historically contaminated properties, and for businesses that use, generate, or dispose of hazardous materials or petroleum products in their operation. In addition, the database search reviews lists of active contaminated sites that are currently undergoing monitoring and remediation. The databases searched and reviewed by Environmental FirstSearch are listed in **Table 4.8-1**.

The listed hazardous materials sites identified within the vicinity of the Proposed Presidential Substation Project are provided in **Table 4.8-2**. These sites may have been subjected (or are suspected of being subjected) to a release of hazardous materials or petroleum products that have resulted in contamination of soil and/or groundwater.

No Federal National Priority List (NPL), CERCLIS, or RCRA Correction Action Records were identified for sites in the vicinity of the Proposed Project. Four State listed records were identified, including two underground storage tanks (USTs) listings associated with the East Valley Sheriff Station south of the proposed subtransmission alignment and two leaky underground storage tanks (LUSTs) listings at the Callegues Municipal Water District Facility located southwest of the proposed subtransmission alignment and proposed Presidential Substation site; however these cases have been closed. The Phase 1 Site Assessment included a review of the State of California's EnviroStor database, which did not reveal any additional sites.

Alternative Substation Site B, Alternative Subtransmission Alignments, and System Alternative B

Chapter 3, Alternatives and Cumulative Projects, and Figure 3-2, Project Alternatives Map, describe and depict the locations for Alternative Substation Site B and the alternative subtransmission alignments. This section evaluates the alternative subtransmission alignments, Alternative Substation Site B, and the System Alternative B; however, because CEOA does not require an equal level of detail for project alternatives, this analysis was not included in the Phase 1 Environmental Site Assessment Report. The types of bulk hazardous materials currently stored and/or used in the vicinity of the alternatives would most likely be petroleum hydrocarbons found in underground storage tanks, such as those previously located at the Sherriff's station and water district; or in aboveground storage tanks, such as those typically located at farm or ranch operation centers. While the Phase 1 Environmental Site Assessment Report (SCE, 2008) may have included portions of the proposed alternatives within the radius search for the Proposed Presidential Substation Project, ESA conducted a regulatory database search of the SWRCB's GeoTracker and the California Department of Toxic Substances Control's EnvironStor websites for each of the proposed alternatives. Review of the GeoTracker database did not reveal any hazardous material sites at Alternative Subtransmission Alignment 1, Alternative Subtransmission Alignment 2, Alternative Subtransmission Alignment 3, Alternative Substation Site B, or the System Alternative B.

Database	Type of Record	Agency	
PL National Priority List		U.S. Environmental Protection Agency (USEPA)	
NPL Delisted	National Priority List subset	USEPA	
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System	USEPA	
NFRAP	Comprehensive Environmental Response, Compensation, and Liability Information System Achieved Sites	USEPA	
RCRA COR ACT	Resource Conservation and Recovery Act Information System Sites	USEPA	
RCRA TSD	Resource Conservation and Recovery Act Treatment, Storage, and Disposal Facilities	USEPA	
RCRA GEN	Resource Conservation and Recovery Information System Generators	USEPA	
RCRA NLR	Resource Conservation and Recovery Information Systems Sites	USEPA	
Federal IC/EC	Brownfield Management System	USEPA	
ERNS	Emergency Response Notification System	USEPA/Nuclear Regulatory Commission	
Tribal Lands	Indian Lands of the United States	U.S. Department of Interior / Bureau of Indian Affairs	
State/Tribal Sites	Site Mitigation and Brownfields Reuse Program Database (also known as CalSites)	California Environmental Protection Agency (Cal EPA)	
State Spills 90	RWQCB's spills, leaks, investigations, and cleanups	Cal EPA	
SWL	Solid Waste Information System	California Integrated Waste Management Board	
LUST	Leaking Underground Storage Tank Listing State Water Resour Board (SWRCB)		
State/Tribal UST/AST	e/Tribal UST/AST Underground and Aboveground Storage Tank Listing SWRCB		
State/Tribal IC	ate/Tribal IC Deed Restricted Sites Listing		
State/Tribal VCP	Voluntary Cleanup Program Properties	DTSC	
Floodplains	ains 100 year and 500 year floodplain boundaries Federal Emergency Management Agence		
State/SMBRPD	Site Mitigation and Brownfields Reuse Program Database	nd Brownfields Reuse Program Database DTSC	
Oil & Gas Wells	Listings of Completions, plugging, and permits	CA Department of Conservation	

TABLE 4.8-1 REGULATORY AGENCY DATABASES ACCESSED

SOURCE: SCE, 2008 (Environmental FirstSearch, 2008)

Site Name	Site Address	Distance and Direction from Proposed Project ^a	Regulatory List ^b	Site Status
East Valley Sheriff Station	2101 Olsen, Simi Valley, CA 93065	0.15 S	UST	Closed
Sheriff Substation Site No. 5	2101 Olsen, Simi Valley	0.19 S	UST	Closed
Calleguas Water District T0611100405	2100 Olsen Rd, Thousand Oaks, CA 91362	0.34 SW	LUST	Closed
Calleguas Water District T0611100621	2100 Olsen Rd, Thousand Oaks, CA 91362	0.34 SW	LUST	Closed

 TABLE 4.8-2

 HAZARDOUS MATERIALS SITES IN THE VICINITY OF THE PROPOSED PROJECT

^a The distances shown represent the approximate distance to closest portion of the Proposed Project.

^b Refer to Table 4.8-1 for definitions of the regulatory lists.

SOURCE: SCE, 2008 (Environmental FirstSearch, 2008)

For the System Alternative B, the Potrero Substation site is located approximately 800 feet southwest of an open LUST site (RB Case #: C03006); however, this case has already undergone remediation, and the case is open for monitoring purposes. The potential contaminants of concern were hydrocarbons detected in groundwater (SWRCB, 2011).

For the System Alternative B, the Thousand Oaks Substation Site is located approximately 800 feet east of a LUST site (RB Case #: 88042); however, this case has already undergone remediation, and is open for monitoring purposes. This substation site is also located approximately 1,000 feet northeast of two additional LUST sites that are currently undergoing remediation (RB Case #: 89093 and RB Case # 92022) (SWRCB, 2011).

A review of the EnviroStor database did not reveal any hazardous sites at Alternative Subtransmission Alignment 1, Alternative Subtransmission Alignment 2, Alternative Subtransmission Alignment 3, Substation Site B, or at any of the System Alternative substations (California Department of Toxic Substances Control, 2011).

It should also be noted that portions of Alternative Subtransmission Alignments 1 and 3 would be within areas that were either historically or currently used for agriculture, where pesticides and herbicides have likely been used. Therefore, there is a possibility that residual pesticide and/or herbicide contamination may exist in the agricultural soils along these alternative subtransmission alignments.

Alternative Substation Site B is a 2.3-acre parcel north of Madera Road that previously housed the Ventura County Sheriff's Department. About half of the site is developed and supports a paved asphalt parking lot and buildings, with remaining portion consisting of landscaping with ornamental trees and shrubs, and bare ground. SCE discovered that the Sheriff's Station had leaking underground storage tank problems during the 1990's; however, site closure was obtained in 1998 (County of Ventura, 1998).

Wood Treatment Products

More than 90 existing subtransmission and 16kV distribution wood poles would be removed from the proposed subtransmission alignments. These existing wood poles are treated with chemicals that likely include pentachlorophenol, creosote, and chromated copper arsenate. These treatment chemicals are used in pressure treated wood to protect wood from rotting due to insects and microbial agents. These chemicals, for certain uses and quantities, can be considered to be hazardous materials, which require specific handling procedures prescribed by State and federal regulations.

Schools and Daycare Facilities

There is one registered daycare/childcare facility located near the Proposed Project and Alternative Substation Site B. Tutor Time Childcare/Learning Center is located at 1080 Country Club Drive West in the City of Simi Valley (Tutor Time, 2011). The Tutor Time facility is located approximately 300 feet northeast of the proposed Presidential Substation site and approximately 150 feet south of Alternative Substation Site B across Olsen Road.

Madera Elementary School is located in City of Simi Valley, approximately 500 feet from the Alternative Subtransmission Alignment 2 (MUSD, 2009). The System Alternative B includes upgrades to the existing Thousand Oaks Substation, which is located approximately 500 feet from both Pine School and Head Start Child Development Resources in Thousand Oaks.

There are no other schools within one-quarter mile of the Proposed Presidential Substation Project or alternatives.

Airports and Airstrips

The nearest commercial airport to the Proposed Project and alternatives is Oxnard Airport, located approximately 22 miles west of the Proposed Project and Alternative Substation Site B.

There are two private airstrips in the vicinity of the Proposed Project. The Ventura County Sheriff's East County Station has a helicopter pad at 2101 E Olsen Rd, Thousand Oaks, CA 91360, approximately 1,000 feet from the proposed Presidential Substation site, and a small airstrip in the Tierra Rejada Valley is approximately 1,200 feet from the proposed subtransmission alignment. There are no airport land use compatibility plans for the helicopter pad or the airstrip (SCE, 2008).

Wildland Fire Conditions

The California Department of Forestry and Fire Protection (CalFire) has published Draft Fire Hazard Severity Zones for the State. These maps give fire hazards either a "moderate," "high," or "very high" rating classification. The combination of highly flammable fuel, long dry summers, and moderate to steep slopes creates a natural hazard of wildland fires in the study area. Wildland fires can result in death, injury, economic losses, and a large public investment in fire fighting efforts. Woodlands and other natural vegetation can be destroyed resulting in the loss of timber, wildlife habitat, scenic quality, and recreation. Soil erosion, sedimentation of fisheries and reservoirs, and downstream flooding can also result.

Grassland and woodland areas within the study area are extremely dry and prone to wildfires caused by natural phenomena, such as lightning strikes, as well as human sources (SCE, 2008). The unincorporated areas of Ventura County within the vicinity of the Proposed Project (SCE, 2008) and alternatives (CalFire, 2010) have been mapped as having a moderate to very high fire hazard.

Regulatory Context

This section provides the regulatory overview of federal, State, and local hazards and hazardous materials-related laws and regulations.

Federal

Occupational Safety and Health Administration

The federal Occupational Safety and Health Administration (OSHA) enforces regulations associated with the handling of hazardous materials in the workplace. The regulations established in CFR Title 29 are designed to protect workers from hazards associated with encountering hazardous materials at the work site. The regulations require certain training, operating procedures, and protective equipment to be used at work sites where hazardous materials could be encountered. The purpose of CFR Title 1910, Hazard Communication Standard, is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets, and employee training.

Resource Conservation and Recovery Act

Under the federal Resource Conservation and Recovery Act (RCRA), individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements and is approved by the USEPA. The USEPA approved California's RCRA program, referred to as the Hazardous Waste Control Law (HWCL) in 1992.

Toxic Substance Control Act

The Toxic Substances Control Act (TSCA) of 1976 was enacted by Congress to give the USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. The USEPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) was developed to protect the water, air, and land resources from the risk created by

past chemical disposal practices. This act is also referred to as the Superfund Act, and the sites listed under it are referred to as Superfund sites. Under CERCLA, the USEPA maintains a list, known as CERCLIS, of all contaminated sites in the nation that have in part or are currently undergoing clean-up activities. CERCLIS contains information on current hazardous waste sites, potential hazardous waste sites, and remediation activities. This includes sites that are on the National Priorities List (NPL) or being considered for the NPL.

Spill Prevention, Control, and Countermeasure

CFR Title 40, Part 112, *Oil Pollution Prevention*, establishes requirements for the preparation and implementation of Spill Prevention, Control, and Countermeasure (SPCC) Plans. SPCC Plans are designed to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire prevention, and pollution prevention rules. The purpose of an SPCC Plan is to form a comprehensive federal/State spill prevention program that minimizes the potential for discharges from sources, such as oil containing transformers. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility.

State

Hazardous Materials Management

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that businesses handling hazardous materials prepare a business plan. In January 1996, the California Environmental Protection Agency (Cal EPA) adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements, including: hazardous waste generators and hazardous waste on-site treatment; underground storage tanks; above ground storage tanks; hazardous materials release response plans and inventories; risk management and prevention programs; and the Unified Fire Code hazardous materials management plans and inventories. The plans are implemented at the local level, and the agency responsible for the implementation of the Unified Program is called the Certified Unified Program Agency (CUPA). Within Ventura County, the Ventura County Department of Environmental Health serves as the CUPA.

Department of Toxic Substance Control

The DTSC is responsible for regulating the use, storage, transport, and disposal of hazardous substances in the State. DTSC maintains a Hazardous Waste and Substances Site List for site cleanup. This list is commonly referred to as the Cortese List. Government Code section 65962.5 requires the Cal EPA to update the Cortese List at least annually. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

Hazardous Waste Management and Handling

Under the Resource Conservation and Recovery Act (RCRA), individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements. The USEPA must approve state programs intended to implement federal regulations. In California, Cal EPA and DTSC, a department within Cal EPA, regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. The USEPA approved California's RCRA program, called the Hazardous Waste Control Law (HWCL), in 1992. DTSC has primary hazardous material regulatory responsibility, but can delegate enforcement responsibilities to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the HWCL.

The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe the management of hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in ordinary landfills. Hazardous waste manifests must be retained by the generator for a minimum of three years. Hazardous waste manifests provide a description of the waste, its intended destination, and regulatory information about the waste. A copy of each manifest must be filed with the State. The generator must match copies of hazardous waste manifests with receipts from treatment, storage, and disposal facilities. Contaminated soils and other hazardous materials removed from a site during construction or remediation may need to be handled as hazardous waste.

Hazardous Materials Transportation

The State of California has adopted the U.S. Department of Transportation regulations for the intrastate movement of hazardous materials; State regulations are contained in 26 CCR. In addition, the State of California regulates the transportation of hazardous waste originating in the State and passing through the State (26 CCR). Both regulatory programs apply in California.

The two State agencies with primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The CHP enforces hazardous material and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the State that can respond quickly in the event of a spill.

Common carriers are licensed by the CHP, pursuant to California Vehicle Code Section 32000. This section requires the licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time, and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards.

Every hazardous waste package type used by a hazardous materials shipper must undergo tests that imitate some of the possible rigors of travel. Every package is not put through every test. However, most packages must be able to be kept under running water for a time without leaking;

dropped, fully loaded, onto a concrete floor; compressed from both sides for a period of time; subjected to low and high pressure; and frozen and heated alternately.

Hazardous Materials Emergency Response

Pursuant to the Emergency Services Act, California has developed an Emergency Response Plan to coordinate emergency services provided by federal, State, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including the USEPA, CHP, CDFG, the RWQCBs, the local air pollution control districts (in this case, the VCAPCD), and local agencies.

Pursuant to the Business Plan Law, local agencies are required to develop "area plans" for the response to releases of hazardous materials and wastes. These emergency response plans depend to a large extent on the Business Plans submitted by people who handle hazardous materials. An area plan must include pre-emergency planning and procedures for emergency response, notification, and coordination of affected governmental agencies and responsible parties, training, and follow up.

California Department of Forestry and Fire Protection

The California PRC includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire prone areas. The PRC requirements would apply to construction activities in areas designated by CalFire as a Wildland Area That May Contain Substantial Forest Fire Risks and Hazards pursuant to Section 4125 (State of California, 2009).

State Water Resources Control Board

The SWRCB and the RWQCBs administer the requirements of the CWA that regulate pollutant discharges into waterways of the U.S, and enforces site cleanup regulations for illicit discharges that have resulted in contamination of groundwater.

California Occupational Safety and Health Administration

In California, the California Cal OSHA regulates worker safety similar to the federal OSHA. Cal OSHA assumes primary responsibility for developing and enforcing state regulations related to workplace safety. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in CFR Title 29. CalOSHA standards are generally more stringent than federal regulations.

CalOSHA regulations concerning the use of hazardous materials in the workplace, as detailed in Title 8 of the CCR, include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings regarding exposure to hazardous substances, and preparation of emergency action and fire prevention plans. CalOSHA enforces regulations for hazard communication programs that contain training and information requirements. These regulations include procedures for identifying and labeling hazardous substances, communicating information about hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that material safety data sheets (MSDSs) be available to employees and that employee information and training programs be documented.

California Public Utilities Code

California Public Utilities Code Section 21658 prohibits structural hazards associated with utility poles and lines near airports. Should a transmission line be located in the vicinity of an airport or exceed 200 feet in height, a Notice of Proposed Construction or Alteration (Form 7460-1) is required by the Federal Aviation Administration in accordance with Federal Aviation Regulation, Part 77 "Objects Affecting Navigable Airspace."

Local

Ventura County Environmental Health Division (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The Ventura County Department of Environmental Health, Environmental Services Division, is responsible for ensuring conformance with State laws and County ordinances pertaining to the following programs: food protection, hazardous materials, hazardous waste, individual sewage disposal systems, land use, medical waste, ocean water quality monitoring, recreational health, solid waste, underground fuel tanks, and vector control. This department also administers the Leaking Underground Fuel Tank (LUFT) Program, which regulates soil and groundwater cases involving releases from USTs that contain gasoline, diesel, waste oil and other petroleum hydrocarbons within Ventura County. The primary objectives of the LUFT Program are to protect groundwater supplies, public health and the environment from petroleum products leaked from underground storage tanks. These objectives are accomplished by implementing State and federal laws and regulations. The County of Ventura has entered into a contract with the SWRCB to be the lead agency that regulates cleanup of unauthorized releases from USTs within Ventura County.

The Ventura County Department of Environmental Health, Environmental Services Division also serves as the CUPA, to assist with hazardous materials emergency response, investigation of illegal disposal of hazardous waste, and public complaints.

Ventura County Emergency Services (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

As a division of the Public Health Department, the Ventura County Emergency Medical Services (EMS) Agency provides system guidance and oversight through pre-hospital provider driven policy development and a comprehensive quality improvement program. The EMS Agency oversees the development and coordination of the countywide trauma system and works to maintain a constant state of emergency preparedness through a disaster planning process.

The EMS administers the Emergency Preparedness Office, which plans for County-wide health related disasters, educates the community, conducts disaster drills, and plans other disaster operations. The Countywide Emergency Response Plan, which is continuously being updated, identifies specific actions to be taken and the resources available for the protection of public health and the environment in the event of accidental and/or illegal release of hazardous substances.

Ventura County Fire Department (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The Ventura County Fire Department (VCFD) is composed of 531 staff that provide fire protection, medical aid, rescue, hazardous materials response, and a variety of other services to the public. The VCFD response area covers 848 square miles and serves more than 480,000 people in unincorporated areas of Ventura County and six of its cities, including Simi Valley and Thousand Oaks (VCFD, 2011). Additional information regarding fire protection services are located in Section 4.13, *Public Services*.

The Ventura County Fire Department has implemented a Wildfire Action Plan that guides residents in saving themselves and their property through advance planning (SCE, 2008). Outside of the boundaries of Santa Paula, Fillmore, Oxnard, San Buenaventura, and the Los Padres National Forest, the Ventura County Fire Protection District has responsibility for wildfire suppression on all private land. The County has mutual aid and automatic aid agreements with the four city fire departments in the County and the surrounding counties and cities, as well as local military bases and the State Office of Emergency Services. These mutual aid agreements obligate the departments to help each other in case of a major fire (County of Ventura, 2007).

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The purpose of hazardous materials Goal 2.15.1, identified in the Ventura County General Plan, is to minimize the risk of loss of life, injury, serious illness, damage to property, and economic and social dislocations resulting from the use, transport, treatment and disposal of hazardous materials and hazardous wastes, and to locate potentially hazardous facilities and operations in areas that would not expose the public to a significant risk of injury, loss of life, or property damage. The following policies are associated with Goal 2.15.2 (Ventura County, 2007):

- 1. Hazardous wastes and hazardous materials shall be managed in such a way that waste reduction through alternative technology is the first priority, followed by recycling and onsite treatment, with disposal as the last resort.
- 2. Site plans for discretionary development that will generate hazardous wastes or utilize hazardous materials shall include details on hazardous waste reduction, recycling and storage.
- 3. Any business that handles a *hazardous material* shall establish a plan for emergency response to a release or threatened release of a hazardous material. The County Fire Protection District is designated as the agency responsible for implementation of this policy.

- 4. Applicants shall provide a statement indicating the presence of any hazardous wastes on a site, prior to development. The applicant must demonstrate that the waste site is properly closed, or will be closed before the project is inaugurated.
- 5. Commercial or industrial uses which generate, store or handle hazardous waste and/or hazardous materials shall be located in compliance with the County Hazardous Waste Management Plan's siting criteria.

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The City Of Thousand Oaks General Plan Safety Element hazardous materials goal is to protect life, property, and the environment from the releases of hazardous materials. Related policies include waste reduction, implementing the County's Emergency Response Plan, and ensuring proper disposal of household hazardous waste (City of Thousand Oaks, 1996).

The City of Thousand Oaks Emergency Operations Plan provides emergency guidelines for responding to disasters. It provides protocols for different emergency situations and outlines specific agency responsibilities and mutual aid agreements with nearby jurisdictions. Safety Element Goal 2.5.1 is to provide for preparation and implementation of persons and property within the City in the event of a disaster, and to coordinate disaster functions with other public agencies and affected persons and property. Related policies include periodically updating the City Emergency Operation Plan, providing on-going disaster training for City employees, and evaluating emergency power generation supplies.

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified in the City of Simi Valley General Plan would otherwise be relevant to the Proposed Project and alternatives:

The City of Simi Valley General Plan Safety Element contains goals and policies to ensure that the community is reasonably protected from injuries, property damage, or loss of life that may result from natural or man-made hazards by reducing the risk of exposure (City of Simi Valley, 1988). The following list identifies hazards and hazardous materials goals and policies that are related to the Proposed Project:

Goal VIII-I: Minimize The Hazards To Public Health, Safety, And Welfare And Prevent Loss Of Life, Bodily Injury, And Property Damage Resulting From Natural And Man-Made Hazards.

Policy VIII-I.I: The City shall continue to cooperate with and support the federal, state, and county agencies responsible for the enforcement of federal, state; and local health, safety, and environmental laws.

Policy VIII-1.2: To the extent feasible, development should be directed to those areas which avoid unacceptable risk to public health and safety.

Policy VIII-1.3: Development shall not be allowed in areas with a significant potential for a natural disaster without adequate mitigation that reduces potential safety hazards to an acceptable level.

Policy VIII-I.4: New development shall not subject other property to unacceptable hazards or risk of natural disaster.

Policy VIII-1.4.4: The ability of emergency services to provide adequate public protection should not be significantly affected by any urban development.

Goal VIII-4: Continue The Implementation And Enforcement Of Fire Prevention Programs To Minimize Fire Hazards To An Acceptable Level of Risk.

Policy VIII-4.2: Development in high fire hazard areas shall have special fire retardant construction standards and access features.

Policy VIII-4.3: New, non-pressure treated wood shake or shingle roofs shall be prohibited within the City of Simi Valley and all new wooden roof coverings shall be prohibited in high fire hazard areas.

Policy VIII-4.4: The City should continue to cooperate with the County ordinance which requires that weeds and brush be cleared from all vacant lots and within 100 feet of all structures located in fire hazard areas. Non-compliance can result in the Fire Department hiring crews to remove weeds with the cost being assessed to the property owner.

Policy VIII-4.7: The City, acting on its own and in support of the programs of other agencies, should take actions (i.e., establishing fuel modification zones on the wildland periphery of new development areas) to reduce the risk of fire associated with vegetation in high fire hazard areas.

Policy VIII-4.2: The City should continue to cooperate with the Fire Protection District in the enforcement of the Uniform Fire Code.

Policy VIII-4.10.2: All new development shall meet minimum standards as outlined in the Ventura County Fire Protection District road standards and private road standards for access, circulation, and minimum road widths. Such standards shall cover but are not limited to: maximum grade, minimum turning radius, type of surface, weight capacities of bridges, vertical clearance, gates, obstructions, width, second accesses, cul-de-sacs with a maximum length of 800 feet, and turnarounds; Improvements may be imposed within or outside the boundaries of the project.

Policy VIII-4.10.3: Subject to the development review process, developments in high fire hazard areas may be required to provide a location for helicopter operations during vegetation fires and other emergencies. Helispot locations require vehicle access and water.

Policy VIII-4.10.4: Unless otherwise authorized by the Ventura County Fire Protection District, developments in high fire hazard areas shall have at least two vehicular access/exit points. Two access/exit points will be required during the project construction phase.

Goal VIII-5: The City Should Take Appropriate Actions To Reduce And Control The Use, Generation, Storage And Transport Of Hazardous Materials, Substances And Wastes, And To Minimize Accidental Exposure Of Humans And Wildlife To These Substances.

Policy VIII-5.1.1: The City should identify all producers, users, and transporters of hazardous materials substances and wastes within the City and establish a system to monitor the handling, transport, and disposal of such materials, substances and wastes.

Policy VIII-5.1.2: The City should require all businesses, public organizations, and private institutions located in the City. to file a list of the chemicals which they use with the Ventura County Fire Protection District, the City of Simi Valley Department of Public Works, and all other regulatory agencies as required by law and identify the areas where they are used or stored so that, should an emergency arise, emergency personnel will be able to respond appropriately.

Policy VIII-5.1.3: The City, in conjunction with the Ventura County Environmental Health Division (Certified Unified Program Agency [CUPA]) should continue to computerize a list of producers, users, and transporters of hazardous materials, substances and wastes within the City.

Policy VIII-5.2: The City should continue implementation and enforcement of the chemical disclosure laws (HSC Sections 25500 et seq.).

Policy VIII-5.3: The City should attempt to identify existing or previously existing hazardous waste generators or disposal sites.

Policy VIII-5.4: The City should coordinate with the Ventura County Environmental Health Division to encourage monitoring of contamination at sites that have been used for the disposal of hazardous waste. Of special concern are disposal sites that have the potential to adversely affect underground water supplies.

Policy VIII-5.9: The City should make every reasonable effort to ensure that businesses utilizing hazardous materials in the City should be located in areas which minimize risk to the public or the environment.

Policy VIII-5.10: The City should require all businesses utilizing hazardous materials in the City implement a waste minimization program which includes management measures in the following priority:

- 1. Source Reduction: Including substitution of less hazardous materials, spill prevention and control measures, proper storage and handling of chemicals and raw materials.
- 2. Recovery and Reuse: Including on-site recycling and reuse for waste streams such as solvents, oils, ethylene glycol, silver, and concentrated bath solutions.
- 3. Treatment: Including such pretreatment techniques as to render hazardous wastes non-hazardous or suitable for disposal to a public sewer.

Goal VIII-7: The City Should Implement Programs And Actions That Will Promote The Adequate Provision Of Emergency Services During Or Following A Natural Or Human Caused Emergency.

Policy VIII-7.1: The City should continue to maintain and update as needed a comprehensive emergency plan consisting of measures to be taken during and after an earthquake, flood, toxic/hazardous spill, fire or other disaster.

4.8.2 Significance Criteria

According to Appendix G of the *CEQA Guidelines*, a significant impact would occur if implementation of the project would:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.8.3 Applicant Proposed Measures

No APMs have been identified by SCE for reducing impacts from hazards or hazardous materials.

4.8.4 Impacts and Mitigation Measures

Analysis Approach

Hazards and hazardous materials impacts could result from fluids used in construction equipment, from materials used and or stored at the proposed Presidential Substation, from encountering unexpected contaminated soil during construction, and from wildfires. Potential impact thresholds are discussed below as defined by CEQA. Mitigation measures are recommended to ensure that all potentially significant impacts are reduced to less than significant.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact 4.8-1: Construction, operations, and maintenance activities would require the use of certain materials such as fuels, oils, solvents, and other chemical products that could pose a potential hazard to the public or the environment through routine transport and use or accidental release. *Less than significant with mitigation* (Class II)

Construction

During proposed Presidential Substation project construction activities, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc., would be used to fuel and maintain vehicles and motorized equipment. An accidental spill of any of these substances could impact water and/or groundwater quality. As with any liquid, during handling and transfer from one container to another, the potential for an accidental release would exist. As described in section 2.7.2 of Chapter 2, "Project Description", SCE would present the Worker Environmental Awareness Plan to all construction workers prior to commencing construction activities. This training program would emphasize site-specific physical conditions to improve hazard prevention, and would include a review of the Health and Safety Plan and the Hazardous Substance Control and Emergency Response Plan. Depending on the relative hazard of the material, if a spill were to occur of significant quantity, the accidental release could pose a hazard to construction workers, the public, as well as the environment. Although construction activities would involve use, storage, disposal, and/or transport of limited quantities of hazardous materials, impacts related to an inadvertent release of hazardous materials would be potentially significant. Implementation of Mitigation Measures 4.8-1a through 4.8-1d (see below) would reduce this impact to a less-than-significant level.

The existing wood poles removed for the proposed Presidential Substation project during construction would be: 1) reused by SCE, 2) returned to the manufacturer, 3) disposed of in a Class I hazardous waste landfill, or 4) disposed of in the lined portion of a RWQCB-certified municipal landfill. Soil excavated for the Proposed Presidential Project would either be used as fill or disposed of off-site at an appropriately licensed waste facility (SCE, 2008).

Operations and Maintenance

Limited quantities of hazardous materials such as fuels, lubricants, and cleaning solvents would be used to operate and maintain electric subtransmission infrastructure at the proposed Presidential Substation and along the proposed subtransmission alignment. Improper storage, use, handling, or accidental spilling of such materials could result in a hazard to the public or the environment. Implementation of Mitigation 4.8-1b would require development of a projectspecific hazardous materials management and hazardous waste management program, including a Hazardous Substance Control and Emergency Response. In addition, Mitigation Measure 4.8-1e would require SCE to develop a Hazardous Materials Business Plan for Presidential Substation. Implementation of these measures would ensure that impacts to the public or the environment would be mitigated to less than significant (Class II). During operations of the Proposed Project, a potential would exist that a transformer could fail, resulting in a spill of mineral oil. However, the proposed Presidential Substation would meet federal SPCC requirements, as outlined in Title 40 of CFR, Part 112. Clean up and disposal of spills would be conducted pursuant to Title 40 of the CFR, Part 12. Pursuant to USEPA requirements, SCE would inspect the equipment and any required spill containment facilities on a monthly basis. Implementation of the SPCC requirements described above would ensure that potential impacts related to a transformer malfunction oil spill would be less than significant (Class III).

Mitigation Measure 4.8-1a: SCE and/or its contractors shall implement BMPs including but not limited to the following:

- Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction;
- Avoid overtopping construction and maintenance equipment fuel gas tanks;
- Use tarps and adsorbent pads under vehicles when refueling to contain and capture any spilled fuel;
- During routine maintenance of construction and operations equipment, properly contain and remove grease and oils; and
- Properly dispose of discarded containers of fuels and other chemicals.

Mitigation Measure 4.8-1b: SCE and/or its contractors shall prepare a Hazardous Substance Control and Emergency Response Plan and implement it during construction, operations, and maintenance to ensure compliance with all applicable federal, State, and local laws and guidelines regarding the handling of hazardous materials. The plan shall prescribe hazardous material handling procedures to reduce the potential for a spill during construction, or exposure of the workers or public to hazardous materials. The plan shall also include a discussion of appropriate response actions in the event that hazardous materials are released or encountered during excavation activities. The plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities.

Hazardous Materials and Hazardous Waste Handling: A project operations-specific hazardous materials management and hazardous waste management program shall be developed prior to operations of proposed Presidential Substation project. The program shall outline proper hazardous materials use, storage, and disposal requirements, as well as hazardous waste management procedures. The program shall identify types of hazardous materials to be used at the proposed Presidential Substation project and the types of wastes that would be generated. All project personnel shall be provided with project-specific training. This program shall be developed to ensure that all hazardous materials and wastes are handled in a safe and environmentally sound manner. Employees handling wastes would receive hazardous materials training and shall be trained in hazardous waste procedures, spill contingencies, waste minimization procedures and Treatment, Storage, and Disposal Facility training in accordance with OSHA Hazard Communication Standard.

- *Transport of Hazardous Materials:* Containers used to store hazardous materials shall be properly labeled and kept in good condition. Written procedures for the transport of hazardous materials used shall be established in accordance with U.S. Department of Transportation and Caltrans regulations. A qualified transporter shall be selected to comply with U.S. Department of Transportation and Caltrans regulations.
- *Emergency Release Response Procedures:* An Operations Emergency Response Plan detailing responses to releases of hazardous materials would be developed prior to Substation operational activities. It would prescribe hazardous materials handling procedures for reducing the potential for a spill and would include an emergency response program to ensure quick and safe cleanup of accidental spills. All hazardous materials spills or threatened release, including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of the quantity spilled, would be immediately reported to the applicable agencies if the spill enters a storm drain, if the spill migrates from the site, or if the spill causes injury to a person or threatens injury to public health. The plan shall identify and make all personnel aware of the local, State, and federal emergency response reporting guidelines.

Mitigation Measure 4.8-1c: SCE and/or its contractors shall prepare and implement a Health and Safety Plan to ensure the health and safety of construction workers and the public during construction, operations, and maintenance. The plan shall include information on the appropriate personal protective equipment to be used during construction, operations, and maintenance. The plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities.

Mitigation Measure 4.8-1d: SCE and/or its contractors shall ensure that oil-absorbent material, tarps, and storage drums shall be used to contain and control any minor releases. Emergency spill supplies and equipment shall be kept at the project staging areas and adjacent to all areas of work, and shall be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials shall be provided in the project's Hazardous Substance Control and Emergency Response Plan (see Mitigation Measure 4.8-1b), which shall be implemented during construction operations, and maintenance.

Mitigation Measure 4.8-1e: SCE shall prepare and submit a Hazardous Materials Business Plan for the proposed Presidential Substation project. The required documentation shall be submitted to the Ventura County Department of Environmental Health and the CPUC. The Hazardous Materials Business Plan would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment.

Significance after Mitigation: Less than Significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Impact 4.8-2: Project activities could release previously unidentified hazardous materials into the environment. *Less than significant with mitigation* (Class II)

It is not anticipated that construction or operation of the Proposed Project would create a significant hazard to the public due to project upset or accidental release of hazardous materials into the environment. Accidental releases of hazardous materials routinely used during construction activities are addressed under Impact 4.8-1, above. No existing contamination has been identified in the immediate vicinity of the Proposed Project. The potential mobilization of hazardous materials at unidentified release sites would be relatively low; however, the potential does exist. Pursuant to Mitigation Measure 4.8-1c (above), SCE would implement appropriate safety measures to ensure the safety of construction workers. In addition, implementation of Mitigation Measure 4.8-2 (below), which requires provisions to be implemented if any subsurface hazardous materials are identified during construction, would ensure that potential impacts associated with mobilizing hazardous materials into the environment at previously unidentified release sites would be less than significant (Class II). For mitigation to reduce impacts related to potential existing contaminated groundwater, refer to Impact 4.9-2 in Section 4.9, *Hydrology and Water Quality*.

Mitigation Measure 4.8-2: SCE's Hazardous Substance Control and Emergency Response Plan (as required under Mitigation Measure 4.8-1b) shall include provisions that would be implemented if any subsurface hazardous materials are encountered during construction. Provisions outlined in the plan shall include immediately stopping work in the contaminated area and contacting appropriate resource agencies, including the CPUC designated monitor, upon discovery of subsurface hazardous materials. The plan shall include the phone numbers local and State agencies and primary, secondary, and final cleanup procedures. The Hazardous Substance Control and Emergency Response Construction Plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities.

Significance after Mitigation: Less than Significant.

c) Produce hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school or daycare facility.

Impact 4.8-3: Project activities could release hazardous materials within the vicinity of an existing day care facility. *Less than significant with mitigation* (Class II)

No schools are located within a quarter mile of any component of the Proposed Project; however, Tutor Time Childcare/Learning Center is approximately 300 feet northeast of the proposed Presidential Substation site. Construction, operation, and maintenance activities associated with the proposed Presidential Substation project would not be expected to result in releases of hazardous emissions, substances, or waste that might impact the Tutor Time Childcare/Learning Center because SCE and/or its contractors would be required to adhere to Mitigation Measures 4.8-1a through 4.8-1e and 4.8-2, (see above), which include the development and implementation of hazardous materials best management practices for construction activities, as well as for handling, transport, and release response during operations, development and implementation of a Hazardous Materials Business Plan, and a Hazardous Substance Control and Emergency Response Plan. With implementation of Mitigation Measures 4.8-1a through 4.8-1e and 4.8-2, the Proposed Project would result in less than significant impacts to nearby schools (Class II).

Mitigation Measure 4.8-3: Implement Mitigation Measures 4.8-1a through 4.8-1e, and 4.8-2.

Significance after Mitigation: Less than Significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

The Phase I Environmental Assessment Report and associated regulatory agency database list searches conducted for the Proposed Project did not reveal any active hazardous materials sites at or in the vicinity of the proposed Presidential Substation project. Therefore, the Proposed Presidential Substation project would result in a hazard to the public or the environment related to being located on a site that is included on a list of hazardous materials sites (No Impact).

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

No general aviation airports are located within 2 miles of the Proposed Project. The closest airport is Oxnard Airport, located approximately 22 miles from the proposed Presidential Substation site; therefore, no impact would occur (No Impact).

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

Impact 4.8-4: The Proposed Project could result in a safety hazard for people working in the project area because a nearby private airstrip. *Less than significant with mitigation* (Class II)

As discussed in the setting, there are two known private airstrips located within 2 miles of the Proposed Project corridor: a helicopter pad at the Ventura County Sheriff's East County Substation approximately 1,000 feet from the proposed subtransmission alignment, and a small airstrip in the

Tierra Rejada Valley is approximately 1,200 feet from the proposed subtransmission alignment. Existing 43-foot tall wood poles in the vicinity of the helicopter pad would be replaced with tubular steel poles (TSPs) that would be up to 85 feet tall and existing wood poles in the vicinity of the Tierra Rejada Valley airstrip that are between 34 and 39 feet tall would be replaced with light weight steel (LWS) poles that would be up to 70 feet tall. Although the proposed new poles and subtransmission line conductors would replace existing poles and conductor in existing utility rights-of-way, the proposed new poles would be nearly double the height of the existing poles. Therefore, without previous knowledge of the change in pole heights, the Proposed Project could represent a potentially significant increased safety hazard to pilots of aircraft that use the helicopter pad and the landing strip. To ensure pilot notification of the proposed new subtransmission line and poles, the following mitigation measure shall be implemented.

Mitigation Measure 4.8-4: SCE shall provide written notification to the Ventura County Sheriff Department and the land owner of the Tierra Rejada Valley landing strip stating when the new subtransmission line and poles would be erected. SCE shall also provide the Sheriff Department and the landing strip owner with recent aerial photos or topographic maps clearly showing the location of the new lines and poles. The photos or maps shall also indicate the heights of the poles and conductors. SCE shall provide documentation of compliance to the CPUC.

Significance after Mitigation: Less than Significant.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Impact 4.8-5: Construction of the Proposed Project could interfere with an emergency response or evacuation plan. *Less than significant with mitigation* (Class II)

Several private and public roadways, including Sunset Valley Road, Moorpark Road, and Madera Road that would be crossed by the Proposed Presidential Substation project would likely need to be temporarily closed during subtransmission line stringing activities. These roadways could be used by people evacuating the area during an emergency. Ventura County administers emergency response through the county CUPA, the county EMS, and the Countywide Emergency Response Plan, which is not available on-line at the time of the writing of this document. Because this document was not available for consultation, this analysis assumed a conservative approach and determined that this impact was less than significant with mitigation. Implementation of Mitigation Measure 4.15-1b requires SCE and/or its contractors to coordinate all construction activities with emergency service providers in and along the proposed subtransmission alignment to minimize disruption to emergency vehicle access (see Section 4.15, *Transportation and Traffic*). Implementation of this measure would ensure that potential impacts associated with an interference with an emergency response or evacuation would be mitigated to less than significant levels.

Mitigation Measure 4.8-5: Implement Mitigation Measures 4.15-1b.

Significance after Mitigation: Less than Significant.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impact 4.8-6: Construction and maintenance-related activities could ignite dry vegetation and start a fire. *Less than significant with mitigation* (Class II)

The proposed Presidential Substation site and portions of the proposed subtransmission alignment are located in very high fire hazard zones. Heat or sparks from construction and/or maintenance vehicles/equipment have the potential to ignite dry vegetation and cause a fire. Therefore, depending on the time of year and location of construction and maintenance activities, a high to moderate fire hazard would likely exist during construction and maintenance of the Proposed Project.

SCE has standard protocols that are implemented when the National Weather Service issues a "Red Flag Warning," which is a warning that conditions (e.g., strong wind, low humidity, warm temperatures) favor explosive fire growth potential. These protocols include measures to address worker smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. Trained fire suppression personnel and fire suppression equipment would be established at key locations, and the personnel and equipment would be capable of responding to a fire within 15 minutes of notification. Portable communication devices (i.e., radio or mobile telephones) would be available to construction personnel. In addition, SCE participates with the California Department of Forestry and Fire Protection, California Office of Emergency Services, U.S. Forest Service, and various city and county fire agencies in the Red Flag Fire Prevention Program and complies with California Public Resources Code Sections 4292 and 4293 related to vegetation management in transmission line corridors (SCE, 2008). In addition, implementation of Mitigation Measure 4.8-6 would reduce the potentially significant wildland fire impact associated with the construction and maintenance of the Proposed Project to less than significant.

Mitigation Measure 4.8-6: SCE and/or its contractors shall have water tanks and/or water trucks sited/available at active project sites for fire protection. All construction and maintenance vehicles shall have fire suppression equipment. Construction personnel shall be required to park vehicles away from dry vegetation. Prior to construction, SCE and its contractors shall contact and coordinate with the California Department of Forestry (CalFire) and applicable local fire departments (i.e., Ventura County) to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate locations for the water tanks if water trucks are not used. SCE shall submit verification of its consultation with CalFire and the local fire departments to the CPUC.

Significance after Mitigation: Less than Significant.

Impact 4.8-7: Operation of the subtransmission lines could increase the probability of a wildfire. Less than significant (Class III)

During operations, the Proposed Project could increase the risk of wildland fires in the southern portion of the project area. Electrical lines can start a fire if an object, such as a tree limb, kite, Mylar balloon, etc., simultaneously contacts the subtransmission line conductors and a second object, such as the ground or a portion of the supporting pole; if two conductors make contact; or if dust and/or dirt builds up on insulators such that a conductive path to a portion of the tower is created. To minimize the risk of trees falling on the subtransmission line or other accidental ignition of a wildland fire from the subtransmission line, SCE would follow State vegetation and tree clearing requirements, including CPUC General Order 95, PRC S §4293.

Given proper ROW management, arcing between conductor phases is more likely than between a conductor and the ground. System component failures and accidents during maintenance activities can also cause line faults that result in arcing on subtransmission lines. Distribution and subtransmission lines are also subject to conductor-to-conductor contact, which can occur when extremely high winds force two conductors on a single pole to oscillate so excessively that they contact one another. This contact can result in arcing (sparks) that can ignite nearby vegetation.

Both distribution and transmission systems are designed to withstand high winds, and it is extremely rare for higher-voltage transmission structures to blow over. When this rare event does occur, the protection system on a subtransmission line is designed to shut off power flow in a fraction of a second. However, a fraction of a second can be enough for an energized conductor to cause sparks and ignite nearby vegetation. Distribution structure failures are also infrequent but due to their placement in narrower corridors in close proximity to trees and other tall vegetation they may be pushed down in storms by wind-blown trees.

The risk of ignitions and the risk of damage from a Proposed Project-related ignition are low, and as mentioned above, SCE would be required to implement State vegetation and tree clearing requirements, including CPUC General Order 95, PRC§4293. Also, SCE would inspect all components of the proposed subtransmission line at least annually for corrosion, equipment misalignment, loose fittings, and other common mechanical problems. Consequently, implementation of the Proposed Project would not result in a significant risk of loss, injury, or death involving wildland fires; therefore, operational impacts would be less than significant.

Mitigation: None required.

4.8.6 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore, no hazards or hazardous materials related impacts would occur (No Impact).

Alternative Subtransmission Alignment 1

Alternative Subtransmission Alignment 1 has a similar geographic setting to the proposed subtransmission alignment. Similar to the Proposed Project, construction activities associated with Alternative Subtransmission Alignment 1 would require mitigation to ensure that impacts associated with the routine use of hazardous materials, accidental release of hazardous materials, the release and mobilization of previously unidentified residual contamination, interference with an adopted emergency response plan, and fire hazards would be less than significant. Therefore, implementation of Mitigation Measures 4.8-1a through 4.8-1d, 4.8-2a, 4.8-2b, and 4.8-3 through 4.8-7, would reduce impacts from Alternative Subtransmission Alignment 1 to less than significant (Class II). Under Alternative Subtransmission Alignment 1, these impacts would be the same as the Proposed Project.

There are no general aviation airports or airstrips located within 2 miles of Alternative Subtransmission Alignment 1; therefore, as with the Proposed Project, no impacts would occur under Alternative Subtransmission Alignment 1 (No Impact).

Alternative Subtransmission Alignment 2

Unlike the proposed subtransmission alignment, Alternative Subtransmission Alignment 2 is entirely adjacent to existing roadways, but this alternative subtransmission alignment has a similar geographic setting to the proposed subtransmission alignment. Construction-related impacts associated with this alternative subtransmission alignment would be similar to those for the proposed subtransmission alignment. The Phase 1 Environmental Site Assessment Report did not survey this alternative for hazard impacts. However, based on the land uses in the project vicinity, the mitigation measures for the Proposed Project would be applicable to this alternative would reduce potential impacts to less than significant on Alternative Subtransmission Alignment 2. Alternative Subtransmission Alignment 2 would result in similar impacts as the Proposed Project.

Alternative Subtransmission Alignment 3

Alternative Subtransmission Alignment 3 is in a very similar location to the proposed subtransmission alignment, except the underground portion of Alignment 3 does not follow Read Road. Construction and operation impacts associated with this alternative would be similar to the Proposed Project. However, no pole replacement or construction would be required between the intersection of Sunset Valley Road and Read Road and the proposed Presidential Substation project.

Construction of access roads and below grade construction would comply with applicable safety laws, and the Proposed Project mitigation measures would be applicable to Alternative Subtransmission Alignment 3. Therefore, Alternative Subtransmission Alignment 3 would result in similar impacts as the proposed Presidential Substation project.

Alternative Substation Site B

Alternative Substation Site B is located within a similar geographic setting to that of the Proposed Project. The parcel is presently owned by the City of Simi Valley and previously housed the Ventura County Sheriff's Department. The Parcel contains several abandoned concrete block buildings and structures, a garage, formerly contained four UFSTs, and parking areas. Previous contamination at this site has been investigated and closed. Therefore, hazard impacts during construction of this site are anticipated to be less than significant. Operation-related impacts associated with this alternative would be similar to the Proposed Project. Alternative Substation Site B would result in similar impacts as the Proposed Project.

System Alternative B

The System Alternative B would not require the construction of a new substation and associated subtransmission lines. Installing larger transformers could require the replacement of some existing distribution equipment located inside and outside of the substation footprint. Additional 16 kV circuits may be required at some locations or existing 16 kV get-away equipment may need to be upgraded. Construction and operation of this equipment would not result in hazard impacts. Because the footprint of the System Alternative B is less than the Proposed Project and contains existing infrastructure, construction and operational impacts would be less than the Proposed Project. The two existing LUST sites currently undergoing remediation would not affect construction and operation of this alternative because this alternative would not require grading or subsurface construction, and because this alternative is not located directly adjunct to either of these open cases.

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4.9 Hydrology and Water Quality

4.9.1 Setting

This section discusses the existing environmental and regulatory setting of the Proposed Project and alternatives, identifies potential impacts related to construction, operation and maintenance of the Proposed Project and alternatives, and proposes mitigation measures for those impacts determined to be significant. Setting information presented in this section was compiled from: the PEA (SCE, 2008), peer-reviewed scientific literature, resource agency websites and databases, and Geographic Information System (GIS) data.

Environmental Setting

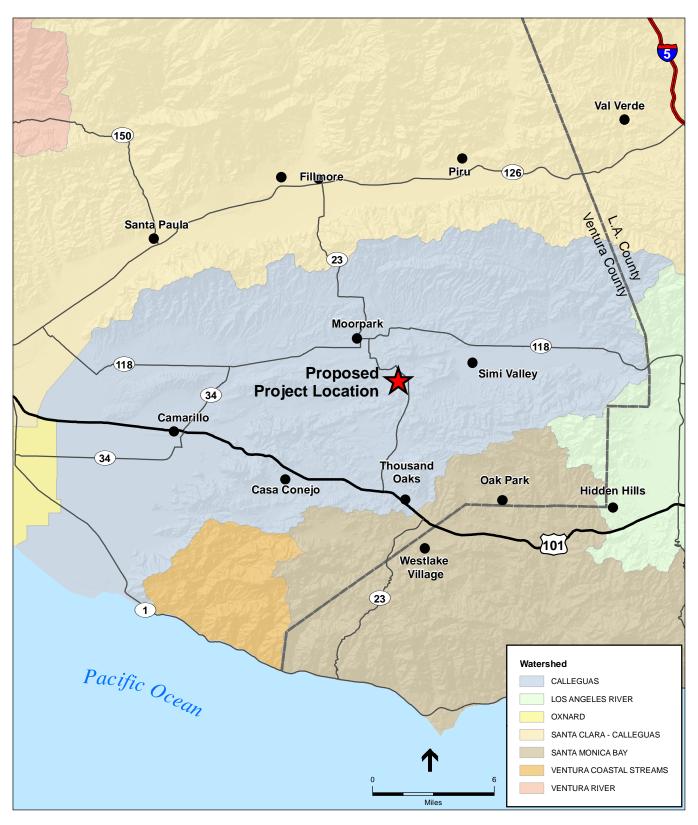
Regional Setting and Climate

The Proposed Project is located in the northeastern portion of the City of Thousand Oaks and unincorporated Ventura County, near the jurisdictional boundary of the City of Simi Valley California (see Chapter 2, *Project Description*, Figure 2-1). The Proposed Project is located in a region characterized by an east/west-trending sequence of ridges and valleys within the Ventura Basin, between the Santa Ynez and the Santa Monica Mountains (SCE, 2008; USACE, 2003). The Proposed Project lies entirely within the Calleguas Creek watershed (**Figure 4.9-1**).

The Calleguas Creek watershed is characterized by a temperate, Mediterranean climate regime, with mild temperatures and little variation in temperature extremes. The summers are typically long and dry, with rain seldom occurring in May through August, and the winters are generally short and wet (VCWPD, 2003). Nearly all precipitation occurs during the months of December through March. If the fall months are wet, typically the winter following will be drier than normal (VCWPD, 2003). Mean annual precipitation is between 12 inches on the Oxnard Plain to 21 inches in the higher elevations. Major winter storms generally originate over the Pacific Ocean and often last several days, and are accompanied by heavy precipitation (VCWPD, 2003). Dry periods can be considerable and may extend over many months, or even years (USACE, 2003). Snow rarely occurs within the Calleguas Creek watershed. Average annual temperatures within the Calleguas Creek watershed are around 60° Fahrenheit (F), with average maximums reaching 70-80° F and an average annual minimum of approximately 40° F (USACE, 2003).

Surface Water Hydrology and Quality

The Calleguas Creek watershed covers 343 square miles of land from the Los Angeles County Line on the east to Mugu Lagoon on the west, and from the Santa Monica Mountains on the south to Oak Ridge in the north. The watershed is an elongated area with a maximum east-west length of 32 miles and a maximum north-south width of 14 miles. Elevations within the watershed range from 3,700 feet in the upper watershed to sea level at the outlet to the Pacific Ocean at Mugu Lagoon (USACE, 2003). Approximately half of the drainage area is mountainous, with steep rocky ridges and numerous canyons. The remaining half consists of rolling hills with well defined stream courses and relatively flat valley areas. The surface waters are primarily arroyos and



Presidential Substation Project . 207584.02 Figure 4.9-1 Regional Watershed Map

SOURCE: SCE, 2010; ESRI, 2009; Calwater 2.2.1, 2004

creeks that have historically carried storm flows and post-storm flows from the upper watershed down to the alluvial valleys and the southeastern portion of the Oxnard Plain (SCE, 2008). Numerous small tributaries draining the mountainous portions of the watershed flow into Calleguas Creek in the upper two-thirds of the watershed. Conejo Creek and Revolon Slough, two major tributaries, enter Calleguas Creek in the lower one-third of the watershed. Calleguas Creek is also known as Arroyo Las Posas and Arroyo Simi in the middle and upper reaches respectively (USACE, 2003). Extensive urban development, farmland conversion, and the development of orchards on steep slopes have altered the geomorphology of the watershed area and have led to accelerated erosion rates (USACE, 2003). Water now flows from Calleguas Creek into Mugu Lagoon year round due to urban runoff and discharges from waste water treatment plants (USACE, 2003). However, the volume and peak of this flow are negligible compared to runoff generated during storm events (USACE, 2003).

Runoff within the watershed from storm events occurs during and immediately following rainfall. Stream flow increases rapidly in response to effective rainfall. Undeveloped areas of the Calleguas Creek watershed comprise approximately 39 percent of the total area where some of the rainfall is intercepted by vegetation and evaporates, and some percolates into the ground resulting in relatively minor amounts of storm runoff except in very large storms (VCWPD, 2003). High intensity rainfall, in combination with the effects of sparse vegetation, possible denudation by fire, and steep gradients in the upper watershed, result in intense, sometimes sediment laden floods. These high-velocity flows generally produce channel scouring on unimproved channel reaches. Deposition of the sediment being transported in storm flow occurs in lower Calleguas Creek as stream gradients become less steep (USACE, 2003).

Urbanization within valley areas tends to make the watershed more responsive to rainfall in these locations. Runoff from urban areas in the watershed is characterized by high flood peaks of short duration that result from high-intensity rainfall on areas with a high percentage of impervious cover. Rainfall occurring over an urbanized area of the watershed will typically generate higher peak discharges with a shorter peak time and a greater total volume than the natural watershed lands (USACE, 2003). The major drainage systems of the Calleguas Creek watershed that are proximate to the project area are described further below.

Arroyo Simi

Arroyo Simi is the longest of the major drainages within the Calleguas Creek watershed and flows through Simi Valley. The City of Simi Valley is located in the southeastern portion of Ventura County immediately adjacent to Los Angeles County. The valley is defined by the Santa Susanna Mountains on the north and east and by the Simi Hills on the south. The Santa Susanna Mountains separate the Simi Valley from the Santa Clara River Valley. The Simi Hills separate the valley from the City of Thousand Oaks to the southwest, and the Moorpark Sphere of Influence separates the western limit.

Arroyo Simi drains from the extreme limits of the watershed in the east and northeast, then westerly through the Las Posas Valley (as Arroyo Las Posas) to the Oxnard Plain (as Calleguas Creek), and finally into the Pacific Ocean through Mugu Lagoon (SCE, 2008). Tributaries to Arroyo Simi from

the Santa Susanna Mountains on the north are, from west to east, Alamos Canyon, Brea Canyon, North Simi Drain, Dry Canyon, Tapo Canyon, Chivo Canyon and Las Llajas Canyon. Canyons draining the Simi Hills from the south are Sycamore Canyon, Bus Canyon, Erringer Road Drain, Runkle Canyon, Meier Canyon and finally Black Canyon in Santa Susanna area (VCWPD, 2003).

Arroyo Santa Rosa

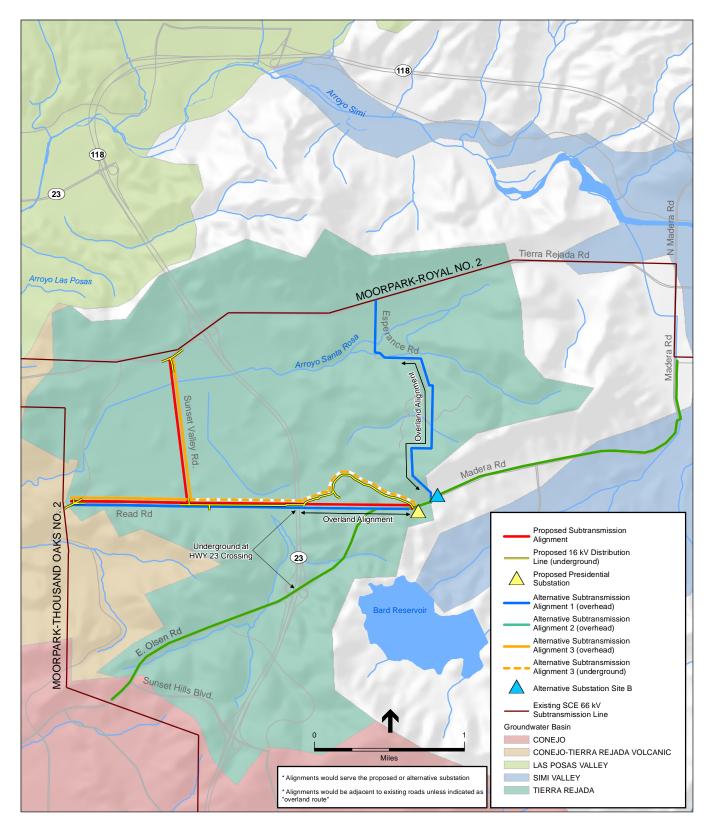
The Santa Rosa Valley is located approximately 6 miles east of the City of Camarillo. It is limited on the north by Las Posas Hills, on the south by the Mountclef Ridge, on the east by the Tierra Rejada Valley upstream of Hwy 23, and on the west by the original grant line of Rancho Calleguas. The Arroyo Santa Rosa headwaters begin in the Tierra Rejada Valley upstream of Hwy 23 and traverse in a general east to west direction to the confluence with Conejo Creek. Arroyo Santa Rosa flows directly through the project area, passing under the proposed subtransmission alignment on Sunset Valley Road (**Figure 4.9-2**).

Arroyo Conejo

Thousand Oaks is situated primarily within the watershed of Arroyo Conejo. The developed portions of the City are situated primarily on the Conejo Valley floor and on slopes less than 25 percent. The major drainage course through the City is Arroyo Conejo. From Thousand Oaks, Arroyo Conejo flows northerly through Hill Canyon into the Santa Rosa Valley. After exiting Hill Canyon, Arroyo Conejo merges with Arroyo Santa Rosa and becomes Conejo Creek (Bookman-Edmonston Engineering, 2002). The creek then flows to the west out of the Santa Rosa Valley and into Pleasant Valley towards a confluence with Calleguas Creek approximately 5.5 miles north of Mugu Lagoon (Bookman-Edmonston Engineering, 2002). Major tributaries going from west to east include South Branch Arroyo Conejo and North Fork Arroyo Conejo. Each of these main tributaries contain large sub-watersheds. Included in South Branch Arroyo Conejo is Conejo Mountain Creek, Newbury Park Drain Numbers One and Newbury Park Drain Number Two (VCWPD, 2003).

Surface Water Quality

The Los Angeles Regional Water Quality Control Board (LARWQCB) is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within major portions of Los Angeles and Ventura Counties, including the Calleguas Creek watershed. A large portion of the surface waters within the watershed are impaired by one or more water quality constituents (CCWMP, 2004). A major portion of this degradation appears to be from nonpoint sources. Nonpoint source pollutants, typically of diffuse origin, can be mobilized and transported to receiving water bodies in sudden pulses and large quantities by storm and irrigation flows within the watershed. Possible sources of nonpoint source pollution include over-application of nitrogen fertilizers and irrigation water, sedimentation and the leaching of salts, pesticides, and herbicides (CCWMP, 2004). The use of excessive irrigation water or the effect of precipitation hitting bare ground increases erosion, sediment transport and levels of total dissolved solids. Excessive irrigation also causes soil constituents and minerals to leach out of the soil. This has been cited as one of the causes for the high levels of sodium, calcium, magnesium and sulfate found within the watershed (CCWMP, 2004).



SOURCE: SCE, 2010; NHD, 2010; DWR, 2006

 Presidential Substation Project . 207584.02
 Figure 4.9-2
 Groundwater Basins and Drainages in the Project Vicinity 4.9 Hydrology and Water Quality

Applicable water quality standards are identified within the *Water Quality Control Plan Los Angeles Region* (Basin Plan) (LARWQCB, 1995). Water quality is assessed on a biannual basis and impairments are listed on the State of California List of Impaired Water Quality Segments (i.e., the 303(d) list). The Regulatory Setting (below) lists water quality objectives for pollutants appearing on the 303(d) list of impaired water bodies in the Calleguas Creek watershed for surface waters within the vicinity of the Proposed Project. According to the 303(d) List, approximately 344 acres of Mugu Lagoon and approximately 118 miles of streams within the Calleguas, Conejo and Revolon Slough system are impaired for water quality (CCWMP, 2004). The majority of these listings (64) occur within the Historic Pesticides/PCBs category, followed by Salts, Nutrients, Toxicity, Sedimentation, Bacteria, Metals, Trash, and Organophosphate Pesticides (CCWMP, 2004). In addition, the preparation of a chloride Total Maximum Daily Load (TMDL) in the Calleguas Creek watershed required the quantification of salt sources, among which was salts imported with water and urban uses such as water softeners (CCWMP, 2004). In recent years, studies have indicated that in most urbanized areas, urban storm water runoff is one of the most significant sources of water pollution (CCWMP, 2004).

Groundwater Hydrology and Groundwater Quality

The Calleguas Creek watershed includes several significant groundwater basins (CCWMP, 2004). Two groundwater basins underlie the area of the Proposed Project and its alternatives: the Tierra Rejada Groundwater Basin (Tierra Rejada Basin) and the Simi Valley Groundwater Basin (Simi Valley Basin). These groundwater basins are bounded by impermeable rock to the south and east, and faulting to the north and west. Groundwater levels in these basins are relatively stable but also experience periods of rising groundwater levels (SCE, 2008). Each of the valley areas contains water bearing geologic deposits (CCWMP, 2004). In general, each sub area has a unique upper aquifer or set of upper and lower aquifers, or is unconfined (CCWMP, 2004). Some of the sub areas also have a lower aquifer system, which can extend between basins. The characteristics of each groundwater basin within the project area are described below.

Groundwater recharge areas within the Calleguas Creek watershed are identified within the Calleguas Creek Watershed Management Plan (CCWMP, 2004). The recharge areas identified occur in certain aquifer outcrop areas and on various reaches of individual streams. The amount of recharge is predicated on the depth and width of the underlying stream channel deposits, the nature of the geologic materials comprising the stream channel deposits, the depth and nature of the geologic materials underlying the stream channel deposits, the depth to groundwater, and the quantity and timing of water flowing into the streams (CCWMP, 2004). The Proposed Project is not located within one of the identified significant groundwater recharge areas of the Calleguas Creek watershed (CCWMP, 2004).

Tierra Rejada Groundwater Basin

Most of the project footprint, including the proposed subtransmission alignment and the proposed Presidential Substation, overlies the Tierra Rejada Basin. The Tierra Rejada Basin is near the headwaters of Arroyo Santa Rosa in southern Ventura County. The Tierra Rejada Basin is currently unmanaged. The primary water-bearing units are unconfined alluvium and the sedimentary and volcanic rocks of the Modelo, Topanga and Conejo Formations. The alluvium is only found in the center of the basin and is estimated to be only about 25 feet thick and is not a significant source of groundwater (DWR, 2004). The sedimentary and volcanic rocks can reach a combined thickness of more than 8,500 feet. Total storage capacity of this basin is estimated be approximately 39,320 acre-feet. Annual production from wells is estimated to be about 1,500 acre-feet per year (afy) and is generally used for irrigation. The Tierra Rejada Basin is replenished by percolation of rainfall to the valley floor, stream flow, and irrigation return (DWR, 2004). Percolation of effluent from septic systems and a wastewater treatment plant add a minor amount of water to the basin. Groundwater moves westward through the basin (DWR, 2004).

Groundwater level data for the Tierra Rejada Basin exhibit typical, seasonal variation, but also highlight broader, longer-term trends. Most hydrographs of wells monitored in the basin display a marked rise in water levels since the 1970s, with some hydrographs indicating more than 100 feet of rise. Most hydrographs show 15 to 20 feet of annual variation about a stable mean water level between 1995 and 2001 (DWR, 2004). Within the Tierra Rejada Basin, groundwater elevations are typically at their highest in the late winter and early spring. Well data for the northern portion of the project area (i.e., within approximately 0.5 mile of the Sunset Valley Road and Tierra Rejada Road intersection) (DWR, 2009a; DWR, 2009b) indicate that the depth of the water table generally ranges from approximately 50 feet bgs (e.g., in the spring) to about 110 feet bgs (e.g., in late fall or early winter). Yet, in some areas the range could be as shallow as 15 to 35 feet bgs (e.g., within the southern portion of the Tierra Rejada Basin and project area) (DWR, 2009c) (Figure 4.9-2).

Groundwater in this basin is characterized as magnesium-calcium bicarbonate (DWR, 2004), though the basin is also reported to contain calcium, magnesium and sodium in roughly equal amounts, with bicarbonate and sulfate as dominate anions (DWR, 2004). With respect to total dissolved solids (TDS) and nitrate (NO_3) , the groundwater quality of the Tierra Rejada Basin is generally poor. High TDS and nitrate concentrations in excess of the Basin Plan water quality objectives occur locally throughout the basin. In 1996, the maximum TDS concentration was 930 milligrams per liter (mg/L) and the maximum nitrate concentration was 16 mg/L (DWR, 2004). Water sampled from one public supply well in the basin had an average TDS content of 619 mg/L (DWR, 2004). The Ventura County Watershed Protection District (VCWPD) (2008) reported sample results for ten groundwater wells within the Tierra Rejada Basin; six wells had measured TDS concentrations in excess of the Basin Plan groundwater quality standard (700 mg/L), four of which also had measured TDS concentrations in excess of the Basin Plan surface water quality objective (850 mg/L). Further, four of the wells sampled had nitrate concentrations in excess of the Basin Plan water quality standard for surface water and groundwater (45 mg/L) (VCWPD, 2008); all four of these wells are located within approximately .25 mile of Sunset Valley Road, within the project area.¹

¹ According to the map (Figure 3-26) presented in the 2008 Groundwater Section Annual Report (VCWPD, 2008).

4.9 Hydrology and Water Quality

Simi Valley Groundwater Basin

A portion of the Simi Valley Groundwater Basin (Simi Valley Basin) overlaps the eastern extent of the project area, though no components of the Proposed Project would occur this far to the east. The Simi Valley Basin underlies the Simi Valley in southeastern Ventura County. The basin is bounded on the north and northeast by the Santa Susana Mountains and the Simi fault, and on the south and southwest by the Simi Hills. The primary water-bearing unit is unconfined alluvium, and the aquifer's maximum thickness is estimated to be approximately 730 feet (DWR, 2004). Total estimated groundwater storage is approximately 180,000 acre-feet (AF) (DWR, 2004). Percolation of direct precipitation, inflow of minor streams, minor subsurface inflow from surrounding semi-permeable formations, and irrigation return flow provide recharge to the basin (DWR, 2004). Groundwater generally moves westward through the basin following the course of Arroyo Simi (DWR, 2004). During periods of overdraft, the slope of the groundwater surface can reverse in the western part of the basin and groundwater may flow in an easterly direction. Hydrographs of wells in the Simi Valley Basin show that water levels have typically remained the same or risen since 1980.

In the Simi Valley groundwater basin, groundwater storage has increased significantly in the last several decades, necessitating dewatering operations in order to protect development in the western portion of the City of Simi Valley (CCWMP, 2004). This increase is due to a combination of an overall decrease in agricultural use of groundwater and the availability of imported water that has supplemented Simi Valley groundwater, but increased the total input volume of water to the basin (CCWMP, 2004).

Based upon data from public supply wells between 1990 and 1998, the TDS of the groundwater within the Simi Valley Basin ranges from about 580 mg/L to 820 mg/L (MWD, 2007). According to DWR (2004), there are some problems with VOCs in shallower portions of the basin and TDS concentrations can reach up to 1,580 mg/L. Groundwater from the Simi Valley Basin is generally not utilized for municipal supply.

Flooding

Flooding within the project area (e.g., near the City of Thousands Oaks) is controlled primarily by Arroyo Santa Rosa Creek, within the Calleguas Creek watershed (Figure 4.9-2). Historically, flood flows in the Calleguas Creek watershed were able to leave the highlands and spread across the Oxnard Plain, lose energy, and deposit sediment, which in turn created the rich agricultural lands in that area. Presently, much of the Oxnard floodplain is used for year-round agricultural activities and significant portions of Calleguas Creek have been channelized to convey larger flows more efficiently and rapidly. Flood management in the Calleguas Creek watershed is administered by the VCWPD. Activities administered by the VCWPD include land use planning and channel maintenance (County of Ventura, 2008). Development in the Calleguas Creek watershed has increased peak flows in these channels, resulting in semi-regular flood events. The Calleguas Creek watershed experienced major storms and flooding in 1918, 1938, 1943, 1969, 1978, 1980, and 1983 (USACE, 2003). The Federal Emergency Management Agency (FEMA) is responsible for mapping areas subject to flooding during a 100-year flood event (i.e., one percent chance of occurring in a given year). The Ventura County flood zones are mapped and are

available in digital format (FEMA, 1996) (Figure 4.9-2). These maps show that the proposed subtransmission alignment would pass through the 100-year floodplain.

Regulatory Setting

Federal and State Water Quality Policies

The statutes that govern the activities under the Proposed Project that may affect water quality are the federal CWA (33 U.S.C. §1251) and the Porter-Cologne Water Quality Control Act (Porter-Cologne) (Water Code, §13000 et seq.). These acts provide the basis for water quality regulation in the project area.

The California Legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality to the SWRCB and its nine RWQCBs. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The RWQCB adopts and implements a Water Quality Control Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code, §13240-13247). The project area is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB).

Beneficial Use and Water Quality Objectives (CWA §303)

The LARWQCB is responsible for the protection of the beneficial uses of waters within the Coastal watersheds of Ventura County and Los Angeles County. The LARWQCB uses its planning, permitting, and enforcement authority to meet this responsibility and has adopted the Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the LARWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. The existing and beneficial uses designated in the Basin Plan for the surface water bodies in or adjacent to the project area are identified in **Table 4.9-1**. The existing uses of groundwater in the vicinity of the project area, Simi Valley and Arroyo Santa Rosa groundwater basins, include: municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (LARWQCB, 1995). The Basin Plan also includes water quality objectives that are protective of the identified beneficial uses; the beneficial uses and water quality objectives collectively make-up the water quality standards for the region. **Table 4.9-2** presents selected, quantitative surface water and groundwater quality objectives relevant to the project area.

4.9 Hydrology and Water Quality

Beneficial Use	Arroyo Santa Rosa	Lake Bard (Wood Ranch Reservoir)
Municipal and Domestic Supply (MUN)	Р	Е
Agricultural Supply (AGR)		E
Industrial Service Supply (IND)		E
Industrial Process Supply (PRO)		E
Groundwater Recharge (GWR)	I	Р
Water Contact Recreation (REC 1)	I	Р
Non-Contact Water Recreation (REC 2)	I	E
Warm Freshwater Habitat (WARM)	I	E
Wildlife Habitat (WILD)	E	Е
P = Potential beneficial use E = Existing beneficial use I = Intermittent beneficial use		

TABLE 4.9-1 BENEFICIAL USES OF WATERS IN THE PROJECT AREA

TABLE 4.9-2 SELECTED WATER QUALITY OBJECTIVES

	Water Quality Objectives (mg/L)				
Watershed/Water Body	TDS	Sulfate	Chloride	Boron ^a	Nitrogen ^b
Calleguas Creek above Potrero Rd Tierra Rejada Groundwater Basin	850 700	250 250	150 100	1.0 0.5	10, 45 10, 45

^a Where naturally occurring boron results in concentrations higher than the stated objective, a site-specific objective may be determined.
 ^b The 10 mg/L objective is for Nitrate-nitrogen plus nitrite-nitrogen (NO₃-N + NO₂-N), the 45 mg/L objective is for NO₃. The groundwater and surface water objectives are the same.

SOURCE: LARWQCB, 1995

SOURCE: LABRWQCB, 1995

The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." Under CWA §303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. Arroyo Santa Rosa is listed as an impaired water body with 13 pollutants/stressors (**Table 4.9-3**). California is required to establish TMDL for each pollutant/stressor.

A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. TMDLs have been approved for 7 of the 13 pollutant/stressors in Arroyo Santa Rosa.

Name	Pollutant/Stressor	Source	Proposed or Approved TMDL Completion Date
Arroyo Santa Rosa	Ammonia	Nonpoint/Point Source	2004, approved
(Calleguas Creek	ChemA (tissue)	Nonpoint Source	2005, proposed
Reach 11) ^a	Chlordane	Source Unknown	2006, approved
,	DDT (tissue)	Nonpoint Source	2005, approved
	Dieldrin	Source Unknown	2006, approved
	Endosulfan (tissue)	Nonpoint Source	2005, proposed
	Fecal Coliform	Nonpoint/Point Source	2006, proposed
	PCBs (Polychlorinated biphenyls)	Source Unknown	2006, approved
	Sedimentation/Siltation	Agriculture, Natural Sources	2005, proposed
	Sulfates	Nonpoint/Point Source	2019, proposed
	Total Dissolved Solids	Nonpoint/Point Source	2019, proposed
	Toxaphene (tissue & sediment)	Nonpoint/Point Source	2005, approved
	Toxicity	Nonpoint/Point Source	2005, approved

TABLE 4.9-3 APPROVED 2006 CWA §303(D) LIST OF WATER QUALITY LIMITED SEGMENTS IN THE PROJECT AREA

Part of Conejo Creek Reach 3 on 1998 303d list

SOURCE: LARWQCB, 2006

Water Quality Certification (CWA §401)

Section 401 of the CWA requires that an applicant for any federal permit (e.g., a USACE §404 permit) obtain certification from the state that the discharge would comply with other provisions of the CWA and with state water quality standards. For example, an applicant for a permit under \$404 of the CWA must also obtain water quality certification per \$401 of the CWA. Section 404 of the CWA requires a permit from the United States Army Corps of Engineers (Corps) prior to discharging dredged or fill material into waters of the United States, unless such a discharge is exempt from CWA §404.² For the project area, the LARWQCB must provide the water quality certification required under §401 of the CWA. Water quality certification under §401 of the CWA, and the associated requirements and terms, is required in order to minimize or eliminate the potential water quality impacts associated with the action(s) requiring a federal permit.

NPDES Program (CWA §402)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National NPDES permit. The 1987 amendments to the CWA added \$402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. In November 1990, the USEPA published final regulations that also establish storm water permit application requirements for discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance. Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES Program to

² The term "waters of the United States" as defined in the Code of Federal Regulations (40 CFR 230.3[s]) includes all navigable waters and their tributaries.

address storm water discharges from construction sites that disturb land equal to or greater than 1.0 acre and less than 5.0 acres (small construction activity). The regulations also require that storm water discharges from small municipal separate storm sewer systems (MS4s) be regulated by an NPDES permit.

Ventura County MS4 Permit (LARWOCB Order R4-2010-0108). Within the purview of the MS4 permit requirements, the VCWPD, County of Ventura, and the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, and Thousand Oaks have formed the Ventura Countywide Stormwater Quality Management Program and are named as co-permittees under a revised municipal NPDES permit for storm water discharges issued by the LARWOCB (Order R4-2010-0108; Ventura County MS4 Permit).³ Under the Ventura County MS4 Permit, the co-permittees are required to administer, implement, and enforce a Storm Water Quality Management Program (SOMP) to reduce pollutants in urban runoff. The Ventura County Technical Guidance Manual for Stormwater Quality Control Measures (Ventura County TGM) (2010) provides guidance for the implementation of storm water management control measures. The Ventura County TGM has been developed to meet the Planning and Land Development requirements contained in the Ventura County MS4 Permit for new development and redevelopment projects and to facilitate successful implementation of the SQMP. Specific to post-construction runoff, a goal of the SQMP is to minimize runoff pollution typically caused by land development and protect the beneficial uses of receiving waters by limiting effective impervious area $(EIA)^4$ to no more than 5 percent of the proposed Presidential Substation footprint and retaining storm water on site (Ventura County, 2010). Within the guidelines, a process is outlined to ensure that new development and redevelopment projects comply with the SOMP and the requirements of the Ventura County MS4 Permit. This process includes screening and selection of BMPs (e.g., retention BMPs, treatment control BMPs, etc.) as appropriate.

According to the definition of new development projects, the Proposed Project would be subject to the requirements and standards set forth in the Ventura County MS4 Permit and within the guidelines (Ventura County, 2010). According to the Ventura County MS4 Permit, new development projects include all development projects equal to 1.0 acre or greater of disturbed area that add more than 10,000 square feet of impervious surface area.

Construction General Permit (SWRCB Order 2009-09-DWQ). For storm water discharges associated with construction activity in the state of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (SWRCB Order 2009-0009-DWQ; Construction General Permit) in order to avoid and

³ LARWQCB Order R4-2010-0108, NPDES Permit No. CAS004002, Waste Discharge Requirements for Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein.

⁴ Effective Impervious Area (EIA) refers to that portion of the surface area that is hydrologically connected via sheet flow over a hardened conveyance of impervious surface without any intervening medium to mitigate flow volume (Ventura County TGM, 2010).

minimize water quality impacts attributable to such activities.⁵ The Construction General Permit applies to all projects where construction activity disturbs 1.0 or more acre of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a SWPPP, which would include and specify BMPs designed to prevent pollutants from contacting storm water and keep all products of erosion from moving off-site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

For the project area, the Construction General Permit is implemented and enforced by the LARWQCB. Dischargers are required to submit a Notice of Intent (NOI) in order to, at the discretion of the SWRCB and the LARWQCB, obtain coverage under the Construction General Permit. Dischargers are responsible for notifying the relevant RWQCB of violations or incidents of non-compliance, as well as for submitting annual reports identifying deficiencies of the BMPs and how the deficiencies were corrected.

The Construction General Permit requires a risk-based permitting approach, dependent upon the likely level of risk imparted by a project. To ensure compliance and protection of water quality, the permit implements monitoring, reporting, and training requirements for management of potential storm water pollutants. The permit contains several compliance items, including: (1) mandatory BMPs to reduce erosion and sedimentation, which may include incorporation of vegetated swales, setbacks and buffers, rooftop and impervious surface disconnection, bioretention cells, rain gardens, rain cisterns, implementation of pollution/sediment/spill control plans, training, and other structural and non structural actions; (2) sampling and monitoring for non-visible pollutants; (3) effluent monitoring and annual compliance reports; (4) development and adherence to a Rain Event Action Plan; (5) requirements for the post-construction period; (6) numeric action levels and effluent limits for pH and turbidity; (7) monitoring of soil characteristics on site; and (8) mandatory training under a specific curriculum.

The Proposed Project would disturb more than 1.0 acre of soil and would thus be subject to the provisions and requirements of the General Construction Permit. SCE would submit an NOI to the SWRCB and obtain coverage under, and comply with, the General Construction Permit. As summarized previously, the preparation of a SWPPP would be required in accordance with the General Construction Permit. The SWPPP would include, but not be limited to, relevant measures, conditions, and obligations which would reduce or eliminate the impacts of construction activities on storm water and receiving water quality and quantity. Further, a sediment monitoring plan would be required as part of the SWPPP for the Proposed Project because Arroyo Santa Rosa is listed as sediment impaired, as described above (LARWQCB, 2006).

⁵ SWRCB Order 2009-0009-DWQ (as amended by SWRCB Order 2010-0014-DWQ), NPDES Permit No. CAS000002, National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (codified in the California Water Code, §13000 *et seq.*) is the basic water quality control law for California. As mentioned above, it is implemented by the SWRCB and the nine RWQCBs. The SWRCB establishes statewide policy for water quality control and provides oversight of the RWQCBs' operations. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state⁶ could cause pollution or nuisance, including impacts to public health and the environment. Evident from the preceding regulatory discussion, the Porter-Cologne Act and the CWA overlap in many respects, as the entities established by the Porter-Cologne Act are in many cases enforcing and implementing federal laws and policies. However, there are some regulatory tools that are unique to the Porter-Cologne Act.

Dredge/Fill Activities and Waste Discharge Requirements

Actions that involve, or are expected to involve, discharge of waste are subject to water quality certification under §401of the CWA (e.g., if a federal permit is being sought or granted) and/or waste discharge requirements (WDRs) under the Porter-Cologne Act. Chapter 4, Article 4 of the Porter-Cologne Act (California Water Code, §13260-13274), states that persons discharging or proposing to discharge waste that could affect the quality of waters of the state (other than into a community sewer system) shall file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States) an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as isolated wetlands), WDRs are required and are issued exclusively under state law. WDRs typically require many of the same BMPs and pollution control technologies as required by NPDES-derived permits. Further, the WDRs application process is generally the same as for CWA §401 water quality certification, though in this case it does not matter whether the particular project is subject to federal regulation.

General WDRs for Discharges to Land with a Low Threat to Water Quality. In SWRCB

Order 2003-0003-DWQ, the SWRCB adopted General Waste Discharge Requirements (General WDRs) for discharges to land that are considered to be a low threat to water quality and are of low volume with minimal pollutant concentrations.⁷ All WDRs must implement the Basin Plan and require dischargers (e.g., SCE) to comply with all applicable Basin Plan provisions and water quality objectives. The General WDRs establish minimum standards and monitoring requirements with respect to a few, specific categories of discharge, including boring waste discharge, small dewatering projects (e.g., temporary dewatering during construction excavation activity), and miscellaneous discharges such as small, inert solid waste disposal operations. The Proposed Project may require dewatering during pole installation (particularly for the TSPs), and any dewatering activity that would discharge to the land surface would need to comply with the provisions of these General WDRs (or, alternatively, SCE or its contractor would need to obtain

⁶ "Waters of the state" are defined in the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code, § 13050 (e).)

 ⁷ SWRCB Order 2003-0003-DWQ, Statewide General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality (General WDRs).

an individual WDR). Accordingly, to obtain coverage under these General WDRs and ensure compliance with the Basin Plan, SCE or its contractor would submit the following to the LARWQCB: an NOI to comply with these General WDRs, a Proposed Project map, evidence of CEQA compliance, the requisite fee, a discharge monitoring plan (DMP), and any additional information requested by the LARWQCB.⁸ As described above, locally high concentrations of TDS and nitrate within groundwater are likely to preclude the option of directing dewatering discharges to surface waters. Regional Board staff would determine whether or not coverage under the General WDRs is appropriate and, if so, would notify SCE by letter of coverage. In the event of any conflict between the provisions of the General WDRs and the Basin Plan, the more stringent provision would prevail.

WDRs for Construction Dewatering Discharges to Surface Water. In June of 2008, the LARWQCB adopted Order R4-2008-0032, which regulates discharges to surface waters of treated or untreated groundwater from dewatering operations, including those related to construction excavation, and other waste waters.⁹ As stated previously, the Proposed Project may require dewatering during pole installation (particularly for the TSPs), and any dewatering activity that would discharge to surface waters would need to comply with the provisions of these WDRs (or, alternatively, SCE or its contractor would need to obtain individual WDRs).

To be covered under this order, a discharger must demonstrate that pollutant concentrations in the discharge would not violate any applicable water quality objectives or exceed water quality criteria for specific toxic pollutants (and that there would be no reasonable potential to cause or contribute to an excursion above the criteria),¹⁰ perform a reasonable potential analysis using a representative sample of the groundwater to be discharged, and, if necessary, design and implement a treatment system for the water to be discharged. To obtain discharge authorization under this order, SCE or its contractor would submit an NOI to the Executive Officer of the LARWQCB (Executive Officer), obtain and analyze a representative sample of the groundwater to be discharged information deemed necessary by the Executive Officer. Among other things as described in the order, the NOI should include a demonstration of direct hydrologic connection and similar water chemistry between the groundwater and the receiving surface water(s), a description of BMPs for preventing degradation of water quality, and a description of the treatment system (if necessary).

Upon receipt of a completed application (e.g., NOI, requisite sampling and assessment, etc.), the Executive Officer would determine the applicability of this order to the Proposed Project and the intended discharge. If the discharge is eligible, the Executive Officer would notify SCE or its contractor that the proposed discharge is authorized under the terms and conditions of this order and prescribe an appropriate monitoring and reporting program.

⁸ Further details concerning the requirements for coverage under these General WDRs, such as the necessary contents of a DMP, can be found in the SWRCB Order implementing these General WDRs (SWRCB Order 2003-0003-DWQ; see footnote 7).

⁹ LARWQCB Order R4-2008-0032, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.

¹⁰ Specific toxic pollutants are identified in Attachment A, Attachment B, and Part V of LARWQCB Order R4-2008-0032.

Executive Order 11988

Under Executive Order 11988, FEMA is responsible for management of floodplain areas defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a 100-year floodplain. FEMA requires that local governments covered by federal flood insurance pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year floodplain.

County and Local Plans, Policies, and Regulations

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified in the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives:

2.10 Flood Hazards

2.10.1 Goals

- 1. Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards.
- 2. Design and construct appropriate surface drainage and flood control facilities as funding permits.
- 3. Prevent incompatible land uses and development within flood plains.

2.10.2 Policies

- 2. Within areas subject to flooding, the County shall require the recordation of a Notice of Flood Hazard or dedication of a flowage easement with the County Recorder for all divisions of land and discretionary permits.
- 3. Development shall be protected from a 100-year flood if built in the flood plain areas.
- 4. The design of any structures which are constructed in flood plain areas as depicted.

(County of Ventura, 2008).

Ventura County Watershed Protection District (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The Proposed Project is located within the VCWPD jurisdiction. The VCWPD was formed, in 1944, to provide for the "control and conservation of flood and storm waters and for the protection of watercourses, watersheds, public highways, life and property in the district from damage or destruction from these waters" (VCWPD, 2009). The authority of the VCWPD over its jurisdiction channels is established through a number of ordinances and policies. The primary ordinance established the VCWPD's authority and requirements to obtain permits for encroachments in jurisdictional waters and right of ways is Ventura County Ordinance FC-18. Ordinance FC-18 relates to protection and regulation of flood control facilities and watercourses. This ordinance has been amended by FC-19 through FC-23 and FC-27 (VCWPD, 1981). Additionally, the VCWPD

implements the Flood Plain Management Ordinance 3841 on behalf of the County of Ventura to ensure compliance with FEMA regulations. This includes all proposed residential and non-residential development within the 1percent annual chance base flood area (100-year floodplain). The Proposed Project includes routing subtransmission source lines through part of a 100-year floodplain, therefore some of the FEMA regulations would be applicable.

City of Thousand Oaks Municipal Code (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The City of Thousand Oaks Municipal Code (City of Thousand Oaks, 1988) that would be applicable to the Proposed Project includes:

Title 4, Public Safety, Chapter 7 – Flood Damage Prevention

Provisions for flood hazard reduction are established in §4.7.05. This section includes standards for construction for residential, non-residential, and utilities development. Section 4.7.06 outlines variance procedures for floodplain regulations. Sections 4.7.10, 4.7-11, and 4.7-12 establish additional standards.

Title 7, Chapter 3 – Grading

This chapter regulates grading & establishes grading permit requirements. A grading permit is required if any of the following criteria apply.

- Excavation is greater than 50 cubic yards, or
- Excavation is greater than 2 feet at grade, or
- Cut slope is increased to over 5 feet in height, or
- Fill is greater than 1 foot in depth or the existing terrain is 5:1 or steeper, or
- Grading obstructs or diverts a drainage course, or
- Grading (including removal & recompaction) is intended to support a structure, or
- Importing or exporting of earth.

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified in the City of Thousand Oaks General Plan would otherwise be relevant to the Proposed Project and alternatives:

Flood Hazards

Goals

- Promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas (M.C. 4-7.01).
- Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from inundation by dam failure or from disruption of domestic water supply.

Policies and Programs

- 2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction (M.C. 4-7.01)
- 3. Control the alteration of natural floodplains, stream channels and natural protective barriers which help accommodate or channel floodwaters (M.C. 4-701).
- 4. Control filling, grading, dredging and other development which may increase flood damage (M.C. 4-7.01).
- 6. Locate structure and additions outside of the 100-year floodplain unless such facilities are necessary to service existing uses and construction of these structures would not increase the hazard to life or property within or adjacent to the floodplain. Location within the floodplain shall be governed by the County Flood Plain Ordinance and Title 4, Chapter 7 of the Thousand Oaks Municipal Code and shall require certification by a registered professional demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the 100-year flood.

(City of Thousand Oaks, 2001).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goal and policy identified in the City of Simi Valley General Plan would otherwise be relevant to Alternative Alignment 2 and the Alternative Substation Site B:

Goal VIII-3: Adopt programs and promote actions that will minimize loss of life, injuries, and property damage resulting from flooding.

Water-Related Hazards

Policy VIII-3.1: Development shall be required to protect projects and downstream uses from flooding and to mitigate on-site and downstream flooding. The City should continue to require detention of significant increases in peak runoff due to development.

City of Simi Valley General Plan (1988).

4.9.2 Significance Criteria

Significance criteria, or thresholds, listed in Appendix G of the CEQA Guidelines area used to determine the significance of potential impacts due to the Proposed Project. Based on these criteria, a project would have a significant hydrology- or water quality-related effect on the environment if it would:

- a) Violate any water quality standards or waste discharge requirements.
- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

- c) Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or sedimentation on- or off-site.
- d) Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- f) Substantially degrade water quality.
- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- j) Inundation by seiche, tsunami, or mudflow.

Approach to Analysis

Reconnaissance field investigations were conducted and regional and site-specific technical documents were reviewed to identify hydrology and water quality resources that could be affected by the Proposed Project. Potential impacts on hydrologic resources and water quality during construction and operations and maintenance were determined and evaluated with respect to identified hydrologic features.

Based on the proposed construction, operation and maintenance of the various project elements and the hydrologic environment in the areas where project components would be constructed, the Proposed Project would not result in impacts related to groundwater resources, risks relating to housing within a flood zone, and inundation by seiche, tsunami, or mudflow (i.e., CEQA criteria b), e), f), g), h), i), or j)). No impact discussion is provided for these topics for the following reasons:

• Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). During installation of subsurface structures, there is a possibility that shallow groundwater would be encountered. If dewatering should occur, it would be for a short period of time and would not affect groundwater levels in the region. Operation of the Proposed Project may indirectly use groundwater (through a water agency) to maintain landscaping, but this usage is not expected to deplete groundwater supplies. The impermeable surfaces associated with the Proposed Project would be minimal, as they are limited to the footings and duct banks and do not constitute the entire Substation, and would not substantially interfere with groundwater recharge. As a result, construction, operation and

maintenance of the Proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table.

- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. The proposed Presidential Substation does not involve housing within a 100-year floodplain, therefore, there are no impacts associated with placing housing within a 100-year floodplain.
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows. The proposed Presidential Substation site is not within a FEMA designated 100-year flood hazard zone. Construction of the subtransmission source lines would occur in a 100-year flood zone; however the poles and foundations would not alter drainage patterns and do not have a large cross section that would significantly impede flood flows. Therefore, there are no impacts related to impeding or redirecting flood flows from placing structures within a 100-year flood plain.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. The Proposed Project is not located down gradient of a levee or dam. The closest dam or levee is Bard Reservoir, located in an adjacent drainage basin, and its failure would not expose people or structures associated with the Proposed Project to any risk of loss, injury or death from flooding. Therefore, there is no impact to people or structures associated with construction and operation of the Proposed Project from the risk from dam or levee failure.

These criteria are not evaluated further in this EIR.

4.9.3 Applicant Proposed Measures

No APMs have been identified by SCE to reduce Proposed Project impacts on hydrology and water quality.

4.9.4 Impacts and Mitigation Measures

This impact analysis considers the potential hydrology and water quality impacts of activities associated with the construction, operation, and maintenance of the Proposed Project.

a) Violate any water quality standards or waste discharge requirements.

Impact 4.9-1: Construction, operation and maintenance activities associated with the Proposed Project could result in increased erosion and sedimentation and/or pollutant (e.g., fuels and lubricants) loading to surface waters, which could increase turbidity, suspended solids, settleable solids, or otherwise degrade water quality. *Less than significant with mitigation* (Class II)

Construction activities associated with the Proposed Project could increase the turbidity or otherwise degrade the water quality of receiving stream channels or other surface waterways. Activities that disturb the ground near or within a stream channel (e.g., clearing and grading) could

make soils and sediments more susceptible to erosion by altering their existing structure or state. Depending on the distance and ground slope, some portion of the eroded material could eventually be delivered to a receiving stream channel or other type of waterway over a relatively short time period (e.g., during the next rain event). In this case, increased erosion rates would likely lead to increased sediment concentrations and turbidity levels in the receiving stream channel and have a potentially adverse impact on the beneficial uses identified by the LARWOCB (1995). Further, moderate increases in surface runoff from construction areas could initiate or exacerbate an erosion and sediment delivery problem. An increase in the runoff rate from a construction area may result from temporarily decreasing ground surface resistance to overland flow (e.g., clearing of native vegetation or slope grading), decreasing the infiltration capacity of the soil by means of compaction (e.g., with heavy equipment), or by increasing the velocity of runoff (e.g., concentrating flow into manmade features or into existing rills or gullies). In addition, if construction equipment or workers inadvertently release pollutants (e.g., hydraulic fluid or petroleum) on site, these compounds could be entrained by runoff and discharged into receiving channel(s) causing water quality degradation. The extent of erosion or pollution that could occur at any given construction site varies depending on soil type, vegetation/cover, and weather conditions.

Most elements of the Proposed Project that would require construction involve only short-term (i.e., within a single season) construction activities, and thus the associated potential impacts would be short-lived in nature. Actions associated with the Proposed Project that include notable construction components include site preparation and construction of the proposed Presidential Substation, access road installation, underground subtransmission conductor installation at Hwy 23, removal of old poles and installation of new poles, preparation of wire stringing sites, and development of material staging yards. Specific construction activities referenced under this potential impact include, but are not limited to, clearing and grading, excavation work, and the stockpiling of soil or sediments.

The Proposed Project would be required to adhere to a number of federal and state water quality provisions. These provisions would serve to minimize or eliminate the potential water quality impacts associated with the construction activities, and some of the operational activities and features, described above. As summarized in Chapter 2, Project Description, SCE would need to acquire the Construction General Permit from the LARWQCB in order to carry out the proposed construction activities. SCE would be required to submit an NOI to the SWRCB in order to obtain approval to carry-out construction activities under the General Construction Permit. This permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction and phase impacts related to storm water (and some non-storm water) discharges. Permit requirements would include the preparation of a SWPPP, implementation and monitoring of BMPs, implementation of best available technology (BAT) for toxic and non-conventional pollutants, implementation of best conventional technology (BCT) for conventional pollutants, and periodic submittal of performance summaries and reports to the LARWQCB. The SWPPP would apply to the Proposed Project as a whole and would include reference to the major construction areas, such as the proposed Presidential Substation and the staging areas for the underground work (i.e., beneath Hwy 23). Additionally, if a federal permit is required then the applicant would subsequently be required to also obtain water quality certification

from the LARWQCB. Also, the applicant would contact the LARWQCB and file a Report of Waste Discharge; the LARWQCB would then determine whether an issuance or a waiver of WDRs is necessary considering the permits already required for the Proposed Project.

Construction, operation and maintenance of the Proposed Project would require the limited use of hazardous materials; all hazardous materials would be stored, handled, and used in accordance with the applicable regulations. The SWPPP would provide detail of locations where hazardous materials may be stored during construction, and the protective measures, notifications, and cleanup requirements for any accidental spills or other releases of hazardous materials that could occur.

A small section of new or improved, unpaved access roads would be installed as part of the Proposed Project (see Chapter 2, *Project Description*, Figure 2-10). In general, unpaved roads (e.g., forest roads, ranch roads, etc.) commonly lead to increases in the volume of surface runoff as well as increases in erosion and sediment delivery. This is attributable to the fact that road installation tends to intercept and elongate overland flow paths and substantially reduce the infiltration capacity of soils and disturb the existing soil structure, making the soil more susceptible to erosion and entrainment by runoff. The beneficial uses of the surface water channels within the project area could be adversely affected by increased sedimentation and turbidity levels resulting from the erosion and delivery of sediment from the proposed new access roads.

The existing measures required of SCE (e.g., the Construction General Permit, water quality certification, and/or WDR) are sufficient to reduce potential construction-related water quality impacts to a less than significant level. Though, with respect to potential impacts associated with the proposed new access roads, the required measures are not necessarily sufficient. Therefore, Mitigation Measure 4.9-1 would be required to specifically address the potential water quality impacts associated with proposed new roads.

Mitigation Measure 4.9-1: For all segments of new or improved access roads that would be within 300 feet of an existing surface water channel (i.e., one that has a distinct bed and banks, including irrigation ditches where no berm/levee is currently in place) and traverse a ground slope greater than two percent, the following protective measures shall be adhered to and/or installed:¹¹

- All access roads shall be out-sloped;
- Cross-drains (road surface drainage, e.g., waterbars, rolling dips, or channel drains) shall be installed at intervals based upon the finished road slope: road slope 5 percent or less, cross-drain spacing shall be 150 feet; road slope 6 to 15 percent, cross-drain spacing shall be 100 feet; 16 to 20 percent, cross-drain spacing shall be 75 feet; and 21 to 25 percent, cross-drain spacing shall be 50 feet;
- Energy dissipation features (e.g., rock rip-rap, or a rock-filled container) shall be installed at all cross-drain outlets; and

¹¹ The mitigation measures for roads are based on measures and recommendations contained in the Handbook for Forest and Ranch Roads – A Guide for Planning, Designing, Constructing, Reconstructing, Maintaining, and Closing Wildland Roads (Weaver and Hagans, 1994).

• No new or improved road segments with finished slopes greater than 25 percent.

Significance after Mitigation: Less than Significant.

Impact 4.9-2: Dewatering during Project construction activities could release previously contaminated groundwater to surface water bodies and/or increase sediment loading to local surface water channels through overland discharge and subsequent erosion, both processes could degrade water quality in receiving surface waters. *Less than significant with mitigation* (Class II)

The proposed excavations (up to 60 feet) could encounter groundwater in select locations, in which case dewatering would be necessary. As discussed above, groundwater within the project area could be as shallow as 15 to 35 feet bgs. Where the groundwater table is relatively shallow, some groundwater seepage may occur into pole excavation or auger holes requiring dewatering on a one-time basis immediately prior to pole placement and installation.

For the Proposed Project, if dewatering is required for pole placement, it would be accomplished be setting well points around the work area which are tied to manifold and pump. The water would then be discharged to a sediment tank and, after adequate residence time for settling of sediments and other solids, subsequently discharged into the local storm drain or sewer system. However, as described above, locally high concentrations of TDS and nitrate within groundwater are likely within the project area. Concentrations of TDS and nitrate in groundwater within the Tierra Rejada Basin have been measures at levels that exceed the water quality objectives in the Basin Plan. If not treated, discharging such water directly to a storm drain and/or surface channel would likely result in a violation of existing water quality standards contained within the Basin Plan. Thus, this would preclude the option of directing dewatering discharges to surface waters (including storm drains that discharge to surface waters).

All dewatering activities, when necessary, should ultimately discharge to the land surface in the vicinity of the particular installation or construction site. These discharges should be contained, such that the water is allowed to infiltrate back into the soil and the potential for inducing erosion and subsequent sediment delivery to nearby surface waterways is eliminated. Concerning such activities, SCE shall apply and comply with the provisions of SWRCB Order 2003-0003-DWQ, including develop and submit a discharge monitoring plan.

Though the dewatering process would be temporary, yielding only a small volume of groundwater, the potential exists for such water or saturated soils to already be contaminated. Discharge (i.e., through dewatering) or displacement of contaminated water or soil, as a result of excavation related to the Proposed Project, could potentially impact the beneficial uses of surface water or groundwater identified in the Basin Plan. Mitigation Measure 4.9-2 would be required to specifically address the potential water quality impacts associated with dewatering discharge of previously contaminated groundwater, or of groundwater which exceeds existing water quality criteria or objectives for one or more constituents.

Mitigation Measure 4.9-2: Regarding dewatering activities and discharges (if necessary), the following measures shall be implemented as part of Proposed Project construction:

- If degraded soil or groundwater is encountered during excavation (e.g., there is an obvious sheen, odor, or unnatural color to the soil or groundwater), SCE and/or its contractor shall excavate, segregate, test, and dispose of degraded soil or groundwater in accordance with State hazardous waste disposal requirements.
- All dewatering activities shall, where feasible, ultimately discharge to the land surface in the vicinity of the particular installation or construction site. The discharges shall be contained, such that the water is allowed to infiltrate back into the soil (and eventually to the groundwater table) and the potential for inducing erosion and subsequent sediment delivery to nearby surface waterways is eliminated. Further, the holding tank or structure shall be protected from the introduction of pollutants (e.g., oil or fuel contamination from nearby equipment). Concerning such activities, SCE shall apply and comply with the provisions of SWRCB Order 2003-0003-DWQ, including develop and submit to the LARWQCB a discharge monitoring plan.
- If discharging to a community sewer system is feasible or necessary, SCE shall discharge to a community sewer system that flows to a wastewater treatment plant. Prior to discharging, SCE shall inform the responsible organization or municipality and present them with a description of and plan for the anticipated discharge. SCE shall comply with any specific requirements that the responsible organization or municipality may have.
- If discharging to surface waters (including to storm drains) would be necessary, SCE shall obtain and comply with the provisions of the LARWQCB Dewatering General Permit. SCE shall perform a reasonable potential analysis using a representative sample(s) of the groundwater to be discharged; this shall include analyzing the sample(s) for the constituents listed in the LARWQCB Dewatering General Permit, including TDS and nitrate. Further, the sample(s) shall be compared to the screening criteria listed in the LARWQCB Dewatering General Permit and the Basin Plan, and it shall be demonstrated that the discharge would not exceed any of the applicable water quality criteria or objectives. If necessary, SCE shall develop and submit to the LARWQCB a treatment plan and design.
- SCE shall provide to the CPUC proof of compliance with LARWQCB plans and permits prior to the commencement of construction activities.

Significance after Mitigation: Less than Significant.

c) Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or sedimentation on- or off-site.

See discussion for criterion d), below.

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

Impact 4.9-3: Installation of the proposed Presidential Substation would alter the local drainage pattern, potentially resulting in substantial on- or off-site erosion or sedimentation, and/or substantially increasing the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. *Less than significant with mitigation* (Class II)

Construction and operation of the proposed Presidential Substation would require vegetation removal, installation of impervious surfaces and the associated Substation components, and modifications to the existing, local drainage characteristics. These proposed changes could increase the volume and rate of storm runoff from the proposed Presidential Substation site and subsequently lead to an increase in local hill slope erosion, downstream channel erosion, and/or downstream flooding. Impervious surfaces essentially eliminate the process of infiltration, allowing a larger volume of precipitation to be transformed to surface runoff. Further, the proposed drainage modifications (e.g., the proposed concrete swales and retaining walls) would convey surface runoff more rapidly and efficiently. The increase in impervious surfaces, coupled with the proposed drainage modifications, could result in earlier and larger peak flow rates during storm events.

Though each project area or watershed are ultimately unique in their response to perturbation, development and land-use conversion typically bring about a common suite of potential hydrology and water quality issues, stemming primarily from the creation and addition of impervious surface areas. The MS4 permits promulgated by the RWQCBs in California are in direct response to these more typical hydrology and water quality issues and are meant to address the cumulative and project-specific impacts of development. According to the definition of new development projects, the Proposed Project would be subject to the requirements and standards set forth in the Ventura County MS4 Permit and within the Ventura County TGM (2010). According to the Ventura County MS4 Permit, new development projects include all development projects equal to 1.0 acre or greater of disturbed area that add more than 10,000 square feet of impervious surface area. Construction activities for the proposed Presidential Substation would result in a disturbed area of approximately 2.3 acres (see Chapter 2, *Project Description*, Figure 2-7), and the various elements associated with the proposed Presidential Substation (e.g., foundation, driveways, perimeter wall, etc.) would result in approximately 16,000 square feet of new, impervious surface at the site (see Chapter 2, *Project Description*, Table 2-5).

The Ventura County MS4 Permit comprises two general categories, storm water quality control measures and hydromodification control measures. Concerning storm water quality control measures, in accordance with the Ventura County MS4 Permit, applicable projects must reduce their EIA to no more than 5 percent of the total project area and retain storm water on site; this would minimize runoff pollution typically caused by land development and protect the beneficial uses of receiving waters (Ventura County, 2010). With respect to hydromodification measures, applicable projects are required to implement hydrologic control measures to prevent accelerated

4.9 Hydrology and Water Quality

erosion and to protect stream habitat in downstream natural drainage systems. Natural drainage systems are defined as unlined or unimproved (not engineered) creeks, streams, rivers and their tributaries. Projects disturbing less than 50 acres are required only to comply with the storm water quality control measures and would not need to develop a hydromodification analysis study or plan (Ventura County TGM, 2010). In all cases, however, the project applicant is required to also develop a maintenance plan, which shall include guidelines for how and when inspection and maintenance should occur for each control.

In conforming to the Ventura County MS4 Permit and the Ventura County TGM (2010), the Proposed Project would need to reduce the EIA at the proposed Presidential Substation to less than 5 percent of the Substation project area. Runoff from impervious areas in excess of the 5 percent allowance would need to be retained on site, and runoff from the remaining Substation area would need to be treated prior to being discharged from the site. The total project area for the proposed Substation site is approximately 4 acres (all pervious surface), and the total area of impervious surface that would be created as part of the Proposed Project is approximately 16,000 square feet (or 0.37 acre). The 5 percent EIA allowance for the proposed Presidential Substation site would equate to 0.20 acre, leaving approximately 0.17 acre in excess of the allowance. Guidance for selection and implementation of retention BMPs, biofiltration BMPs, and treatment control measures can be found in the Ventura County TGM (2010). A storm water infiltration swale is proposed for the Substation site as part of the Proposed Project. The infiltration swale would be approximately 250 feet in length and approximately 6.5 feet wide. According to the Ventura County TGM (2010), if adequately sized and designed, this would likely be considered an appropriate retention BMP in the context of the Ventura County MS4 Permit; however, the design of this feature is only in the conceptual stage.

In accordance with the requirements outlined in the Ventura County MS4 Permit and the Ventura County TGM (2010), SCE must implement a retention BMP with a design volume of approximately 0.01 acre-feet and a treatment control measure with a design volume of approximately 0.05 acre-feet.¹² Hydromodification control measures, as defined in the Ventura County MS4 Permit, would not be required for the Proposed Project (as described above). Mitigation Measure 4.9-3 would be required to ensure the potential operational impacts related to storm runoff and erosion are reduced to a less-than-significant level.

Mitigation Measure 4.9-3: The following storm water quality control measures and BMPs shall be implemented at the proposed Presidential Substation site (see Appendix D for the related worksheet and calculations):

• SCE shall implement a Retention BMP(s) (as defined in the Ventura County TGM [2010]) with a design volume of approximately 0.01 acre-feet. The drainage area to this feature shall comprise at least 0.17 acre of the proposed impervious surface area. This BMP shall be selected, designed, and implemented according to the guidance and requirements summarized in the Ventura County MS4 Permit and the Ventura County TGM (2010). Alternatively, SCE shall demonstrate that the proposed storm water infiltration swale, or modifications thereto, would meet these mitigation requirements.

¹² If Biofiltration BMPs are employed the design volumes would need to be slightly larger. The specific volume required can be calculated using the methodology contained in the Ventura County TGM (2010).

• SCE shall implement a Treatment Control BMP(s) (as defined in the Ventura County TGM [2010]) with a design volume of approximately 0.05 acre-feet. The drainage area to this feature shall comprise at least the remaining 3.83 acres of the proposed Presidential Substation site (i.e., the residual drainage area not captured by the Retention BMP(s)). This BMP shall be selected, designed, and implemented according to the guidance and requirements summarized in the Ventura County MS4 Permit and the Ventura County TGM (2010). Alternatively, SCE shall demonstrate that the proposed storm water infiltration swale, or modifications thereto, would meet these mitigation requirements.

Significant after Mitigation: Less than Significant.

4.9.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented. Therefore, there would be no impacts related to hydrology and water quality (No Impact).

Alternative Subtransmission Alignment 1

Alternative Subtransmission Alignment 1 has a similar hydrology and water quality setting as the proposed subtransmission alignment, and Alternative Subtransmission Alignment 1 is similar in scope to the Proposed Project. The potential impacts resulting from construction and operation of Alternative Subtransmission Alignment 1 would be similar to those identified for the proposed subtransmission alignment. In general, the potential impacts to hydrology and water quality resulting from the implementation of Alternative Subtransmission Alignment 1 would be the same as for the proposed subtransmission alignment. However, some differences in the extent of the potential impacts should be noted.

The second subtransmission line for this alternative (i.e., from the Moorpark-Royal No. 2 to the Substation) would traverse land that is generally less developed and which is characterized by more variable and relatively steeper topography as compared to the proposed subtransmission alignment. The relative risk of erosion and sediment delivery impacts may be higher for this particular segment (i.e., as compared to crossing the flatter terrain of the Tierra Rejada valley). However, local groundwater levels may be relatively deeper in proximity to this second source line route.

Though the extent and severity of the potential construction and operation impacts related to the implementation of Alternative Subtransmission Alignment 1 may be slightly greater, they would not warrant additional or different mitigation measures than those required for the proposed subtransmission alignment. Therefore, Mitigation Measures 4.9-1, 4.9-2, and 4.9-3 would also be required for Alternative Subtransmission Alignment 1 and the potential impacts of this alternative to hydrologic resources and water quality would be less than significant (Class II).

Alternative Subtransmission Alignment 2

Alternative Subtransmission Alignment 2 has a similar hydrology and water quality setting as the proposed subtransmission alignment, and Alternative Subtransmission Alignment 2 is similar in scope to the proposed subtransmission alignment. The potential impacts resulting from construction and operation of Alternative Subtransmission Alignment 2 would be similar to those identified for the proposed subtransmission alignment. In general, the potential impacts to hydrology and water quality resulting from the implementation of Alternative Subtransmission Alignment 2 would be the same as for the proposed subtransmission alignment. However, some differences in the extent of the potential impacts should be noted.

No new access roads would be installed or improved as part of construction or operation of Alternative Subtransmission Alignment 2. Therefore, the potential erosion and sedimentation risks related to road installation or improvement would likely be eliminated, and the implementation of Mitigation Measure 4.9-1 would not be necessary. However, land-clearing and grading activities associated with Alternative Subtransmission Alignment 2 may disturb a larger gross area due to the need for approximately seven additional pull and tension sites as compared to the proposed subtransmission alignment.

Implementation of Alternative Subtransmission Alignment 2 would not likely warrant additional or different mitigation measures than those required for the proposed subtransmission alignment. Therefore, Mitigation Measures 4.9-2 and 4.9-3 would also be required for Alternative subtransmission Alignment 2 and the potential impacts of this alternative to hydrologic resources and water quality would be less than significant (Class II).

Alternative Subtransmission Alignment 3

Alternative Subtransmission Alignment 3 has a similar hydrology and water quality setting as the proposed subtransmission alignment, and Alternative Subtransmission Alignment 3 is similar in scope to the proposed subtransmission alignment. The potential impacts resulting from construction and operation of Alternative Subtransmission Alignment 3 would be similar to those identified for the proposed subtransmission alignment. In general, the potential impacts to hydrology and water quality resulting from the implementation of Alternative Subtransmission Alignment 3 would be the same as for the proposed Subtransmission alignment. However, some differences in the extent of the potential impacts should be noted.

No new access roads would be installed or improved as part of construction or operation of Alternative Subtransmission Alignment 3. Therefore, the potential erosion and sedimentation risks related to road installation or improvement would likely be eliminated, and the implementation of Mitigation Measure 4.9-1 would not be necessary.

Implementation of Alternative Subtransmission Alignment 3 would not likely warrant additional or different mitigation measures than those required for the proposed subtransmission alignment. Therefore, Mitigation Measures 4.9-2 and 4.9-3 would also be required for Alternative Subtransmission Alignment 3 and the potential impacts of this alternative to hydrologic resources and water quality would be less than significant (Class II).

Alternative Substation Site B

Alternative Substation Site B has a similar hydrology and water quality setting as the proposed Presidential Substation site, and is similar in scope to the proposed Presidential Substation site. The potential impacts resulting from construction and operation Alternative Substation Site B would be similar to those identified for the proposed Presidential Substation site. In general, the potential impacts to hydrology and water quality resulting from the implementation of Alternative Substation Site B would be the same as for the proposed Presidential Substation site. Given that the alternative substation footprint and drainage configuration would be different, the specific requirements outlined in Mitigation Measure 4.9-3 would likely be different, though this mitigation measure would still be required.

Implementation of Alternative Substation Site B would not likely warrant additional or different mitigation measures than those required for the proposed Presidential Substation site. Therefore, Mitigation Measures 4.9-1, 4.9-2 and 4.9-3 would also be required for Alternative Substation Site B and the potential impacts of this alternative to hydrologic resources and water quality would be less than significant (Class II).

System Alternative B

System Alternative B (i.e., upgrade the existing substations with non-standard equipment) has a similar hydrology and water quality setting as the Proposed Project, yet System Alternative B would be much smaller in scope as compared to the Proposed Project. Potential construction and operational impacts related to storm water runoff and water quality for System Alternative B would be controlled by existing regulatory requirements, including the Construction General Permit and relevant WDRs. Therefore, there would be no impacts related to hydrology and water quality (No Impact).

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4.10 Land Use and Planning

This section addresses potential impacts to land uses in the study area. The analysis considers potential impacts resulting from the construction, operation and maintenance of the Proposed Project and alternatives. Land use issues include the division of established communities, and consistency with applicable land use plans and policies and HCPs or natural community conservation plans. This evaluation is based on site visits and review of local and regional plans and policies.

4.10.1 Setting

The Proposed Project and alternatives would be located within unincorporated Ventura County and the cities of Simi Valley and Thousand Oaks, with the proposed Presidential Substation site located in the City of Thousand Oaks and the proposed subtransmission alignment located in both the City of Thousand Oaks and unincorporated Ventura County.

Existing Land Uses

Proposed Project

Proposed Presidential Substation

The proposed Presidential Substation site is located on Olsen Road in the City of Thousand Oaks near the border of the City of Simi Valley. The 4-acre Substation footprint would be built on presently undeveloped land that is included in the Wood Ranch Specific Plan area (see *Regulatory Context*, below, for further description of this Plan). A privately owned avocado orchard surrounds the parcel to the south and east, with Lake Bard Water Filtration Plant farther south, and a former sheriff's station (now abandoned) on the hill across the street to the northeast. The land use pattern in the adjacent area of the City of Simi Valley, southwest of the site, includes a mix of open space, residential, public facilities, commercial, and agriculture uses. The surface terrain of the Substation site is predominated by the convergence of two hills just south of Olsen Road.

Proposed Subtransmission Alignment

The proposed subtransmission alignment would be located predominantly within ROW currently being used for 16 kV distribution¹. The proposed subtransmission alignment would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. The proposed subtransmission alignment would extend east along the south side of Read Road within the City of Thousand Oaks, cross underneath Hwy 23, and continue east to the terminate at the proposed Presidential Substation site. This portion of the proposed subtransmission alignment primarily is characterized by flat, rural, and agricultural land with several residences.

¹ While some areas along Sunset Valley Road and Read Road could require additional overhang easement rights to accommodate pole cross-arms, the Proposed Project would not require additional ground surface ROW.

The proposed subtransmission alignment would turn north at the Read Road and Sunset Valley Road intersection in unincorporated Ventura County, parallel Sunset Valley Road to Tierra Rejada Road and connect to the Moorpark-Royal No. 2 66 kV subtransmission line. Along Sunset Valley Road, the proposed subtransmission alignment would cross lands that are being used for agriculture, open space, and rural residential development.

Royal and Moorpark Substations

Upgrades to the 66 kV subtransmission relays at the Royal and Moorpark Substations would occur as part of the Proposed Project and alternatives. All Proposed Project activities would occur on land currently used by SCE for industrial purposes within the existing fence lines.

Alternatives

Alternative Subtransmission Alignment 1

Similar to the Proposed Project, Alternative Subtransmission Alignment 1 would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. Alternative Subtransmission Alignment 1 would have the same alignment as the Proposed Project along Read Road until reaching the proposed Presidential Substation site. Exiting the proposed Presidential Substation site, unlike the Proposed Project, Alternative Subtransmission Alignment 1 would trend northerly toward Esperance Road, and then parallel Esperance Road until connecting to the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection of Tierra Rejada Road and Esperance Road. Alternative Subtransmission Alignment 1 would be approximately 4.5 miles long, crossing land presently used for open space, agriculture, and rural residential purposes.

Alternative Subtransmission Alignment 2

The first subtransmission segment under Alternative Subtransmission Alignment 2 would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Olsen Road and Sunset Hills Boulevard in the City of Thousand Oaks. The alignment would parallel Olsen Road, primarily on the north side, to the proposed Presidential Substation site. The second subtransmission segment under Alternative Subtransmission Alignment 2 would originate at the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection of Madera Road and Tierra Rejada Road and parallel Madera Road within the City of Simi Valley to the proposed Presidential Substation. Alternative Subtransmission Alignment 2 would total approximately 5 miles, and run adjacent to land presently used for residential, commercial, public space, and open space purposes.

Alternative Subtransmission Alignment 3

Like the Proposed Project, Alternative Subtransmission Alignment 3 would originate at the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. This alignment would extend east along the south side of Read Road within the City of Thousand Oaks, cross underneath Hwy 23, and continue east to the terminate at the proposed Presidential Substation site. This portion of the alternative subtransmission alignment is characterized primarily by flat, rural, and agricultural

land with several residences. The alternative subtransmission alignment would also turn north at the Read Road and Sunset Valley Road intersection in unincorporated Ventura County. The alternative subtransmission alignment would parallel Sunset Valley Road to Tierra Rejada Road and connect to the Moorpark-Royal No. 2 66 kV subtransmission line. Along Sunset Valley Road, the alternative subtransmission alignment would cross lands that are being used for agriculture, open space, and rural residential development.

Alternative Substation Site B

The Alternative Substation Site B would be located on an approximate 2.3-acre parcel of land located on the north side of Madera Road in the City of Simi Valley. The parcel is owned by the City of Simi Valley and previously housed the Ventura County Sheriff's Department.

System Alternative B

This alternative would consist of upgrading three existing SCE substations: Royal Substation in the City of Simi Valley, Thousand Oaks Substation in the City of Thousand Oaks, and Potrero Substation in the City of Thousand Oaks. All work would occur on land currently being used for utility purposes. No additional land or ROW acquisitions would be required under this alternative.

Regulatory Context

State

California Public Utilities Commission General Order No. 131-D

The California Public Utilities Commission (CPUC) has sole and exclusive jurisdiction over the siting and design of the Proposed Project and alternatives because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Although such projects are exempt from local land use and zoning regulations and discretionary permitting (i.e., they would not require any land use approval that would involve a discretionary decision to be made by a local agency such as a planning commission, city council or county board of supervisors), General Order No. 131-D, Section XIV.B requires that in locating a project "the public utility shall consult with local agencies regarding land use matter." The public utility is required to obtain any required non-discretionary local permit.

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The Ventura County General Plan, adopted in 2008, is the County's long-range planning document. It consists of four topical chapters: Resources, Hazards, Land Use, and Public Facilities and Services. The purpose of the Land Use Chapter is to set goals, policies and programs to guide future growth and development in the unincorporated area of Ventura County in a manner consistent with State legal mandates and requirements and in a manner consistent with the goals and quality of life desired by Ventura County citizens (Ventura County, 2008b).

A portion of the Proposed Project and Alternative Subtransmission Alignments 1 and 3 are located in unincorporated Ventura County, and traverse parcels with an *Open Space* land use designation. The *Open Space* designation identifies parcels or areas of land or water which are essentially unimproved and devoted to an open-space use as defined as any of the following:

- Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.
- Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands not designated agricultural; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
- Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
- Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

The following goals and policies pertaining to Land Use are identified in the Ventura County General Plan:

Land Use Chapter

Goal 3.1.1-1: Ensure that the County can accommodate anticipated future growth and *development* while maintaining a safe and healthful environment by preserving valuable natural resources, guiding development away from hazardous areas, and planning for adequate public facilities and services. Promote planned, well-ordered and efficient land use and *development* patterns.

Goal 3.2.1-5-1: Preserve for the benefit of all County's residents the continue wise use of the County's renewable and nonrenewable resources by limiting the encroachment into such areas of uses which would unduly and prematurely hamper or preclude the use or appreciation of such resources.

Public Facilities and Services Chapter

Goal 4.5-1: Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards and are compatible with the natural and human resources.

Policy 4.5.2-1: New gas, electric, cable television and telephone utility transmission lines shall use or parallel existing utility rights-of-way where feasible and avoid scenic areas when not in conflict with the rules and regulations of the California Public Utilities Commission. When such areas cannot be avoided, transmission lines should be designed and located in a manner to minimize their visual impact.

(County of Ventura, 2008b).

Tierra Rejada Greenbelt Agreement and SOAR Ordinance (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

A greenbelt is defined as an area consisting of prime agricultural or other open space land. The proposed subtransmission alignment and Alternative Subtransmission Alignments 1 and 3 would traverse a portion of the Tierra Rejada Greenbelt, an area lying generally in the Tierra Rejada Valley west of the City of Simi Valley, north of the City of Thousand Oaks, and south of the City of Moorpark. The greenbelt in the Tierra Rejada Valley was formed as a result of an agreement signed in 1984 by Ventura County and the Cities of Moorpark, Thousand Oaks, and Simi Valley. The agreement established a policy of non-annexation in order to protect the agricultural and open space lands in the Tierra Rejada Valley (County of Ventura, 2008a).

Save Open-Space and Agricultural Resources (SOAR), a non-profit organization whose mission is to make Ventura County a better place to live by limiting urban sprawl and protecting open space and agricultural lands, developed initiatives in 1998 to regulate land use in the greenbelt in the Tierra Rejada Valley. Ventura County has adopted the SOAR ordinance requiring Countywide voter approval of any change to the County General Plan involving "Agricultural," "Open Space," or "Rural" land use map designations in the Tierra Rejada Greenbelt, or any change to a General Plan goal or policy related to those land use designations (County of Ventura, 2008a).

Ventura County Non-Coastal Zoning Ordinance (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The Ventura County Non-Coastal Zoning Ordinance, adopted in September 2008, contains the comprehensive zoning regulations for the unincorporated area of the County of Ventura that is outside of the Coastal Zone. These regulations were adopted to protect and promote the public health, safety and general welfare; to provide environmental, economic and social advantages that result from an orderly, planned use of resources; to establish the most beneficial and convenient relationships among land uses; and to implement Ventura County's General Plan.

A portion of the proposed subtransmission alignment and Alternative Subtransmission Alignments 1 and 3 are located outside the Coastal Zone in unincorporated Ventura County, and traverse parcels zoned as *Agricultural Exclusive (A-E)* and *Open Space (O-S)*. The purpose of the *Agricultural Exclusive* zone is to preserve and protect commercial agricultural lands as a limited and irreplaceable resource, to preserve and maintain agriculture as a major industry in Ventura County and to protect these areas from the encroachment of nonrelated uses which, by their nature, would have detrimental effects upon the agriculture industry. The purpose of the *Open Space* zone is to provide for the conservation of renewable and nonrenewable natural resources, to preserve and enhance environmental quality and to provide for the retention of the maximum number of future land use options while allowing reasonable and compatible uses on open lands in the County which have not been altered to any great extent by human activities. Aboveground transmission lines and service yards are allowed in *Agricultural Exclusive* and *Open Space* zoning designations with a Conditional Use Permit (County of Ventura, 2008c).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The City of Thousand Oaks General Plan sets forth the long-term policies for the physical development of the City. The General Plan was adopted in 1970 and was last amended in 2001. The General Plan is made up of several elements, which articulate the City's policies in different subject categories.

The Circulation and Land Use Element is a map that defines a plan for the distribution, type and density of land uses in the City. The proposed Presidential Substation site would be located entirely within the jurisdiction of the City of Thousand Oaks and is designated as *Residentially* Developable Land. In addition, a portion of the proposed subtransmission alignment as well as Alternative Subtransmission Alignments 1 and 3 would traverse City of Thousand Oaks parcels designated as Reserve Residential; Existing Parks, Golf Courses, Open Space; and Residentially Developable Land. Alternative Subtransmission Alignment 2 would traverse parcels with the same designations as the Proposed Project with the exception that it would not cross Reserve *Residential*, and would cross two land use designations not traversed by the Proposed Project: Low Density Residential, and Institutional (City of Thousand Oaks, 2009a). The Residentially Developable Land designation is intended for residential uses at a density of 0.2 to 1.0 dwelling units per net acre. The *Reserve Residential* designation is intended for residential uses at a density of 0.0 to 2.0 dwelling units per net acre for ultimate need. The Low Density Residential designation is intended for residential uses of 0.0 to 2.0 dwelling units per acre for ultimate need. The Existing Parks, Golf Courses, Open Space and Institutional designations are not further described in the Land Use Element (City of Thousand Oaks, 2009a).

The CPUC General Order described above explains that local land use regulations do not apply. However, for information purposes, the following goals and policies identified in the City of Thousand Oaks General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal: To enhance and preserve the spaciousness and attractiveness of the Conejo Valley.

Goal: To provide and maintain a system of natural open space and trails.

Goal: To provide and maintain a permanent park and recreational system of sufficient size and quality to serve current and future needs, consistent with community expectations.

Goal: Wildlife corridors and sensitive ecological systems within the City's Planning Area, should be protected.

(City of Thousand Oaks, 2001).

Open Space Element

Policy OS-25: Facilities necessary to serve visitors, such as trails, trailheads, access roads and parking lots, kiosks, restrooms, signage shall be designed and installed so as to have no impact on sensitive natural resources within the open space area, and minimal impact on non-sensitive resources. Where emergency facilities or public service and utility facilities must be located in a natural open space area, they and any necessary access roads shall be located and designed to minimize impacts.

Policy OS-30: Open space managers should work cooperatively with the utility companies, water agencies, and the Ventura County Flood Control District to assure that facilities subject to their jurisdiction are planned and designed in a manner which provides effective public service and also protects the natural environment.

(City of Thousand Oaks, 1996).

City of Thousand Oaks Municipal Code: Zoning Regulations Chapter (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The Zoning Regulations Chapter of the City of Thousand Oaks Municipal Code constitutes the comprehensive zoning plan and regulations for the City. These regulations have been adopted to protect and promote the public health, safety, morals, and welfare and to provide the economic and social advantages which result from an orderly, planned use of land resources.

The proposed Presidential Substation site is located entirely within the jurisdiction of the City of Thousand Oaks and is zoned as *Residential Planned Development* (0.22 units allowed per net acre) – *Single Family Detached Homes in a Protected Ridgeline Overlay Zone (RPD-0.22U-SFD-PR).* The Substation site also is subject to a ridgeline preservation overlay zoning designation (PR).

In addition, a portion of the proposed subtransmission alignment and Alternative Subtransmission Alignment 3would traverse City of Thousand Oaks parcels that are zoned *Rural Exclusive* – 5 acre average lot size (*RE* - 5AC), Open Space (OS), and Open Space – Protected Ridgeline Overlay Zone (OS-PR). Alternative Subtransmission Alignment 1 would traverse the same parcels as the proposed subtransmission alignment within the City of Thousand Oaks. Alternative Subtransmission Alignment 2 would traverse parcels zoned *Hillside Planned Development* – Single Family Detached (HPD-SFD), Open Space – Protected Ridgeline Overlay Zone (OS-PR), Single Family Residential (R-1-10AV), and Public, Quasi-Public, and Institutional Lands and Facilities (P-L).

The *Residential Planned Development* designation provides a residential zoning district that encourages creative and innovative developments that are environmentally pleasing through the application of imaginative land planning techniques not permitted with other residential zones by the enforcement of more rigid standards. The *Rural Exclusive* zoning designation establishes provisions for low density single-family dwellings, as well as other dwelling unit types in keeping with the rural character of the area. The *Open Space* zoning designation ensures that any proposed structures and improvements in the zoning district will be compatible with surrounding zones and uses and will have minimal impact on the natural undisturbed character of the land. The *Hillside Planned Development* zoning designation protects the terrain of certain areas that provide a unique and substantial character to the area. The *Single Family Residential* zoning designation provides residential zoning for single-family dwellings. The *Public, Quasi-Public, and Institutional Lands and Facilities* zoning designation is intended to apply to publicly owned property, property owned by quasi-public or public service entities, such as utility companies, property planned to be used for certain institutional facilities, and certain private recreational facilities (City of Thousand Oaks, 2009b).

Several of the parcels traversed by the proposed subtransmission alignment, as well as the proposed Presidential Substation site, are located on land zoned as a *Protected Ridgeline Overlay Zone (PR)*. As further discussed in Section 4.1, *Aesthetics*, the City of Thousand Oaks is bounded by prominent natural land forms and knolls including, but not limited to, the Santa Monica Mountains, the Conego Mountain, the Mount Clef Ridge, and the Conejo Ridge. The *Protected Ridgeline Overlay District* promotes the preservation of natural views and open space in the district with regulations to preserve natural lands forms, maintenance and preserve open space, and protect the scenic backdrop to the City's major roadways (City of Thousand Oaks, 2009b).

Section 9-4.904 of the Zoning Regulations states that in the Residential Planned Development zoning designation: "All new and existing utilities adjacent to or on the subject property shall be placed underground unless otherwise waived through the approval of an underground utility waiver application." §9-4.3602 states that in the *Open Space* zoning designation a special use permit is required for public utility facilities, including but not limited to electric power substations, water reservoirs and transmission lines, sewage treatment plants, natural gas pipelines, and right-of-way property for electric transmission lines in excess of 66kV. § 9-4.3201 states that in the *Public*, Quasi-Public, and Institutional Lands and Facilities zoning designation a development permit is required for public utility facilities, including but not limited to electric power substations, water reservoirs and transmission lines, sewage treatment plants, natural gas pipelines, and right-of-way property for electric transmission lines in excess of sixty six (66) kilovolts, except that such electric transmission lines shall be developed in locations approved by the Public Utilities Commission of the State. § 9-4.3202 states that in the Public, Quasi-Public, and Institutional Lands and Facilities zoning designation special use permits are required for public utility facilities, including easement property for transmission lines in excess of sixteen (16) kilovolts. The Zoning Regulations do not discuss the allowance or disallowance of transmission line facilities within the other zoning designations that the proposed subtransmission alignment would traverse (City of Thousand Oaks, 2009b).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

A portion of the Alternative Subtransmission Alignment 2 alignment would traverse City of Simi Valley parcels designated as *Open Space, Residential Low, Residential Medium, Residential Moderate, Residential High, Residential Very High, Recreation Commercial,* and *General Commercial.* In addition, the proposed Alternative Substation Site B is located within the jurisdiction of the City of Simi Valley and is designated as *Institutional/Public* (City of Simi Valley, 2007). The aforementioned land use designations are described below:

Open Space (1 Unit Per 40 net acres: top development range + 0.025 units per acre). The intended land use pattern in this land use category is to provide for open space, recreational uses, agricultural uses, grazing, and very large lot estate or farm homes. To encourage the keeping of areas designated as Open Space in a largely undeveloped state, the allowable dwelling units may be transferred to portions of the subject parcel which are not designated Open Space. It is also intended that this designation: (1) provide for a very low density farmland environment and housing; (2) provide a buffer between Simi Valley and adjacent communities; (3) retain land with greater than 20 percent slope as open space; (4) provide for the controlled development of natural resources; and (5) hold some land from urban development until such time as the valley floor and closer canyon areas are approaching full development.

Institutional/Public. This land use category includes fire, police, civic facilities, and hospitals.

Low Density (0-3.25 Units Per net acre; top development range = 2.6 Units per acre). This land use category includes single-family homes in a suburban or rural setting with a wide range of lot sizes but a low overall density. Clustering of smaller lots in order to achieve affordable housing and minimize hillside grazing is encouraged.

Medium Density (3.26.5.0 Units per net acre; top development range = 3.7 units per acre). The land uses category encourages a single-family residential environment that has a wide range of lot sizes, with an overall density similar to the bulk of single-family developments on the valley floor.

Moderate Density (5.1.10.0 units per net acre; top of development range = 7.0 units per acre). The purpose of the land use category is to create residential areas primarily composed of detached, single-family dwellings on small lots and multi-family units (senior and affordable).

High Density (10.1-18.75 units per net acre; top of the development range = 15 units per acre). Permitted uses in this category include townhomes, low density garden apartments, and other multi-family housing.

Very High Density (18.75 -50 units per net acre; top of development range=25 units per acre; top of bonus range=50 units per acre). Permitted residential development includes apartments and townhomes, usually of two stories in height.

Recreation Commercial (Floor Area Ratio (FAR) 0.10). This land use category provides areas for commercial activities of a low-intensity, recreational nature, such as miniature and 3-par golf courses, camping grounds, athletic clubs, and other commercial recreation facilities. Projects in this category have a maximum lot coverage of 25 percent.

General Commercial (FAR 0.20). As defined in the Simi Valley General Plan Land Use Element, General Commercial areas are designed to serve four purposes: (1) satisfy the daily shopping needs of a localized area (1-2 mile radius); these uses include supermarkets, drug stores, small restaurants, personal services and retail shops; (2) set aside land for a broad range of commercial offices; (3) allow the location of new automobile dealerships in specified overlay areas; and (4) encourage spending by travelers passing through Simi Valley on Route 118. These types of uses would include coffee shops and restaurants, gas stations, specialty retail shops and entertainment.

(City of Simi Valley, 2007).

The following goals and policies identified in the City of Simi Valley General Plan govern in the area proposed for development of Alternative Subtransmission Alignment 2, Alternative Substation Site B, and the System Alternative B:

Land Use Element

Industrial Development. Policy III-2.12: Industrial areas should be located near major transportation routes such as freeways, railways, or arterials to reduce industrial traffic on residential streets and provide efficient transportation of supplies and workers.

Conservation/Open Space Element

Preservation of Open Space and Natural Features. Policy IV-1.1: The natural features and open space qualities of the hills and canyons shall be preserved.

Policy IV-1.1.2: Provide utility and public works projects shall be designed to minimize their effect upon the natural and scenic qualities of open space areas.

Community Services Element

Public Utilities and Facilities. Policy IV-2.3: Plans for the expansion of facilities or extension of services shall be consistent with the General Plan.

(City of Simi Valley, 1988).

City of Simi Valley Municipal Code: Zoning Districts (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

A portion of Alternative Subtransmission Alignment 2 would traverse City of Simi Valley parcels zoned as *Open Space (OS), Residential – Low Density (RL), Residential – Moderate Density (RMod), Residential – High Density (RH), Residential – Very High Density (RVH), Commercial Planned Development (CPD), and Commercial Recreation (CR).* In addition, the proposed Alternative Substation Site B is located within the jurisdiction of the City of Simi Valley and is zoned as *Residential – Low Density* with *Conditional Zoning (RL – CZ)* (City of Simi Valley, 2006). The aforementioned land use designations are described below:

Open Space District: This zoning district is intended to provide for the conservation of renewable and nonrenewable natural resources, to preserve and enhance environmental quality, and to provide for the retention of the maximum number of future land use options while allowing reasonable and compatible uses on open lands in the City that have not been altered to any major extent by human activities.

Residential Low Density District: This zoning district is intended to provide for a suburban single-family residential environment with a range of parcel sizes, but with generally low density and some clustering of parcels.

Residential Medium Density District: This zoning district is intended to provide for a suburban single-family residential environment with a range of parcel sizes and some clustering of parcels.

Residential Moderate Density District: This zoning district is intended to provide for moderate density detached single-family or multi-family dwellings.

Residential High Density District: This zoning district is intended for areas of more compact multi-family residential developments, such as townhouses, garden apartments, and other multiple-unit dwellings.

Residential Very High Density District: This zoning district is intended to provide for areas of relatively high density, compact multi-family residential development near district or community shopping centers.

Commercial Recreation District: This zoning district is intended to provide for the development of recreational, entertainment, and associated retail and service activities meant to serve primarily the needs of the local population.

Commercial Planned Development District: This zoning district is intended to encourage the development of attractive, innovative, and efficient commercial sites containing a broad range of retail, office and service commercial uses.

(City of Simi Valley, 2006).

A conditional use permit is required for public utility facilities as well as pipelines, transmission lines, and aboveground facilities in the *Open Space*, *Residential – Low Density*, *Residential – Moderate Density*, *Residential – High Density*, and *Residential – Very High Density* zoning designations. Public utility facilities are a permitted use in the *Commercial Recreation* and *Commercial Planning Development* zoning designations; however, a conditional use permit is required for transmission and distribution pipelines and surface facilities (City of Simi Valley, 2006).

City of Simi Valley Wood Ranch Specific Plan (Alternative Subtransmission Alignment 2)

The City of Simi Valley adopted the Wood Ranch Specific Plan in 1980, reformatting and republishing it in 2003 (City of Simi Valley, 2003). The Wood Ranch Specific Plan area is located adjacent to Madera Road, southwest of the City of Simi Valley. Wood Ranch consists of approximately 3,748.88 acres, and was designed to include residential "villages," one or more neighborhood shopping areas, public and semi-public land uses (e.g., a golf course and equestrian facility) and open space areas. When this specific plan was approved, approximately 3,010 acres were within the Sphere of Interest of the City of Simi Valley with the remaining acreage within the Sphere of Interest of the City of Simi Valley with the remaining acreage within the Sphere of Interest of the City of Thousand Oaks. The proposed Presidential Substation site since has been annexed to the City of Thousand Oaks. A portion of Alternative Subtransmission Alignment 2 would traverse through parcels designated as *Residential-Intermediate Density*, *Residential-High Density*, and *Residential-Very High Density*.

The CPUC General Order described above explains that local land use regulations do not apply. However, for information purposes, the following goals and policies identified in the City of Simi Valley Wood Ranch Specific Plan would otherwise govern the area proposed for development of Alternative Subtransmission Alignment 2:

Specific Plan Concept

Goal 7: To provide necessary utilities and services for residential, commercial, and agricultural uses.

Goal 8: To protect uses and to ensure non-encroachment of conflicting uses.

Open Space

Goal 1: Areas of open space shall be uses, where feasible, to preserve natural features, views, native vegetation and provide for 40 acre farm lots.

Goal 2: Areas of open space shall be used to create physical separation form the effects of urbanization for the residents of the Ranch.

(City of Simi Valley, 2003).

4.10.2 Significance Criteria

Based on CEQA Guidelines Appendix G, a project would cause adverse impacts related to land use if it would:

- a) Physically divide an established community;
- b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- c) Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.10.3 Applicant Proposed Measures

No Applicant Proposed Measures have been identified by SCE to reduce impacts of the Proposed Project related to land use and planning.

4.10.4 Impacts and Mitigation Measures

Approach to Analysis

The approach used to analyze potential impacts of the Proposed Project related to land use and planning involved four steps:

- 1. Summarizing existing land uses in areas where the various components of the Proposed Project would be developed (see Section 4.10.1, *Existing Land Uses*);
- 2. Identifying and reviewing relevant provisions of State and local land use plans and policies (see Section 4.10.1, *Regulatory Context*);
- 3. Determining whether construction, operation and maintenance of the Proposed Project and alternatives would cause an adverse impact relative to identified significance criteria (see Section 4.10.2, *Significance Criteria*) and analyzing whether any such impact would be less than significant, less than significant with mitigation incorporated or potentially significant (see this section for analysis of impacts caused by the Proposed Project; impacts of alternatives are analyzed in Section 4.10.6); and

4. Analyzing whether any incremental impact of the Proposed Project would be cumulatively considerable (see Section 4.10.5, *Cumulative Impacts*).

As discussed above, the Proposed Project would include minor upgrades to the 66 kV subtransmission relays at the Royal and Moorpark Substations. The proposed modifications at the Royal and Moorpark Substations consist solely of electrical system and safety upgrades, and the associated construction, operation, and maintenance activities would constitute a continuation of current land use conditions at the substations. Proposed modifications to the Royal and Moorpark Substations would not have significant land use impacts; therefore, potential impacts will not be discussed further in this section.

a) Physical division of an established community.

Proposed Presidential Substation. The proposed Presidential Substation would be constructed on vacant private property on Olsen Road within the City of Thousand Oaks, just northeast of the municipal boundary with the City of Simi Valley. Each of these cities is an established community: Thousand Oaks was incorporated in 1964, Simi Valley incorporated five years later. Thousand Oaks has grown from a small semi-rural community to a semi-urban city that is about 56 square miles in size and has a General Plan Planning Area of about 60 square miles (City of Thousand Oaks, 2011).

The proposed approximately 4-acre Substation footprint could not physically divide the City of Simi Valley because it would not be constructed or operated within this city. It also would not physically divide the City of Thousand Oaks because the proposed Presidential Substation site is small, and would not restrict access or circulation within the city or constitute a physical barrier. Therefore, the proposed Presidential Substation would have no impact related to the physical division of an established community (No Impact).

Proposed Subtransmission Alignment. The proposed subtransmission alignment would not have an impact related to the physical division of an established community. The alignment would be located within the existing ROW currently being used for 16 kV distribution within the City of Thousand Oaks. Some areas along Sunset Valley Road and Read Road (in unincorporated Ventura County) could require additional overhang easement rights to accommodate pole cross-arms, and could require additional ground surface ROW. Regardless, because the proposed subtransmission alignment would be located predominantly within an existing ROW in a largely low density rural residential area, and because a subtransmission line would not restrict access or constitute a physical barrier to an established community, the proposed subtransmission alignment would have no impact related to the physical division of an established community (No Impact).

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

No local land use plans, policies or regulations would apply to the Proposed Project because, pursuant to General Order No. 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of the Proposed Project. Consequently, the Proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (No Impact).

Although the Proposed Project would be exempt from local land use and zoning regulations and discretionary permitting, the CPUC has consulted with local agencies regarding land use matters potentially affected by the Proposed Project. This land use consistency analysis is provided for informational purposes only.

The Proposed Project would not result in any changes in land use or zoning designations in the cities of Thousand Oaks and Simi Valley, or Ventura County. The proposed subtransmission alignment would be located in an established utility corridor in which an existing 16 kv distribution line is currently located. For these reasons and the reasons listed below, the Proposed Project would not conflict with the following land use plans, policies and regulations:

- 1. **Ventura County General Plan.** The Proposed Project applicant proposes to construct and operate a subtransmission alignment through lands within the jurisdiction of unincorporated Ventura County. As discussed in the Setting, the proposed subtransmission alignment would cross areas that are designated *Open Space* by the Ventura County General Plan (County of Ventura, 2008b). The Ventura County General Plan does not discuss the allowance or disallowance of transmission line facilities within this land use designation. Furthermore, transmission and 16 kV distribution lines are established features within the landscape, and the Proposed Project would not change the land use within the General Plan land use designation.
- 2. Ventura County Tierra Rejada Greenbelt and SOAR Ordinance. As discussed in the *Setting*, a portion of the proposed subtransmission alignment would traverse the Tierra Rejada Greenbelt. The Tierra Rejada Greenbelt Agreement established a policy of non-annexation in order to protect the agricultural and open space lands in the Tierra Rejada Valley (County of Ventura, 2008a). In addition, Ventura County has adopted the SOAR ordinance, which requires Countywide voter approval of any change to the County General Plan involving *Agricultural, Open Space*, or *Rural* land use designations in the Tierra Rejada Greenbelt, or any change to a General Plan goal or policy related to those land use designations (County of Ventura, 2008a). The Proposed Project would not conflict with the Tierra Rejada Greenbelt Agreement or Soar Ordinance because it would be located within an established utility corridor, and would not change any Ventura County General Plan land use designation, goal, or policy.
- 3. Ventura County Non-Coastal Zoning Ordinance. As discussed in the Setting, the Proposed Project would traverse land zoned by the Ventura County Non-Coastal Zoning Ordinance as *Agricultural Exclusive* and *Open Space*. Aboveground transmission lines and service yards are allowed in *Agricultural Exclusive* and *Open Space* zoning designations with a Conditional Use Permit (County of Ventura, 2008c). However, a use permit is a discretionary land use instrument, and so not required for the Proposed Project.

4. **City of Thousand Oaks General Plan.** As discussed in the Setting, the proposed Presidential Substation site would be located on land designated by the City of Thousand Oaks General Plan as *Residentially Developable Land*. The proposed subtransmission alignment would traverse land designated as *Reserve Residential; Existing Parks, Golf Courses, Open Space*; and *Residentially Developable Land*. The General Plan does not discuss the allowance or disallowance of electric power substations or subtransmission line facilities within these land use designations (City of Thousand Oaks, 2011a). Accordingly, locating the Proposed Project within these designations would not conflict with the City of Thousand Oaks General Plan.

The Proposed Project also would be consistent with the policies set forth in the City of Thousand Oaks General Plan Public Facilities and Services Chapter. Policy 4.5.2-1 states that new utility transmission lines shall use or parallel existing utility ROW where feasible. The proposed subtransmission alignment would be located almost entirely within existing ROW currently being used for 16 kV distribution lines. Therefore, the Proposed Project would not conflict with the land use plans, policies or regulations of the City of Thousand Oaks.

Although General Order No. 131-D gives the CPUC sole and exclusive jurisdiction over the siting and design of the Proposed Project, if the City of Thousand Oaks Zoning Ordinance applied to the Proposed Project, a conflict with the Protected Ridgeline Overlay Zone would result:

1. **City of Thousand Oaks Zoning Ordinance:** *Protected Ridgeline Overlay Zone.* As discussed in the Setting, the proposed Presidential Substation would be located entirely within the jurisdiction of the City of Thousand Oaks, in an area zoned *Residential Planned Development.* According to § 9-4.904, within the *Residential Planned Development* zoning designation, all new and existing utilities adjacent to or on the subject property shall be placed underground unless otherwise waived through the approval of an underground utility waiver application. Consistent with § 9-4.904, power would leave the Substation underground via four 16 kV distribution getaways and one vault. By contrast, power would flow into the proposed Presidential Substation via an overhead (above-ground) 66 kV subtransmission line that would extend approximately 70 feet. Under ordinary circumstances, this above-ground work would require an underground utility waiver. As a result of CPUC General Order No. 131-D, however, no such waiver is required.

A portion of the proposed subtransmission alignment would traverse parcels zoned by the City of Thousand Oaks as *Rural Exclusive - 5 acre average lot size, Open Space,* and *Open Space-Protected Ridgeline Overlay Zone.* As stated in § 9-4.3602, public utility facilities, including transmission lines and ROW property for electric transmission lines in excess of 66 kV, ordinarily require a Special Use Permit in this zoning designation (City of Thousand Oaks, 2009b). The proposed 66 kV subtransmission line would not be in excess of 66 kV, and therefore would not require a Special Use Permit. Furthermore, a Special Use Permit is a discretionary approval, and would not be required pursuant to CPUC General Order No. 131-D.

The proposed Presidential Substation site and several of the parcels that would be traversed by the proposed subtransmission alignment would also be subject to the *Protected Ridgeline Overlay Zone (PR)* set forth in Article 35 of the City's Zoning Ordinance. Certain development standards apply within 300 feet horizontally or 100 feet vertically of the crest of a protected ridgeline; however, these standards can be modified with an approved request for a Special Use Permit. The significance of adverse impacts on the scenic vistas and natural features intended to be protected by the *PR* zoning designation would be considered by the City in evaluating such a request. As analyzed in Section 4.1, *Aesthetics*,

Impact 4.1-8 concludes that the Proposed Project would cause a significant impact on visual resources by substantially degrading the existing visual character or quality of the proposed Presidential Substation site and its surroundings from public views. Even with the implementation of recommended mitigation measures, the impact would remain significant and unavoidable. Consequently, construction, operation and maintenance of the Substation would conflict with the City of Thousand Oaks's Protected Ridgeline Overlay Zone.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan.

As discussed in Section 4.4, *Biological Resources*, there are no HCPs or NCCPs that involve lands within the Proposed Project area. Because no HCPs or NCCPs are applicable, the Proposed Project would result in no conflict with any such plan (No Impact).

4.10.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore, there would be no impact related to Land Use and Planning (No impact).

Alternative Subtransmission Alignment 1

Construction, operation and maintenance activities associated with Alternative Subtransmission Alignment 1 would be the same as the Proposed Project. Alternative Subtransmission Alignment 1 would not physically divide any established communities (No Impact). Also like the Proposed Project, there are no HCPs or other approved governmental habitat plans that involve lands traversed by Alternative Subtransmission Alignment 1 (No Impact).

Alternative Subtransmission Alignment 1 would traverse the same land use and zoning designations as the Proposed Project in Ventura County. Local land use plans, policies and regulations, including discretionary permit requirements, would not apply, and land use and zoning impacts related to Alternative Subtransmission Alignment 1 would be the same as the Proposed Project (No Impact). Consequently, the construction, operation and maintenance of Alternative Subtransmission Alignment 1 (like the Proposed Project) would cause no impact on land use and planning resources (No Impact).

Alternative Subtransmission Alignment 2

Construction, operation and maintenance activities associated with Alternative Subtransmission Alignment 2 would be similar to the Proposed Project. Alternative Subtransmission Alignment 2 would not physically divide any established communities; local land use plans, policies and regulations, including discretionary permit requirements, would not apply; and no HCPs or NCCPs cover lands traversed by Alternative Subtransmission Alignment 2. Consequently, the construction, operation and maintenance of Alternative Subtransmission Alignment 2 (like the Proposed Project) would cause no impact on land use and planning resources (No Impact).

Nonetheless, Alternative Subtransmission Alignment 2 would cross some different land use and zoning designations than the Proposed Project in the City of Thousand Oaks as well as parcels within the City of Simi Valley. Therefore, a land use consistency analysis for parcels traversed by Alternative Subtransmission Alignment 2 is provided below.

City of Thousand Oaks General Plan

Alternative Subtransmission Alignment 2 would cross through two City of Thousand Oaks General Plan land use designations not traversed by the Proposed Project: *Low Density Residential*, and *Industrial*. The General Plan does not discuss the allowance or disallowance of transmission line facilities within these land use designations. As such, Alternative Subtransmission Alignment 2 would not conflict with the City of Thousand Oaks General Plan.

City of Thousand Oaks Zoning Ordinance

Alternative Subtransmission Alignment 2 would cross through three City of Thousand Oaks zoning designations not traversed by the Proposed Project: *Hillside Planned Development, Single Family Residential,* and *Public, Quasi-Public, and Institutional Lands and Facilities.* The Zoning Regulations do not discuss the allowance or disallowance of transmission line facilities within the *Hillside Planned Development* or *Single Family Residential* zoning designations. Consequently, Alternative Subtransmission Alignment 2 would not conflict these zoning designations.

Public utility structures, including electric transmission lines in excess of 16 kV, are allowable within the *Public, Quasi-Public, and Institutional Lands and Facilities* zoning designation with Special Use Permit approval (City of Thousand Oaks, 2009b). If the City of Thousand Oaks's Quasi-Public, and Institutional Lands and Facilities zoning requirements applied to the Proposed Project, a special use permit would be required. However, such permits are discretionary and, because of CPUC General Order No. 131-D, would not be necessary prior to project approval.

City of Simi Valley General Plan

A portion of Alternative Subtransmission Alignment 2 would traverse City of Simi Valley parcels designated as *Open Space, Residential Low, Residential Medium, Residential Moderate, Residential High, Residential Very High, Recreation Commercial,* and *General Commercial* (City of Simi Valley, 2007). The General Plan does not discuss the allowance or disallowance of transmission line facilities within these land use designations.

City of Simi Valley Municipal Code: Zoning Districts

Alternative Subtransmission Alignment 2 would traverse parcels designated as *Open Space*, *Residential-Low Density, Residential Moderate Density, Residential-High Density, Residential-*

Very High Density, Commercial Planned Development, and *Commercial Recreation.* As previously described, if the *Open Space, Residential – Low Density, Residential – Moderate Density, Residential – High Density,* and *Residential – Very High Density* zoning designations applied to the Proposed Project, a conditional use permit would be required to develop the proposed public utility facilities as well as pipelines, transmission lines, and aboveground facilities. Public utility facilities are a permitted use in the *Commercial Recreation* and *Commercial Planning Development* zoning designations; however, a conditional use permit would be required for transmission and distribution pipelines and surface facilities (City of Simi Valley, 2006) in the absence of General Order 131-D.

City of Simi Valley Wood Ranch Specific Plan

A portion of Alternative Subtransmission Alignment 2 would traverse parcels designated as *Residential-Intermediate Density, Residential-High Density,* and *Residential-Very High Density.* The Specific Plan does not discuss the allowance or disallowance of transmission line facilities within these land use designations. As such, Alternative Subtransmission Alignment 2 would not conflict with the City of Simi Valley Wood Ranch Specific Plan.

Alternative Subtransmission Alignment 3

Construction, operation and maintenance activities associated with Alternative Subtransmission Alignment 3 would be similar to the Proposed Project. Alternative Subtransmission Alignment 3 would not physically divide any established communities, and no HCPs or NCCPs cover lands within the Alternative Subtransmission Alignment 3 site (No Impact). Alternative Subtransmission Alignment 3 would traverse the same land use and zoning designations as the Proposed Project in Ventura County. However, Alternative Subtransmission Alignment 3 would differ from the Proposed Project because it would not conflict with the City of Thousand Oaks Protected Ridgeline Overlay Zone, as subtransmission poles would not be constructed and the conductor would installed be underground. Nevertheless, local land use plans, policies and regulations, including discretionary permit requirements, would not apply, and land use and zoning impacts related to Alternative Subtransmission Alignment 3 would be the same as the Proposed Project (No Impact).

Alternative Substation Site B

Construction, operation and maintenance activities associated with Alternative Substation Site B would be similar to the Proposed Project. Alternative Substation Site B would not physically divide an established community; no local land use plans, policies and regulations, including discretionary permit requirements, would apply; and no HCPs or NCCPs cover lands within the Alternative Substation Site B (No Impact).

Alternative Substation Site B would be located on a parcel within the City of Simi Valley. Therefore, a land use consistency with Simi Valley land use plans, policies and regulations is provided for informational purposes.

City of Simi Valley General Plan

The proposed Alternative Substation Site B would be located within the jurisdiction of the City of Simi Valley in a parcel designated as Institutional/Public (City of Simi Valley, 2007). The General Plan does not discuss the allowance or disallowance of transmission line facilities within this designation. As such, Alternative Substation Site B would not conflict with the City of Simi Valley General Plan.

City of Simi Valley Municipal Code: Zoning Districts

Alternative Substation Site B would be located on a parcel zoned *Residential-Low Density* with *Conditional Zoning*. If the land use and planning requirements Simi Valley Municipal Code applied to the Proposed Project, a conditional use permit would be required to develop public utility facilities as well as pipelines, transmission lines, and aboveground facilities in this zoning designation (City of Simi Valley, 2006).

Systems Alternative B

Implementation of the Systems Alternative would not require any new facilities to be constructed; all changes would take place within existing facility footprints. Implementation of this alternative would not physically divide an established community; conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the Proposed Project; or conflict with an applicable HCP or NCCP. Therefore, the Systems Alternative would have no impact (No Impact).

References – Land Use and Planning

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- City of Simi Valley, 2007. Simi Valley General Plan Update, Final Technical Background Report, published October 2007.
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4.11 Noise

This section evaluates potential impacts associated with noise levels from construction, operations, and maintenance of the Proposed Project and alternatives. The analysis presented below is based on review of the PEA (SCE, 2008), ambient noise measurements taken near the Proposed Project and alternatives, and local noise ordinances and regulations set by cities and Ventura County in the study area.

4.11.1 Setting

Noise Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).

Noise Exposure and Community Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. In fact, community noise varies continuously with time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. Background noise levels change throughout a typical day, but do so gradually, corresponding with the addition and subtraction of distant noise sources and atmospheric conditions. The addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens) makes community noise constantly variable throughout a day.

4.11 Noise

These successive additions of sound to the community noise environment vary the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- $L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value. The L_{eq} is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).$
- L_{max} : The instantaneous maximum noise level measured during the measurement period of interest.
- L_{dn}: The energy average of the A-weighted sound levels occurring during a 24-hour period, and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10 p.m. and seven a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.
- CNEL: Similar to the L_{dn}, the Community Noise Equivalent Level (CNEL) adds a 5 dBA penalty for the evening hours between 7 p.m. and 10 p.m. in addition to a 10 dBA penalty between the hours of 10 p.m. and 7 a.m.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning; and
- physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers at industrial plants often experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way the new noise compares to the existing noise levels that one has adapted, which is referred to as the "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response;

- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. A ruler is a *linear* scale; it has marks on it corresponding to equal quantities of distance. One way of expressing this is to say that the ratio of successive intervals is equal to one. A *logarithmic* scale is different in that the ratio of successive intervals is not equal to one. Each interval on a logarithmic scale is some common factor larger than the previous interval. A typical ratio is 10, so that the marks on the scale read: 1, 10, 100, 1,000, 10,000, etc., doubling the variable plotted on the x-axis. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Sound level naturally decreases with more distance from the source. This basic attenuation rate is referred to as the *geometric spreading loss*. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate (lessen) at a rate of 6.0 dBA per doubling of distance from the source. In many cases, noise attenuation from a point source increases by 1.5 dBA from 6.0 dB to 7.5 dBA for each doubling of distance due to ground absorption and reflective wave canceling. These factors are collectively referred to as *excess ground attenuation*. The basic geometric spreading loss rate is used where the ground surface between a noise source and a receiver is reflective, such as parking lots or a smooth body of water. The excess ground attenuation rate (7.5 dBA per doubling of distance) is used where the ground surface is absorptive, such as soft dirt, grass, or scattered bushes and trees.

Widely distributed noises such as a street with moving vehicles (a "line" source) would typically attenuate at a lower rate of approximately 3.0 dBA for each doubling of distance between the source and the receiver. If the ground surface between source and receiver is absorptive rather than reflective, the nominal rate increases by 1.5 dBA to 4.5 dBA for each doubling of distance. Atmospheric effects, such as wind and temperature gradients, can also influence noise attenuation rates from both line and point sources of noise. However, unlike ground attenuation, atmospheric effects are constantly changing and difficult to predict.

Trees and vegetation, buildings, and barriers reduce the noise level that would otherwise occur at a given receptor distance. However, for a vegetative strip to have a noticeable effect on noise levels, it must be dense and wide. For example, a stand of trees must be at least 100 feet wide and dense enough to completely obstruct a visual path to the roadway to attenuate traffic noise by 5 dBA (Caltrans, 1998). A row of structures can shield more distant receivers depending upon the size and

spacing of the intervening structures and site geometry. Similar to vegetative strips discussed above, noise barriers, which include natural topography and soundwalls, reduce noise by blocking the line of sight between the source and receiver. Generally, a noise barrier that breaks the line of sight between source and receiver will provide at least a 5-dBA reduction in noise.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is typically expressed in units of inches per second (in/sec). The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the affect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration (FTA, 2006). Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Existing Ambient Noise Environment

The main contributor to the study area noise environment is vehicle traffic noise. Major roadways in the study area include Hwy 23, Olsen Road, and Madera Road. To a lesser extent, aircraft overflights also contribute to the ambient noise environment. There are two airstrips in the vicinity of the Proposed Project: a helicopter pad at the Ventura County Sheriff's Department, East County Station (approximately 2,800 feet from the proposed Presidential Substation site), and a small airstrip in the Tierra Rejada Valley (approximately 1,200 feet from the proposed subtransmission alignment). These facilities are not public and do not experience a high level of use.

On April 13 and 14, 2009, Environmental Science Associates (ESA) conducted short-term (10-minute) noise measurements at five locations along the proposed and alternative subtransmission alignments as well as near the proposed Presidential Substation site. **Table 4.11-1** displays the L_{eq} and L_{max} for the 10-minute measurements and **Figure 4.11-1** shows locations where the measurements were collected. As shown, ambient L_{eq} noise levels in the study area ranged from 42.8 dBA to 63.7 dBA. The predominant noise source at the noise monitoring locations was vehicle traffic on nearby roadways.

In addition to the short-term measurements, 24 hours of continuous noise data were collected along Read Road approximately 600 feet west of Hwy 23 to help characterize day and night ambient levels as well as the L_{dn} and CNEL in the study area. Figure 4.11-1 shows the location where the long-term (24-hour) noise measurement was taken. **Table 4.11-2** displays the hourly L_{eq} and L_{max} data collected at the long-term monitoring site. As shown in the table, noise levels were found to be moderate, with the hourly L_{eq} levels ranging between 43.9 dBA and 60.4 dBA. The L_{dn} and CNEL calculated from the data are 58.2 dBA and 58.4 dBA, respectively.

TABLE 4.11-1 **10-MINUTE AVERAGE AMBIENT NOISE LEVELS IN THE STUDY AREA**

#	Measurement Location	Applicable Alignments	Time	L_{eq}	L_{max}	Description of Noise Sources
1	Sunset Valley Road	PP and ASA3	12:34 p.m.	63.7	78.8	Vehicle traffic; wind; birds
2	Read Road and Moorpark Road	PP, ASA1, and ASA3	11:35 a.m.	59.9	67.6	Vehicles on Moorpark Road; wind; tractor in the distance
3	Fresh Meadows Road	All	9:54 a.m.	42.8	68.8	Vehicles along Madera Road; birds; dog barking
4	Esperance Drive	ASA1	12:02 p.m.	48.5	60.9	Light vehicle traffic; wind; birds; music playing at equestrian facility
5	Vista Del Lago	ASA2	9:20 a.m.	54.7	80.5	Vehicle traffic

NOTES: PP = Proposed Project; ASA1 = Alternative Subtransmission Alignment 1; ASA2 = Alternative Subtransmission Alignment 2; and ASA3 = Alternative Subtransmission Alignment 3.

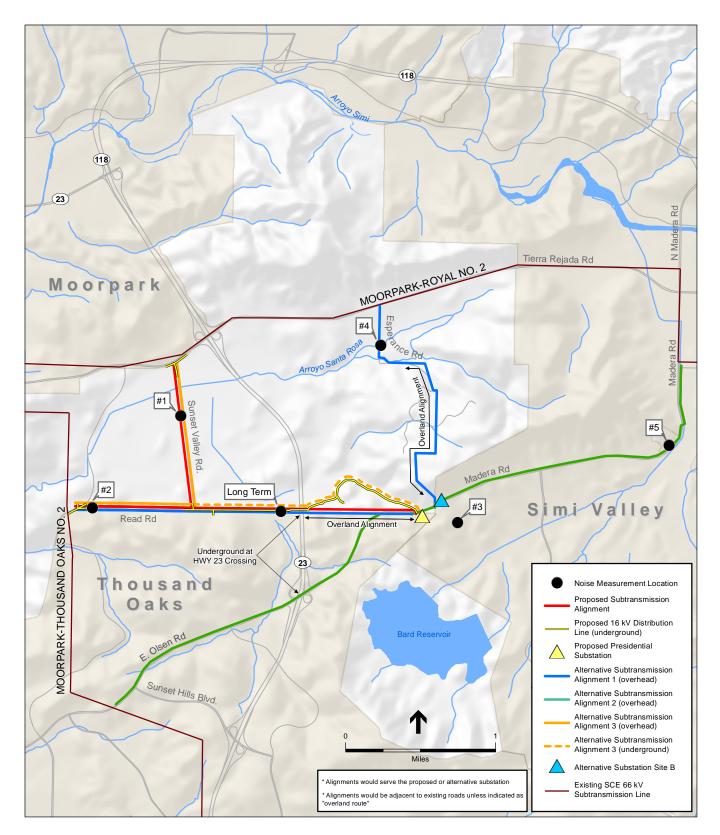
SOURCE: ESA, 2009

Hour	L _{eq}	L _{max}
3:00 p.m 4:00 p.m.	56.0	72.5
4:00 p.m 5:00 p.m.	52.7	67.4
5:00 p.m 6:00 p.m.	52.9	62.6
6:00 p.m 7:00 p.m.	53.7	70.1
7:00 p.m 8:00 p.m.	52.2	68.2
8:00 p.m 9:00 p.m.	50.0	58.9
9:00 p.m 10:00 p.m.	51.2	57.8
10:00 p.m 11:00 p.m.	50.1	58.7
11:00 p.m 12:00 a.m.	48.0	57.8
12:00 a.m 1:00 a.m.	46.0	57.8
1:00 a.m 2:00 a.m.	45.3	61.0
2:00 a.m 3:00 a.m.	43.9	61.1
3:00 a.m 4:00 a.m.	44.0	58.4
4:00 a.m 5:00 a.m.	47.8	59.1
5:00 a.m 6:00 a.m.	53.6	67.3
6:00 a.m 7:00 a.m.	56.8	65.6
7:00 a.m 8:00 a.m.	58.1	73.3
8:00 a.m 9:00 a.m.	56.6	74.3
9:00 a.m 10:00 a.m.	54.7	65.0
10:00 a.m 11:00 a.m.	54.0	63.4
11:00 a.m 12:00 p.m.	53.7	70.6
12:00 p.m 1:00 p.m.	53.4	64.7
1:00 p.m 2:00 p.m.	57.5	77.3
2:00 p.m 3:00 p.m.	60.4	81.3

TABLE 4.11-2 **AMBIENT NOISE LEVELS – 24-HOUR MEASUREMENT**

NOTE: Measurements began at 3:00 p.m. Monday, April 13, 2009, and concluded at 3:00 p.m. on Tuesday, April 14, 2009.

SOURCE: ESA, 2009



SOURCE: SCE, 2010; ESA, 2010

Presidential Substation Project . 207584.02 Figure 4.11-1 Noise Measurement Locations

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate are also sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

Proposed Project

There are approximately 10 residences along Adirondack Court, between approximately 600 feet and 1,000 feet south from the perimeter of the proposed Presidential Substation site. There are also approximately four dozen residences located farther south and east of the Substation site, along Fresh Meadows Road and Shoal Creek Court, and the Tudor Time Child Care Center is located approximately 300 feet east of the site. The proposed subtransmission alignment and the underground distribution line and fiber optic cable along Read Road would be within 50 to 500 feet of approximately 14 single family residences. The underground distribution line and fiber optic cable would be installed within 50 feet and 125 feet, respectively, of two residences east of Hwy 23. The proposed new access road east of Hwy 23 would be 100 feet and 400 feet, respectively, from two residences.

Alternative Subtransmission Alignment 1

The portion of Alternative Subtransmission Alignment 1 that is the same as the proposed subtransmission alignment along Read Road would pass by the same residents as described for the Proposed Project. Similarly, the underground distribution and telecommunications cable and the access road construction east of Hwy 23 under this alternative subtransmission alignment would pass near the same sensitive receptors as described for the Proposed Project. The part of Alternative Subtransmission Alignment 1 along Esperance Road would also be within 100 to 200 feet of at least two residences.

Alternative Subtransmission Alignment 2

Alternative Subtransmission Alignment 2 would be within 100 feet of several dozen residences north and south of East Olsen Road and Madera Road. In addition to residential receptors, the Tutor Time Child Care Center is within 50 feet of the alignment and the eastern end of the alignment is approximately 1,300 feet south-southwest of Madera Elementary School in Simi Valley.

Alternative Subtransmission Alignment 3

The portion of Alternative Subtransmission Alignment 3 that is the same as the proposed subtransmission alignment along Read Road would pass by the same residents as described for the Proposed Project. Similarly, the underground portion of Alternative Subtransmission

Alignment 3 and the access road construction east of Hwy 23 would pass near the same sensitive receptors as described for the Proposed Project.

Alternative Substation Site B

Alternative Substation Site B would be located along Madera Road approximately 150 feet and across the street from the Tutor Time Child Care Center. The site would also be within approximately 600 to 1,000 feet of approximately 16 residential receptors along Fresh Meadows Road and Scioto Circle. In addition, there is one residence approximately 1,000 feet north of the site along Presidential Drive.

System Alternative B

System Alternative B would require upgrades at existing Royal, Thousand Oaks, and Potrero substations. Royal and Potrero Substations are surrounded by commercial uses; however, Thousand Oaks Substation is surrounded on the west, south, and east by multi-family residential buildings as close as 35 feet from the Thousand Oaks Substation, and to the north are approximately eight single-family residences at distances between 100 and 200 feet. Pinecrest School is approximately 300 feet to the east of the Thousand Oaks Substation.

Regulatory Context

Federal, State, and local agencies regulate different aspects of environmental noise. Federal and State agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans tend to identify general principles intended to guide and influence development plans; local noise ordinances establish standards and procedures for addressing specific noise sources and activities.

Ventura County (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

General Plan

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following policies identified in the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives (County of Ventura County, 2008):

Policy 2.16.2-1(4)¹: Noise generators, proposed to be located near any *noise sensitive use*, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:

Policy 2.16.2-1(4) is not applicable to increased traffic noise along any of the roads identified within the 2020 Regional Roadway Network Public Facilities Appendix of the Ventura County General Plan. In addition, State and Federal highways, all railroad line operations, aircraft in flight, and public utility facilities are noise generators having Federal and State regulations that preempt local regulations.

- a. L_{eq} 1H of 55 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.
- b. L_{eq} 1H of 50 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.
- c. L_{eq} 1H of 45 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.

Policy 2.16.2-1(5): Construction noise shall be evaluated and, if necessary, mitigated in accordance with the County *Construction Noise Threshold Criteria and Control Plan.*

Construction Noise Threshold Criteria and Control Plan

The *Construction Noise Threshold Criteria and Control Plan* establishes construction noise thresholds and standard noise monitoring and control measures for construction projects located in Ventura County (County of Ventura, 2010). **Table 4.11-3** displays daytime, evening, and nighttime construction noise threshold criteria for projects in Ventura County. The criteria presented in the table are expressed in hourly average noise levels not to be exceeded. In addition to hourly average noise levels, the instantaneous maximum noise level (L_{max}) shall not exceed the noise threshold criteria presented in the table by 20 dBA more than eight times per daytime hour, more than six times per evening hour, or more than four times per nighttime hour. If construction projects exceed the noise threshold criteria at sensitive receptor sites, the County requires contractors to implement effective noise mitigation measures recommended by equipment manufacturers (County of Ventura, 2010).

	Noise Threshold Criteria ^a					
Construction Duration Affecting Noise-Sensitive Receptors	Fixed L _{eq} (h), dBA	Hourly Equivalent Noise Level (L _{eq}), dBA ^{b,c}				
Daytime (Mon-Fri 7 a.m. to 7 p.m.; Sat, Sun	and holidays 9 a.m. to 7 p.m.)					
0 to 3 days	75	Ambient L _{eq} (h) + 3 dB				
4 to 7 days	70	Ambient L _{eq} (h) + 3 dB				
1 to 2 weeks	65	Ambient L _{eq} (h) + 3 dB				
2 to 8 weeks	60	Ambient L _{eq} (h) + 3 dB				
Longer than 8 weeks	55	Ambient L _{eq} (h) + 3 dB				
Evening (7 p.m. to 10 p.m.)						
Any duration	50	Ambient L _{eq} (h) + 3 dB				
Nighttime (Mon-Fri 10 p.m. to 7 a.m.; Sat, S	un and holidays 10 p.m. to 9 a.m.)					
Any duration	45	Ambient L _{eq} (h) + 3 dB				

 TABLE 4.11-3

 VENTURA COUNTY CONSTRUCTION ACTIVITY NOISE THRESHOLD CRITERIA

^a The applicable noise threshold criteria shall be the greater of the noise levels presented in the table at the nearest receptor area or 10 feet from the nearest noise sensitive building.

^b The instantaneous L_{max} shall not exceed the noise threshold criteria by 20 dBA more than eight times per daytime hour, six times per evening hour, or four times per nighttime hour.

^b Local ambient L_{eq} measurements shall be made on any mid-week day during applicable hours prior to project work.

SOURCE: County of Ventura, 2010

While compliance with the thresholds set forth in Table 4.11-3 would reduce the likelihood of strong adverse community reaction, the Plan notes that noise complaints are still possible. Therefore, it is recommended that a "Complaint Log" noting date, time, complainant's name, nature of the complaint, and any corrective action be maintained throughout construction of a project. To ensure that complaints are registered effectively, the Plan recommends that a "Hot Line" telephone or pager number that is attended to during active construction working hours be published and distributed to the potentially affected community (County of Ventura, 2010).

Noise Ordinance

Ventura County Ordinance No. 4124 regulates nighttime noise in residential zones. According to the ordinance, no person shall create within any residential zone of the County of Ventura, any loud or raucous noise which is audible to the human ear during the hours of 9 p.m. to 7 a.m. the following day, at a distance of 50 feet from the property line of the noise source or 50 feet from any such noise source if the noise source is in a public right-of-way (County of Ventura, 1996).

City of Thousand Oaks (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

General Plan

The General Plan Noise Element includes a program to help the City achieve its noise goals and objectives. As part of this program, the City has defined thresholds for determining significance of noise impacts under CEQA. According to the City, if the annual average CNEL that considers a proposed project, cumulative projects, and General Plan buildout in an area currently designated in the General Plan for noise-sensitive land use is expected to be less than 55 dB, then impacts would be less than significant. If the CNEL is expected to be 55 to 60 dB, then a project would be considered to have an individually significant impact if it would increase noise levels by greater than 1 dB. When the CNEL would be expected to be 60 dB or greater, then a project would be considered significant if noise levels increase by 0.5 dB or more (City of Thousand Oaks, 2000).

Municipal Code

Title 5, Chapter 21 of the City of Thousand Oaks Municipal Code regulates noise levels throughout the City. This chapter prohibits any person from causing any loud, unnecessary, and unusual noise that disturbs the peace or quiet of any neighborhood, or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area (City of Thousand Oaks, 1990).

Acceptable hours for construction activities are set forth in Title 8, Chapter 11 of the City's Municipal Code. According to the code, construction hours are limited to between the hours of 7 a.m. and 7 p.m., Monday through Saturday, unless a permit for work during different hours or days has been issued by the Public Works Director (City of Thousand Oaks, 1970).

City of Simi Valley (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

General Plan

There are no policies or standards identified in the City of Simi Valley General Plan that would be applicable to the review of the Proposed Project or alternatives (City of Simi Valley, 1988).

Municipal Code

Title 5, Chapter 16 of the Simi Valley Municipal Code regulates noise levels throughout the City. According to the code, operation of engines, motors, and mechanical devices in and near residential districts between the hours of 11 p.m. and 7 a.m. on Friday or Saturday and between the hours of 10 p.m. and 7 a.m. on Sunday through Thursday is prohibited unless such motor, engine, or mechanical device is enclosed within a sound-insulated structure as to prevent noise and sounds from being plainly audible at a distance of 50 feet from the structure. Additionally, construction activities are limited to between the hours of 7 a.m. and 7 p.m. (City of Simi Valley, 2000).

4.11.2 Significance Criteria

According to Appendix G of the CEQA Guidelines, a project impact would be considered significant if it would:

- a) Expose people to or generate noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies;
- b) Expose people to or generate excessive groundborne vibration or groundborne noise levels;
- c) Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- d) Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; or
- e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, expose people residing or working in the area to excessive noise levels;
- f) For a project located in the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

4.11.3 Applicant Proposed Measures

No APMs have been identified by SCE to reduce noise impacts from construction, operation, or maintenance of the Proposed Project.

4.11.4 Impacts and Mitigation Measures

Equipment noise during construction of the Proposed Project is the primary concern in evaluating short-term noise impacts. During operation, noise from corona discharge along subtransmission lines in wet conditions, Substation transformer noise, and general maintenance activities would be the primary concern associated with long-term noise impacts.

Evaluation of potential noise impacts from construction and operation of the Proposed Project included a review of relevant city and County noise standards and policies, as well as a comparison of the existing noise environment with modeled Proposed Project construction and operation noise levels. Impacts were assessed by comparing the modeled noise levels of construction equipment and operational activities to applicable noise regulations and/or the ambient noise environment.

a) Expose people to or generate noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies.

Impact 4.11-1: Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria. *Significant unavoidable* (Class I)

Construction of the Proposed Project would result in temporary increases in ambient noise levels associated with operation of heavy duty construction equipment. Ventura County General Plan Policy 2.16.2-1(5), states that construction noise shall be evaluated and, if necessary, mitigated in accordance with the *Ventura County Construction Noise Threshold Criteria and Control Plan*. Several components of the Proposed Project would either be constructed within unincorporated Ventura County or in the City of Thousand Oaks, immediately adjacent to unincorporated Ventura County. For the purposes of this analysis, Proposed Project construction noise levels at the nearest sensitive receptors in unincorporated Ventura County were estimated using methods identified by the County (County of Ventura County, 2010) and compared to the County construction noise threshold criteria regardless of whether the construction activity would take place within unincorporated Ventura County or within the City of Thousand Oaks.

Average (L_{eq}) construction noise levels at the nearest unincorporated sensitive receptor locations were estimated for construction activities associated with the proposed Presidential Substation, access road construction, installation of LWS poles and tubular steel poles (TSPs), and installation of the underground distribution line and fiber optic cable. Construction activities at the proposed Presidential Substation site would occur within 1,600 feet of the nearest unincorporated sensitive receptor, while the underground distribution line and fiber optic cable installation activity would occur within 50 feet of unincorporated residences along Read Road and east of Hwy 23. The construction activities were modeled for each of the specific activities identified in Project Description Table 2-7, *Construction Equipment Use*. Based on the results of the noise modeling, the activity types with the highest construction noise levels were used to represent the specific Proposed Project component.

Construction equipment reference average noise levels at 50 feet identified in the Ventura County Construction Noise Threshold Criteria and Control Plan were used in the modeling analysis. For the purposes of estimating combined noise levels associated with construction of the proposed Presidential Substation, access roads, and underground distribution line and fiber optic cable, it was assumed that the loudest piece of equipment would operate the closest to the sensitive receptor, then each of the other pieces of equipment would be spaced at intervals of 50 feet for Substation work and 25 feet for access road and underground distribution line and fiber optic cable work based on the referenced noise levels for each piece of equipment (i.e., equipment with highest noise levels are modeled closest to the receptor). The modeling also accounts for usage factors based on the estimated hours of operation during a typical 10-hour workday. For example, a water truck would operate approximately three hour per day during the Substation civil construction activities, therefore a usage factor of 30 percent was used to estimate the water truck L_{eq} noise levels associated with that construction activity. For the purpose of estimating noise levels associated with TSP and LWS pole installation, it was assumed that one piece of equipment would generally operate at a time; therefore, the loudest piece of equipment was used to represent the noise levels associated with TSP and LWS pole installation.

As shown in **Table 4.11-4**, modeled L_{eq} construction noise levels at nearby unincorporated sensitive receptors range between 52.1 dBA for proposed Presidential Substation civil construction activities, and 85.2 dBA for underground distribution line and telecommunications cable installation within 50 feet of a residence. Using the methods identified in the *County Construction Noise Threshold Criteria and Control Plan* (see Table 4.11-3, *Ventura County Construction Activity Noise Threshold Criteria*), it is anticipated that construction activities associated with access road construction within 100 feet a residence, TSP installation within 70 feet of a residence, and underground distribution line and fiber optic cable installation within 50 feet and 125 feet would exceed the County construction noise threshold criteria. Therefore, the Proposed Project would conflict with Ventura County General Plan Policy 2.16.2-1(5), resulting in a significant, albeit temporary, impact.

Activity at Distance from Sensitive Receptor	Duration	L _{eq}	Significant Impact?
Substation Civil Activities at 1,600 feet	> 8 weeks	52.1	No
Overhead Subtransmission Access Road Construction at 100 feet Access Road Construction at 400 feet LWS Pole Installation at 300 feet TSP Installation at 70 feet TSP Installation at 300 feet	< 3 days < 3 days < 2 weeks < 2 weeks < 2 weeks < 2 weeks	76.5 63.2 61.3 80.4 64.6	Yes No No Yes No
Underground Distribution/Fiber Installation at 50 feet	< 2 weeks	85.2	Yes
Underground Distribution/Fiber Installation at 125 feet	< 2 weeks	76.4	Yes

TABLE 4.11-4
ESTIMATED CONSTRUCTION NOISE LEVELS AT UNINCORPORATED SENSITIVE RECEPTORS

NOTES: Estimates are based on information presented in Chapter 2, *Project Description*, using methods identified in the County *Construction Noise Threshold Criteria and Control Plan* (County of Ventura, 2010). As discussed in Chapter 2, *Project Description*, construction activities would generally be scheduled during daylight hours (i.e., between 7 a.m. to 5 p.m.), Monday through Friday. If SCE determines that different hours or days are necessary, it would obtain variances from local noise ordinances, as necessary. Therefore, no impact would occur related to a potential noise ordinance violation. Although nighttime construction activities would not violate local ordinances if variances are obtained, nighttime construction activities would likely exceed the *Construction Activity Noise Threshold Criteria* for nighttime construction sources depending on the proximity of the nighttime construction activities to the closest unincorporated sensitive receptors, resulting in a significant impact.

Implementation of Mitigation Measures 4.11-1a and 4.11-1b, below, would require SCE and/or its construction contractors to reduce noise levels and the associated nuisance at sensitive receptor locations to the extent practical.

Mitigation Measure 4.11-1a: SCE and/or its contractors shall develop a Construction Noise Reduction Plan. The Plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities. The Plan shall include, but not be limited to, the following measures for daytime construction activities:

- Publish and distribute to the potentially affected community within 300 feet, a "Hot Line" telephone number or pager number, which shall be attended during active construction working hours, for use by the public to register complaints. All complaints shall be logged noting date, time, complainants' name, nature of complaint, and any corrective action taken.
- All construction equipment shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations.
- Maximize physical separation, as far as practicable, between noise sources (construction equipment) and noise receptors. Separation may be achieved by providing enclosures for stationary items of equipment and noise barriers around particularly noisy areas at the project sites and by locating stationary equipment to minimize noise impacts on the community.
- Utilize construction noise barriers such as paneled noise shields, barriers, or enclosures adjacent to or around noisy equipment associated with access road construction, pole installation and removal, and underground trenching for distribution line and fiber optic cable in the immediate vicinity (i.e., within 200 feet) of sensitive receptors. Noise control shields shall be made featuring a solid panel and a weather-protected, sound-absorptive material on the construction-activity side of the noise shield. Shields used during linear construction activities shall be readily removable and moveable so that they may be repositioned, as necessary, to provide noise abatement for construction activities located near residential receptors.

Mitigation Measure 4.11-1b: The Construction Noise Reduction Plan required by Mitigation Measure 4.11-1a shall include a nighttime noise and nuisance reduction strategy in the event that nighttime construction activity is determined to be necessary within 1,000 feet of sensitive receptors. The strategy shall include a set of site-specific noise attenuation measures that apply state of the art noise reduction technology to ensure that nighttime construction noise levels and associated nuisances are reduced to the extent feasible.

The attenuation measures may include, but not be limited to, the control strategies and methods for implementation that are listed below. If any of the following strategies are determined by SCE to not be feasible, an explanation as to why the specific strategy is not feasible shall be included in the Construction Noise Reduction Plan.

- Plan construction activities to minimize the amount of nighttime construction.
- Offer temporary relocation of residents within 200 feet of nighttime construction activities.
- Temporary noise barriers, such as shields and blankets, shall be installed immediately adjacent to all nighttime stationary noise sources (e.g., auger rigs, bore rigs, generators, pumps, etc.).
- Install temporary noise barriers that block the line of sight between nighttime activities and the closest residences within 1,000 feet.
- The notification requirements identified in Mitigation Measure 4.11-1a shall be extended to include residences within 1,000 feet of pending nighttime construction activities.

Although several components of Mitigation Measures 4.11-1a and 4.11-1b would likely reduce the annoyance that would be associated with loud construction activities, it not possible to firmly substantiate that implementation of Mitigation Measures 4.11-1a and 4.11-1b would achieve noise reductions of more than 5 dBA. Therefore, even with these mitigation measures, daytime construction activities associated with at least one TSP installation and installation of the underground distribution line and fiber optic cable would be likely to exceed the Ventura County construction noise threshold criteria, and nearly all nighttime construction activities within 1,000 feet of Ventura County sensitive receptors would continue to exceed the Ventura County construction noise threshold criteria. Therefore, the impact would be significant and unavoidable.

Significance after Mitigation: Significant Unavoidable.

Construction Noise Municipal Codes

Local municipal codes restrict construction activities in unincorporated Ventura County to between the hours of 7 a.m. and 9 p.m. and in the City of Thousand Oaks and City of Simi Valley to between the hours of 7 a.m. and 7 p.m., Monday through Saturday. As discussed in Chapter 2, *Project Description*, construction activities would generally be scheduled during daylight hours (7 a.m. to 5 p.m.), Monday through Friday. There is a possibility that construction would be required during different hours or days; however, if SCE determines that different construction hours or days are necessary, it has committed to obtaining variances from local noise ordinances, as necessary. Therefore, no impact related to a violation of a local noise ordinance would occur (No Impact).

Operations

As explained in more detail under the Impact 4.11-3 discussion, there would be no operational impact in this regard because the Proposed Project's operational noise levels would be within the acceptable noise levels for residential uses as identified by the Ventura County General Plan and Thousand Oaks General Plan land use compatibility standards. The City of Simi Valley does not have adopted General Plan noise-related standards that would be applicable to the Proposed Project (No Impact).

b) Expose people to or generate excessive groundborne vibration or groundborne noise levels.

Impact 4.11-2: Construction activities could expose people and/or structures to vibration levels. *Less than significant* (Class III)

Temporary sources of groundborne vibration and noise during construction would result from operation of conventional heavy construction equipment such as drill rigs, bulldozers, and loaded haul trucks. These pieces of equipment can generate vibration levels of up to 0.09 in/sec at a distance of 25 feet. However, vibration levels attenuate rapidly from the source. At a distance of 50 feet, which is the approximate distance that the closest residence would be to active heavy construction equipment, vibration would be up to 0.04 in/sec.

The PPV threshold of 0.20 in/sec identified by Caltrans (2004) is used in this analysis to determine the significance of vibration impacts related to adverse human reaction, and the Federal Transit Administration (FTA) PPV threshold of 0.12 in/sec for buildings extremely susceptible to vibration damage is used to determine the significance of vibration impacts related to risk of architectural damage to buildings (FTA, 2006). Vibration levels at the closest residence locations would be well below these PPV thresholds. Therefore, construction-related vibration impacts would be less than significant. These vibration levels would not have the potential to cause structural damage to nearby buildings; however, they would be potentially perceptible at residences or other sensitive uses in the immediate vicinity of the construction corridor.

Construction activities associated with the subtransmission line and distribution line/telecommunication line installation would not be concentrated at the same location for an extended period of time; rather, they would progress in a linear fashion along the proposed subtransmission alignments. Therefore, it is expected that an individual receptor would not be exposed to groundborne vibration for longer than a few days. Impacts from subtransmission line construction would be less than significant (Class III).

Mitigation: None required.

Proposed Presidential Substation Construction

Construction activities associated with the proposed Presidential Substation would be localized in one location for approximately 13 months; however, since the nearest sensitive receptor would be located 300 feet from perimeter of the proposed Presidential Substation site, it is expected that construction-related groundbourne vibration would not be perceptible and no impact would occur (No Impact).

Operations

Operation and maintenance of the Proposed Project would not introduce any new sources of perceivable groundborne vibration to the study area. Therefore, there would be no operation-related vibration impacts. Groundborne noise is the rumbling sound of structure surfaces caused by high vibration levels. Because implementation of the Proposed Project would not result in exposure of persons to or generation of excessive groundborne vibration, it also would not expose them to or generate excessive groundborne noise levels. Consequently, there would be no groundborne noise-related impact associated with operation and maintenance of the Proposed Project (No Impact).

c) Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact 4.11-3: Operation and maintenance-related noise levels could increase ambient noise levels in the vicinity of the Proposed Project. *Less than significant* (Class III)

The primary noise sources from operations of the Proposed Project would be associated with corona discharge, substation transformers, and general maintenance-related activities.

Corona Noise

The term corona is used to describe the breakdown of air into charged particles caused by the electrical field at the surface of a conductor. Audible noise levels generated by corona discharge vary depending on weather conditions as well as on the voltage of the line. Wet weather conditions often increase corona discharge due to accumulation of raindrops, fog, frost or condensation on the conductor surface, which causes surface irregularities thereby promoting corona discharge.

According to the Electric Power Research Institute (EPRI), noise levels 25 feet directly below 138 kV transmission lines under wet conditions would be up to 37 dBA (EPRI, 1978). Noise levels under the Proposed Project conductors would be expected to be lower as the voltage would be 66 kV rather than 138 kV; nevertheless, for the purpose of this analysis the noise level of 37 dBA is used to represent worst case corona noise levels that would occur directly below the subtransmission line conductors. This noise level would be below the County nighttime exterior L_{eq} standard of 45 dBA. Assuming an L_{eq} noise level of 37 dBA during all hours of the day, again

a worst case assumption, the CNEL of the subtransmission line corona noise would be up to 44 dBA. Given that the existing CNEL measured along Read Road measured approximately 58 dBA (see *Existing Ambient Noise Environment* discussion in Section 4.11.1), noise from the subtransmission lines would not likely increase ambient CNEL levels at sensitive receptor locations and would therefore not exceed City of Thousand Oaks significance thresholds designed to help the City achieve its General Plan noise goals and objectives. Therefore, corona noise that could be associated with the Proposed Project would be less than significant (Class III).

Substation Transformers

The proposed Presidential Substation would include installation two 66/16 kV transformers. Operation of the new transformers would increase noise levels in the immediate vicinity of the transformers. Transformer noise is caused, in part, by a phenomenon called magnetostriction, which causes the transformer to be magnetically excited and vibrate, producing a "humming" type sound. Maximum noise levels for a slightly higher voltage transformer (i.e., 69/34 kV) have been estimated for a recent substation project to be no more than 53 dBA at a distance of 50 feet (ESA, 2011). Therefore, maximum combined noise levels for the two proposed Presidential Substation transformers could be up to 56 dBA at 50 feet. As illustrated in Project Description Figure 2-4, *Proposed Substation Layout*, the transformers would be sited at the approximate center of the substation site. Therefore, it is anticipated that the transformers would be no closer than 100 feet to the 8-foot high perimeter walls that would surround the proposed Presidential Substation site. Accounting for the distance to the perimeter wall and for extra attenuation that would be associated with the wall, it is estimated that the substation transformers would result in an L_{eq} noise level of approximately 45 dBA at the outside perimeter of the substation.

The nearest sensitive receptors to the perimeter of the proposed Presidential Substation site are Tudor Time Child Care Center approximately 300 feet to the east and approximately 10 residences along Adirondack Court approximately 600 to 1,000 feet to the south. These sensitive receptors are in the City of Simi Valley, which does not have adopted noise standards for stationary sources such as the proposed transformers. Assuming a L_{eq} noise level of approximately 45 dBA at the outside perimeter of the substation, maximum noise levels at 300 feet and 600 from the substation perimeter would be approximately 33 dBA and 28 dBA, respectively, which would be virtually inaudible given the ambient noise levels in the area (see Table 4.11-1). Therefore, noise impacts related to the proposed Presidential Substation transformers would be less than significant (Class III).

Maintenance

Maintenance activities would include inspection, maintenance, and repair of Proposed Project components. SCE personnel would visit the proposed Presidential Substation three to four times per month to test and repair equipment. New subtransmission lines would be inspected on an annual basis. Worker vehicles used to transport maintenance staff would create a negligible amount of noise and would not be expected to conflict with applicable noise ordinances and plans. Impact would be less than significant (Class III).

Mitigation: None required.

d) Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact 4.11-4: Construction activities could increase ambient noise levels in Thousand Oaks and Simi Valley. *Less than Significant with Mitigation* (Class II)

As described under the Impact 4.11-1 discussion, construction of the Proposed Project would result in temporary increases to ambient noise levels associated with operation of heavy duty construction equipment. Table 4.11-3 includes the estimated construction noise levels at sensitive receptors in unincorporated Ventura County. **Table 4.11-5**, below, includes the estimated construction noise levels at the closest sensitive receptors to the proposed Presidential Substation in Simi Valley and the closest sensitive receptors to the overhead subtransmission line and underground distribution line/fiber optic cable alignment in Thousand Oaks. As indicated in Table 4.11-5, L_{eq} construction noise levels are estimated to range between 61.3 dBA and 85.2 dBA.

Activity at Distance from Sensitive Receptor	L _{eq} (dBA)
Substation Civil Activities at 300 feet (Simi Valley)	68.5
Substation Civil Activities at 600 feet (Simi Valley)	62.0
Overhead Subtransmission (Thousand Oaks) LWS Pole Installation at 300 feet TSP Installation at 100 feet	61.3 76.5
Underground Distribution/Fiber at 50 feet (Thousand Oaks)	85.2
Bore Construction at 150 feet (Thousand Oaks)	74.4

TABLE 4.11-5 ESTIMATED CONSTRUCTION NOISE LEVELS AT THOUSAND OAKS AND SIMI VALLEY SENSITIVE RECEPTORS

NOTES: Estimated were made based on methods identified in the *County Construction Noise Threshold Criteria and Control Plan* (County of Ventura, 2010) with information presented in Chapter 2, *Project Description*.

Although there are no applicable local policies or standards available to judge the significance of short-term daytime construction noise levels in Thousand Oaks or Simi Valley, the FTA has identified a daytime hourly L_{eq} level of 90 dBA as a noise level where adverse community reaction could occur (FTA, 2006). Given that L_{eq} noise levels at the nearest Simi Valley sensitive receptors would be limited to 69 dBA at the Tudor Time Child Care Center and 62 dBA at the nearest residences, and the L_{eq} noise levels at the nearest Thousand Oaks sensitive receptors would range between 61 dBA and 85 dBA, the increase in local noise levels would not be expected to be substantial at nearby sensitive receptors. However, construction noise levels would likely be perceived as a nuisance at the closest sensitive receptors, potentially resulting in significant impacts.

In addition to onsite construction equipment, it is anticipated that an average of approximately 42 commuting worker daily round trips and up to 100 material delivery round trips would be required during the 13- to 20-month construction period. It is anticipated that the majority of trips would occur along Madera Road, with substantially less trips occurring along Read Road, Sunset Valley Road, etc. These Proposed Project-related trips would represent an increase to the existing average daily traffic volumes on these roads and would likely result in a short-term L_{dn} increase along the roads of less than 2 dBA. These short-term traffic related noise increases would result in less-than-significant impacts.

As discussed in Chapter 2, *Project Description*, construction activities would generally be scheduled during daylight hours (7 a.m. to 5 p.m.), Monday through Friday. If SCE determines that different hours or days are necessary, it would obtain variances from local noise ordinances, as necessary to avoid conflict with the City of Thousand Oaks and the City of Simi Valley noise ordinances. Although the ordinances would not be violated if variances are obtained, nighttime construction noise levels could result in a substantial increase in nighttime ambient noise levels resulting in a nuisance at nearby residences, causing a significant impact.

Mitigation Measure 4.11-4: Implement Mitigation Measures 4.11-1a and 4.11-1b.

Mitigation Measures 4.11-1a and 4.11-1b would reduce the annoyance that would be associated with loud construction activities.

Significance after Mitigation: Less than Significant.

e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels.

The Proposed Project would not be located within an airport land use plan area nor would it be located within 2 miles of any public airport; therefore, no impact would occur (No Impact).

f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Impact 4.11-5: Construction workers and employees conducting maintenance of the Proposed Project could be exposed to noise levels associated with private airstrips. *Less than significant* (Class III)

The Proposed Project would be located within the vicinity of a helipad and one private airstrip. However, the Proposed Project would not involve the development of noise-sensitive land uses that would be exposed to excessive aircraft noise. Construction workers at the proposed Presidential Substation site and along the proposed subtransmission alignment would be exposed to limited aircraft overflight noise during the 13 to 20 month construction period. There would be no full time employees at the proposed Presidential Substation; however, employees that would conduct maintenance at the substation three to four times per month and the employees that would inspect the new subtransmission lines on an annual basis would also be exposed to limited aircraft overflight noise. Construction workers and employees conducting maintenance would be exposed to periodic short-term aircraft overflight noise; however, the average construction and maintenance activity noise and ambient vehicle traffic noise levels that the workers and employees would be exposed to would likely be greater than the average overflight noise levels that they would be exposed to. Therefore, the impact would be less than significant (Class III).

Mitigation: None required.

4.11.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore, no noise or vibration impacts would occur (No Impact).

Alternative Subtransmission Alignment 1

Construction-related impacts associated with this alternative subtransmission alignment would generally be similar to those anticipated from construction of the Proposed Project. However, Alternative Subtransmission Alignment 1 would include a subtransmission alignment that would follow Esperance Road. Therefore, in addition to residential receptors located along Read Road, Alternative Subtransmission Alignment 1 would also impact residences located along Esperance Road. This alternative subtransmission alignment would be expected to result in significant unavoidable short-term construction impacts to unincorporated Ventura County residences along Esperance Road (Class I).

However, unlike the Proposed Project, this alternative would not require existing distribution to be relocated underground along Read Road and east of Hwy 23. Therefore, impacts to residences along Read Road and the Proposed Project distribution route east of Hwy 23 would be reduced compared to the Proposed Project. In addition, instead of TSP installation along Read Road, Alternative Subtransmission Alignment 1 would require installation of LWS poles, which would result in slightly lower (i.e., approximately 3 dBA) L_{eq} construction noise levels compared to the Proposed Project. Although construction noise levels along Read Road would be lower under this alternative, due to the close proximately of residences to LWS pole construction activities it is anticipated that this alternative would also result in significant unavoidable short-term construction impacts to unincorporated Ventura County residences along the north side of Read Road (Class I). However, significant unavoidable impacts to the unincorporated Ventura County residences along the Proposed Project distribution route east of Hwy 23 would be avoided under

this alternative. Short-term construction impacts to sensitive receptors in Thousand Oaks and Simi Valley would be mitigated to less than significant (Class II) with implementation of Mitigation Measures 4.11-1a and 4.11-1b. Similar to the Proposed Project, Alternative Subtransmission Alignment 1 would result in less-than-significant impacts related to exposing sensitive receptors to vibration (Class III).

Long-term impacts associated with this alternative subtransmission alignment would generally be the same as those anticipated from operation and maintenance of the Proposed Project. Corona discharge would be the primarily noise source; however, as with the Proposed Project, such noise levels would not be expected to increase ambient noise levels by any perceptible amount and impacts would be less than significant (Class III).

Alternative Subtransmission Alignment 2

Construction-related impacts associated with Alternative Subtransmission Alignment 2 would generally be less than those that would be anticipated for construction of the Proposed Project. Rather than being constructed along Read Road and Sunset Valley Road, this alternative subtransmission alignment would be constructed along East Olsen Road in Thousand Oaks and along Madera Road in Simi Valley. Alternative Subtransmission Alignment 2 would pass by a greater number of residential receptors compared to the Proposed Project; however, this alternative subtransmission alignment would result in no significant unavoidable impacts related to exceeding Ventura County construction noise threshold criteria because unincorporated Ventura County residents would not be impacted under this alternative. As with the Proposed Project, implementation of mitigation measures would reduce short-term construction impacts on sensitive receptors in Thousand Oaks and Simi Valley to less than significant (Class II) with implementation of Mitigation Measures 4.11-1a and 4.11-1b. Similar to the Proposed Project, Alternative Subtransmission Alignment 2 would result in less-than-significant impacts related to exposing sensitive receptors to vibration (Class III).

Long-term impacts associated with this alternative subtransmission alignment would generally be the same as those anticipated from operation and maintenance of the Proposed Project. Corona discharge would be the primarily noise source; however, as with the Proposed Project such noise levels would not be expected to increase ambient noise levels by any perceptible amount and impacts would be less than significant (Class III).

Alternative Subtransmission Alignment 3

Construction-related impacts associated with Alternative Subtransmission Alignment 3 would generally be similar to those anticipated from construction of the Proposed Project. This alternative subtransmission alignment would include installation of the double-circuit 66 kV line underground in the same alignment as that proposed for the Proposed Project distribution line relocation and telecommunications cable between Sunset Valley Road and the proposed Presidential Substation. The Proposed Project overhead double-circuit subtransmission line and associated TSPs between Sunset Valley Road and the proposed Presidential Substation site would not be required under this alternative. As with the Proposed Project, this Alternative

Subtransmission Alignment 3 would be expected to result in significant unavoidable short-term construction impacts to unincorporated Ventura County residents along the north side of Read Road and east of Hwy 23 (Class I). Short-term construction impacts to sensitive receptors in Thousand Oaks and Simi Valley would be mitigated to less than significant (Class II) with implementation of Mitigation Measures 4.11-1a and 4.11-1b. Similar to the Proposed Project, Alternative Subtransmission Alignment 3 would result in less-than-significant impacts related to exposing sensitive receptors to vibration (Class III).

Long-term impacts associated with this alternative subtransmission alignment would generally be the same as those anticipated from operation and maintenance of the Proposed Project. Corona discharge along the overhead single circuit alignment would be the primarily noise source; however, as with the Proposed Project, such noise levels would not be expected to increase ambient noise levels by any perceptible amount and impacts would be less than significant (Class III).

Alternative Substation Site B

Under Alternative Substation Site B, short-term construction activities would result in similar overall noise levels compared to the construction activities that would result for the proposed Presidential Substation. Although the development at the Alternative Substation Site B would require complete demolition of all existing structures associated with the previous Ventura County Sherriff's Department buildings and infrastructure, this site would require considerably less cut and fill construction activities compared to those that would be required for the proposed Presidential Substation. The additional equipment hours required for the demolition activities would likely be offset by the reduced equipment hours for cut and fill activities compared to those that would be needed for the proposed Presidential Substation site. Construction activities under the Alternative Substation Site B would result in less-than-significant impacts with mitigation (Class II). Similar to the Proposed Project, the Alternative Substation Site B would result in less-than-significant impacts related to exposing sensitive receptors to vibration (Class III).

Transformers installed at Alternative Substation Site B would be located approximately 250 feet from the nearest sensitive receptor, which would be closer than that associated with the Proposed Project. However, long-term operational noise levels are predicted to be approximately 37 dBA at the nearest receptor, which would represent an imperceptible increase in noise levels. Impacts from operation of this alternative substation alignment would be less than significant (Class III). Like the proposed Presidential Substation, maintenance-related impacts under this alternative would result in a less-than-significant impact related to periodic employee vehicle noise.

System Alternative B

Under System Alternative B, short-term construction activities at Royal, Thousand Oaks, and Potrero Substations would result in similar overall noise levels compared to the construction activities that would result for the proposed Presidential Substation. Average noise levels at the closest residences to Thousand Oaks Substation are estimated to be up to 89 dBA. However, it is anticipated that the construction period for each of the substations would be substantially shorter than the construction period that would be associated with the proposed Presidential Substation. Construction activities under System Alternative B would result in impacts that would be mitigated to less-than-significant (Class II) with implementation of Mitigation Measures 4.11-1a and 4.11-1b. Like the Proposed Project, System Alternative B would result in less-thansignificant impacts related to exposing sensitive receptors to vibration and to periodic employee vehicle noise during maintenance activities (Class III).

Impact 4.11-SAB-1: Transformer noise under System Alternative B at Thousand Oaks Substation would increase noise levels at nearby residences, potentially conflicting with City of Thousand Oaks noise standards. *Less than significant with mitigation* (Class II)

The new transformers that would replace the existing transformers at Thousand Oaks Substation would be located approximately 100 feet from the nearest sensitive receptors. Assuming that the new larger transformers would have twice the sound pressure level of the existing transformers, the associated CNEL would be approximately 55 dBA. According to the Thousand Oaks General Plan Noise Element, if the cumulative CNEL is expected to be 55 to 60 dB, then a project would be considered to have an individually significant impact if it would increase noise levels by greater than 1 dB. Given the residential characteristics in the vicinity of Thousand Oaks Substation and the substation's location setback from the nearest public roadways, it is anticipated that the average CNEL at the substation is directly influenced by the existing transformers, which are estimated to produce an average noise level of approximately 52 CNEL at 100 feet. Therefore, implementation of System Alternative B could result in CNEL noise levels at residences adjacent to Thousand Oaks Substation that would be approximately three dBA higher than ambient conditions, potentially resulting in a significant. However, implementation of Mitigation Measure 4.11-SAB-1 would ensure that SCE would design the upgrades to Thousand Oaks Substation such that transformer noise levels would not exceed City of Thousand Oaks's noise standards.

Mitigation Measure 4.11-SAB-1: Thousand Oaks Substation. SCE shall ensure that noise levels associated with the Thousand Oaks Substation do not exceed the City of Thousand Oaks noise standards. Noise control techniques may include, but not be limited to: locating the new transformers with as much setback from the existing residential properties as possible, use of noise walls or equivalent sound attenuation devices, and the use of transformers with special noise control specifications designed in a way to specifically achieve acceptable regulatory noise standards.

Prior to the installation of the new transformers, SCE shall submit to the CPUC and the City of Thousand Oaks, for review and approval, a plan that describes the specific measures that will be taken in order to comply with the City's noise standards. SCE shall retain an acoustical engineer to perform noise measurements in the vicinity of the adjacent residences prior to and after the proposed transformers are operational, to verify that transformer noise levels comply with the County standards. Documentation of compliance shall be submitted to the CPUC and City of Thousand Oaks. In the event the transformer noise levels violate the standards, additional noise control techniques shall be initiated to correct the violation.

Significance after Mitigation: Less than Significant.

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4.12 Population and Housing

This section provides a description of population and housing for the Proposed Project area, and evaluates potential impacts associated with implementation of the Proposed Project and alternatives. A discussion of population growth or displacement of human population and housing is also included. The Proposed Project would be constructed in the City of Thousand Oaks and unincorporated areas of Ventura County. Project construction would also involve a temporary marshalling yard in the City of Moorpark or the City of Santa Clarita. Components of the project alternatives would be constructed in the locations previously listed, as well as the City of Simi Valley.

4.12.1 Setting

Population

The Proposed Project is located in southeast Ventura County. Ventura County is located in southern California, north of the City of Los Angeles. Over the past three decades the County has experienced steady growth. According to the California Department of Finance (CA DOF), the County's population increased by approximately 26 percent in the 1980's, from 529,174 in 1980 to 666,800 in 1990 (CA DOF, 2009a; CA DOF, 2009b). The 2000 population estimate was 753,197 persons, which further increased the population by approximately 11 percent. The County grew an additional 10 percent between 2000 and 2011, reaching an estimated 828,383 residents (CA DOF, 2011).

The incorporated cities of Thousand Oaks and Simi Valley followed similar trends for population growth as Ventura County within the same time period. **Table 4.12-1** shows 2011 population estimates for Ventura County and the cities of Thousand Oaks and Simi Valley.

	Ventura County	Thousand Oaks	Simi Valley
Total Population	828,383	127,557	125,026
SOURCE: CA DOF, 2011			

TABLE 4.12-1	
2011 POPULATION ESTIMATES	

As demonstrated in **Table 4.12-2**, which shows historic and projected population growth from 1980 to 2035, the populations in Ventura County and the cities of Thousand Oaks and Simi Valley are expected to increase over the next 25 years.

4.12 Population and Housing

	HISTORIC AND PROJECTED POPULATION GROWTH, 1980–2035												
Area	1980 ^a	1990 ^b	% Change 1980–1990	2000 ^b	% Change 1990–2000	2005 ^b	% Change 2000–2005	2010 [℃]	% Change 2005–2010	2020 ^d	% Change 2010–2020	2035 ^d	% Change 2015–2035
Ventura County	529,174	666,800	26%	749,740	11%	809,286	7%	822,108	2%	910,328	11%	978,978	8%
Thousand Oaks	77,072	104,800	36%	116,535	10%	126,344	8%	126,655	0%	131,865	4%	133,075	1%
Simi Valley	77,500	99,600	29%	110,732	10%	120,686	8%	124,238	3%	131,894	6%	135,389	3%

TABLE 4.12-2

SOURCE:

^a CA DOF, 2009a ^b CA DOF, 2009b ^c CA DOF, 2011

d SCAG, 2011

Housing

According to the CA DOF, at the beginning of 2011 Ventura County had an estimated 282,209 total housing units with a vacancy rate of approximately 5.40 percent (CA DOF, 2011). Table 4.12-3 shows housing data for Ventura County and the cities of Thousand Oaks and Simi Valley.

TABLE 4.12-3 2011 HOUSING DATA ESTIMATES

	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacancy Rate (percent)
Ventura County	282,209	266,958	15,251	5.4
Thousand Oaks	47,529	45,866	1,663	3.5
Simi Valley	42,508	41,239	1,269	3.0

As demonstrated in Table 4.12-4, the number of households in the cities of Thousand Oaks and Simi Valley and Ventura County is forecast to increase from 2008 to 2035 (SCAG, 2011).

TABLE 4.12-4 HOUSEHOLD ESTIMATES: 2008 TO 2035

Year	Ventura County	Thousand Oaks	Simi Valley
2008	267,665	45,820	40,992
2020	294,354	46,079	42,684
2035	320,449	46,600	43,815

Regulatory Context

Regional

Southern California Association of Governments

Southern California Association of Governments (SCAG) is a Joint Powers Agency established under California Government Code Section 6502 et seq. SCAG is designated as a Council of Governments, a Regional Transportation Planning Agency, and a Metropolitan Planning Organization for a six-county region that includes Ventura County. SCAG prepares a Regional Housing Needs Assessment (RHNA) for the region, which defines the housing need allocation for each member local government in Southern California. The most recently published RHNA covered the planning period of January 1, 2006 to June 30, 2014. The RHNA is a key tool for SCAG and its member governments to plan for growth (SCAG, 2009).

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified in the Public Facilities and Services Element of the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal 4.1.1.1: Plan for public facilities and services which will adequately serve the existing and future residents of the County.

Goal 4.5.1: Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards and are compatible with the natural and human resources.

(County of Ventura, 2008).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

The City of Thousand Oaks General Plan does not include any applicable goals, objectives, and policies related to population/housing that would be applicable to the Proposed Project or alternatives (City of Thousand Oaks, 2001).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

The City of Simi Valley General Plan does not include any applicable goals, objectives, and policies related to population/housing that would be applicable to the Proposed Project or alternatives (City of Simi Valley, 1988).

4.12.2 Significance Criteria

According to Appendix G of the CEQA Guidelines, an impact resulting from the Proposed Project would be considered significant if it would:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.12.3 Applicant Proposed Measures

No Applicant Proposed Measures have been identified by SCE for reducing impacts to population and housing.

4.12.4 Impacts and Mitigation Measures

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Impact 4.12-1: The Proposed Project could induce substantial population growth in an area, either directly or indirectly. *Less than significant* (Class III)

The Proposed Project proposes no new homes and no new businesses. The proposed Presidential Substation site is currently undeveloped and under the Proposed Project an unmanned substation would constructed on the site. The proposed subtransmission alignment would be within an established utility corridor, which would continue to be used as a utility corridor. Therefore the Proposed Project would not directly induce population growth.

The Project would provide temporary employment opportunities, but this would not result in substantial population growth. The construction period would last approximately 13-20 months and SCE anticipates a total of approximately 42 construction personnel working on any given day, consisting of either SCE construction crews or contractors. It is anticipated that all temporary positions would be filled from the local labor pool available in Ventura County, with workers expected to commute to the site rather than move. However, even if the 42 construction personnel needed temporary accommodations, an adequate number of units exist in the area to serve the demand. There are seven full-service hotels, 12 motels, and at least 10 campgrounds and recreational vehicle (RV) opportunities within Ventura County (Ventura Visitors and Convention Bureau, 2011a, 2011b, 2011c). In addition, a 5 percent apartment vacancy rate generally means there are ample choices for would-be tenants (Dyer, 2010). In January 2010, Ventura's countywide apartment vacancy rate was 5.24 percent, which is about the same as it had been

since January 2008 (Dyer, 2010). Additional accommodations are available in the cities of Thousand Oaks and Simi Valley. Project operation and maintenance would require minimal staffing, which would be handled by current SCE employees. No new permanent jobs would be created. Therefore, overall, employment generated by the Proposed Project would have no impact on population growth because any short-term housing demand created during construction could be accommodated by existing units and no long-term growth would result from operation and maintenance of the Proposed Project. Therefore, implementation of the Proposed Project is not expected to result in any significant increase to the local population or adverse effects on the housing market.

Construction of the Proposed Project would also not indirectly induce substantial population growth by creating new opportunities for local industry or commerce. The Proposed Project is designed to allow SCE to continue to provide safe and reliable electrical service in its ENA (see Figure 2-2 in Chapter 2, *Project Description*), and to meet forecasted demand projections. Growth is anticipated in the project area, as described above in Section 4.12.1, *Setting*. This growth is planned and regulated by applicable local planning policies and zoning ordinances and the Proposed Project's provision of electrical service is consistent with development anticipated by plans and zoning in the jurisdictions that the Proposed Project would serve. Additionally, the availability of electrical capacity by itself does not normally ensure or encourage growth within a particular area. Other factors such as economic conditions, land availability, population trends, availability of water supply or sewer services and local planning policies have a more direct effect on growth. Therefore, construction would not directly or indirectly encourage new development or induce substantial population growth.

Mitigation: None required.

b) Displacement of existing housing units, necessitating the construction of replacement housing elsewhere.

The proposed subtransmission alignment would be constructed within 3.5 miles of an existing utility corridor, generally paralleling local and County roads as well as traversing open space and agricultural areas. The proposed Presidential Substation would be constructed on vacant land with no existing buildings or structures. Implementation of the Proposed Project would not displace any residential housing units. Therefore, the Proposed Project would have no impact with regard to the displacement of existing housing units, nor would it necessitate the construction of replacement housing elsewhere (No Impact).

c) Displacement of people, necessitating the construction of replacement housing elsewhere.

As noted above, implementation of the Proposed Project would not eliminate housing or any other structures that are currently used by people. It would consequently not displace any people.

Therefore it would have no impact with regard to the displacement of people, and would not necessitate the construction of replacement housing elsewhere (No Impact).

4.12.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore, no population or housing impacts would occur (No Impact).

Alternative Subtransmission Alignment 1

Operation and maintenance activities associated with Alternative Subtransmission Alignment 1 would be the same as under the Proposed Project. Compared to the Proposed Project, Alternative Subtransmission Alignment 1 would require the construction of an additional 1.0 mile of subtransmission line. As such, total project construction of Alternative Subtransmission Alignment 1 would be expected to be proportionately longer than the Proposed Project. However, the additional construction time necessary for Alternative Subtransmission Alignment 1 would not induce substantial population growth directly or indirectly, as it would use the same labor pool as the Proposed Project; therefore, impacts related to population and housing would be the same as under the Proposed Project. Impacts to population and housing under Alternative Subtransmission Alignment 1 would be less than significant and require no mitigation (Class III).

Alternative Subtransmission Alignment 2

Operation and maintenance activities associated with Alternative Subtransmission Alignment 2 would be the same as under the Proposed Project. Compared to the Proposed Project, Alternative Subtransmission Alignment 2 would require the construction of an additional approximate 1.5 miles of subtransmission line. As such, total project construction of Alternative Subtransmission Alignment 2 would be expected to be proportionately longer than the Proposed Project. However, the additional construction time necessary for Alternative Subtransmission Alignment 2 would not induce substantial population growth directly or indirectly, as it would use the same labor pool as the Proposed Project; therefore, impacts related to population and housing would be the same as under the Proposed Project. Impacts to population and housing under Alternative Subtransmission Alignment 2 would be less than significant and require no mitigation (Class III).

Alternative Subtransmission Alignment 3

Operation and maintenance activities associated with Alternative Subtransmission Alignment 3 would be the same as under the Proposed Project. During construction, compared to the Proposed Project, additional portions of the Alternative Subtransmission Alignment 3 would be installed underground compared to the Proposed Project, although some sections of the existing 16 kV distribution line would not need to be relocated and would instead remain in place on the existing

wooden poles. As such, Alternative Subtransmission Alignment 3 would require approximately the same construction time as the Proposed Project. Therefore, impacts related to population and housing would be the same as under the Proposed Project: less than significant requiring no mitigation (Class III).

Alternative Substation Site B

Construction, operation and maintenance activities associated with Alternative Substation B would be the same as under the Proposed Project. Duration of construction is also expected to be similar to the Proposed Project. Alternative Substation Site B would differ from the Proposed Project because it is located on a parcel of land that contains numerous structures and buildings, including several abandoned concrete block buildings and structures, a garage, former underground fuel storage tanks, and parking areas. However, none of these buildings are residential, and like the Proposed Project Alternative Substation Site B would not displace any residential housing units or any people. Therefore, impacts related to population and housing would be the same as under the Proposed Project (i.e., less than significant) and would require no mitigation (Class III).

System Alternative B

Operation and maintenance activities associated with System Alternative B would be similar to the Proposed Project. This alternative would not require the construction of a new substation and associated subtransmission lines. Construction activities associated with upgrading the Royal, Thousand Oaks, and Potrero substations would require a similar number or fewer temporary construction personnel than the Proposed Project, and would consequently not induce substantial population growth directly or indirectly. Additionally, implementation of System Alternative B would not displace any residential housing units or people. Therefore, impacts related to population and housing would be less than the Proposed Project (i.e. less than significant) and would require no mitigation (Class III).

References – Population and Housing

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4.13 Public Services

This section analyzes the impact of the Proposed Project and alternatives on the provision of public services in unincorporated Ventura County and the cities of Simi Valley and Thousand Oaks, and identifies adverse physical impacts to the environment that could result from a need to provide new or physically altered public facilities resulting from the Proposed Project and alternatives. This analysis reviews fire protection and emergency medical response, police services, schools and other public facilities. Park and recreational facilities are discussed in Section 4.14, *Recreational Resources*.

4.13.1 Setting

Fire Protection and Emergency Medical Services

Local

Ventura County, City of Thousand Oaks, City of Simi Valley

The VCFD provides fire protection and emergency services in the project area. VCFD provides services to the residents and visitors of unincorporated Ventura County and six of its cities: Ojai, Port Hueneme, Moorpark, Camarillo, Simi Valley, and Thousand Oaks. VCFD is a special district that serves more than 480,000 people and its response area covers 848 square miles. VCFD's services include responding to fires, medical emergencies, traffic accidents, land and water rescues, hazardous materials calls, and other everyday public services needs. VCFD also partners with communities to conduct public education, fire prevention and safety programs (VCFD, 2011).

The VCFD consists of 31 fire stations throughout Ventura County (VCFD, 2011). Equipment includes 30 first-run fire engines, one first-run quint apparatus (i.e., a piece of fire apparatus combining features of an engine and a ladder truck), 17 reserve fire engines, 11 wildland fire engines, four ladder trucks, five fire boat and water rescue craft, 14 command vehicles, four paramedic squad vehicles, nine pieces of heavy equipment (bulldozers, etc.), and 38 other emergency response vehicles (VCFD, 2009b). Field personnel are comprised of 531 persons including Battalion Chiefs, Fire Captains, Fire Engineers, Firefighters, Fire Control Workers, and three Dozer Operators (VCFD, 2011; Acosta, 2009).

The VCFD adheres to staffing and response time goals of the National Fire Protection Association Standards. In 2010, VCFD responded to 22,795 emergency medical calls, 1,336 fires, 2,648 rescue calls, 4,052 public service calls, 1,470 alarms, and 563 calls involving hazardous materials (VCFD, 2011). Calls are received via Ventura County's Fire Communications Center (FCC), which handles 911 fire and medical calls. FCC dispatchers answer more than 575 citizen calls per day. The facility is staffed 24 hours a day, 7 days a week, with seven professional public safety dispatchers and one supervising public safety dispatcher (VCFD, 2009a; VCFD, 2011).

Fire protection services within the vicinity of the Proposed Project would not be provided by a specific station; rather, the station that would respond to a call would depend on which units were

4.13 Public Services

available and closest to the call location (Kruschke, 2009). The three fire stations closest to the Proposed Project and alternatives are Fire Stations #34, #44 and #45.

Fire Station #34, the Arboles Fire Station, is located at 555 E. Avenida de los Arboles in the northeast section of the City of Thousand Oaks. It is a three person company comprised of three Firefighters, one of whom is a Paramedic/Firefighter. Station #34 operates a medic engine, a reserve engine, and a reserve squad (VCFD, 2011).

Fire Station #44, Wood Ranch Station, is located at 1050 County Club Drive in the City of Simi Valley and serves the western portion of the City of Simi Valley, the northeastern portion of the City of Thousand Oaks, and the Ronald Reagan Presidential Library. It is a four person company and houses a rescue engine, a reserve engine, and a reserve ladder truck (VCFD, 2011).

Fire Station #45 is located at 790 Pacific Avenue in the City of Simi Valley and serves the midtown and west portions of the City of Simi Valley. It is a three person company comprised of one Captain, one Engineer, and one Firefighter. The Station operates one engine, a reserve engine, a pickup and trailer foam unit, and is the secondary home for a fire-fighting bulldozer staffed by an Operator and a Swamper (e.g., someone who clears a swamp or forest) (Kruschke, 2009; VCFD, 2011).

Police Protection

Ventura County

The Ventura County Sheriff's Department (VCSD) provides services to unincorporated areas in Ventura County, as well as five contract cities: Camarillo, Fillmore, Moorpark, Ojai, and Thousand Oaks. VCSD is comprised of one Sheriff, one Undersheriff, four Chief Deputies, nine Commanders, 26 Captains, seven Managers, and one Psychologist. The Department has four divisions: Detention Services, Patrol Services, Special Services, and Support Services. Each Division is commanded by a Chief Deputy, with differing numbers of Commanders and Captains (VCSD, 2009; VCSD, 2011).

The VCSD headquarters station is located at 800 South Victoria Avenue in the City of Ventura. VCSD has six additional patrol stations within the County located in the cities of Camarillo (3701 East Las Posas Road), Thousand Oaks (2101 East Olsen Road), Fillmore (524 Sespe Avenue), Lockwood (15021 Lockwood Valley Road), Moorpark (610 Spring Road), and Ojai (402 South Ventura Street (VCSD, 2011). VCSD provides court security to all County courts, maintains all County jails and provides law enforcement services to unincorporated areas in Ventura County and contracted cities (Pentis, 2009).

Calls for service for the VCSD and its contracted cities are dispatched by the Sheriff's Communications Center (SCC) (Pentis, 2009). In addition to a larger staff of Managers, Supervisors, and Sheriff's Captains, the SCC employs 22 full-time and two part-time Sheriff's Technical Communications Specialists whose responsibilities include answering emergency and non-emergency phone lines and dispatching calls to the radio. The SCC has 23 emergency (911) lines, 33 10-digit phone numbers used for emergencies and non-emergencies, and 25 'ring-down' lines connected to local law enforcement agencies, hospitals, and outlying stations (Crombach, 2009).

City of Thousand Oaks

As stated above, the City of Thousand Oaks contracts with the VCSD for police services. The Thousand Oaks Police Department (TOPD) shares a facility with the VCSD at 2101 East Olsen Road in the City of Thousand Oaks and a Commander for the VCSD also serves as TOPD's Acting Chief of Police (Pentis, 2009). TOPD has six beats, and the number of patrol officers on duty ranges from eight during the night shift to 15 during the day, plus specialized units such as bike officers and traffic officers. TOPD provides law enforcement services to the City of Thousand Oaks, and does not provide court security to County courts or maintain County jails. Calls for service are dispatched by the SCC, as discussed above (Pentis, 2009).

City of Simi Valley

The City of Simi Valley Police Department (SVPD) provides law enforcement services within the City limits. SVPD has one station located at 3901 Alamo Street, and SVPD is organized into three divisions: Investigative Services Division, Operations Division, and Administrative Division (SVPD, 2011). Calls for service are dispatched by the Communications Unit, which uses a Computer Aided Dispatch System. The Communications Unit is staffed with 13 full-time Public Safety Dispatchers and Call Takers. The Communications Unit answers and processes nine emergency (911) lines, 25 non-emergency lines and 3 radio frequencies, and is staffed 24 hours a day, 365 days a year (Freeman, 2009). The City is divided into six patrol beats, with at least one officer assigned to each beat 24 hours a day. The Patrol Unit is comprised of 60 Officers, and services provided include responding to over 46,000 emergency and routine calls each year, enforcing laws and ordinances, conducting routine and directed patrols, documenting and investigating crimes, performing traffic enforcement duties, and addressing quality of life issues (SVPD, 2011).

Schools

There are three school districts and one university in the vicinity of the Proposed Project. The Conejo Valley Unified School District (CVUSD) serves the cities of Thousand Oaks and Westlake Village, and the community of Newbury Park. CVUSD consists of three preschools, 17 elementary schools, five middle schools, three high schools, two alternative education schools, and five special programs (e.g. magnet schools and a Junior kindergarten) (CVUSD, 2011). Simi Valley Unified School District (SVUSD) serves the City of Simi Valley. SVUSD consists of 21 elementary schools, three middle schools, four high schools, one adult education school, and one alternative/independent study school (SVUSD, 2009). Moorpark Unified School District (MUSD) serves the City of Moorpark and surrounding rural areas. MUSD operates six elementary schools, two middle schools, one high school, one continuation high school and a middle college program (MUSD, 2009). California Lutheran University is located at 60 West Olsen Road in the City of Thousand Oaks, and offers undergraduate, graduate, and continuing education programs (CLU, 2009).

No schools are located within 0.25 mile of the Proposed Project, Alternative Subtransmission Alignment 1, or Alternative Subtransmission Alignment 3. One school is located within 0.25 mile of Alternative Subtransmission Alignment 2. Madera Elementary School is located at 250 Royal Avenue in the City of Simi Valley, approximately 500 feet from Alternative Subtransmission Alignment 2 (Madera Elementary, 2011).

Other Public Facilities

Childcare Facilities

Table 4.13-1 provides information on licensed childcare facilities located in the vicinity of the Proposed Project and alternatives.

Childcare/Daycare	Address	Distance from Proposed Project or alternative			
Tutor Time Childcare/ Learning Center	1080 Country Club Drive West, Simi Valley	400 feet west of the Proposed Project and Alternative Subtransmission Alignments 1 and 3; adjacent to Alternative Subtransmission Alignment 2; approximately 550 feet from Alternative Substation Site B			
La Petite Academy	85 East Bonita Drive, Simi Valley	Approximately 0.3 mile northeast of Alternative Subtransmission Alignment 2			
Arroyo Montessori	9 West Bonita Drive, Simi Valley	Approximately 0.3 mile northeast of Alternative Subtransmission Alignment 2			
Simi Valley Montessori School – West Valley	1636 Sinoloa Road, Simi Valley	Approximately 0.6 mile northeast of Alternative Subtransmission Alignment 2			

 TABLE 4.13-1

 CHILD CARE FACILITIES IN VICINITY OF PROPOSED PROJECT AND ALTERNATIVES

SOURCE: CDSS, 2009

There is one licensed daycare/childcare facility located within 0.25 mile of the Proposed Project and alternatives. Tutor Time Childcare/Learning Center (Center) is located at 1080 Country Club Drive West in the City of Simi Valley (Tutor Time, 2011). The Center is on the parcel of land adjacent to the proposed Presidential Substation site to the east, approximately 400 feet from the proposed Presidential Substation and Alternative Subtransmission Alignments 1 and 3. Alternative Subtransmission Alignment 2 would run along Madera Road, adjacent to the Center. The Center is across the street from Alternative Substation Site B, a distance of approximately 550 feet.

Libraries

There is one library within 0.25 mile of the Proposed Project and alternatives. The Ronald Reagan Presidential Library, at 40 Presidential Drive in the City of Simi Valley, is located approximately 0.7 mile northeast of the Proposed Project, approximately 0.2 mile east of Alternative Subtransmission Alignment 1, approximately 0.4 mile north of Alternative Subtransmission Alignment 2, and approximately 0.4 mile northeast of Alternative Subtransmission Alignment 3 (RRPFL, 2009).

Medical Facilities

There are no hospitals or other medical facilities, including emergency walk-in clinics, within 0.25 mile of the Proposed Project or alternatives.

Regulatory Context

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals identified in the Public Facilities and Services Element of the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal 4.5.1: Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards and are compatible with the natural and human resources.

Goal 4.7.1, 1: Provide for the protection of the public through effective law enforcement and emergency services.

Goal 4.8.1: Strive to reduce the loss of life and property by providing effective fire prevention, suppression and rescue services and facilities.

(County of Ventura, 2008).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following policies identified in the Safety Element of the City of Thousand Oaks General Plan would otherwise be relevant to the Proposed Project and alternatives:

Fire Hazard Policy 2: Continue to provide adequate fire protection and prevention services to meet the needs of the community and continue to support interjurisdictional fire protection agreements.

Fire Hazard Policy 6: Continue to strive for 6.5-minute response time to all fire and life safety emergency responses.

(City of Thousand Oaks, 2001).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goal identified in the

Community Services Element of the City of Simi Valley General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal IX-2: Maintain municipal services, public utilities and facilities at adequate levels of service.

(City of Simi Valley, 1988).

4.13.2 Significance Criteria

According to Appendix G of the CEQA Guidelines, a project impact would be considered significant if it would:

- a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
 - i. Fire protection;
 - ii. Police protection;
 - iii. Schools;
 - iv. Parks; or
 - v. Other public facilities.

4.13.3 Applicant Proposed Measures

No APMs have been identified by SCE to reduce project impacts on public services.

4.13.4 Impacts and Mitigation Measures

As explained below, the Project would have no impact on fire or police protection, schools, parks, or other public facilities.

a.i) Fire Protection

The VCFD provides fire protection services to the project area. The fire protection facilities and infrastructure required to protect the proposed Presidential Substation and subtransmission alignment are already in place, and would not change as a result of the Proposed Project. The proposed subtransmission alignment would be constructed in an existing utility corridor and the proposed Presidential Substation would be an unmanned facility. During construction, approximately 42 construction personnel would work on any given day, and would consist of SCE construction crews or contractors. However, Proposed Project construction activities would be temporary, estimated to be approximately 13-20 months, and construction crews would likely be based at one of SCE's local facilities such as the Moorpark Substation or the Thousand Oaks Service Center. These workers are presumed to primarily be local, and therefore would not increase the local population and housing demand on fire protection services. If the

workers were not local, a temporary increase in population of 42 workers would not increase the need for fire protection services to a degree that would require new or physically altered facilities. Moreover, implementation of the Proposed Project would not result in new residents at the site or a substantial increase in employees accessing the site on a permanent basis. As such, construction, operation and maintenance of the Proposed Project would not result in the need for new or altered facilities, such as a new or expanded fire station. Accordingly, no impact would occur. See Section 4.8, *Hazards and Hazardous Materials*, for discussion of wildland fire impacts.

a.ii) Police Protection

Police protection services in the project area would be provided by the VCSD and TOPD. The police protection facilities and infrastructure required to protect the proposed Presidential Substation and subtransmission alignment are already in place, and would not change as a result of the Proposed Project.

Potential police protection service effects would primarily be confined to the construction period for the Proposed Project. As mentioned previously, during peak activities, a 42 person crew comprised of SCE construction crews or contractors would be required to construct the Proposed Project. However, Proposed Project construction activities would be temporary, estimated to be approximately 13-20 months, and construction crews would likely be based at one of SCE's local facilities such as the Moorpark Substation or the Thousand Oaks Service Center. These workers are presumed to primarily be local, and therefore part of the existing demand on police protection services. If the workers were not local, a temporary increase in population of 42 workers would not increase the need for police protection services to a degree that would require new or physically altered sheriff or police facilities. Therefore, construction of the Proposed Project would not require new or physically altered police protection facilities (No Impact).

Once constructed, the subtransmission line and proposed Presidential Substation would require monitoring in the form of police response to potential trespassing. Operational activities would increase above existing levels that are employed to maintain the existing 16 kV distribution line to include the proposed Presidential Substation. However, as stated in Chapter 2, *Project Description*, perimeter walls, fences and a locked metal gate would be installed around the proposed Presidential Substation to restrict general and recreational vehicular access. Installation of such a gate would reduce opportunities for trespassing, and the need for police response. Furthermore, implementation of the Proposed Project would not result in new residents at the site or a substantial increase in employees accessing the site on a permanent basis. Therefore, operation and maintenance of the Proposed Project would not result in the need for new or altered police protection facilities.

a.iii) Schools

No schools are present within 0.25 mile of the Proposed Project. No residential uses are proposed as part of the Proposed Project and thus, no new students would be generated by the Proposed Project. The school-aged children of temporary construction workers who reside locally are assumed to be part of the existing or anticipated student population. Temporary workers who do not reside locally would not be expected to bring school-aged children during construction of the Proposed Project. If, however, non-local construction workers were accompanied by school-aged children during the construction period, the increase in student population would be temporary (i.e., 13 to 20 months) and not substantial enough to warrant construction or expansion of school facilities (i.e. the maximum increase in student population would be the school-aged children of 42 crew members). Therefore, implementation of the Proposed Project would not require the construction or expansion of school facilities and no impact would occur.

a.iv) Parks

There are several regional parks and other open space areas within the vicinity. These facilities are intended to serve a large segment of the population. Residential uses are not proposed as part of the Proposed Project; thus no direct increase in the number of park users is expected to result from the Proposed Project. It is presumed that the construction workers and permanent employees and their families would already reside locally, and so would be part of the existing demand on park facilities. If construction workers do not reside locally, the increase in park users would be temporary (i.e., 13 to 20 months) and not substantial enough to warrant construction or expansion of park facilities (i.e. the maximum increase in park users would be 42 crew members plus family members). Therefore, the Proposed Project would not require the provision of new or physically altered park facilities and no impact would occur.

a.iv) Other Public Facilities

No other public facilities, such as meeting halls, libraries, hospitals, etc., are present onsite. No residential uses or public facilities are proposed as part of the Proposed Project. Therefore, construction, operation and maintenance of the Proposed Project would neither increase the demand on existing public facilities nor require the construction or expansion of any other public facilities. Accordingly, no impact would occur.

4.13.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented. The fire and police protection facilities and infrastructure required in the project area would not change. There would be no increase in demand for schools, parks, or other public facilities, and there would be no need for new or physically altered school, park or other public facilities (No Impact).

Alternative Subtransmission Alignment 1

Operation and maintenance activities associated with Alternative Subtransmission Alignment 1 would be the same as under the Proposed Project (No Impact). Compared to the Proposed Project, Alternative Subtransmission Alignment 1 would require the construction of an additional 1.0 mile of subtransmission alignment. As such, total project construction of Alternative Subtransmission Alignment 1 would be expected to be proportionately longer than the Proposed Project. However, the additional time and/or crew necessary for construction of Alternative Subtransmission Alignment 1 would not induce substantial population growth directly or indirectly. Like the Proposed Project, Alternative Subtransmission Alignment 1 would not generate a substantial temporary or permanent service population that would result in the need for new or physically altered fire protection, police protection, school, park, or other public service facilities (No Impact).

Alternative Subtransmission Alignment 2

Although Alternative Subtransmission Alignment 2 would differ from the Proposed Project in that it would pass through the City of Simi Valley, operation and maintenance activities associated with Alternative Subtransmission Alignment 2 would be the same as under the Proposed Project, and would therefore not result in the need for new or physically altered government facilities (No Impact). Compared to the Proposed Project, Alternative Subtransmission Alignment 2 would require the construction of an additional 1.5 miles of subtransmission alignment. As such, total project construction of Alternative Subtransmission Alignment 2 would be expected to be proportionately longer than the Proposed Project. However, the additional time and/or crew necessary for construction of Alternative Subtransmission Alignment 2 would not induce substantial population growth directly or indirectly. Like the Proposed Project, Alternative Subtransmission Alignment 2 would not generate a substantial temporary or permanent service population that would result in the need for new or physically altered fire protection, police protection, school, park, or other public service facilities (No Impact).

Alternative Subtransmission Alignment 3

Operation and maintenance activities associated with Alternative Subtransmission Alignment 3 would be the same as under the Proposed Project (No Impact). During construction, additional portions of Alternative Subtransmission Alignment 3 subtransmission alignment would be installed underground compared to the Proposed Project. In addition, some sections of the existing 16 kV distribution line would not need to be relocated and would instead remain in place on the existing wooden poles. As such, total project construction of Alternative Subtransmission Alignment 3

would be expected to be similar to the Proposed Project alignment. Like the Proposed Project, Alternative Subtransmission Alignment 3 would not generate a substantial temporary or permanent service population that would result in the need for new or physically altered fire protection, police protection, school, park, or other public service facilities (No Impact).

Alternative Substation Site B

Although Alternative Substation Site B would differ from the Proposed Project in that it would be located in the City of Simi Valley, construction, operation and maintenance activities associated with Alternative Substation Site B would be the same as under the Proposed Project. Duration of construction would also be similar. Alternative Substation Site B would differ from the Proposed Project because it is located on a parcel of land that contains numerous structures and buildings, including several abandoned concrete block buildings and structures, a garage, former underground fuel storage tanks, and parking areas. However, additional demolition required for Alternative Substation Site B would not induce substantial population growth directly or indirectly. Like the Proposed Project, Alternative Substation Site B would not generate a substantial temporary or permanent service population that would result in the need for new or physically altered fire protection, police protection, school, park, or other public service facilities (No Impact).

System Alternative B

System Alternative B would not require the construction of a new substation and associated subtransmission alignments, and would require a shorter construction period and smaller crew than under the Proposed Project. As such, System Alternative B would not generate a substantial temporary or permanent service population that would result in the need for new or physically altered fire protection, police protection, school, park, or other public service facilities (No Impact).

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4.14 Recreation

This section presents the environmental setting and impact analysis for parks, open space, and recreational resources for the Proposed Project and the surrounding project area. The purpose of this section is to assess the impacts of the Proposed Project and alternatives on parks, other recreational facilities and recreational values.

4.14.1 Setting

The Proposed Project and alternatives are located in southeastern Ventura County. Specifically, the Proposed Project and Alternative Alignments 1 and 3 are located in unincorporated Ventura County and the City of Thousand Oaks near the City of Simi Valley boundary. Alternative Alignment 2 and the Systems Alternative are located in the cities of Thousand Oaks and Simi Valley, while Alternative Substation Site B is located within the City of Simi Valley.

The study area for recreational resources encompasses the recreational facilities potentially affected by implementation of Proposed Project or alternatives.

Federal and State

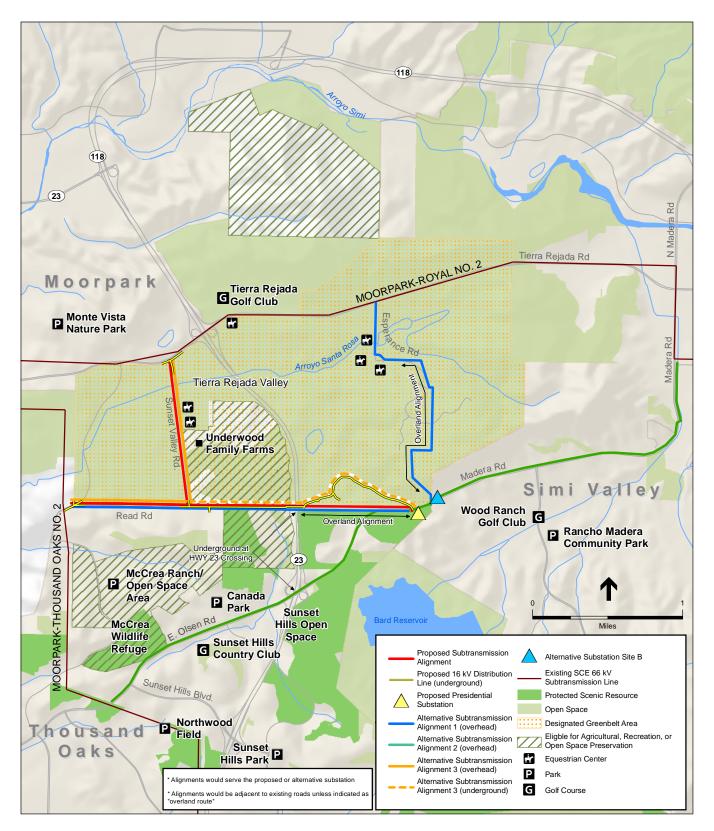
No federal or State recreational facilities or open space lands are located in the study area. The federal or State recreational opportunity closest to the study area is the Santa Monica Mountains National Recreation Area, located approximately 5 miles south of the Proposed Project and alternatives. Other, more distant federal recreational opportunities area available in the Los Padres National Forest, the Santa Monica Mountains National Recreation Area and the Channel Islands National Monument. State recreational facilities and open space lands are generally located along the coast, within the Santa Monica Mountains area (County of Ventura, 2005).

Regional Recreation Areas and Local Parks

As discussed below, Ventura County, the cities of Thousand Oaks and Simi Valley, the Conejo Open Space Conservation Agency (COSCA), three recreation and park districts, and private venues provide regional and local recreation facilities and opportunities in the vicinity of the Proposed Project and alternatives (see **Figure 4.14-1**). A *regional recreation area* is an extent of land which, by its unique natural character or unusual or extensive development, offers recreation opportunities that attract patronage from beyond the local vicinity without regard to physical, political or municipal boundaries. *Local parks* provide facilities to serve the daily needs of a neighborhood or group of neighborhoods within an urban community (County of Ventura, 2005).

Conejo Open Space Conservation Agency

COSCA manages two designated open space areas in the vicinity of the Proposed Project and alternatives. The McCrea Open Space Area is a 148-acre discontiguous open space area known in particular for its 75 acre McCrea Wildlife Refuge. The southern border of the refuge abuts East Olsen Drive in the City of Thousand Oaks, and the northern border runs along a small portion of



Presidential Substation Project . 207584.02 Figure 4.14-1 Open Space and Recreation Areas

SOURCE: SCE, 2010

Read Road, in unincorporated Ventura County. The open space area is located adjacent to the Proposed Project, Alternative Subtransmission Alignment 1, and 3 to the south of Read Road, and adjacent to Alternative Subtransmission Alignment 2 north of Olsen Road. However, public access to this preserve is limited to protect sensitive resources, under terms of an agreement with the McCrea family (COSCA, 2011).

The Sunset Hills Open Space Area consists of 410 acres of discontiguous preserves distributed throughout the Sunset Hills community in northern Thousand Oaks. The northernmost portion of the open space area is located just east of Hwy 23, along the northern border of the City of Thousand Oaks. The open space area is located adjacent to the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 to the south (between Hwy 23 and Olsen Road), and adjacent to Alternative Subtransmission Alignment 2 the north and south of Olsen Road (COSCA, 2008; COSCA, 2011). The Sunset Hills Open Space Area includes numerous hiking trails, several of which provide views of Bard Reservoir, and on clear days one can see the Pacific Ocean. Access is provided from a trailhead on the east side of Erbes Road (COSCA, 2011).

Conejo Recreation and Park District (City of Thousand Oaks and Unincorporated Ventura County)

The Conejo Recreation and Park District (CRPD) provides regional recreation areas, numerous local facilities, and an extensive trail system in the City of Thousand Oaks and surrounding areas of unincorporated Ventura County. The CRPD has served the Conejo Valley since 1963 and covers 66 square miles, serving a population of over 140,000 people. The CRPD maintains 29 neighborhood parks, six sports playfields, four community parks and one district-wide park, all with a variety of recreation amenities. The CRPD Parks and Planning Division, through an agreement with COSCA, maintains approximately 15,000 acres of open space and an approximately 140-mile multi-use trail system (CRPD, 2011a).

McCrea Ranch, a regional recreational facility managed by the CRPD, is within 0.5 mile of the Proposed Project and Alternative Subtransmission Alignments 1, 2, and 3. McCrea Ranch is an approximately 220-acre property located at 4500 Moorpark Road in the City of Thousand Oaks. It includes a ranch house and outbuildings and is listed on the National Register of Historic Places. The CRPD has been working on a series of improvements to the property and buildings to make them available for public use. Plans include development of the historical buildings, lake, restored riparian habitat, hiking and equestrian trails, amphitheatre, corrals, agricultural fields, day camp facilities, and parking. When McCrea Ranch opens, it will primarily be used for private tours or school field trips, neither of which would generate a large number of visitors. Although the estimated completion date is spring 2011, at the time of publication of this document, McCrea Ranch is still unavailable for public use (CRPD, 2011b).

A local park managed by the CRPD, Canada Park, is located less than 0.25 mile from the Proposed Project, and Alternative Subtransmission Alignments 2 and 3. Canada Park, located at 1619 Calle Zocalo in the City of Thousand Oaks, is a 9-acre property designed to serve the neighborhood residents within walking distance of the park (there is no parking lot at this park). Facilities include backstops, barbeque grills, a handball court, and outdoor basketball court, picnic tables, a playground, and tetherball (CRPD, 2011c).

Rancho Simi Recreation and Park District (City of Simi Valley)

The Rancho Simi Recreation and Park District (RSRPD) provides parks and recreation facilities for the City of Simi Valley. Rancho Madera Community Park, located at 556 Lake Park Drive in the City of Simi Valley, is a local park managed by the RSRPD located approximately 0.75 mile from the proposed Presidential Substation site, Alternative Subtransmission Alignments 1 and 3, and Alternative Substation Site B. It is approximately 0.5 mile from Alternative Subtransmission Alignment 2. Rancho Madera Community Park amenities include an amphitheater, basketball court, baseball diamond, gazebo, hiking trail, parking stalls, picnic tables, play area, and restrooms (RSRPD, 2009a).

Lincoln Park, located at 1215 First Street in the City of Simi Valley, is a local park managed by the RSRPD approximately 1.0 mile east of Alternative 2. Lincoln Park provides the following amenities: half-court basketball, fitness circuit, picnic tables, and a tot lot (RSRPD, 2009b). It is primarily used by residents in the neighborhood.

City of Moorpark

Monte Vista Nature Park, managed by the City of Moorpark Parks and Recreation Department, is located approximately 0.75 mile northwest of the northernmost portion of the Proposed Project and Alternative Subtransmission Alignment 3. Monte Vista Nature Park is a 5-acre park located in the City of Moorpark, with a small parking lot, benches, drinking fountain and picnic table (City of Moorpark, 2009). There are no active recreational amenities such as open turf areas, sports fields or tennis courts. The picnic area is seldom used on the weekends. The park is primarily used as a staging area for a 0.5 mile hiking trail. It is used year round during the evening hours, weather permitting. The use is somewhat sporadic and there does not seem to be a busy season, however, the hiking trail is dirt and is rarely used when wet (Laurentowski, 2011).

Golf Courses

There are four golf courses located in the vicinity of the Proposed Project and alternatives: Sunset Hills Country Club, Tierra Rejada Golf Club, Wood Ranch Golf Club, and Sinaloa Golf Course (see **Table 4.14-1**, below). There is also one driving range, Tom Barber Golf Center, approximately 0.5 mile from the Proposed Project and Alternative Subtransmission Alignments 1 and 3.

Underwood Family Farms

A portion of the proposed alignment that parallels Sunset Valley Road would traverse parcels across the roadway from the Underwood Family Farms. Underwood Family Farms, at 3370 Sunset Valley Road in unincorporated Ventura County, is an active farm that offers a variety of recreational activities. The farm is open 7 days a week March through November, and weekends in December, from 9 a.m. to 6 p.m. (5 p.m. outside Daylight Savings Time). The Farm is closed in January and February. Regular and seasonal activities include pick-your-own fruit

Golf Course	Private/ Public	Location	Distance from Proposed Project	Distance from Alternative Subtransmission Alignment 1	Distance from Alternative Subtransmission Alignment 2	Distance from Alternative Subtransmission Alignment 3	Distance from Alternative Substation Site B
Sunset Hill Country Club	Private, 18-hole	4155 Erbes Road, Thousand Oaks	Adjacent to Proposed Project along East Olsen Road	~0.8 mile south	Adjacent to the portion of the Alternative 2 alignment along East Olsen Road	Adjacent to the portion of the Proposed Project along East Olsen Road	~1.5 mile southwest
Tierra Rejada Golf Club	Public, 18-hole	15187 Tierra Rejada Road, Moorpark	~0.5 mile north	~0.5 mile west	~1.5 mile north	~0.5 mile north	~0.5 mile north
Wood Ranch Golf Club	Private, 18-hole	301 Wood Ranch Parkway, Simi Valley	~0.8 mile southeast	~0.8 mile southeast	~0.3 mile south	~0.8 mile southeast	~0.8 mile southeast
Sinaloa Golf Course	Public, 9-hole, managed by the RSRPD	980 Madera Road, Simi Valley	~1.5 mile east	~1.5 mile east	Adjacent to the portion of the Alternative 1 alignment on Madera Road	~1.5 mile east	~1.5 mile east
Tom Barber Golf Center	Public, Driving Range	15186 Tierra Rejada Road Moorpark	~0.5 mile north	~0.5 mile west	~1.5 mile north	~0.5 mile north	~0.5 mile north

 TABLE 4.14-1

 GOLF COURSES IN THE VICINITY OF THE PROPOSED PROJECT AND ALTERNATIVES

SOURCE: GoogleEarth, 2011

and vegetable fields, a farm market, educational farm tours for school groups, a Farm Animal Center, the Fall harvest Festival, Easter on the farm, Christmas on the farm, and civil war reenactments. The farm also has space for hosting birthday parties and weddings (Underwood Family Farms, 2011).

Equestrian Centers

There are six equestrian centers located in the vicinity of the Proposed Project and alternatives: CastleRock Farms, Classic Equestrian Center, Elvenstar, Fieldstone Riding Club, Rancho Linda Mio Riding Club, and Shadowbrook Stables. **Table 4.14-2**, provides the location of each equestrian center, and the approximate distance between the center and the closest portion of the Proposed Project and alternatives.

Name	Location	Distance from Proposed Project	Distance from Alternative Subtrans- mission Alignment 1	Distance from Alternative Subtrans- mission Alignment 2	Distance from Alternative Subtrans- mission Alignment 3	Distance from Alternative Substation Site B
CastleRock Farms	15608 Tierra Rejada Road Moorpark, CA	~1.1 miles north	Adjacent to Esperance Drive	~1.1 miles north	~1.1 miles north	~1.1 miles north
Classic Equestrian Center	2182 Tierra Rejada Road Moorpark, CA	~0.4 mile northeast	~1.0 mile West	~1.8 miles north	~0.4 mile northeast	~1.8 miles northeast
Elvenstar	15618 Tierra Rejada Road Moorpark, CA	~1.0 mile north	Adjacent to Esperance Drive	~1.0 mile north	~1.0 mile north	~1.0 mile north
Fieldstone Riding Club	3566 Sunset Valley Road Moorpark, CA	Adjacent to Sunset Valley Road	~0.6 mile North	~1.3 miles northwest	Adjacent to Sunset Valley Road	~1.7 miles northwest
Rancho Linda Mio Riding Club	1550 Tierra Rejada Road Moorpark, CA	~0.9 mile north	Adjacent to Esperance Drive	~0.9 mile north	~0.9 mile north	~0.9 mile north
Shadowbrook Stables	3678 Sunset Valley Road, Moorpark, CA	Adjacent to Sunset Valley Road	~0.7 mile north	~1.4 miles northwest	Adjacent to Sunset Valley Road	~1.7 miles northwest

 TABLE 4.14-2

 EQUESTRIAN CENTERS IN THE VICINITY OF THE PROPOSED PROJECT AND ALTERNATIVES

SOURCE: GoogleEarth, 2011; CastleRock Farms, 2011; Classic Equestrian Center, 2011; Elvenstar, 2011; Fieldstone Riding Club, 2011; Rancho Linda Mio, 2011; Shadowbrook Stables, 2011

Regulatory Context

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policy identified in the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal 3.2.1-5-4: Retain open space lands for outdoor recreational activities, parks, trails and for scenic lands.

Goal 4.10.1-4: Promote the multi-use of existing physical resources through coordination with other public and quasi-public agencies (i.e., utility easements, flood control easements, school district facilities, etc.)

Goal 4.10.1-7: Ensure compatibility between recreation facilities and adjoining land uses.

Policy 4.10.2-2: Discretionary development which would obstruct or adversely impact access to a public recreation resource shall be conditioned to provide public access as appropriate.

(County of Ventura, 2008)

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following policies identified in the City of Thousand Oaks General Plan would otherwise be relevant to the Proposed Project and alternatives:

Recreational, Park and Natural Open Space Policy: Existing and future public parks, golf courses and Conejo Open Space Conservation Agency (COSCA) lands should be kept free of incompatible private development.

Circulation Policy: A City-wide system of pedestrian and bicycle facilities that provide safe, continuous accessibility to all residential, commercial and industrial areas, to the trail system and to the scenic bike route system shall be provided and maintained.

(City of Thousand Oaks, 2001)

City of Thousand Oaks Bicycle Facilities Master Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goal identified in the City of Thousand Oaks Bicycle Facilities Master Plan would otherwise be relevant to the Proposed Project and alternatives: Goal 2.0: Improve bicycle safety.

(City of Thousand Oaks, 2010)

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following policy identified in the City of Simi Valley General Plan would otherwise be relevant to the Proposed Project and alternatives:

Recreation Element: A variety of recreational opportunities accessible to the public should be encouraged.

(City of Simi Valley, 1988)

Simi Valley Bicycle Master Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goal identified in the City of Simi Valley Bicycle Master Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal 2: Maintain bicycle safety.

(City of Simi Valley, 2008)

City of Simi Valley Wood Ranch Specific Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goal identified in the City of Simi Valley Wood Ranch Specific Plan would otherwise be relevant to the Proposed Project and alternatives:

Recreation Goal 1: To provide a wide range of recreational facilities, based upon the needs of the residents and related to the natural features of the Ranch.

(City of Simi Valley, 2003)

4.14.2 Significance Criteria

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on recreational resources if it would:

- a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.14.3 Applicant Proposed Measures

No APMs have been identified by SCE to reduce potential impacts related to recreation resources.

4.14.4 Impact Analysis

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

Impact 4.14-1: The Proposed Project could increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. *Less than significant* (Class III)

Increases in demand for recreational facilities are typically associated with substantial increases in population. The Proposed Project does not contain a residential component that would result in increased use of existing parks and recreational facilities. As further discussed in Section 4.12, *Population and Housing*, the number of construction workers that would be required to construct the Proposed Project, at its peak, would be approximately 42 crew members per day. The Proposed Project construction activities would be temporary, lasting approximately 13 – 20 months, and would not result in additional staffing at the substations or along the alignment. The Proposed Project therefore would not result in a substantial increase in the existing demand for parks and recreation-related facilities, and implementation of the Proposed Project is not expected to result in any substantial physical deterioration of existing facilities. Impacts would be less than significant.

Mitigation: None required.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The Proposed Project does not include any plans for the addition of any recreational facilities, nor (for the reasons provided above) would it require the construction or expansion of existing recreational facilities. Therefore, the Proposed Project would not result in any adverse physical effects on the environment from construction or expansion of additional recreational facilities (No Impact).

4.14.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore there would be no impact related to recreation (No impact).

Alternative Subtransmission Alignment 1

Total project construction of Alternative Subtransmission Alignment 1 is estimated to take place during approximately the same time frame and location as the Proposed Project. Furthermore, like the Proposed Project, Alternative Subtransmission Alignment 1 would not contain a residential component that would result in an increased use of existing recreational facilities, and would not include or require the construction or expansion of recreational facilities. Consequently, resulting impacts would be less than significant for criterion a), and no impact for criterion b) (Class III; No Impact).

Alternative Subtransmission Alignment 2

Construction of Alternative Subtransmission Alignment 2 is estimated to take place during approximately the same time as the Proposed Project. Unlike the Proposed Project, Alternative Subtransmission Alignment 2 would pass through the City of Simi Valley, resulting in potential impacts on recreational resources in that community. Similar to the Proposed Project, Alternative Subtransmission Alignment 2 would not contain a residential component that would result in an increased use of existing recreational facilities, nor would it include or require the construction or expansion of recreational facilities. Related impacts of Alternative Subtransmission Alignment 2 would be less than significant for criterion a), and no impact for criterion b) (Class III; No Impact).

Alternative Subtransmission Alignment 3

Construction of Alternative Subtransmission Alignment 3 is estimated to take place during approximately the same time as the Proposed Project. Furthermore, like the Proposed Project, Alternative Subtransmission Alignment 3 would not contain a residential component that would result in an increased use of existing recreational facilities, nor would it include or require the construction or expansion of recreational facilities; related impacts of Alternative Subtransmission Alignment 3 would be less than significant for criterion a), and no impact for criterion b) (Class III; No Impact).

Alternative Substation Site B

The Alternative Substation Site B would have similar impacts to recreation resources as the Proposed Project. Unlike the Proposed Project, the Alternative Substation Site B would be located in the City of Simi Valley, resulting in potential impacts on recreational resources in that community. Like the Proposed Project, the Alternative Substation Site B would not contain a residential component that would result in an increased use of existing recreational facilities, nor

would it include or require the construction or expansion of recreational facilities; impacts would be less than significant for criterion a), and no impact for criterion b) (Class III; No Impact).

System Alternative B

Implementation of System Alternative B would result in the construction of no new facilities; all changes would take place on existing facility footprints. Implementation of this alternative would not increase the use of existing neighborhood and regional parks or other recreational facilities. Therefore, System Alternative B would have no impact (No impact) relating to recreation resources.

References – Recreation

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4.15 Transportation and Traffic

This section addresses potential traffic and circulation impacts on the basis of information supplied by the County of Ventura General Plan and the City of Thousand Oaks General Plan Circulation Element. The City of Simi Valley General Plan supplied information related to Alternative Subtransmission Alignment 2.

The following were considered in the assessment of potential impacts:

- Review and evaluation of the County of Ventura General Plan and associated documents, the City of Simi Valley General Plan, and the City of Thousand Oaks General Plan to determine the characteristics of roads that are proposed to accommodate construction-generated vehicle trips. Characteristics include the number of vehicle lanes, traffic control, on-street parking (permitted or prohibited), bicycle routes, and land uses served by the affected roads (e.g., sensitive uses like fire stations, schools, etc.).
- Estimated highest number of vehicle trips that Proposed Project-related activities would generate, on both a daily and peak hour basis.

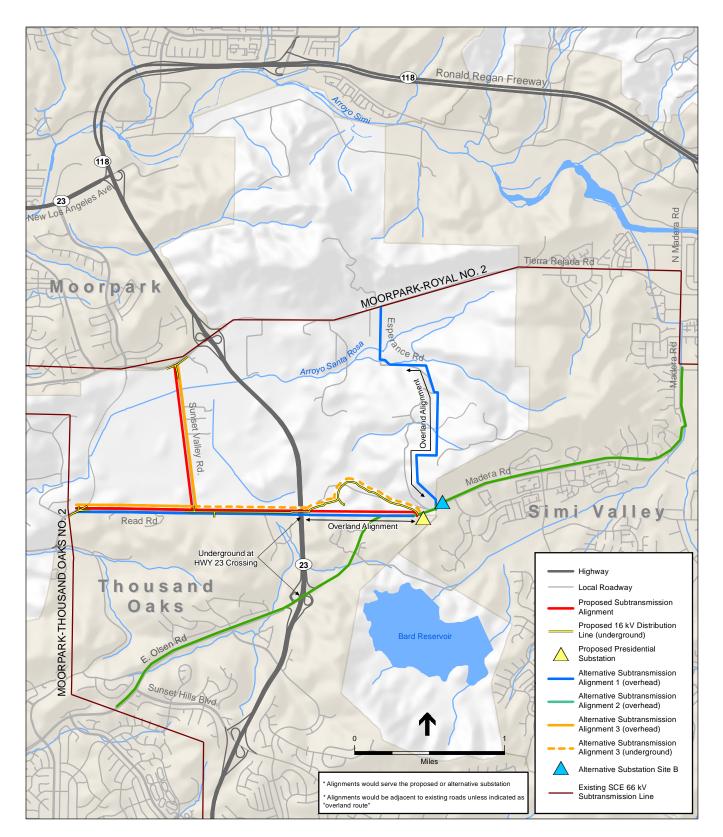
4.15.1 Setting

The Proposed Project is located northeast of the City of Thousand Oaks in southern Ventura County. Alternatives include additional areas of the City of Thousand Oaks, southern Ventura County and the City of Simi Valley. The study area includes the transportation system in southern Ventura County, which is comprised of an interconnected network of roadways, local transit systems, and pedestrian and bicycle facilities. Within the vicinity of the Proposed Project and alternatives, Highway (Hwy) 23 is a north-south multi-lane freeway, which provides regional and interregional connectivity. Olsen Road provides access to Hwy 23 from the proposed location for the Substation. The proposed subtransmission alignment on Sunset Valley Road can be accessed via Tierra Rejada Road, which has an interchange with Hwy 23 as well. **Figure 4.15-1** shows regional highways and arterial roads in the vicinity of the Proposed Project.

Regional Roadway Network

Hwy 23 is a four-lane north-south freeway that connects the Proposed Project and alternatives to Thousand Oaks to the south and Moorpark to the north. There are interchanges at Olsen Road and Tierra Rejada Road. At the Los Angeles Avenue interchange (north of Tierra Rejada Road in Moorpark), the freeway becomes Hwy 118 and is aligned east-west. Average daily traffic (ADT) on Hwy 23 north of the Olsen Road interchange is about 68,000 vehicles (Caltrans, 2010a).

Hwy 118 is a 4-lane east-west freeway that connects the Proposed Project and alternatives to Simi Valley to the east and Moorpark to the west. The ADT on Hwy 118 east of the Princeton Avenue interchange is about 81,000 vehicles (Caltrans, 2010a).



SOURCE: SCE, 2010; Census, 2010

Presidential Substation Project . 207584.02 Figure 4.15-1 Regional Road Network

Local Roadway Network

Several arterials within the vicinity of the Proposed Project site serve regional, as well as local, needs. Olsen Road is a four-lane, divided arterial with a Class II bike lane. The Proposed Project runs along a portion of Olsen Road within the northern boundary of the City of Thousand Oaks, directly west of the city limits of the City of Simi Valley. Read Road is a two-lane, undivided local roadway that connects Moorpark Road with Sunset Valley Road, and continues east of Sunset Valley Road as an unstriped road that dead ends just west of Hwy 23. Sunset Valley Road is a two-lane, undivided local roadway that runs from Tierra Rejada Road to Read Road. Moorpark Road is a two-lane, undivided thoroughfare that runs from Santa Rosa Road in Thousand Oaks to Tierra Rejada Road. Tierra Rejada Road is a four-lane, divided expressway that connects the Proposed Project site to Hwy 23 (County of Ventura, 2005b).

For Alternative Subtransmission Alignment 1, subtransmission lines would be placed along Esperance Road, and for Alternative Subtransmission Alignment 2, subtransmission lines would be placed along Madera Road. Esperance Road is an unpaved, local roadway, and Madera Road is a four-lane divided arterial with a landscaped median and a bike lane (County of Ventura, 2005b).

The following table includes a list of study area roadway segments and the agency or local municipality that has jurisdiction over the roadway.

Roadway Segment	Jurisdiction	
Hwy 23, south of Read Road	Caltrans	
Hwy 23, from Read Road to Tierra Rejada	Caltrans	
Hwy 23, north of Tierra Rejada	Caltrans	
Hwy 118, west of Oak Park	Caltrans	
Hwy 118, east of Oak Park	Caltrans	
Olsen Road	City of Thousand Oaks	
Madera Road	City of Simi Valley	
Read Road	County of Ventura	
Sunset Valley Road	County of Ventura	
Tierra Rejada Road, west of Hwy 23	City of Moorpark	
Tierra Rejada Road, Hwy 23 to Esperance Road	County of Ventura	
Tierra Rejada Road, east of Esperance Road	City of Simi Valley	
Esperance Road	County of Ventura	
Moorpark Road, south of Read Road	City of Thousand Oaks	
Moorpark Road, Read Road to Tierra Rejada	County of Ventura	
Moorpark Road, north of Tierra Rejada	City of Moorpark	

TABLE 4.15-1 STUDY AREA ROADWAYS AND JURISDICTION

SOURCE: County of Ventura, 2005b

Traffic Volumes and Levels of Service

Traffic counts are obtained from Caltrans, the County of Ventura, the City of Thousand Oaks, the City of Moorpark and the City of Simi Valley in order to examine roadway conditions related to congestion and delay. Roadway conditions are analyzed based on Average Daily Traffic (ADT), Level of Service (LOS), and Volume to Capacity (V/C) ratio. LOS is calculated in order to describe the degree of congestion on the roadways.¹ In accordance with the Ventura County General Plan Circulation Element, LOS standards require that all Ventura County roadway segments operate at LOS C or better, and all County thoroughfares and federal and state highways operate at LOS D or better (County of Ventura, 2005a). The City of Thousand Oaks and the City of Simi Valley also require that roadway segments operate at LOS C or better. **Table 4.15-2** provides the Transportation Research Board's description of LOS A through F.

TABLE 4.15-2 LEVEL OF SERVICE DESCRIPTIONS

LOS	Description
А	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
В	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
С	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

SOURCE: TRB, 2010

Within the Proposed Project vicinity, Hwy 23 has an ADT of 68,000 vehicles, and a peak hour LOS of C. Tierra Rejada has an ADT of 18,200 vehicles and a peak hour LOS of A. Madera Road has an ADT of 39,300 vehicles and a peak hour LOS of D, and Moorpark Road has an ADT of 16,500 vehicles and a peak hour LOS of D (County of Ventura, 2010).

¹ LOS is a quality measure describing operational conditions within a traffic stream, generally in terms of service measures such as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Public Transportation

Airports

Four airports are located within the County of Ventura: two public airports in Oxnard and Camarillo, one private airport in Santa Paula, and the Naval Air Station in Point Mugu. None of these airports are within the vicinity of the Proposed Project. The Oxnard Airport is approximately 22 miles away, the Camarillo Airport is approximately 12 miles away, the Santa Paula Airstrip is approximately 13 miles away, and the Point Mugu Naval Air Station is approximately 17 miles from the Proposed Project (County of Ventura, 2005b).

Bus Service

There are four bus service providers with routes in the study area. Ventura Intercity Service Transit Authority provides routes throughout the County. Moorpark Transit provides routes within the City of Moorpark. Simi Valley Transit operates in the cities of Simi Valley and Chatsworth, and the Thousand Oaks Transit provides bus service for Thousand Oaks, Newbury Park and Westlake Village. The bus stop closest to the Proposed Project would be the Simi Valley Transit bus stop by the intersection of Madera Road and Country Club Road, approximately 0.1 mile from the proposed Presidential Substation site.

Bicycle and Pedestrian Transportation

The regional network of bicycle facilities includes a variety of designated bikeways within the cities and communities of Ventura County. The Ventura County Transportation Commission (VCTC) defines three types of bikeways within Ventura County (VCTC, 2009):

Class 1: Bike Path or Trail – A separate right-of-way for bicycles, often fenced and found along flood control channels and the beach

Class 2: Bike Lane – A restricted right-of-way, usually designated by a painted line and signs on the road

Class 3: Bike Route – A travel lane shared by bicycles and motor vehicles designated by signs only

The City of Thousand Oaks Bicycle Facilities Master Plan also identifies bikeway types, based on those described by the California Department of Transportation (Caltrans) in Chapter 1000 of the *Highway Design Manual* (City of Thousands Oaks, 2010). In the City of Thousand Oaks, bicycle lanes are divided into three categories:

- *Class I Bikeway*: A bike path or trail within a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with cross flows by motorists minimized.
- *Class II Bikeway*: A bike lane within a restricted road right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted.

• *Class III Bikeway*: A bike route within a road right-of-way designated by signs or permanent markings and shared with pedestrians or motorists.

The Simi Valley Bicycle Master Plan similarly defines Class I, II and III Bikeways (City of Simi Valley, 2008).

In the study area, Olsen Road (located adjacent to the Proposed Project and Alternative Subtransmission Alignments 1, 2, and 3) in the City of Thousand Oaks is designated as a Class 2 bike lane by VCTC, and an on-street bike lane and by the City of Thousand Oaks (VCTC, 2009; City of Thousand Oaks, 2010). Tierra Rejada Road (located perpendicular to the Proposed Project and Alternative Subtransmission Alignments 1 and 3) in the City of Moorpark is designated as a Class 2 bike lane by Ventura County (VCTC, 2009). Read Road (located adjacent to the Proposed Project and Alternatives 1 and 3) is a designated Class III shared-road bike route by the City of Thousand Oaks (City of Thousand Oaks, 2010).

Regulatory Context

State

California Department of Transportation (Caltrans)

Caltrans manages interregional transportation, including management and construction of the California highway system. In addition, Caltrans is responsible for permitting and regulation of the use of state roadways. The study area includes one roadway that falls under Caltrans' jurisdiction.

Caltrans' construction practices require temporary traffic control planning "during any time the normal function of a roadway is suspended" (Caltrans, 2010b). In addition, Caltrans has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code. Requests for such special permits require the completion of an application for a Transportation Permit.

California Joint Utility Traffic Control Committee

For any construction activities within a public ROW, the use of a traffic control service and any lane closures would be conducted in accordance with local ordinances and city permit conditions. These traffic control measures are typically consistent with those published in the *California Joint Utility Traffic Control Manual* (CJUTCC, 2010).

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The County of Ventura General Plan does not include circulation policies or goals that address temporary construction traffic, temporary bike lane closures, or negative aesthetic impacts to roadways (County of Ventura, 2008).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative)

The following goals and policies identified in the City of Thousand Oaks General Plan would be applicable to the Proposed Project and alternatives:

Circulation Policy 5: A City-wide system of pedestrian and bicycle facilities that provide safe, continuous accessibility to all residential, commercial and industrial areas, to the trail system and to the scenic bike route system shall be provided and maintained.

Circulation Policy 9: The City shall balance vehicular circulation requirements with aesthetic, pedestrian, bicycle and equestrian needs which affect the quality of life

(City of Thousand Oaks, 2001).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative)

The City of Simi Valley General Plan does not include circulation policies or goals that address temporary construction traffic, temporary bike lane closures, or negative aesthetic impacts to roadways (City of Simi Valley, 1988).

4.15.2 Significance Criteria

Based in part on criteria in Appendix G of the CEQA Guidelines, a project would be considered to have a significant effect on the environment if it would:

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks.
- d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).
- e) Result in inadequate emergency access.
- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

This analysis relies upon available information and roadway characteristics. Impacts to traffic and circulation that would result from increases in traffic volumes, loss of travel lanes and/or parking areas, and potential safety effects associated with construction were considered. Construction

characteristics, including estimated crew size and equipment requirements, location of construction, and rate of construction were developed to reasonably determine the potential number of vehicles required for Project implementation.

4.15.3 Applicant Proposed Measures

SCE has not proposed APMs with regard to transportation and traffic.

4.15.4 Impacts and Mitigation Measures

Approach to Analysis

Impacts to transportation and traffic resulting from implementation of the Proposed Project are provided in the following discussion. The impacts are considered for all Project components, including both short-term construction and long-term operational phases. The Project would not introduce any new land uses or activities to the area that would generate long-term increases in traffic volume. Potential traffic increases would be limited to temporary significant construction-related activities associated with installation of the Proposed Project facilities.

Construction Easement Requirements

Existing paved public roads and unpaved access roads would be used to provide necessary construction access. Access to the proposed Presidential Substation would be provided via Olsen Road and Madera Road (both paved public roadways). The proposed subtransmission alignment construction activities would use the following paved asphalt roads:

- Read Road;
- Sunset Valley Road;
- Tierra Rejada Road;
- Moorpark Road;
- Madera Road; and
- Olsen Road

An unpaved dirt road provides access to the 16 kV distribution circuit between Hwy 23 and the proposed Presidential Substation site, and is approximately 0.5 mile long. SCE has an access easement for maintenance of the existing 16 kV distribution circuit but it is anticipated that approximately 0.3 mile of this access road could require rehabilitation and widening to support proposed subtransmission alignment construction activities. The existing road ranges between eight and ten feet in width, subtransmission construction and maintenance activities would require widening the road to fourteen feet.

Construction Trip Distribution

The specific destinations for hauling materials to or from the construction areas are not known at present. However, a number of construction materials sources and excess soil re-use options are located in the surrounding area. The closest fill source has been identified is located in Fillmore

(approximately 20 miles from the proposed Presidential Substation location. A second potential fill source is located in Inglewood (approximately 60 miles) and a third source is located in Monrovia (approximately 70 miles). Construction worker trips are assumed to originate from the major urban areas in the Proposed Project region and nearby communities.

Based on the existing roadway network serving the study area, it is assumed that Project trucks and construction workers traveling to and from the alignment would primarily use a combination of highways (e.g., Hwy 23, and Hwy 118), arterials, and designated truck routes in the Proposed Project vicinity to reach other local points and/or regional locations.

Staging areas would be required to store materials, construction equipment, and other construction related items. Staging areas would be established in areas near construction zones that are open and easily accessed. SCE anticipates using the Moorpark Substation (in the City of Moorpark), Thousand Oaks Service Center (in the City of Thousand Oaks) and/or Pardee Substation (in the City of Santa Clarita). If neither the Moorpark Substation, the Thousand Oaks Service Center, nor the Pardee Substation could be used as a marshalling yard, SCE would consider other options which could include leasing an existing, approximately 3-acre commercial facility located within approximately 5 miles of the construction area.

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Impact 4.15-1: Project construction would temporarily increase traffic volumes on roadways in the study area, and would potentially conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. *Less than significant with mitigation* (Class II)

Construction

Construction-generated traffic would be temporary and therefore would not result in any longterm degrading of roadway operating conditions or level of service. The primary impact from the movement of construction trucks and equipment would include short-term and intermittent lessening of roadway capacities because of slower vehicle movement and larger turning radii when compared to passenger vehicles. Such equipment would move similar to existing farm and agricultural equipment commonly found in the area.

The Proposed Project and alternatives being considered for the proposed subtransmission alignment would generate similar transportation impacts during construction. The following discussion should therefore be considered applicable to both the Proposed Project and alternatives.

4.15 Transportation and Traffic

Proposed Presidential Substation Construction

Construction of the new 66/16 kV proposed Presidential Substation and four new 16 kV distribution getaways would generate both construction worker and truck delivery trips. The estimated daily crew size for the entire Project would be 42 employees and is not anticipated to exceed 84 one-way trips from the construction workers traveling to and from the work sites each day. Project construction activities are expected to require approximately 13 to 20 months to complete.

The Proposed Project would require approximately 40,000 cubic yards of fill, which would generate approximately 5,440 truck loads to bring the fill to the proposed Presidential Substation site from offsite locations. Grading is expected to take 90 work days and assuming that the truck trips are divided evenly over the 90 days, there would be approximately 60 fill deliveries per day, or 120 one-way truck trips. The impact from the additional 120 truck trips would include short-term and intermittent lessening of roadway capacities due to slower movements and larger turning radii of the trucks compared to passenger vehicles.

The increased traffic generated by Project construction would fall within the daily fluctuations of traffic volumes for the highway and arterial roadways in the area. Therefore, this short-term increase in vehicle trips would not significantly affect level of service and traffic flow on roadways.

The Project would construct a 16 kV distribution getaway under Olsen Road. The duct bank for the getaway would extend for 8,700 feet and would be located under an existing bike lane on Olsen Road. To construct the duct bank, the bike lane would be trenched. On completion of the getaway, the trench would be finished as street and repaved for use as a bike lane. It is estimated that trenching would take 104 work days, the vault delivery, cable pulling, switch installation and cable splicing would take 59 work days, and paving would take seven work days, thus, the bike lane would be closed for approximately eight months.

The Proposed Project would also construct acceleration and deceleration lanes on Olsen Road to provide safe entry and exit to the proposed Presidential Substation. The acceleration lane and deceleration lane would have a 12-foot ROW and Olsen Road would be widened along the length of the acceleration and deceleration lanes.

Proposed Subtransmission Alignment Construction

The proposed subtransmission alignment construction activities would consist of replacing approximately 89 existing wooden poles and four steel poles with approximately 66 steel poles with polymer insulators within the existing ROW. As noted, portions of the Proposed Project construction activities would overlap, and daily vehicle trips would be generated associated with the arrival and departure of construction workers. Heavy truck trips would be required for hauling equipment and materials to and from the construction sites. It is estimated that several construction crews would operate concurrently each day, with a total of about 42 workers. Activities associated with proposed subtransmission alignment construction would include hauling of oversize loads, including poles, conductor spools, Substation hardware, various types of equipment, etc.

Installation of the proposed subtransmission alignment would require the overhead crossing of Read Road, a public roadway. The placement of the proposed subtransmission alignment on poles across Read Road would temporarily disrupt existing transportation and traffic patterns in the vicinity of the crossing. This work could require temporary lane and road closures on Read Road, and impacts would include direct disruption of traffic flows and street operations. Access on Read Road for emergency vehicles would be maintained at all times. No alternative access (detour) is available, and residents of Read Road on the dead-end side of the construction work zone would receive advance notice of the access restrictions and would be advised when to move motor vehicles out of the area to be closed. Residents of Read Road between Sunset Valley Road and the work zone would have full vehicle access at all time. As the active work zone progressed past residence driveways, more and more residents would be on the Sunset Valley Road side of the construction work zone, and would have full vehicle access.

The subtransmission lines would be installed underground at Hwy 23. On either side of the highway, TSP riser poles would be installed as the subtransmission lines will be overhead. The undergrounding of the proposed subtransmission alignments will not cause any disruption of traffic on Hwy 23. However, to construct the substructure that would contain the underground proposed subtransmission alignment, SCE will excavate a trench on Read Road directly west of Hwy 23 that would be 200 feet long. This portion of Read Road would be fully closed during this excavation, but this portion of the road provides neither access to residences nor critical access to other uses.

Prior to stringing the conductor, temporary guard structures may be installed along the road crossings for public protection. The purpose of the guard structures would be to prevent the conductor from being lowered or falling into traffic. The use of guard structures during subtransmission line stringing activities over roadways would be at the discretion of the regulatory agency with permit authority of the roadway. For example, the County or City may require other or additional safety measures as part of its encroachment permit requirements. In addition to subtransmission line stringing activities over public roads, the Proposed Project and Alternative Subtransmission Alignments 1 and 2 would cross private roads, potentially resulting in short-term (e.g., a couple of hours) restrictions to private property access.

A portion of the proposed subtransmission alignment along Sunset Valley Road is adjacent to Underwood Family Farms, a popular regional attraction. The temporary closure of a lane or of an entire roadway segment would be required on Sunset Valley Road to ensure public safety during construction. Temporary closure or partial-closure of Sunset Valley Road would have the potential to block access to the Underwood Family Farms, creating traffic congestion and confusion for patrons of the Farms.

As stated in the Regulatory Context above, General Plans for the affected local jurisdictions generally do not include policies or goals that address temporary construction period impacts. The City of Thousand Oaks General Plan has policies to provide and maintain pedestrian and bicycle facilities that provide safe, continuous accessibility, and to balance vehicular circulation requirements with aesthetic, pedestrian, bicycle and equestrian needs. Although construction of

the Proposed Project would not have any long-term effects on those policies, the potential for short-term conflicts with the policies is considered a significant impact. Implementation of Mitigation Measures 4.15-1a through 4.15-1d would lessen the potential impact to a less-than-significant level.

Operations

Once constructed, the proposed subtransmission alignments and the proposed Presidential Substation would require routine maintenance trips, inspection, and vegetation management activities. Vegetation management in the proposed subtransmission alignment corridors could include control of noxious weeds and trimming of shrubs or trees for safety upkeep and would be limited to seasonal and yearly traffic. Maintenance activities would not increase above existing levels that are employed to maintain the existing subtransmission line ROWs and therefore, would not result in an increase in traffic in the study area.

The acceleration and deceleration lanes on Olsen Road at the proposed Presidential Substation access would provide safe entry and exit to the Substation. Autos and trucks would be able to turn into and out of the proposed Presidential Substation without slowing traffic on Olsen Road. Thus, there will be no operational impacts resulting from the proposed Presidential Substation on Olsen Road.

Mitigation Measure 4.15-1a: SCE shall obtain and comply with local road encroachment permits for public roads that are crossed by the proposed subtransmission alignment. SCE shall also coordinate short-term construction activities at private road crossings with the applicable private property owners. Copies of all encroachment permits and evidence of private property coordination shall be provided to the CPUC prior to the commencement of construction activities.

Mitigation Measure 4.15-1b: SCE shall prepare and implement a Traffic Management Plan subject to approval of the appropriate state agency and/or local government(s). The approved Traffic Management Plan and documentation of agency approvals shall be submitted to the CPUC prior to the commencement of construction activities. The plan shall:

- Include a discussion of work hours, haul routes, work area delineation, traffic control and flagging;
- Identify all access and parking restriction and signage requirements;
- Require workers to park personal vehicles at the approved staging area and take only necessary Project vehicles to the work sites;
- Lay out plans for notifications and a process for communication with affected residents and landowners prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which road/lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints; and

- Include plans to coordinate all construction activities with emergency service providers in the area prior to construction to ensure that construction activities and associated lane closures would not significantly affect emergency response vehicles. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times. SCE shall submit verification of its consultation with emergency service providers to the CPUC.
- Identify all roadway locations where special construction techniques (e.g., night construction) would be used to minimize impacts to traffic flow.

Mitigation Measure 4.15-1c: The County and SCE shall insure that appropriate warning signs are posted alerting bicyclists to bike lane closures and instructing motorists to share the road with bicyclists. In addition, in order to remove potential roadway hazards to bicyclist in the construction areas the SEC shall ensure that all contract haul trucks are covered to prevent spillage of materials onto haul routes, and that the area adjacent to the Substation site shall be kept free of debris and dirt that may accumulate from entering and exiting trucks by conducting regular sweeping of the project area.

Mitigation Measure 4.15-1d: SCE shall coordinate with the appropriate local government departments in Thousand Oaks, Simi Valley, with county agencies such as the Ventura County Public Works Agency, with state agencies such as Caltrans, and with other utility districts and agencies as appropriate, regarding the timing of construction projects that would occur near the Proposed Project. The Ventura County Public Works Agency reviews environmental documents to ensure that all individual and cumulative adverse impacts to the Regional Road Network and County-maintained local roads have been adequately evaluated and mitigated to insignificant levels. SCE shall submit verification of its coordination to the CPUC. This multi-agency coordination, and implementation of Mitigation Measures 4.15-1a and 4.15-1b, would ensure that the cumulative effect of simultaneous construction activities in overlapping areas would be minimized.

Significance after Mitigation: Less than Significant.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Impact 4.15-2: The Proposed Project would not conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. *Less than significant* (Class III)

Construction

Ventura County Congestion Management Program (CMP) monitors performance of the region's roadway transportation system, develops programs to address near- and long-term congestion, and integrates transportation and land use planning (VCTC, 2009). Construction of the Proposed

Project would create a source for temporary increases in traffic volumes on area roadways. Construction activities in roadways will temporarily increase traffic congestion by reducing the number of traffic lanes through construction sites, limiting passage to controlled escort, or imposing detours around construction areas. The short-term construction impacts would not exceed 200 trips per day, which would not result in levels of service on local roadways declining below acceptable thresholds. Therefore, construction of the Proposed Project would not conflict with the Ventura CMP and applicable standards, and impacts related to construction would be less than significant.

Operations

Occasional maintenance activities of the Proposed Project facilities could briefly affect the movement of vehicles on local roadway segments or intersections. Maintenance activities would not increase above existing levels that are employed to maintain the existing subtransmission line ROWs and therefore, would not result in an increase in traffic in the study area. Therefore, the Proposed Project would not conflict with the Ventura CMP and applicable standards, and impacts related to operations would be less than significant.

Mitigation: None required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks.

The Proposed Project and alternatives would not change air traffic patterns and would not require the use of helicopters or other aircraft. No impacts would occur because the nearest commercial airport (Oxnard Airport) is approximately 22 miles from the study area; therefore, no impacts would occur related to air traffic patterns (No Impact). For a discussion of general aviation safety hazards associated with the Proposed Project, refer to Section 4.8, *Hazards and Hazardous Materials*.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact 4.15-3: Project construction would increase potential traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways. *Less than significant with mitigation* (Class II)

The traffic impacts associated with the construction of the Proposed Project would be essentially the same regardless of which alternative is selected. The following discussion should be considered applicable to the Proposed Project and Alternative Subtransmission Alignments 1 and 2.

The Project may increase potential traffic safety hazards for vehicles, bicyclists, or pedestrians on public roadways in construction areas where vehicle access is permitted. In addition, proposed

subtransmission alignment installation could temporarily disrupt access and traffic flows on highways, arterials and local roadways or along Proposed Project detours.

The addition of construction vehicles and equipment movement would increase potential hazards on local and County roadways, including Read Road, Sunset Valley Road, Tierra Rejada Road, Moorpark Road, Madera Road and Olsen Road. The increase in hazard would be proportional to the increase of truck traffic. The trenching and subsequent closure of the Class 2 bicycle lane on Olsen Road would increase the risk of bicycle, vehicle conflicts in the vicinity of the Substation site.

The Project would increase wear-and-tear on the designated haul routes used by construction vehicles to access the Proposed Project work sites. The use of heavy trucks to transport equipment and material to and from the Proposed Project work sites for the Proposed Project could affect road conditions on the designated haul routes by increasing the rate of road wear. The degree to which this impact would occur depends on the pavement type, thickness, and existing condition of the road. The Project's impacts are expected to be negligible on major arterial roads that are designed for heavier truck loads. Rural roads may also have negligible effect because they are designed for agricultural equipment and truck traffic. Residential streets are generally not built with a pavement thickness that will withstand substantial truck traffic volumes. This impact is considered potentially significant and mitigable to less-than-significant levels by implementing Mitigation Measures 4.15-3a and 4.15-3b.

Operations

Project operations would not increase any traffic safety hazards on public roadways. No impacts will occur.

Mitigation Measure 4.15-3a: Implement Mitigation Measure 4.15-1a, Mitigation Measure 4.15-1b, and Mitigation Measure 4.15-1c.

Mitigation Measure 4.15-3b: Roads damaged by construction would be repaired to a structural condition equal to that which existed prior to construction activity. The Project Partners and the local jurisdiction shall enter into an agreement prior to construction that will detail the pre-construction conditions and the post-construction requirements of the rehabilitation program.

Significance after Mitigation: Less than Significant.

e) Result in inadequate emergency access.

Impact 4.15-4: The Proposed Project would not result in inadequate emergency access. *Less than significant with mitigation* (Class II)

Construction of the Proposed Project would have temporary effects on traffic flow, particularly where the line would be constructed over roadways and where trenching will occur. Proposed

subtransmission alignment pole installation across roads and the temporary reduction in travel lanes could result in delays for emergency vehicles passing through the vicinity of a Proposed Project work area.

Implementation of Mitigation Measure 4.15-4 would require the construction contractor to coordinate all construction activities with emergency service providers in and along the Proposed Project to minimize disruption to emergency vehicle access to land uses along the corridors. Implementation of these measures would ensure potential impacts associated with temporary effects on emergency access would be mitigated to a less than significant level.

Mitigation Measure 4.15-4: Implement Mitigation Measure 4.15-1b.

Significance after Mitigation: Less than Significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact 4.15-5: The Proposed Project would temporarily conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and would temporarily decrease the performance or safety of such facilities. *Less than significant with mitigation* (Class II)

The Proposed Project would not include changes in policies or programs regarding public transit, bicycle or pedestrian facilities, and it would not construct facilities in locations where future alternative transportation facilities are planned. In addition, the Project would not permanently eliminate (directly or indirectly) existing alternative transportation corridors or facilities (e.g., bike paths, lanes, bus turnouts, etc.). However, the Proposed Project would close a portion of the bike lane along Olsen Road for approximately eight months, which conflicts with the City of Thousand Oaks General Plan policy calling for continuous bike lane accessibility. The short-term conflict with the City of Thousand Oaks General Plan policy is considered a significant impact. Implementation of Mitigation Measure 4.15-5would require the County and SCE to ensure that (1) appropriate warning signs are posted alerting bicyclists to bike lane closures and instructing motorists to share the road with bicyclists, (2) all contract haul trucks are covered to prevent spillage of materials onto haul routes, and (3) the area adjacent to the Substation site shall be kept free of debris and dirt that may accumulate from entering and exiting trucks. Implementation of this measure would ensure impacts associated with temporary decrease in the performance or safety of the bicycle lane would be mitigated to a less than significant level.

Mitigation Measure 4.15-5: Implement Mitigation Measure 4.15-1c.

Significance after Mitigation: Less than Significant.

4.15.5 Alternatives

No Project Alternative

Under the No Project Alternative, no new facilities would be constructed, and existing facilities would not be altered, expanded, or demolished. Implementation of this alternative would not affect area roadways or bike lanes and would not result in inadequate emergency access or parking capacity (No Impact).

Alternative Subtransmission Alignment 1

Construction-related impacts associated with this alternative would be similar to the Proposed Project. Like the Proposed Project, this alternative would require the closure of an 8,700-foot stretch of the Olsen Road eastbound bike lane. The location for Alternative Subtransmission Alignment 1 would be the same as the Proposed Project, thus, a total of approximately 10,880 one-way truck trips (120 per day) would be required to bring fill to the site. This alternative would also require temporary road closures/partial road closures and temporary road crossing closures during the construction of new poles, the stringing of conductor, and the removal of old poles. The location for the proposed Presidential Substation for Alternative Subtransmission Alignment 1 would be the same as the Proposed Project, thus, approximately 60 daily round-trip truck trips would be required to bring fill to the site. Impacts from increased truck traffic for Alternative Subtransmission Alignment 1 would not encroach on Sunset Valley Road, and thus, would not impede access to the Underwood Family Farms as the Proposed Project would. Implementation of Mitigation Measure 4.15-1a through 4.15-1d, and Mitigation Measure 4.15-3b, would reduce construction-related impacts to area roadways to a less than significant level.

For operations, traffic impacts from Alternative Subtransmission Alignment 1 would be similar to those for the Proposed Project. Neither the Proposed Project nor Alternative Subtransmission Alignment 1 would cause a substantial increase in traffic in the study area. Like the Proposed Project, Alternative Subtransmission Alignment 1 would require a minimal amount of trips for maintenance.

Alternative Subtransmission Alignment 2

Construction-related impacts associated with this alternative would be greater than the Proposed Project. Like the Proposed Project, this alternative would require the closure of an 8,700-foot stretch of the Olsen Road eastbound bike lane; however, unlike the Proposed Project, Alternative Subtransmission Alignment 2 would require temporary, rolling closure of approximately 2.5 miles of the Olsen Road eastbound bike lane for pole construction and conductor stringing. Unlike the Proposed Project, this alternative would not result in potential impacts to the Class II bike lane on Tierra Rejada Road, or the Class III bike route on Read Road. Alternative Subtransmission Alignment 2 would require temporary road closures/partial road closures and temporary road crossing closures during the construction of new poles, the stringing of conductor, and the removal of old poles. However, these temporary impacts would occur on a major area 4.15 Transportation and Traffic

thoroughfare, causing greater impacts to area traffic. Olsen Road/Madera Road is a major commuter roadway for residents of the cities of Thousand Oaks and Simi Valley. Impacts to this roadway would affect significantly more area motorists than if the Proposed Project is constructed along rural roadways, as in the Proposed Project. Traffic on Olsen Road/Madera Road already exceeds the 38,000 ADT threshold for LOS C for 4-lane arterials in Ventura County (County of Ventura, 2005a). Closing lanes and street crossings on Olsen Road/Madera Road would be a significant temporary impact. The location for the proposed Presidential Substation for Alternative Subtransmission Alignment 2 would be the same as the Proposed Project, thus, approximately 60 daily round-trip truck trips would be required to bring fill to the site. Impacts from increased truck traffic for Alternative Subtransmission Alignment 2 would not encroach on Sunset Valley Road, and thus, would not impede access to the Underwood Family Farms as the Proposed Project would. Implementation of Mitigation Measure 4.15-1a through 4.15-1d, and Mitigation Measure 4.15-3b, would reduce construction-related impacts to area roadways to a less than significant level.

For operations, traffic impacts from Alternative Subtransmission Alignment 2 would be similar to those for the Proposed Project. Neither the Proposed Project nor Alternative Subtransmission Alignment 2 would cause a substantial increase in traffic in the study area. Like the Proposed Project, Alternative Subtransmission Alignment 2 would require a minimal amount of trips for maintenance.

Alternative Subtransmission Alignment 3

Construction-related impacts associated with this alternative would be greater than the Proposed Project. Like the Proposed Project, this alternative would require the closure of an 8,700-foot stretch of the Olsen Road eastbound bike lane; however, unlike the Proposed Project, Alternative Subtransmission Alignment 3 would require additional road closures for the purpose of undergrounding subtransmission lines. Alternative Subtransmission Alignment 3 follows the same alignment as the Proposed Project, but the portion of the alignment from the intersection of Sunset Valley Road and Read Road east to the proposed Presidential Substation would be underground. The trenching needed to underground the proposed subtransmission alignments would increase the amount of time that the portion of Read Road from Sunset Road east is closed. The location for the proposed Presidential Substation for Alternative Subtransmission Alignment 3 would be the same as the Proposed Project, thus, approximately 60 daily round-trip truck trips would be required to bring fill to the site. Impacts from increased truck traffic for Alternative Subtransmission Alignment 3 would be the same as the Proposed Project. Alternative Subtransmission Alignment 3 would encroach on Sunset Valley Road, and thus, would impede access to the Underwood Family Farms as would the Proposed Project, and would result in the same potential impacts to the Class II bike lane on Tierra Rejada Road, and the Class III bike route on Read Road. Implementation of Mitigation Measure 4.15-1a through 4.15-1d, and Mitigation Measure 4.15-3b, would reduce construction-related impacts to area roadways to a less than significant level.

For operations, traffic impacts from Alternative Subtransmission Alignment 3 would be similar to those for the Proposed Project. Neither the Proposed Project nor Alternative Subtransmission Alignment 3 would cause a substantial increase in traffic in the study area. Like the Proposed Project, Alternative Subtransmission Alignment 3 would require a minimal amount of trips for maintenance.

Alternative Substation Site B

Construction-related impacts associated with this alternative would be similar to the Proposed Project. The location for Alternative Substation Site B would be across Olsen Road from and to the east of the proposed Presidential Substation location, northwest of the Olsen Road/Country Club Road intersection. Like the Proposed Project, this alternative would require the closure of an 8,700-foot stretch of the Olsen Road bike lane (westbound). This alternative would also require temporary road closures/partial road closures and temporary road crossing closures during the construction of new poles, the stringing of conductor, and the removal of old poles. Alternative Substation Site B would not require 40,000 cubic yards of fill like the site for the Proposed Project would. However, this site houses the former sheriff's department building, which would need to be demolished and hauled off-site prior to the construction of the alternative Substation. The demolition and hauling would create truck trips to and from the site, but likely fewer than the 60 daily round trips needed to haul fill to the proposed Presidential Substation site. As with the Proposed Project, all impacts to area roadways from construction would be temporary and implementation of Mitigation Measures 4.15-1a through 4.15-1d, and Mitigation Measure 4.15-3b, would reduce impacts to a less than significant level.

For operations, traffic impacts from Alternative Substation Site B would be similar to those for the Proposed Project. Neither the Proposed Project nor Alternative Substation Site B would cause a substantial increase in traffic in the study area. Like the Proposed Project, Alternative Substation Site B would require a minimal amount of trips for maintenance.

System Alternative B

Construction-related impacts associated with this alternative would be less than the proposed project. System Alternative B would require upgrades at existing Royal, Thousand Oaks, and Potrero substations. These substation sites are already developed, and the proposed upgrades would not require construction-related truck trips associated with grading activities or the delivery of fill material. Construction activities under System Alternative B would primarily be associated with replacing the existing transformers at Royal, Thousand Oaks, and Potrero substations with new transformers. There could also be a need to replace and/or add some distribution equipment at the substations. Therefore, the number of construction trips needed for delivery of equipment and the circulation of construction employee vehicles would be minimal. Similar to the proposed project, construction-related impacts would be short-term and temporary and implementation of Mitigation Measures 4.15-1a through 4.15-1d, and Mitigation Measure 4.15-3b, would reduce impacts to a less than significant level.

Similar to the proposed project, operating System Alternative B would not cause a substantial increase in traffic in the study area because this alternative would not create trip-generating land uses (such as residences or retail centers), and this alternative would require a minimal number of trips for maintenance activities.

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4.16 Utilities and Service Systems

This section addresses the potential impacts on water, wastewater, solid waste disposal systems, and energy systems that could result from implementation of the Proposed Project and alternatives. The study area includes public utility and service systems that serve Ventura County and the cities of Thousand Oaks and Simi Valley. Various entities operate these systems and provide services to residents, businesses and other land uses in the vicinity of the study area.

4.16.1 Setting

Water Supply

A multitude of domestic water service providers, both public and private, service the unincorporated areas of Ventura County including city-owned and operated systems, special water districts, public water purveyors, CPUC regulated water companies, mutual water companies, and other privately owned systems of varying sizes (County of Ventura, 2005). For imported water, the Calleguas Municipal Water District (CMWD) obtains imported water from the Metropolitan Water District of Southern California (MWD), as one of MWD's 26 member agencies. CMWD then delivers the water to smaller retail purveyors primarily in the southern and eastern portions of the County, including the cities of Thousand Oaks, Simi Valley, and Moorpark. Most farmers obtain water from their own wells. According to a 2000 survey, the average per capita water use in Ventura County (unincorporated and incorporated) was 156 gallons per day. In unincorporated Ventura County, water use was 2,400 acre-feet (for municipal and industrial water use), with a per capita water use of 0.22 acre-feet per year (County of Ventura, 2005). The project area is served primarily by the Camrosa Water District and the City of Thousand Oaks Water District.

The City of Thousand Oaks receives water service from four purveyors: the City of Thousand Oaks Water Department, California American Water Company, California Water Service Company, and Camrosa Water District (County of Ventura, 2005). According to a 2000 survey, water demand in the City of Thousand Oaks averaged 39,402 acre-feet (municipal and industrial water use), with an average per capita water use of 0.18 acre-feet/year (County of County, 2005). The Camrosa Water District serves more than 31,000 people in the southern portion of Ventura County, California, including Read Road and the northern portion of the City of Thousand Oaks (Camrosa Water District, 2011; City of Thousand Oaks, 2011). Approximately two-thirds of the potable water distributed by the Camrosa Water District is imported water from the State Water Project, which is a water storage and delivery system of reservoirs, aqueducts, powerplants and pumping plants serving the state of California. The remaining one-third is local groundwater obtained from the three principal groundwater basins within the Camrosa Water District: the Tierra Rejada Basin, the Santa Rosa Basin, and the Pleasant Valley Basin. Recycled (non-potable) water comes from the Camrosa Water Reclamation Facility (Camrosa Water District, 2009). The Camrosa Water District delivers more than 14,400 acre-feet of water each year, via 10,200 service connections (Camrosa Water District, 2009; Pimentel, 2009). Water is provided on a metered basis, and the Camrosa Water District has eleven tanks of water for emergency back-up purposes. Camrosa Water District does not anticipate future increases in delivery amounts because the system is entirely built-out; if

4.16 Utilities and Service Systems

increases were necessary, they would be met through the purchase of imported water (Pimentel, 2009). The City of Thousand Oaks Water District serves approximately 50,000 people in the northeast and southeast areas of the City (Kelly, 2009; Witt, 2009). One hundred percent of the potable water supplied by the District is imported water, purchased from CWMD. In Fiscal Year 2008-2009, the City of Thousand Oaks Water District supplied 13,740 acre-feet of water via roughly 16,800 service connections, on a metered basis. The City of Thousand Oaks Water District's emergency back-up supply is the Bard Reservoir, and the City of Thousand Oaks Water District does not anticipate future increases in delivery amounts from this source because the system is entirely built-out (Kelly, 2009). Future increases would be required to be met through the purchase of imported water from another source.

The City of Simi Valley is served by two water suppliers. Ventura County Waterworks District (VCWWD) No. 8 supplies water to approximately 66 percent of the City, while the Golden State Water Company (GSWC) supplies water to the remaining 34 percent (City of Simi Valley, 2007). The City uses water from imported, recycled, and groundwater sources. The major source of water in the City is imported water: 96 percent of the water consumed in the VCWWD No. 8 service area and 90 percent of water served by the GSWC is imported water (City of Simi Valley, 2007). This water is imported from the State Water Project, and supplied by the MWD of Southern California via Calleguas Municipal Water District. Recycled water comes from the Simi Valley Waste Water Treatment Plant which produces approximately 20 million gallons of water per year. Groundwater comes from the Simi Valley Groundwater Basin. VCWWD No. 8 owns two wells in the Basin (Well No. 31 and Well No. 32 in the Tapo Canyon area) which together have a capacity of 2,200 gallons per minute (gpm). GSWC owns two wells, seven reservoirs, nine booster pump stations, and five interconnections within its service area (City of Simi Valley, 2007).

In the City of Simi Valley, as of 2007, VCWWD No. 8 delivered over 23,000 acre-feet annually to almost 24,000 service connections. The GSWC served an annual demand of approximately 8,500 acre-feet to almost 13,300 customers (City of Simi Valley, 2007; GSWC, 2011). According to a 2000 survey, in the City of Simi Valley, the average per capita water use was 0.22 acre-feet per year (County of Ventura, 2005). The total capacity for VCWWD No 8's 12 metered turnout stations equals 55,200 gpm (City of Simi Valley, 2007). An additional 40 million gallons of potable water are kept in storage tanks within the VCWWD No. 8 service area for operational, fire protection and emergency services. The Bard Reservoir contains an additional 2,607 MG of storage for emergency supplies. Future increases in water supply will come from the Las Posas Basin Aquifer Storage and Recovery Project; an increase in groundwater projection from GSWA's two wells; the Tapo Canyon Water Treatment Plant; and possibly a recycled water distribution system to deliver tertiary-treated effluent from the Simi Valley Water Quality Control Plant (City of Simi Valley, 2007).

Sanitary Sewer

In Ventura County sanitary sewer services are owned and operated by a variety of agencies, including some cities and several different types of special districts, such as: sanitary districts and sanitation districts, community service districts, and County service areas. Three sewage treatment facilities are located within the vicinity of the Proposed Project: Moorpark Wastewater Treatment Plant in

unincorporated Ventura County west of the City of Moorpark: Simi Valley County Sanitation District Water Quality Control Plant in the City of Simi Valley; and Thousand Oaks—Hill Canyon Wastewater Treatment Plant in the City of Thousand Oaks. The Ventura Regional Sanitation District (VRSD) is an enterprise public agency that provides integrated regional waste treatment and disposal services to 600,000 residents of Ventura County (VRSD, 2011). It is a special district that operates water and wastewater treatment facilities, and provides services to independent sanitation districts.

Wastewater service providers in the City of Thousand Oaks include the City of Thousand Oaks, Triunfo Sanitation District, and the VRSD (discussed above) (City of Thousand Oaks, 2011; Kelly, 2009). The City of Thousand Oaks, a customer of the VRSD, provides sanitation services for approximately 37,700 service connections (90 percent of the City), for residential, commercial, and industry/institutional customers in the central and western areas of the City (Kelly, 2009). The City also owns and operates the Thousand Oaks-Hill Canyon Wastewater Treatment Plant, located at 9600 Santa Rosa Valley Road in Thousand Oaks. Design capacity of the treatment plant is 14 million gallons per day (mgd) (County of Ventura, 2005; Kelly, 2009). The Triunfo Sanitation District is a Special District operated by the VRSD that provides sanitation services and wastewater treatment for approximately 30,100 residents in the southeastern portion of Ventura County. Triunfo Sanitation District manages 12,300 sewer service connections and its wastewater treatment plant (jointly-owned by the Las Virgenes Municipal Water District) has a total treatment capacity of 16 mgd (TSD, 2011).

The City of Simi Valley Department of Public Works Sanitation Services Division operates the City's sanitary sewer system as well as the Simi Valley County Sanitation Water Quality Control Plant. The City treats all wastewater in Simi Valley, and has approximately 360 miles of mainline sewers. In 2005 the Wastewater Treatment Plant treated nearly 10 mgd of wastewater. Permitted capacity is 12.5 mgd (City of Simi Valley, 2007).

Storm water Management

Storm water control in the region consists of a system of storm sewers, channels, basins, and constructed wetlands that ultimately direct storm water to Calleguas Creek and the Pacific Ocean (SCE, 2008). A number of different agencies and districts provide storm water management services within Ventura County. The Ventura Countywide Storm Water Quality Management Program serves to enhance, protect and preserve water quality in Ventura County water bodies, and works as a countywide team with public agencies, private enterprise, the environmental community and the general public to locally implement Clean Water Act requirements.

The Ventura County Watershed Protection District provides for the control and conservation of flood and storm waters and for the protection of watercourses, watersheds, public highways, life and property in the district from damage or destruction from these waters. The District is divided into four zones, roughly corresponding to the major river systems in the County. The Proposed Project and alternatives are located in Zone 3, which essentially follows the boundaries of the Calleguas Creek Watershed and its tributaries (VCWPD, 2011).

Electricity and Natural Gas

SCE provides electrical service to Ventura County, and owns and operates generation plants, substations and transmission lines. Southern California Gas Company provides natural gas services to all of Ventura County through a fixed transmission and distribution system (County of Ventura, 2005).

Solid Waste and Recycling Service

In Ventura County solid waste collection and disposal has traditionally been handled by the private sector, and disposal facilities are either privately owned or owned by a special district. In unincorporated areas, collections providers are also privately owned (Ventura County, 2005).

Ventura County has two landfill facilities. The Simi Valley Landfill and Recycling Center (SVLRC), provides approximately 60 percent of Ventura County's daily refuse disposal needs, and 100 percent of the City of Simi Valley's daily refuse disposal needs. The landfill is located in unincorporated Ventura County at 2801 Madera Road, Simi Valley, and is currently permitted to accept 3,000 tons per day of refuse and 6,250 tons of recyclable material (City of Simi Valley, 2007). Its estimated remaining capacity is 20.6 million cubic yards (47.3 percent) and the landfill is located at 3500 North Toland Road in Santa Paula. Toland Road Landfill is currently permitted to accept 1,500 tons per day of refuse and does not accept recyclable material (CIWMB, 2011a; Jones, 2009). Its estimated remaining capacity is 21,983,000 cubic yards (73.3 percent) and the landfill is expected to operate until 2027 (CIWMB, 2011a).

In addition to the two landfills located within Ventura County, in 2007 Ventura County used a number of landfills in adjacent and nearby counties including Los Angeles, Kern, San Luis Obispo, Riverside, Orange, Kinds, and Santa Barbara Counties. Two regional landfills that serve the area include the Calabasas Sanitary Landfill and the Chiquita Canyon Sanitary Landfill. Calabasas Sanitary Landfill is located at 5300 Lost Hills Road, in Agoura (in unincorporated Los Angeles County). The landfill's estimated remaining capacity is 18,100,000 cubic yards (26.1 percent) and the landfill is expected to operate until 2025. Chiquita Canyon Sanitary Landfill is located at 29201 Henry Mayo Drive, in Valencia. The landfill's estimated remaining capacity is 29,300,000 cubic yards (45.9 percent) and the landfill is expected to operate until 2019 (CIWMB, 2011a).

Regulatory Context

State

Assembly Bill 939

Assembly Bill (AB) 939, enacted in 1989 and known as the Integrated Waste Management Act, required each city and/or county¹ to prepare a Source Reduction and Recycling Element (SRRE) to demonstrate reduction in the amount of waste being disposed to landfills, with diversion goals of 50 percent by the year 2000. Senate Bill (SB) 2202 made a number of changes to the municipal

¹ Joint documents are permissible.

solid waste diversion requirements under the Integrated Waste Management Act. These changes included revision of the statutory requirements to state that local governments shall divert 50 percent of all solid waste on and after January 1, 2000. Diversion includes waste prevention, reuse, and recycling. Other related bills have addressed particular aspects of diversion, requiring programs or methodologies to address such issues as bottle recycling, re-chargeable battery recycling, plastic bag disposal, and others.

Table 4.16-1 provides the 2005 and 2006 diversion rates (the most recent available data) for the cities within the study area, as well as for the unincorporated areas of Ventura County (CIWMB, 2011b).

Jurisdiction	2005	2006
Thousand Oaks	56	56
Simi Valley	52	55
Ventura County (Unincorporated	48	52

 TABLE 4.16-1

 DIVERSION RATES (AS A PERCENT OF THE TOTAL WASTE STREAM)

More recent data is available as per capita disposal rates. The per capita disposal rate is a jurisdiction-specific index used as one of several factors in determining a jurisdiction's compliance with AB 939. The per capita disposal rate allows jurisdictions, as well as the California Department of Resources Recycling and Recovery (CalRecycle), to set their primary focus on successful implementation of diversion programs (CIWMB, 2011b). **Table 4.16-2** provides the 2008 per capita disposal rates in pounds per day for population and employment disposal.

TABLE 4.16-2 PER CAPITA DISPOSAL RATES

	•	n Disposal PD)	Employment Disposal (PPD)	
Jurisdiction	Target	Annual	Target	Annual
Thousand Oaks	7.5	6.7	14.8	12.5
Simi Valley	7.2	6.2	21.8	18.4
Ventura County (Unincorporated	7.7	7.1	23	19.8

SOURCE: CIWMB, 2011b

Local

Ventura County General Plan (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified

in the Public Facilities and Services Element of the Ventura County General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal 4.1.1, 1: Plan for public facilities and services which will adequately serve the existing and future residents of the County.

Policy 4.4.2, 6: Applicants for discretionary development shall be encouraged to employ practices that reduce the quantities of wastes generated and shall be requested to engage in recycling activities to further reduce the volume of waste disposed of in landfills.

Goal 4.5.1: Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards and are compatible with the natural and human resources.

Policy 4.5.2, 2: All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.

Policy 4.5.2, 3: Discretionary development shall be conditioned to place utility service lines underground wherever feasible.

(County of Ventura, 2008).

Ventura County Construction and Demolition Debris Ordinance (Proposed Project and Alternative Subtransmission Alignments 1 and 3)

The Tulare County Recycling and Conversion of Construction and Demolition Debris Ordinance (Ordinance Number 4357), adopted in 2007, establishes regulations for the recycling and diversion of Construction and Demolition (C&D) Debris within unincorporated areas in Ventura County. According to the ordinance, applicants for a Covered Project² must complete and submit a C&D Debris Recycling Plan as a prerequisite for Permit issuance. The C&D Recycling Plan must be reapproved by the C&D Recycling Compliance Official, and prior to completion of the project the Applicant must submit a C&D Debris Recycling Report showing compliance with the Plan. According to the ordinance, the applicant must divert a minimum of 60 percent of the C&D debris resulting from the project (County of Ventura, 2007).

City of Thousand Oaks General Plan (Proposed Project and Alternative Subtransmission Alignments 1, 2 and 3; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified

² "Covered Project" includes any project meeting one or more of the following thresholds: (1) Residential additions or remodels of 1,000 square feet or more of gross floor area; (2) Commercial or Industrial tenant improvements of 2,000 square feet or more of gross floor area; (3) New structures of 1,000 square feet or more of gross floor area; (4) Demolition of any structure subject to a building permit, irrespective of cost or valuation; (5) Any grading work requiring a Permit, irrespective of cost, from which inert material will be removed from the project site; (6) All construction projects awarded within the County pursuant to procurement policy and the competitive bid process mandated by the California Public Contract Code (Ventura County, 2007).

in the Scenic Highways Element of the City of Thousand Oaks General Plan would otherwise be relevant to the Proposed Project and alternatives:

Policy 9: Co-ordinate program for undergrounding utility lines with the achievement of scenic corridors.

(City of Thousand Oaks, 2001).

City of Simi Valley General Plan (Alternative Subtransmission Alignment 2; Alternative Substation Site B; System Alternative B)

CPUC General Order No. 131-D explains that local land use regulations would not apply to the Proposed Project. However, for information purposes, the following goals and policies identified in the Community Services Element of the City of Simi Valley General Plan would otherwise be relevant to the Proposed Project and alternatives:

Goal 1X-2: Maintain municipal services, public utilities and facilities at adequate levels of service.

Policy IX-2.8: The City should encourage the recycling and separation of solid waste materials.

(City of Simi Valley, 1988).

4.16.2 Significance Criteria

Based on criteria in Appendix G of the CEQA Guidelines, a project would be considered to have a significant effect on utilities and service systems if it would:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- d) Not have sufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded water supply resources or entitlements are needed;
- e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- f) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- g) Not comply with federal, State, and local statutes and regulations related to solid waste.

4.16.3 Applicant Proposed Measures

No APMs have been identified by SCE to reduce Proposed Project impacts on utilities and service systems.

4.16.4 Impacts and Mitigation Measures

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Impact 4.16-1: The Proposed Project could exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. *Less than significant* (Class III)

The Proposed Project would not cause significant impacts to wastewater. The only wastewater generated during construction would be from the use of portable, a one-time limited timeframe. Furthermore, wastewater would be disposed of according to required regulations. No additional wastewater would be generated during operation or maintenance of the Proposed Project, as the proposed Presidential Substation would not have bathroom facilities. Therefore, this impact would be less than significant. See also, e) below.

Mitigation: None required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The Proposed Project would require water use during construction, primarily for periodic dust control on access roads. However, this water use would be temporary in nature and would not generate wastewater that would require treatment or disposal. Operation of the Proposed Project would require the use of water for landscaping irrigation. However, this irrigation would require a small quantity of water and would be absorbed by the soil; it therefore would not create any demand for wastewater treatment or disposal. As discussed in Section 4.9, *Hydrology and Water Quality*, Impact, 4.9-3, installation of the proposed Presidential Substation would alter the local drainage pattern, potentially increasing the rate or amount of surface runoff. However, the increase in surface runoff would be reduced through implementation of Mitigation Measure 4.9-3, and would not be substantial enough to require or result in the construction of new or expanded water or wastewater treatment plant facilities (No Impact). See also, d) and e) below.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Construction of the proposed Presidential Substation would require several ground surface improvements that would increase the amount of impermeable surface in the project area. **Table 4.16-3** shows the proposed Presidential Substation elements that would create new impermeable surfaces, totaling 16,000 square feet of impermeable surface.

Element	Material	Approximate Surface Area (ft ²)
Foundations	Concrete	2,000
Cable Trenches	Concrete	1,700
66 kV Bus Enclosures	Asphalt Concrete	1,800
Internal Driveway	Asphalt Concrete/ Class II Aggregate	4,700
External Driveway	Asphalt Concrete/ Class II Aggregate	2,900
Perimeter Wall Foundation	Concrete	2,900
Total		16,000

TABLE 4.16-3
SUBSTATION GROUND SURFACE IMPROVEMENT MATERIALS AND AREAS

SOURCE: SCE, 2009b

Also, as discussed in Chapter 2, *Project Description*, construction of the proposed Presidential Substation would require approximately 40,000 cubic yards of soil to be imported to fill low spots on the site to support the Substation equipment and associated facilities. A new culvert would be connected to the existing storm drain by the construction of a concrete box, and pour-in-place concrete swales would be installed around the substation to direct drainage. The hillside runoff would be routed to new concrete swales and into a new storm drain. Some runoff would be routed to a dirt infiltration swale and then into a catch basin. The substation runoff would be routed to an opening in the north wall. The runoff would then be routed to the concrete swales and into the catch basin above the existing 36-inch corrugated steel pipe (CSP). Both the hillside and substation runoffs would come together at the catch basin. All drainage would be routed to the concrete swales, storm drain pipe and then to the existing CSP culvert under Olsen Road.

As described in Chapter 2, *Project Description*, construction of the Proposed Project would require construction vehicles to travel along unpaved roads. A reinforced concrete slab would be constructed as protection from heavy vehicles where the proposed access road crosses over an existing culvert. Where the proposed access road crosses over existing storm drain pipes along the harvest road, these small pipes would be encased in concrete slurry to protect against damage from heavy vehicles. Existing storm drain inlets located along the unpaved access roads would be replaced with small concrete catch basins and traffic rated basin covers. Additionally, metal plates or concrete caps would be used, when necessary, to temporarily cover existing culverts

located on the paved access road. Therefore, construction vehicle travel along unpaved roads would not disturb storm drainage facilities.

Construction of the subtransmission line portion of the Proposed Project would include removing 89 existing wood poles and four steel poles and installing approximately 66 new steel poles along the existing right-of-way (ROW). Construction associated with the proposed subtransmission alignment, including pole installation sites, work areas, pull and tension sites, the staging area, and access roads, would not result in a net increase in impervious surfaces, as no surfaces associated with these elements of the Proposed Project would be paved. Consequently, none of these modifications would substantially increase runoff.

As discussed in Section 4.9, *Hydrology and Water Quality*, the increase in impervious surfaces, coupled with the proposed drainage modifications, could result in earlier and larger peak water flow rates during storm events. Mitigation Measure 4.9-3 would implement storm water quality control measures and BMPs to reduce potential impacts related to stormwater runoff and erosion. The Proposed Project would reduce the EIA at the Substation to less than 5 percent of the Substation project area, and runoff from impervious areas in excess of the 5 percent allowance would be retained on site. Drainage on the proposed Presidential Substation site would be designed such that the surrounding hillside and storm water runoff from the Substation site would not be sufficient to require or result in the construction of a new or expanded storm water drainage facility (No Impact).

d) Not have sufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded water supply resources or entitlements are needed.

Impact 4.16-2: The Proposed Project could require water supplies exceeding existing entitlements and resources. *Less than significant* (Class III)

The primary use of water during construction of the Proposed Project would be for dust suppression measures on access roads. The water that would be required for construction of the subtransmission line would be trucked in from off-site. Dust suppression would be performed as necessary and is not anticipated to occur on a regular basis. The working crew would bring in drinking water from off-site. The construction period would be temporary (i.e., 13 to 20 months), and water used during the construction period would be available from existing municipal water sources. Operation of the Proposed Project would require the use of water for landscape irrigation purposes. Irrigation water to establish and maintain landscaping would come from an existing 4-inch water pipeline that is located along the north side of Olsen Road between the VCSD Station and the city boundaries of Thousand Oaks and Simi Valley. The amount of water required operation of the Proposed Project would be existing entitlements and resources. Construction, operation and maintenance of the Proposed would therefore not require new or expanded waster supply resources or entitlements.

Mitigation: None required.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Impact 4.16-3: The Proposed Project could affect the wastewater treatment providers' ability to serve the Proposed Project's projected demand in addition to the providers' existing commitments. *Less than significant* (Class III)

As described in d), the primary use of water during construction of the Proposed Project would be for dust suppression measures on access roads. Disposal would not be required because the water used during dust suppression activities would be minimal and consequently this water would evaporate or be absorbed into the ground. In addition, construction crews would use portable sanitation facilities (portable toilets), generating relatively small volumes of wastewater for a limited time during the construction phase. Sanitation waste would be disposed of according to sanitation waste management practices. No other sources of wastewater are anticipated during the Proposed Project construction activities. No additional wastewater would be generated during operation or maintenance of the Proposed Project, as the proposed Presidential Substation would not have bathroom facilities. Therefore, the Proposed Project would not affect a wastewater treatment provider's capacity to serve its existing commitments, and this impact would be less than significant.

Mitigation: None required.

f) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Impact 4.16-4: The Proposed Project could be serviced by a landfill with insufficient capacity to accommodate the Proposed Project's solid waste disposal needs. *Less than significant* (Class III)

Operation and maintenance of the Proposed Project would not generate solid waste and would therefore not affect existing landfill capacities. Construction of the Proposed Project would generate various waste materials, including wood, soil, vegetation, and sanitation waste (from portable toilets).

As described in Chapter 2, *Project Description*, the Proposed Project would require the removal and disposal of approximately 89 existing wood poles and four TSPs. The existing wood poles removed for the Proposed Project would be: 1) reused by SCE, 2) returned to the manufacturer, 3) disposed of in a Class I hazardous waste landfill, or 4) disposed of in the lined portion of a Regional Water Quality Control Board-certified municipal landfill.

Soil excavated for the Proposed Project would either be used as fill for the proposed Presidential Substation site or disposed of off-site at an appropriately licensed waste facility. Sanitation waste would be disposed of according to sanitation waste management practices. Other miscellaneous non-hazardous construction materials that cannot be reused or recycled would be disposed of at municipal County landfills, such as the Simi Valley Landfill and Recycling Center or the Toland Road Landfill, in Ventura County. Any hazardous material would be recycled, treated and/or disposed of in accordance with federal and local laws. Impacts related to the removal and disposal of treated wood and construction materials would be less than significant (see Section 4.7, *Hazards and Hazardous Materials*, for additional information).

As discussed in Section 4.16.1, *Setting*, the Simi Valley Landfill currently has a remaining permitted capacity of approximately 20.6 million cubic yards and is not estimated to close until 2034, and the Toland Road Landfill has a remaining permitted capacity of approximately 22 million cubic yards and is not estimated to close until 2027 (CIWMB, 2011a).

Waste resulting from the construction of the proposed Presidential Substation and the removal of the wood poles that would be included under the Ventura County C&D Debris Ordinance would be required to meet a 60 percent diversion requirement. Also, because the local landfills would have sufficient capacity to accept the remainder of SCE's construction waste (i.e., a combined remaining capacity of 42.6 million cubic yards of waste), this would be a less-than-significant impact.

Mitigation: None required.

g) Not comply with federal, State, and local statutes and regulations related to solid waste.

Impact 4.16-5: The Proposed Project could conflict with federal, State, and local statutes and regulations related to solid waste. *Less than significant* (Class III)

As discussed above, Proposed Project operation and maintenance are not anticipated to produce additional solid waste. The Proposed Project would, however, generate waste during construction. Construction waste would include the one time disposal of material that could not be recycled or reused. The construction waste generated would be disposed of in an appropriate landfill. As discussed above, landfills within the project area have sufficient capacity to accept anticipated project waste.

Ventura County has an adopted the Countywide SRRE that establishes goals and methodologies for compliance with the California AB 939, which establishes 50 percent diversion of solid waste from landfills. As stated earlier, unincorporated Ventura County's diversion rate in 2005 was 48 percent and in 2006 was 52 percent (CIWMB, 2011b); therefore the County met the requirement of AB 939 in 2006 but not in 2005. The cities of Thousand Oaks and Simi Valley met the requirement of AB 939 in 2005 and 2006. In 2008, neither unincorporated Ventura County nor the cities of Thousand Oaks or Simi Valley met their population or employment disposal rates.

Nevertheless, as stated in Section 4.16.1, *Regulatory Context*, Ventura County has a construction and demolition ordinance that establishes diversion requirements for construction and demolition occurring within unincorporated areas. SCE would reduce their construction material and treated wood pole waste through the measures described above in Impact 4.16-4 consistent with Ventura County recycling and reduction policies. Thus, impacts related to conflicts with statutes and regulations relating to solid waste and recycling would be less than significant.

Mitigation: None required.

4.16.5 Alternatives

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be implemented; therefore, no impacts to utilities would occur. None of the project objectives would be met and future demand in the ENA would not be adequately met. SCE's present forecast indicates that demand in the ENA would exceed the current operating limits of the ENA substations as early as the summer of 2011. While this condition would continue to jeopardize SCE's ability to provide safe and reliable electric service to customers within the ENA, it would not result in physical impacts to utilities and service systems (No Impact).

Alternative Subtransmission Alignment 1

Construction, operation and maintenance impacts for Alternative Subtransmission Alignment 1 would be similar to those identified for the Proposed Project, which were determined to be no impact or less than significant, requiring no mitigation. Construction of Alternative Subtransmission Alignment 1 would involve similar construction methods as those described for the Proposed Project. As such, the demands placed on local water, wastewater, storm drainage, and solid waste service providers as a result of this alternative would be identical to the Proposed Project. Alternative Subtransmission Alignment 1 would require the replacement of approximately 1.0 less mile of subtransmission line compared to the Proposed Project (i.e., it would not include subtransmission line on Sunset Valley Road), and but would involve the construction of approximately 1.8 additional miles in new ROW. Waste impacts from construction activities would consequently be expected to be similar to the Proposed Project. No part of construction or operation of this alternative would use water or generate wastewater or solid waste in amounts exceeding the capacity of local facilities serving the area. Like the Proposed Project, there would be no need for construction or expansion of water, wastewater, or stormwater drainage facilities (No Impact), and impacts to wastewater treatment and solid waste facilities would be less than significant with no mitigation required. Therefore, this alternative would result in no impact to utility services regarding criteria b) and c) (No Impact), and lessthan-significant impacts regarding criteria a), d), e), f), and g) (Class III).

Alternative Subtransmission Alignment 2

Construction, operation and maintenance impacts for Alternative Subtransmission Alignment 2 would be similar to those identified for the Proposed Project, which were determined to be no impact or less than significant, requiring no mitigation. Construction of Alternative Subtransmission Alignment 2 would involve similar construction methods as those described for the Proposed Project. As such, the demands placed on local water, wastewater, storm drainage, and solid waste service providers as a result of this alternative would be identical to the Proposed Project. Alternative Subtransmission Alignment 2 would require the replacement of approximately 1.5 additional miles of subtransmission line, compared to the Proposed Project, and would thus generate proportionately more waste from construction activities. However, no part of construction or operation of this alternative would use water or generate wastewater or solid waste in amounts exceeding the capacity of local facilities serving the area. Like the Proposed Project, there would be no need for construction or expansion of water, wastewater, or stormwater drainage facilities (No Impact), and impacts to wastewater treatment and solid waste facilities would be less than significant with no mitigation required. Therefore, this alternative would result in no impact to utility services regarding criteria b) and c) (No Impact), and lessthan-significant impacts regarding criteria a), d), e), f), and g) (Class III).

Alternative Subtransmission Alignment 3

Construction, operation and maintenance impacts for Alternative Subtransmission Alignment 3 would be similar to those identified for the Proposed Project, which were determined to be no impact or less than significant, requiring no mitigation. The origination points and general route for Alternative Subtransmission Alignment 3 would be the same as for the Proposed Project. However, additional portions of Alternative Subtransmission Alignment 3 would be installed underground compared to the Proposed Project. The trenching required for undergrounding the 66kV line would be 20 inches deeper than the trench required for the Proposed Project. Alternative 3 would not require the construction of additional access roads east of Hwy 23, or the replacement of the existing wood poles from the intersection of Sunset Valley and Read Road east to the proposed Presidential Substation site. Nevertheless, construction of Alternative Subtransmission Alignment 3 would involve similar construction methods as those described for the Proposed Project. As such, the demands placed on local water, wastewater, storm drainage, and solid waste service providers as a result of this alternative would be similar to the Proposed Project. No part of construction or operation of this alternative would use water or generate wastewater or solid waste in amounts exceeding the capacity of local facilities serving the area. Like the Proposed Project, there would be no need for construction or expansion of water, wastewater, or stormwater drainage facilities (No Impact), and impacts to wastewater treatment and solid waste facilities would be less than significant with no mitigation required. Therefore, this alternative would result in no impact to utility services regarding criteria b) and c) (No Impact), and less-than-significant impacts regarding criteria a), d), e), f), and g) (Class III).

Alternative Substation Site B

Construction, operation and maintenance impacts for Alternative Substation Site B would be greater than those identified for the Proposed Project, which were determined to be less than significant, requiring no mitigation. The demands placed on local water, wastewater, and storm drainage, would be similar to the Proposed Project. However, construction of Alternative Substation Site B would involve greater impacts than those described for the proposed Presidential Substation, as construction would require the removal of existing structures on the site, including several abandoned concrete block buildings and structures, a garage, former underground fuel storage tanks, and parking areas. The parcel is presently landscaped with light posts and ornamental vegetation, which may also need to be removed. As such, Alternative Substation Site B would generate proportionately more waste from construction activities. However, no part of construction or operation of this alternative would use water or generate wastewater or solid waste in amounts exceeding the capacity of local facilities serving the area. Like the proposed Presidential Substation, there would be no need for construction or expansion of water, wastewater, or stormwater drainage facilities (No Impact), and impacts to wastewater treatment and solid waste facilities would be less than significant with no mitigation required. Therefore, this alternative would result in no impact to utility services regarding b) and c) (No Impact), and less-than-significant impacts regarding criteria a), d), e), f), and g) (Class III).

System Alternative B

This alternative would consist of upgrading the Royal, Thousand Oaks, and Potrero substations by replacing the existing 16.8 MVA transformers with larger ones. The demands placed on local water, wastewater, and storm drainage, would be less than the Proposed Project. Construction of System Alternative B would also generate similar or less impacts regarding solid waste disposal than those described for the Proposed Project. System Alternative B would not require the construction of a new substation and associated subtransmission line; construction would require the removal of existing structures at the substations, including 16.8 MVA transformers. Installing larger transformers could also require the replacement of some existing 16 kV distribution equipment located inside and outside of the substation footprint. Additional 16kV circuits may be required at some locations or existing 16kV get-away equipment may need to be upgraded. However, System Alternative B would not require the removal of 89 wood poles and 4 TSPs. As such, System Alternative B would generate less waste from construction activities. Overall, like the Proposed Project, there would be no need for construction or expansion of water, wastewater, or stormwater drainage facilities (No Impact), and impacts to wastewater treatment and solid waste facilities would be less than significant with no mitigation required. Therefore, this alternative would result in no impact to utility services regarding b) and c) (No Impact), and lessthan-significant impacts regarding criteria a), d), e), f), and g) (Class III).

4.16 Utilities and Service Systems

References – Utilities and Service Systems

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CHAPTER 5 Comparison of Alternatives

This section summarizes and compares the environmental advantages and disadvantages of the Proposed Project and the alternatives evaluated in this EIR. This comparison is based on the assessment of environmental impacts of the Proposed Project and each alternative, as identified in Sections 4.1, *Aesthetics,* through 4.16, *Utilities and Service Systems.* Chapter 2, *Project Description,* introduces and describes the Proposed Project. Chapter 3, *Alternatives and Cumulative Projects,* introduces and describes the alternatives considered in this EIR.

Section 5.1 describes the methodology used for comparing alternatives. Section 5.2 summarizes the environmental impacts of the Proposed Project and alternatives. Section 5.3 defines the Environmentally Superior Alternative, based on comparison of each alternative with the Proposed Project. Section 5.4 presents a comparison of the No Project Alternative with the alternative that is determined in Section 5.3 to be environmentally superior.

5.1 Comparison Methodology

CEQA does not provide specific direction regarding the methodology of alternatives comparison. Each project must be evaluated for the issues and impacts that are most important; this will vary depending on the project type and the environmental setting. Issue areas that are generally given more weight in comparing alternatives are those with long-term impacts (e.g., visual impacts and permanent loss of habitat or land use conflicts). Impacts associated with construction (i.e., temporary or short-term) or those that are easily mitigable to less-than-significant levels are generally considered to be less important.

This comparison is designed to satisfy the requirements of CEQA Guidelines §15126.6(d), Evaluation of Alternatives, which states that:

"The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the proposed project as proposed."

If the Environmentally Superior Alternative is the No Project Alternative, CEQA requires identification of an Environmentally Superior Alternative among the other alternatives (CEQA Guidelines §15126.6[e][2]).

The following methodology was used to compare alternatives in this EIR:

- **Step 1:** Identification of Alternatives. An alternatives screening process (described in Chapter 3, *Alternatives and Cumulative Projects*) was used to identify approximately 16 alternatives to the Proposed Project. That screening process identified eight alternatives (each combination of components is considered a separate alternative) for detailed EIR analysis. A No Project Alternative was also identified. No other feasible alternatives were identified that would lessen or alleviate significant environmental impacts while meeting the basic project objectives.
- **Step 2:** Determination of Environmental Impacts. The environmental impacts of the Proposed Project and alternatives were identified in Sections 4.1, *Aesthetics* through 4.16, *Utilities and Service Systems*, including the potential impacts of construction, operation and maintenance.
- **Step 3:** Comparison of Proposed Project with Alternatives. The environmental impacts of the Proposed Project were compared to those of each alternative to determine the Environmentally Superior Alternative. The Environmentally Superior Alternative was then compared to the No Project Alternative.

Although this comparison focuses on the 16 issue areas (described in Sections 4.1 through 4.16), determining an Environmentally Superior Alternative is difficult because of the many factors that must be balanced. Although this EIR identifies an Environmentally Superior Alternative, it is possible that the Commission could choose to balance the importance of each impact area differently and reach a different conclusion during the project approval process. Therefore, the Commission may approve a project that is not the Environmentally Superior Alternative.

5.2 Evaluation of Project Alternatives

This section compares the potential environmental impacts for the Proposed Project and eight alternatives. The No Project Alternative is described in Section 5.4. Due to the proximity of the proposed Presidential Substation site and the Alternative Substation Site B, the comparison of alternatives is described as combinations of the alternative subtransmission alignments with each of the substation sites. With regard to the subtransmission alignments, the primary difference would be whether the subtransmission alignment crosses Olsen Road to reach the substation (e.g., Alternative Subtransmission Alignment 1 with the Alternative Substation Site B it would not require an overhead crossing of Olsen Road).

A detailed analysis of environmental impacts and mitigation for all project alternatives is provided in Sections 4.1, *Aesthetics*, through 4.16, *Utilities and Service Systems*. The following discussion is organized based on level of impacts as defined by CEQA, first by significant unmitigible (Class I) impacts, and secondly less than significant with mitigation (Class II) and less than significant with no mitigation required (Class III) impacts.

There would be significant unavoidable (Class I) aesthetic impacts under the Proposed Project, Alternative Subtransmission Alignment 1 and Alternative Subtransmission Alignment 2. Significant unavoidable impacts on aesthetic resources are identified as substantial damage to scenic resources and substantial degradation of the existing visual character or quality and surroundings from public views.

There would be significant unavoidable (Class I) air quality impacts under the Proposed Project and each alternative, except System Alternative B (**Table 5-1**). Significant unavoidable impacts on air quality are identified as construction activities that would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and construction activities that would result in criteria pollutant emissions of NOx that would be cumulatively considerable.

There would be significant unavoidable (Class I) noise impacts under the Proposed Project, Alternative Subtransmission Alignment 1, and Alternative Subtransmission Alignment 3 (Table 5-1). Significant unavoidable impacts on noise are identified as construction activities that would exceed Ventura County construction noise threshold criteria in unincorporated areas.

Table 5-1 includes a ranking of each alternative component based on both whether significant unavoidable impacts would occur and the intensity and duration of the impact compared to the other alternatives. Immediately following the table is a brief discussion of the rankings.

In addition to the significant unavoidable impacts described above, there are several differentiating impacts that with mitigation would be less than significant. **Table 5-2** provides a comparison of potential impacts by alternative (including various combinations of substation location and alignments) for each resource category. The identification of an alternative as Preferred or No Preference refers to its relation to the Proposed Project.

5.3 Environmentally Superior Alternative

As discussed in the previous section, the Proposed Project and several of the alternatives would have significant unavoidable impacts on air quality, noise, and aesthetic resources.

The selection of an Environmentally Superior Alternative is based on differences in intensity and duration of significant impacts (Table 5-2). Based on these differences the identified environmentally superior alternative is System Alternative B. This alternative would not result in any significant unavoidable impacts. System Alternative B, which does not involve the construction of a new substation, would meet most of the basic project objectives but would result in reduced operational flexibility and reliability compared to the Proposed Project, and other alternatives which involve construction of a new substation. All other alternatives would result in at least one significant unavoidable impact.

Seven of the alternatives combinations are variations of alignments and/or new substation location. For a number of resources there are no material environmental impact differences between the Proposed Project and alternatives including: geology, soils, seismicity and mineral resources; hydrology/water quality; land use/ planning; population/ housing; and recreation.

			Ranking (1 = Most Environmentally Preferred Alternative and 4 = Least Environmentally Preferred Alternative)		
Alternative	Significant (Class I) Impacts	Substation Site	Sub- transmission Alignment		
Proposed Project – proposed Presidential Substation	Aesthetics – significant unavoidable: The Proposed Project would result in significant unavoidable impacts to scenic resources and degradation of visual character and public views. Air Quality – significant unavoidable: The Proposed Project construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable. Significant unavoidable impacts would result from the combined emissions associated with all components of the Proposed Project.	3			
Proposed Project – proposed subtransmission alignment	Aesthetics – significant unavoidable: The Proposed Project would result in significant unavoidable impacts to scenic resources and degradation of visual character and public views. Air Quality – significant unavoidable: The Proposed Project construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable. Significant unavoidable impacts would result from the combined emissions associated with all components of the Proposed Project. Noise – significant unavoidable: The Proposed Project construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria. Significant unavoidable impacts would result from the proposed subtransmission line, 16kV distribution line and telecommunications cable and access road construction.		3		
Significant Impact	is (Class I) Eliminated or Created by Alternatives				
Alternative Subtransmission Alignment 1	Aesthetics – significant unavoidable: Aesthetic impacts would be created on views from three equestrian centers and the Ronald Reagan Presidential Foundation and Ronald Reagan Presidential Library. Air Quality – significant unavoidable: Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable. Noise – significant unavoidable: Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria.		4		
Alternative Subtransmission Alignment 2	Aesthetics – significant unavoidable: Aesthetic impacts due to the presence of pole structures that would substantially degrade the existing visual character of the sites and their surroundings, and Class I impacts to approximately 2.7 miles of Olsen Road (designated Scenic Highway in the City of Thousand Oaks), and approximately 2.2 miles of Madera Road (designated Scenic Roadway in the City of Simi Valley). Air Quality – significant unavoidable: Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable. Noise – less than significant: Construction activities would eliminate significant unavoidable impacts related to exceeding Ventura County construction noise threshold criteria because unincorporated Ventura County residents would not be impacted under this alternative.		4		

TABLE 5-1 SUMMARY OF SIGNIFICANT UNAVOIDABLE (CLASS I) ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT AND ALTERNATIVES BY COMPONENT

		(1 = Most En Preferred A 4 = Least En	nking vironmentally Iternative and vironmentally Alternative)
Alternative	Significant (Class I) Impacts	Substation Site	Sub- transmission Alignment
Alternative Subtransmission Alignment 3	Aesthetics – less than significant. The subtransmission crossing of Olsen Road would be installed underground reducing the visual impact to less than significant.		
	<i>Air Quality</i> – <i>significant unavoidable</i> : Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable.		2
	Noise – significant unavoidable: Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise threshold criteria.		
Alternative Substation	Aesthetics – less than significant: Elimination of eliminate Class I impacts related to aesthetic resources.		
Site B	<i>Air Quality</i> – <i>significant unavoidable</i> : Construction activities would generate ozone precursor emissions (i.e., NOx) that could contribute substantially to a violation of ozone air quality standards and would be cumulatively considerable.	2	
	Noise – less than significant: Construction activities would not generate noise levels in unincorporated Ventura County in excess of Ventura County construction noise threshold criteria. Construction at this site would result in noise impacts less than significant.		
System Alternative B	Aesthetics – less than significant. Class I aesthetic impacts would be eliminated.		
	<i>Air Quality</i> – <i>less than significant:</i> Construction impacts in Ventura County associated with potential violation of ozone air quality standards and cumulatively considerable levels of NOx.	1	
	Noise – less than significant short-term construction impacts: Class I noise impacts in Ventura County would be eliminated. Unlike the Proposed Project and Alternative Substation Site B, this alternative would result in long-term operational impacts at the Thousand Oaks Substation. However, these impacts would be mitigated to less than significant.		

TABLE 5-1 (Continued) SUMMARY OF SIGNIFICANT UNAVOIDABLE (CLASS I) ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT AND ALTERNATIVES BY COMPONENT

Implementation of the Proposed Project and all seven of the alternative combinations would involve construction of a new substation that results in significant unavoidable (Class I) air quality impacts. Although air quality impacts would be of varying degrees with regard to NOx as an ozone precursor, each of the seven alternatives would still result in exceedences of the local threshold.

As described above, System Alternative B is the only alternative which would not result in significant unavoidable impacts on any resource and is therefore ranked as the environmentally superior alternative. A combination of Alternative Substation Site B with Alternative Subtransmission Alignment 3 would follow as the next environmentally preferred alternative. This combination would result in significant unavoidable temporary impacts related to noise and air quality, but neither the substation nor the subtransmission alignment would result in permanent significant unavoidable impacts on aesthetics.

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TABLE 5-2 PROPOSED PROJECT VS. ALTERNATIVES SUMMARY OF ENVIRONMENTAL IMPACT CONCLUSIONS

Resource Area	Proposed Project	Proposed Presidential Substation with Alternative Subtransmission Alignment 1	Proposed Presidential Substation with Alternative Subtransmission Alignment 2	Proposed Presidential Substation with Alternative Subtransmission Alignment 3	Alternative Substation Site B with Proposed Subtransmission Alignment	Alternative Substation Site B with Alternative Subtransmission Alignment 1	Alternative Substation Site B with Alternative Subtransmission Alignment 2	Alternative Substation Site B with Alternative Subtransmission Alignment 3	System Alternative B
Aesthetics	Impacts would be significant unavoidable. No Preference	Impacts would be greater than the Proposed Project. Most Adverse Impact	Impacts would be greater than the Proposed Project. No Preference	Impacts would be less than the Proposed Project but still significant unavoidable. No Preference	Impacts would be less than the proposed Presidential Substation site. Overall impacts would be mitigable to less than significant.	Impacts would be greater than the Proposed project for some aspects but reduced for others. Overall impacts would still be significant unavoidable.	Impacts would be greater than the Proposed project for some aspects but reduced for others. Overall impacts would still be significant unavoidable.	Impacts would be less than the Proposed Project. Overall impacts would be mitigable to less than significant. Preferred	Impacts would be less than the Proposed Project. Overall impacts would be less than significant. Preferred
					Preferred	No Preference	No Preference		Least Impacts
Agriculture and Forestry	Impacts determined to be less than significant.	Impacts would be less than the Proposed Project.	Impacts would be less than the Proposed Project.	Impacts would be less than the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be less than the Proposed Project.	Impacts would be less than the Proposed Project.	Impacts would be less than the Proposed Project.	Impacts would be less than the Proposed Project.
Resources	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference
Air Quality	Impacts would be significant unavoidable. Least Preferred	Impacts would be less than the Proposed Project, but still significant unavoidable. Preferred	Impacts would be less than the Proposed Project, but still significant unavoidable. Preferred	Impacts would be less than the Proposed Project, but still significant unavoidable. Preferred	Impacts would be slightly less than the Proposed Project, but still significant unavoidable. Preferred	Impacts would be less than the Proposed Project, but still significant unavoidable. Preferred	Impacts would be less than the Proposed Project, but still significant unavoidable. Preferred	Impacts would be less than the Proposed Project but still significant unavoidable. Preferred	Impacts would be less than the Proposed Project. Overall, impacts would be mitigated to less than significant.
	Most adverse impact								Most Preferred Least Impact
Biological Resources	Impacts would be mitigated to less than significant.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to Proposed Project but to a lesser degree.	Impacts would be similar to Proposed Project but to a lesser degree.	Impacts would be similar to Proposed Project but to a lesser degree.	Impacts would be similar to Proposed Project but to a lesser degree.	Impacts would be similar to Proposed Project but to a lesser degree.	Impacts would be less than the Proposed Project.
	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference Least Impacts
Cultural Resources	Impacts would be mitigated to less than significant. No Preference	Impacts would be similar to the Proposed Project. No Preference	Impacts would be similar to the Proposed Project. No Preference	Impacts would be similar to the Proposed Project. No Preference	Impacts would be similar to Proposed Project but to a lesser degree. No Preference	Impacts would be similar to Proposed Project but to a lesser degree. No Preference	Impacts would be similar to Proposed Project but to a lesser degree. No Preference	Impacts would be similar to Proposed Project but to a lesser degree. No Preference	Impacts would be less than the Proposed Project. No Preference Least Impacts
Geology, Soils, Seismicity and	Impacts determined to be less than significant.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.
Mineral Resources	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference
Greenhouse Gas Emissions	Impacts would be mitigated to less than significant.	Impacts would be similar to Proposed Project but to a slightly lesser degree.	Impacts would be similar to Proposed Project but to a slightly greater degree.	Impacts would be similar to Proposed Project but to a lesser degree.	Impacts would be similar to the Proposed Project.	Impacts would be similar to Proposed Project but to a slightly lesser degree.	Impacts would be similar to Proposed Project but to a slightly greater degree.	Impacts would be similar to Proposed Project but to a lesser degree.	Impacts would be less than the Proposed Project. Most Preferred
		Preferred	No Preference	Slight Preferred		Preferred	No Preference	No Preference	Least Impacts
Hazards and Hazardous	Impacts would be mitigated to less than significant.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be less than the Proposed Project.
Materials	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference Least Impacts
Hydrology/Water Quality	Impacts would be mitigated to less than significant.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to Proposed Project but to a lesser degree.
									Most Preferred

TABLE 5-2 (Continued) PROPOSED PROJECT VS. ALTERNATIVES SUMMARY OF ENVIRONMENTAL IMPACT CONCLUSIONS

Resource Area	Proposed Project	Proposed Presidential Substation with Alternative Subtransmission Alignment 1	Proposed Presidential Substation with Alternative Subtransmission Alignment 2	Proposed Presidential Substation with Alternative Subtransmission Alignment 3	Alternative Substation Site B with Proposed Subtransmission Alignment	Alternative Substation Site B with Alternative Subtransmission Alignment 1	Alternative Substation Site B with Alternative Subtransmission Alignment 2	Alternative Substation Site B with Alternative Subtransmission Alignment 3	System Alternative B		
Land Use/Planning	No impacts. No Preference	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.		
		No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference		
Noise	Construction Impacts would be significant unavoidable.	Construction impacts would be greater than the Proposed	Construction impacts would be similar to the proposed	Construction impacts would be less than the Proposed	Construction impacts would be similar to the Proposed	Construction impacts would be greater than the Proposed	similar to the proposed project	Construction impacts would be less than the Proposed	Construction impacts would less than significant.		
	Operational impacts would be less than significant with no mitigation. No Preference	Project for some elements but less than the Proposed Project for others. Overall impacts would be significant unavoidable. No Preference	project but because of jurisdictional boundaries would be mitigable to less than significant. Preferred	Project, but still significant unavoidable. Preferred	Project. No Preference	less than the Proposed Project bou for others. Overall impacts to le	less than the Proposed Project for others. Overall impacts would be significant	Project. Project for some elements but less than the Proposed Project for others. Overall impacts would be significant but because of jurisdictional boundaries would be mitigable to less than significant. Project, but still si unavoidable. Project for some elements but less than the Proposed Project for others. Overall impacts but because of jurisdictional boundaries would be mitigable to less than significant. Project, but still si unavoidable.			Operational impacts would be greater than the Proposed Project but mitigable to less than significant.
		NO FICICICE				NO FIEIEIEICE			Preferred		
									Least Impacts		
Population/Hous ing	Impacts would be less than significant.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.		
	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference		
Public Services	Impacts would be mitigated to less than significant.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to Proposed Project but to a lesser degree.		
	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	Preferred		
Recreation	Impacts would be mitigated to less than significant.	Impacts would be similar to Proposed Project but to a lesser degree. Preferred	Impacts would be similar to Proposed Project but to a greater degree. No Preference	Impacts would be similar to the Proposed Project.	Impacts would be similar to the Proposed Project.	Impacts would be similar to Proposed Project but to a lesser degree. No Preference	Impacts would be similar to Proposed Project but to a greater degree. No Preference	Impacts would be similar to the Proposed Project.	Impacts would be similar to Proposed Project but to a lesser degree. No Preference		
Transportation/T raffic	Impacts would be mitigated to less than significant.	Impacts would be similar to the Proposed Project.	Impacts would be greater than the Proposed Project,	Impacts would be slightly greater than the Proposed	Impacts would be similar to Proposed Project but to a	Impacts would be similar to the Proposed Project but to a	Impacts would be greater than the Proposed Project but still	Impacts would be slightly greater than the Proposed	Impacts would be less than the proposed project.		
	No Preference	No Preference	but still mitigated to less than significant.	Project.	lesser degree.	lesser degree.	mitigated to less than significant.	Project.	No Preference		
			No Preference	No Preference	No Preference	No Preference	No Preference	No Preference	Least Impacts		
			Most adverse traffic impacts								
Utilities/Service Systems	Impacts determined to be less than significant.	an significant. Proposed Project. the Proposed Project. the Proposed Project to the Proposed Project but would be mitigated to less		the Proposed Project but		than the Proposed Project	Impacts would be similar to Proposed Project but to a				
	No Preference		No Preference		would be mitigated to less than significant.		but would be mitigated to less than significant.	lesser degree.			
					No Preference	No Preference	No Preference	No Preference	No Preference		
					Most Impacts				Least Impacts		

Resource categories where significant unavoidable environmental impacts would either be lessened or increased by implementing an alternative to the Proposed Project are discussed below in **Table 5-3**.

Alternative	Aesthetics	Air Quality	Noise
Proposed Project	Significant unavoidable impacts related to Subtransmission Alignment Olsen Road crossing and also the proposed Presidential Substation.	Significant unavoidable impacts related to construction emissions.	Significant unavoidable short term impacts where construction occurs near residences in unincorporated Ventura County.
Proposed Presidential Substation with Alternative Subtransmission Alignment 1	Alternative would have similar impacts as the Proposed Project. In addition, creates a new significant aesthetics impact would be created associated with Esperance Road subtransmission alignment.	Alternative would not include construction of 12,500 feet of duct bank but would require a longer subtransmission alignment and more pole construction. Overall, construction emission would be slightly reduced.	Alternative would result noise impacts in new areas in addition to the Proposed Project. Impacts may be slightly reduced in some areas.
Proposed Presidential Substation with Alternative Subtransmission Alignment 2	Alternative would have similar impacts as the Proposed Project. In addition, new significant aesthetics impacts would result from the alignment adjacent to Olsen and Madera Roads.	Alternative would not include construction of 12,500 feet of duct bank but would require a longer subtransmission alignment and more pole construction. Overall, construction emission would be slightly reduced.	Impacts would be similar to the Proposed Project but because of jurisdictional boundaries would be less than significant.
Proposed Presidential Substation with Alternative Subtransmission Alignment 3	Alternative would install the subtransmission line under Olsen road, thereby eliminating the aesthetic impacts associated with the crossing. However, significant impacts would remain related to the proposed Presidential Substation site. Overall reduced but still significant unavoidable.	Alternative would eliminate construction emissions associated with access road construction and subtransmission alignment construction/pole replacement from Sunset Valley to the substation. Overall construction emissions would be reduced.	Impacts would be less than the Proposed Project because construction/pole replacement related to the subtransmission alignment would not be required for much of the alignment.
Alternative Substation Site B with Proposed Project Subtransmission Alignment.	Alternative would eliminate the significant unavoidable impacts associated with the substation site and Olsen Road crossing. Overall, impacts would be reduced to less than significant.	Construction of the alternative substation would require fewer truck haul trips and grading resulting in reduced construction emissions. Construction emissions associated with subtransmission alignment construction would be similar to the Proposed Project. Overall, construction emissions would be reduced.	
Alternative Substation Site B with Alternative Subtransmission Alignment 1.	Alternative would eliminate the aesthetics impacts related to the substation site and the Olsen road overhead crossing. However, a new significant unavoidable impact would be created related to the Esperance Road alignment.	Alternative would eliminate construction emissions associated with 12,500 feet of duct bank construction but would require a longer subtransmission alignment and more pole replacement. Substation construction is expected to require fewer truck haul trips. Overall construction emissions would be reduced.	

 TABLE 5-3

 ENVIRONMENTAL IMPACTS INCREASED OR DECREASED BY IMPLEMENTING AN ALTERNATIVE

Alternative	Aesthetics	Air Quality	Noise
Alternative Substation Site B with Alternative Subtransmission Alignment 2.	Alternative would eliminate the aesthetics impacts related to the substation site and the Olsen road overhead crossing. However, a new significant unavoidable impact would be created related to the jnew subtransmission lines parallel to Olsen and Madera Roads.	Alternative would eliminate construction emissions associated with 12,500 feet of duct bank construction but would require a longer subtransmission alignment and more pole replacement. Substation construction is expected to require fewer truck haul trips. Overall construction emissions would be reduced.	
Alternative Substation Site B with Alternative Subtransmission Alignment 3.	Alternative would eliminate the significant unavoidable impacts associated with the substation site and Olsen Road crossing. Overall, impacts would be reduced to less than significant.	Alternative would eliminate construction emissions associated with access road construction and subtransmission alignment construction/pole replacement from Sunset Valley to the substation. In addition, the substation construction would involve less fill and therefore fewer truck haul trips. Overall construction emissions would be reduced.	Impacts would be less than the Proposed Project because construction/pole replacement related to the subtransmission alignment would not be required for much of the alignment.
System Alternative B	Alternative would eliminate the significant unavoidable impacts associated with the substation site and Olsen Road crossing. Overall, impacts would be reduced to less than significant.	Alternative would not require construction of a new substation or subtransmission lines, resulting in less than significant impacts on air quality.	Short term construction impacts would be less than significant. Long term noise impacts are expected to increase due to larger transformers in the existing substations but would be mitigated to less than significant.

TABLE 5-3 (Continued) ENVIRONMENTAL IMPACTS INCREASED OR DECREASED BY IMPLEMENTING AN ALTERNATIVE

5.4 No Project Alternative vs. the Environmentally Superior Alternative

5.4.1 Summary of the No Project Alternative and Its Impacts

The No Project Alternative is described in Section 3.4.6. Under the No Project alternative, the Proposed Project would not be built and would therefore have no environmental impacts related to project construction and maintenance. However, from an operational perspective, projected demand for electricity in the ENA would not be adequately met. This condition would jeopardize SCE's ability to provide safe and reliable electric service to customers within the ENA, creating the potential for increased incidence of brown-outs and black-outs in the future. Such disruptions to electric service could result in indirect impacts to the provision of public services.

5.4.2 Summary of the Environmentally Superior Alternative and Its Impacts

The Environmentally Superior Alternative is defined in Section 5.3 as System Alternative B. Impacts of System Alternative B are defined in each resource area's impact analysis in Sections 4.1, *Aesthetics*, through 4.16, *Utilities and Service Systems*, and are also summarized in Table 5-2, above. The Environmentally Superior Alternative would have no significant unavoidable impacts. However, although System Alternative B would meet most basic project objectives, it would result in reduced operational flexibility compared to the Proposed Project, and the seven alternatives involving construction of a new substation.

5.4.3 Conclusion: Comparison of the Environmentally Superior Alternative with the No Project Alternative

The Environmentally Superior Alternative (System Alternative B) would result in less-thansignificant impacts on aesthetics, noise and air quality resources and would have minimal longterm impacts on residences. The most significant impact of the No Project Alternative is that SCE's ability to provide safe and reliable electric service to customers within the ENA would be jeopardized, creating the potential for increased incidence of brown-outs and black-outs in the future which could in turn result in indirect impacts to the provision of public services. Overall, the Environmentally Superior Alternative is preferred over the No Project Alternative, as the No Project Alternative would not meet the basic project objectives.

CHAPTER 6 CEQA Statutory Sections

6.1 Growth-Inducing Effects

An EIR must describe any growth-inducing impacts of a proposed project (Pub. Res. Code §21100(b)(5); CEQA Guidelines §15126(d)), including "the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment" (CEQA Guidelines §15126.2(d)). New employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects represent direct forms of growth. Other examples of projects that are growth-inducing are the expansion of urban services into a previously unserved or under-served area, the creation or extension of transportation links, or the removal of major obstacles to growth. It is important to note that these direct forms of growth have secondary effects of expanding the size of local markets and attracting additional economic activity to the area.

Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

6.1.1 Growth Caused by Direct and Indirect Employment

The number of workers required to construct the Proposed Project would be approximately 42 construction personnel working on any given day, and would consist of SCE construction crews or contractors. The Proposed Project construction activities would be temporary, estimated to be approximately 13 to 20 months. As discussed in Chapter 2, *Project Description*, construction crews would likely be based at one of SCE's local facilities such as the Moorpark Substation or the Thousand Oaks Service Center. It is anticipated that all temporary positions would be filled from the local labor pool available in Ventura County, with workers expected to commute to the site rather than move. However, even if the 42 construction personnel needed temporary accommodations, an adequate number of units exist in the area to serve the demand. There are seven full-service hotels, 12 motels, and at least 10 campgrounds and recreational vehicle (RV) opportunities within Ventura County (Ventura Visitors and Convention Bureau, 2011a, 2011b, 2011c). In addition, a 5 percent apartment vacancy rate generally means there are ample choices for would-be tenants (Dyer, 2010). In January 2010, Ventura's countywide apartment vacancy

rate was 5.24 percent, which is about the same as it had been since January 2008 (Dyer, 2010). Additional accommodations are available in the cities of Thousand Oaks and Simi Valley. Therefore, construction of the Proposed Project is not expected to result in any significant increase to the local population or adverse effects on the housing market, and would not indirectly induce growth by creating new opportunities for local industry or commerce. As such, there would be less-than-significant impacts related to short-term population growth in the project area.

Project operation and maintenance would require minimal staffing, which would be handled by current SCE employees. No new permanent jobs would be created. Therefore, overall, employment generated by the Proposed Project would have no impact on population growth because any short-term housing demand created during construction could be accommodated by existing units and no long-term growth would result from operation and maintenance of the Proposed Project.

6.1.2 Growth Related to Provision of Additional Electric Power

Construction of the Proposed Project is needed to meet electric system reliability and planned demand in Thousand Oaks, Simi Valley, and the eastern portion of Moorpark. Therefore, the Proposed Project is designed to increase reliability and accommodate existing and planned electrical load growth, rather than to induce growth.

Growth in Thousand Oaks, Simi Valley, and Moorpark is planned and regulated by applicable local general plans and planning and zoning ordinances. The provision of electricity is generally not considered an obstacle to growth nor does the availability of electrical capacity by itself normally ensure or encourage growth within a particular area. Other factors such as economic conditions, land availability, population trends, availability of water supply or sewer services and local planning policies have a more direct effect on growth. Therefore, the Proposed Project would not indirectly induce growth by creating new opportunities for local industry or commerce.

6.2 Significant Environmental Effects that Cannot be Avoided

Sections 15126.2(b) of the CEQA Guidelines requires that an EIR identify significant environmental effects which cannot be avoided by the Proposed Project, including those that can be mitigated, but not to a less than significant level. The Proposed Project would result in impacts to Aesthetics, Air Quality and Noise that, even with implementation of mitigation measures, would remain significant and unavoidable. The proposed Presidential Substation and proposed subtransmission alignments would be against natural landscapes and demand viewer attention on Olsen Road, a City of Thousand Oaks designated Scenic Highway. Despite mitigation to reduce visual contrast between the scenic character of the existing landscape and the Proposed Project, significant impacts would be unavoidable. Project construction activities would generate ozone precursor emissions that could contribute substantially to a violation of ozone air quality standards, as well as result in noise impacts to sensitive receptors.

6.3 Significant Irreversible Changes

Section 15126.2(c) of the CEQA Guidelines requires that an EIR identify significant irreversible environmental changes that would be caused by a proposed project. These changes may include, for example, uses of nonrenewable resources, or provision of access to previously inaccessible areas, as well as project accidents that could change the environment in the long-term. Development of the Proposed Project would require a permanent commitment of natural resources resulting from the direct consumption of fossil fuels, construction materials, the manufacture of new equipment that largely cannot be recycled at the end of the project's useful lifetime, and energy required for the production of materials. Furthermore, construction of the Proposed Project would necessitate the permanent removal of 0.06 acre of Farmland due to subtransmission pole installation and access road improvements.

Operation of the Proposed Project would allow for the transport of additional electrical power generated from renewable and non-renewable resources, although the Proposed Project itself would not require the future use of specific amounts of non-renewable resources. While the Proposed Project would facilitate the delivery of electrical power generated from non-renewable resources (e.g., natural gas and coal), these resources would be exploited and expended now and in the near future regardless of the Proposed Project, as the production and use of the carbon-based products that would become electricity transported by the Proposed Project has been, or will be, approved by permitting agencies. Therefore, the primary and secondary impacts resulting from the Proposed Project would be less than significant.

Accidents, such as the release of hazardous materials, could trigger irreversible environmental damage. As discussed in Section 4.8, Hazards and Hazards Materials, construction of the Proposed Project would involve limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc., in order to fuel and maintain vehicles and other motorized equipment. An accidental spill of any of these substances could impact water and/or groundwater quality and, if a spill were to occur of significant quantity, the release could pose a hazard to construction workers, the public, as well as the environment. Limited quantities of similar hazardous materials also would be used to operate and maintain the proposed electric subtransmission infrastructure at the Presidential Substation and along the proposed subtransmission alignment. Improper storage, use, handling, or accidental spilling of such materials could result in a hazard to the public or the environment. Considering the types and minimal quantities of hazardous materials that would be used for the Proposed Project and the emergency response plans and other procedures that would be required by the recommended mitigation measures, accidental release is unlikely. State and federal regulations and safety requirements, as described in the regulatory setting in Section 4.8 would ensure that public health and safety risks are maintained at acceptable levels, so that significant irreversible changes from accidental releases are not expected.

6.4 Cumulative Impacts

This section analyzes the potential for the Proposed Project to cause or contribute to significant cumulative effects when the impacts of projects listed in Table 3-12 are considered together with the impacts of the Proposed Project.

6.4.1 Aesthetics

The geographic scope of cumulative impacts to visual quality includes the viewsheds that would be affected by the Proposed Project, including views from public areas such as major or scenic roadways, parks and recreational areas, and scenic vistas. The temporal scope of impacts would include construction, operation and maintenance of the Proposed Project.

Construction of the Proposed Project would result in temporary impacts to affected viewsheds including scenic vistas, scenic roadways and the Proposed Project site, which encompasses the temporary staging area, pulling and slicing sites, Royal and Moorpark substations, the proposed Presidential Substation, the proposed subtransmission alignments, and park and recreation areas. All construction impacts would be temporary, and would be reduced to less than significant with implementation of mitigation (Class II). Operation of the Proposed Project would result in less than significant (Class III) impacts related to scenic vistas; the scenic quality and/or visual character of Moorpark Road, Sunset Valley Road, Royal and Moorpark substations, Tierra Rejada Golf Club, Tom Barber Golf Center, the Ronald Reagan Presidential Library, and local equestrian centers. With mitigation incorporated, operation of the Proposed Project would result in a less than significant impact related to the scenic quality of Hwy 23, Read Road, and Underwood Family Farm, and from lighting of the proposed Presidential Substation (Class II). Even with the incorporation of mitigation measures, operational impacts from the Proposed Project would degrade existing visual character or quality of the proposed Presidential Substation site and Olsen Road; impacts would remain significant unavoidable (Class I).

The Proposed Project would contribute to cumulative adverse influences where aboveground facilities or evidence of underground facilities (e.g., cleared ROWs) occupy the same field of view as other built facilities or impacted landscapes that are currently in the viewsheds of sensitive viewers in the project area. The past, present, and reasonably foreseeable future projects described in Section 3.6, *Cumulative Projects*, include two projects that would be within the same viewshed as the Proposed Project: (1) the renewal of an expired conditional use permit (CUP) for an equestrian center adjacent to Tierra Rejada Road, just west of Hwy 23, in unincorporated Ventura County, and (2) the construction of a single-family detached dwelling at 4920 Read Road in the City of Thousand Oaks.

The renewal of an expired CUP would not visually alter the landscape setting, and therefore would have no impact to visual resources. The construction of a single-family detached dwelling on Read Road would incrementally increase the presence of residential structures for viewers on Read Road, Moorpark Road, Sunset Valley Road, and nearby recreational areas (i.e., Underwood Family Farms, Fieldstone Riding Club, and Shadowbrook Stables). However, the home would be constructed in a rural residential area in which many other homes currently exist. The combined

effects of the construction of this residence and the construction, operation and maintenance of the Proposed Project would not substantially degrade scenic vistas, scenic highways, or the project site and its surroundings, nor would the combined effects create a new source of substantial light or glare. In addition, the cumulative projects would not be located within the same viewshed as the proposed Presidential Substation or Olsen Road. As such, the cumulative projects would not contribute to the Proposed Project's significant and unavoidable impacts to the Substation site and Olsen Road. Accordingly, the Proposed Project's contribution would not be cumulatively considerable.

6.4.2 Agriculture Resources

The geographic scope of this cumulative impacts analysis related to agriculture and forest resources includes *Prime Farmland and Unique Farmland* in Ventura County. The temporal scope of impacts would include construction, operation and maintenance of the Proposed Project.

As analyzed above, the Proposed Project would not conflict with existing zoning for agricultural land, land under a Williamson Act contract, forest land, or timberland production. The Proposed Project would also not result in the loss or conversion of forest land to non-forest use. Therefore, the Proposed Project would not cause or contribute to any cumulative impact with respect to these issues. The Proposed Project would, however, result in less-than-significant temporary and permanent impacts related to the conversion of Farmland to non-agricultural use, related to construction of subtransmission poles and modifications to an existing access road.

As shown in Table 3-12 in Section 3.6, *Cumulative Impacts*, an approved residential project at 4920 Read Road could cause impacts to Farmland adjacent to those of the Proposed Project. Table 3-12 also shows a number of projects not yet in the environmental planning stage, where the acreage of Farmland that could be converted by these projects is unknown.

Between 2006 and 2008, Ventura County saw a reduction in agricultural land (see Table 4.2-1, above). In 2008 (most recent inventory posted), the total acreage of Farmland in Ventura County mapped as part of the Farmland Mapping and Monitoring Program (Farmland) was 106,274, which represents a net loss of 1,970 acres from 2006 (FMMP, 2011b). Land use conversion trends indicate that the acreage of Farmland in California and in Ventura County is expected to decline with or without the Proposed Project. For purposes of this analysis, the historic decline and trend is considered evidence of an existing significant cumulative impact.

The Proposed Project would contribute incrementally (0.06 acre) to Ventura County's overall decline in Farmland. Nevertheless, the incremental contribution of Farmland conversion associated with the Proposed Project would be a cumulatively considerable contribution to an existing significant impact. Implementation of Mitigation Measure 4.2-1 would reduce impacts under the Proposed Project to less than significant.

Mitigation Measure 4.2-1: SCE shall obtain agricultural conservation easements at a one to one (1:1) ratio for each acre of Farmland that is permanently converted by the Proposed Project. An agricultural conservation easement is a voluntary, recorded agreement between

a landowner and a holder of the easement that preserves the land for agriculture. The easement places legally enforceable restrictions on the land. The exact terms of the easement are negotiated, but restricted activities shall include subdivision of that property, non-farm development, and other uses that are inconsistent with agricultural production. The mitigation lands must be of equal or better quality (according to the latest available FMMP data) and have an adequate water supply. In addition, the mitigation lands must be within the same county as the impact.

The Proposed Project would not conflict with existing zoning for agricultural land, land under a Williamson Act contract, forest land, or timberland production. The Proposed Project would also not result in the loss or conversion of forest land to non-forest use. Therefore, the Proposed Project would not cause or contribute to any cumulative impact with respect to these issues.

6.4.3 Air Quality

The geographic scope considered for potential cumulative impacts to air quality is the South Central Coast Air Basin. Based on Ventura County Air Pollution Control District (VCAPCD) guidance, if a project would result in an increase in ROC or NO_x of more than the respective daily mass thresholds, then it also would be considered to contribute considerably to a significant cumulative impact. In developing thresholds of significance for air pollutants, VCAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. Therefore, if a project would exceed the identified significance thresholds, its emissions would be cumulatively considerable, and if a project would not exceed the significance thresholds, its emissions would not be cumulatively considerable.

Long-term operations of the Proposed Project would not cause emissions that would exceed the VCAPCD significance thresholds (see Impact 4.3-3 discussion). Therefore, long-term emissions of the Proposed Project would not be cumulatively considerable.

Proposed Project-related construction activities, as described in the Impact 4.3-1 discussion, would result in short-term emissions of NO_x that would exceed the VCAPCD threshold. Therefore, short-term construction-related NO_x emissions would be cumulatively considerable and associated cumulative impacts would be significant when combined with the emissionsrelated impacts of the cumulative projects described in Table 3-12, to the extent such projects would be constructed concurrently with the Proposed Project. Mitigation Measures 4.3-1 and 4.3-2 would reduce emissions of criteria pollutants (specifically NO_x, ROC, and fugitive dust in the form of PM_{10} and PM_{25}) during construction activities, but the short-term impacts associated with NO_x emissions would remain significant and unavoidable, and would therefore be considered cumulatively considerable. The implementation of Mitigation Measures 4.3-1 and 4.3-2 would reduce emissions of criteria pollutants; however, the Proposed Project's construction-related NOx emissions would not be mitigated to a less-than-significant level. Therefore, when considered with the NO_x emissions of other projects, the Proposed Project-specific impact would be cumulatively considerable and the cumulative impact would be significant and unavoidable (Class I). All other criteria pollutant emissions would not be cumulatively considerable and would result in less than significant cumulative impacts (Class III).

With regard to TAC emissions, the total DPM emissions from on-site equipment that would be required to construct the proposed Presidential Substation would be 0.16 ton over the estimated 13-month construction period (see Impact 4.3-5 discussion). Because these emissions are minor and would occur over 13 months compared to the 70-year exposure used in health risk assessments, the health risk from the short-term DPM emissions would not be cumulatively considerable.

Exposure to Valley Fever from soil disturbed during construction of the Proposed Project would pose a less than significant impact. Ground-disturbing activities would be required to develop the Proposed Project and projects identified as part of the cumulative scenario represent a continual source of spores that contribute to the low number of Valley Fever cases reported each year. A major ground-disturbing event (e.g., large earthquake, dust storm, or wildfire) is required to release a large number of spores over an area wide enough for a major outbreak of Valley Fever to occur. Therefore, the incremental impact of the Proposed Project would not be cumulatively considerable and the cumulative impact would be less than significant (Class III). For example, Following the 1994 Northridge, California earthquake (magnitude 6.7), Ventura County experienced a major outbreak of Valley Fever: 203 outbreak-associated cases were reported in the 8 weeks following the earthquake (January 24th through March 15th) (USGS, 1997). The spatial and temporal distribution of cases indicates that the outbreak resulted from inhalation of sporecontaminated dust generated by earthquake-triggered landslides (USGS, 1997). In October 2003, the Simi fire destroyed more than 108,000 acres. Ventura County normally sees about two cases of valley fever per month; however, in the five months following the fires, more than 70 cases of valley fever were reported. As reported in California Healthline (2004), "it is logical that (brush fires are) the cause' of the increase in the reported cases of the disease." Because natural events, such as earthquakes and fires, and not development projects, trigger valley fever outbreaks, the incremental Proposed Project-specific contribution to the risk of exposure would not be cumulatively considerable.

There is no existing adverse cumulative condition related to odors to which the Proposed Project could contribute. Even if there were, construction of the Proposed Project would cause a less-than-significant impact related to the generation of odors from diesel equipment emissions: construction activities would be intermittent, spatially dispersed, and associated odors would dissipate quickly. Projects in the cumulative scenario are not expected to cause diesel-related odors that would intermingle with those of the Proposed Project and, thereby, cause a significant cumulative effect. The incremental odor-related impact of the Proposed Project would not be cumulatively considerable.

6.4.4 Biological Resources

The geographic context for the analysis of cumulative impacts associated with biological resources varied depending upon the considered species or resource, but the analysis typically included areas within 1 mile of the Proposed Project's components and alternatives. The geographic context for the analysis of cumulative impacts to coastal California gnatcatcher included coastal sage scrub habitat and designated critical habitat for this species within the regional Project area. Potential significant

adverse cumulative impacts to biological resources to which the Proposed Project could contribute include impacts to potential, unoccupied coastal California gnatcatcher habitat, and the loss of federal and State regulated jurisdictional wetlands and other waters of the U.S. These impacts are discussed below. The temporal scope of impacts would include construction, operation and maintenance of the Proposed Project.

As discussed in Section 3.6, *Cumulative Projects*, there are a number of projects located within 1 mile of the Proposed Project that are reasonably foreseeable and would affect undeveloped natural habitat, though not necessarily coastal sage scrub or jurisdictional wetlands. In the City of Thousand Oaks, the projects that are planned or proposed within 1 mile of the Proposed Project in undeveloped habitat include several single family residences, an assisted living facility on Moorpark Road (2008-70341 SUP), a retirement facility on Olsen Road (1974-253 SUP M22), and the construction of new buildings, a stadium and other facilities at the California Lutheran University Campus (near the intersection of Moorpark Road and Olsen Road). In the City of Simi Valley, with few exceptions (the Reagan Library Annexation Project and Sunrise Assisted Living Project), projects appear to be located outside of large blocks of natural habitat where sensitive biological resources are most likely to be encountered.

As discussed in Impact 4.4-2, construction of the Proposed Project could result in temporary impacts to coastal California gnatcatchers, if present, and their habitat. Such losses would occur at the proposed Presidential Substation site (about 3.5 acres) with small permanent habitat impacts associated with Alternative Subtransmission Alignment 2 to accommodate pole footprints and temporarily habitat impacts during pole installation. For those projects within 1 mile of the Proposed Project that are within coastal sage scrub habitat, the Reagan Library Annexation Project would presumably occur within the existing library footprint and would not substantially disturb undeveloped coastal sage scrub habitat that supports coastal California gnatcatchers. The recently constructed Sunrise Assisted Living Project was located within disturbed habitat that did not support coastal sage scrub nor the coastal California gnatcatcher, and is immediately adjacent to developed areas. No development projects were identified that would cause the loss of nearby designated critical habitat for coastal California gnatcatcher.

The loss of 3.5 acres of coastal sage scrub habitat under the Proposed Project would occur in an area that is separate and distinct from other coastal sage scrub areas and designated critical habitat for Coastal California gnatcatcher. Based on the absence of breeding observations during protocol-level surveys, it is reasonable to conclude that the Presidential Substation site does not provide breeding habitat for this species. This site may serve as open space that potentially links nearby natural areas, including designated critical habitat for the coastal California gnatcatcher that occurs north of the site. The potential use of adjacent natural lands as a linkage corridor to other nearby natural lands would remain intact during the operations phase of the Proposed Project due to the large amount open space in the surrounding region. Given the demonstrated absence of site use by gnatcatchers and large amount of surrounding habitat for this species within designated critical habitat, the Proposed Project impact to coastal sage scrub habitat and the coastal California gnatcatcher is considered less than cumulatively considerable.

The Proposed Project would impact approximately 0.05 acre of seasonal wetlands and associated habitat under the jurisdiction of CDFG and 0.04 acre of isolated waters under the jurisdiction of the RWQCB and Corps. The affected drainage is considered to have marginal habitat value and does not support any special-status plants or wildlife species. The direct, permanent loss of this relatively small amount of State and federal jurisdictional wetlands would not significantly affect the functions and values of downstream habitat as a wetland resource, and Project impacts would be fully offset through mitigation. No wetland impacts were identified during the analysis of other projects in the cumulative study area. Therefore, impacts of the Proposed Project to jurisdictional wetlands and other waters of the U.S. do not constitute a cumulatively considerable impact.

The Proposed Project would not impact special-status plants and would not cumulatively contribute to the loss or habitat degradation for regionally occurring rare plants. Also, following the implementation of mitigation measures, the Proposed Project would have no impact on nesting raptors or other protected birds. Consequently, the Proposed Project would not cause or contribute to significant cumulative effects with respect to these resources.

6.4.5 Cultural Resources

The geographic context for the cumulative impacts associated with cultural resources (including paleontological resources) includes the Project site and any cultural viewshed in the Project area. The Proposed Project would not cause a significant cumulative impact on cultural resources within this area. Further, there is no existing significant cumulative impact to which the incremental impacts of the Proposed Project could contribute. Consequently, the less-thansignificant, incremental impacts of the Proposed Project related to cultural resources would not be cumulatively considerable.

6.4.6 Geology and Soils

Concerning erosion, the geographic scope of cumulative consideration consists of the air basin and the watershed boundary. Concerning other geology and soils-related considerations, the geographic scope of cumulative consideration includes the area that could be affected by falling Proposed Project-related structures. For mineral resources, the relevant area includes any designated mineral resource zones or mining areas affected by the Proposed Project. Incremental impacts of the Proposed Project related to geology, soils, and mineral resources could combine with the impacts of the cumulative projects at any time during the life of the Project, i.e., during construction and the operation and maintenance phase.

As analyzed in Section 4.6, *Geology and Soils, Seismicity, and Mineral Resources*, the Proposed Project would cause a less-than-significant impact (Class III) related to the exposure of people or structures to potential substantial adverse effects, substantial soil erosion or the loss of topsoil, geologic unit or soil stability, and expansive soil. Thus, only cumulative projects that would have an impact with respect to these considerations are evaluated in this cumulative analysis. The incremental, less-than-significant impacts of the Proposed Project related to these resource areas would not independently cause a significant cumulative impact. Further, with respect to geology

and seismicity, there is no existing significant cumulative impact to which the incremental impacts of the Proposed Project could contribute. Consequently, the less-than-significant, incremental impacts of the Proposed Project related to geology and seismicity would not be cumulatively considerable.

With respect to erosion, the incremental less-than-significant impact of the Proposed Project could combine with the erosion related impacts of several the 42 projects identified as part of the cumulative scenario. Nonetheless, the incremental impact of the Proposed Project, in combination with other past, present, and reasonably foreseeable projects, would not be cumulatively considerable because projects' compliance with federal, State, and local laws, including those that require the implementation of BMPs and adequate drainage to control features, would provide sufficient controls to avoid significant adverse cumulative impacts.

Because the Proposed Project would cause no impact related to the capability of soils to adequately support a wastewater disposal system, the availability of a known mineral resource, or any mineral resource recovery site designated as locally-important, this cumulative analysis does not consider these topics.

6.4.7 Greenhouse Gas Emissions

GHG emissions are inherently a cumulative concern, in that the significance of GHG emissions is determined based on whether such emissions would have a cumulatively considerable impact on global climate change. Although the geographic scope of cumulative impacts related to GHG emissions is global, this analysis focuses on the State, the region, and the Proposed Project's direct and/or indirect generation of GHG emissions. The Proposed Project would result in less than significant emissions of GHG and would not conflict with the State's GHG reduction goals. Therefore, the Proposed Project-specific incremental impact on GHG emissions would not be cumulatively considerable.

6.4.8 Hazards and Hazardous Materials

Depending on the pathway of migration, the geographic scope for cumulative effects relating to hazards and hazardous materials would be air basin, watershed boundary, groundwater basin, or extent of affected soils. Materials delivery routes also would be included in the event of a traffic accident-related spill. Cumulative hazards and hazardous materials-related effects could arise at any point from the Proposed Project's construction or operation and related activities.

There is no existing significant adverse cumulative condition relating to hazards and hazardous materials in the vicinity of the Proposed Project and, alone, the incremental impacts of the Proposed Project would not cause a significant adverse cumulative impact. As analyzed in Section 4.8, *Hazards and Hazardous Materials*, the Proposed Project would have a less-thansignificant impact (Class II or Class III) impact, except where it would have no impact, related to the specified criteria. These impacts, when combined with the incremental impacts of the projects listed in Section 3.6, *Cumulative Projects*, would not be cumulatively considerable.

In the City of Thousand Oaks, several single family residences, an assisted living facility on Moorpark Road, a retirement facility on Olsen Road, and the construction of new buildings, a stadium and other facilities at the California Lutheran University Campus (near the intersection of Moorpark Road and Olsen Road) are proposed. In the City of Simi Valley, with few exceptions (such as the Reagan Library Annexation Project and Sunrise Assisted Living Project), the cumulative projects appear to be located outside of the geographic scope of review for cumulative effects related to hazards and hazardous materials. Regardless, impacts caused by the cumulative projects, combined with the Proposed Project, would not result in a significant cumulative impact even if all of the projects were to be constructed simultaneously because the Proposed Project and all cumulative projects would be required to adhere to the robust body of regulations that govern hazardous materials storage and handling, water quality best management practices, construction work, and fire prevention and management. Together, these measures would ensure that impacts related to exposure to hazardous materials would be minimized and/or avoided. Therefore, the Proposed Project's incremental contribution to any hazards and hazardous material-related cumulative impact would not be cumulatively considerable.

6.4.9 Hydrology and Water Quality

The geographic context for the cumulative impacts associated with hydrology and water quality consists of the watershed (for surface waters) and the groundwater basin. A substantial body of law (including federal, State, and local water quality regulations) governs this area. Compliance with all of these laws, as applicable, would avoid or substantially reduce the environmental impacts of the cumulative projects identified in Section 3.6, *Cumulative Projects*.

For example, the Proposed Project, along with other projects involving similar general construction activities, would be required to obtain coverage under the General Permit, §401 (of the CWA) water quality certification, and/or WDR. Storm water management measures would be required to be identified and implemented that would effectively control erosion and sedimentation and other construction related pollutants during construction. All of the cumulative projects that would qualify as a new development or redevelopment project under the provisions of the Ventura County MS4 Permit would be required to implement the storm water quality management measures stipulated in that permit and in the Ventura County TGM (2010). According to the Ventura County MS4 Permit, new development projects include all development projects equal to 1.0 acre or greater of disturbed area that add more than 10,000 square feet of impervious surface area.

Other management measures, such as construction of infiltration/detention basins, would be required to be identified and implemented that would effectively treat pollutants that would be expected for the post-construction land use for certain projects. Construction and operational related storm water runoff from the Proposed Project would be controlled by the requirements of an NPDES permit (e.g., General Permit), WDRs, and mitigation measures required as part of this EIR. Other new development in the area would also be required to control construction and operational storm water by implementing State and local requirements regarding hydrology and water quality, as well as by requirements introduced through CEQA review where applicable. Therefore, the incremental impacts of the Proposed Project, in combination with other past, present, and reasonably foreseeable projects, would not be cumulatively considerable.

6.4.10 Land Use and Planning

The Proposed Project would result in no impact relating to physical division of an established community, nor would it conflict with any applicable HCP or NCCP (No Impact). Also, as discussed in the analysis for criterion b), pursuant to General Order No. 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of the Proposed Project. As such, no local land use plans, policies or regulations would apply to the Proposed Project, and the Proposed Project would consequently not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (No Impact). Because the Proposed Project could have no impact pertaining to land use and planning resources, the Proposed Project could not combine with impacts of past, present, or reasonably foreseeable future projects to cause or contribute to a cumulative impact.

6.4.11 Noise

Noise levels tend to diminish quickly with distance from a source; therefore, the geographic scope for cumulative impacts associated with noise would be limited to projects located within 0.5 mile of the Proposed Project. Construction of the Proposed Project would result in significant unavoidable impacts in unincorporated Ventura County and potentially significant impacts from construction activities in the Cities of Thousand Oaks and Simi Valley; however, implementation of Mitigation Measures 4.11-1a and 4.11-1b would reduce impacts in Thousand Oaks and Simi Valley to levels that would less than significant. Operation and maintenance activities associated with the Proposed Project would not result in significant permanent increases to existing noise levels and impacts would be less than significant.

As discussed in Section 3.6, *Cumulative Projects*, there are a number of projects located within 0.5 mile of the Proposed Project that are reasonably foreseeable and would have the potential to be constructed simultaneously with the Proposed Project. Examples of such projects include construction of church-related facilities and a number of single family home projects in the City of Thousand Oaks. If construction of these projects were to occur simultaneously with construction of the Proposed Project, the potential for impacts to nearby receptors from construction noise would increase. However, the human ear perceives noise in a logarithmic fashion rather than a linear fashion. Therefore, if a new noise source is introduced near an existing noise source with the same dB level, the ambient noise level would increase by approximately 3 dB rather than doubling. Accordingly, even if the Proposed Project would be constructed simultaneously with another project in the immediate vicinity, substantial increases in noise levels at nearby receptors would not be expected to occur.

Therefore, when considered in combination with these projects, the Proposed Project's incremental contribution to temporary noise impacts from construction, with proposed mitigation, would not be cumulatively considerable. Furthermore, the main noise sources from operation of the Proposed Project would be corona discharge and substation equipment and the main noise source during maintenance would be worker vehicles; however, these sources would not substantially increase ambient noise levels at the nearest sensitive receptor locations and would therefore not result in a cumulatively considerable contribution to noise impacts.

6.4.12 Population and Housing

The geographic context for the cumulative impacts associated with population and housing issues are the cities and unincorporated communities of southeastern Ventura County; the temporal scope of impacts would include construction, operation and maintenance of the Proposed Project, in combination with build-out of the past, present, and reasonably foreseeable future projects described in Section 3.6, *Cumulative Projects*. Ventura County is expected to undergo moderate growth over the next two decades. By 2035, the population of Ventura County is expected increase approximately 19 percent from 2010 levels to 978,978 persons (CA DOF, 2011; SCAG, 2011). The projects listed in Section 3.6, *Cumulative Projects*, include numerous subdivisions for single- and multi-family residences, expanded facilities for assisted living facilities, a new park, a new fire station, and construction of numerous commercial and institutional public/quasi public areas. State law requires each city and county to adopt a General Plan to govern its physical development. The role of the General Plan is to act as a "constitution" for development, the foundation upon which all land use decisions are made and with which all land use decisions must be consistent. Consequently, build-out of the projects listed in Section 3.6, Cumulative *Projects*, would not result in the inducement of substantial direct or indirect population growth in the area beyond what is planned. Furthermore, the Proposed Project is designed to increase reliability and accommodate existing and planned electrical load growth, rather than to induce growth. Therefore, the incremental impact of the Proposed Project related to population and housing whether direct (employment-related) or indirect (by creating new opportunities for local industry or commerce) would not be cumulatively considerable.

6.4.13 Public Services

The geographic scope of this impact is the service area of affected public services, generally limited to within the cities of Thousand Oaks and Simi Valley, and the surrounding unincorporated areas of Ventura County. As described in Section 4.13, *Public Services*, the Proposed Project would result in no impacts to public services during operations or maintenance. Accordingly, the timeframe within which the Proposed Project could contribute to any adverse cumulative condition would be limited to the construction period.

The temporal scope the Proposed Project would not result in significant effects on the ability of service providers to provide adequate police services, fire protection and emergency medical services, or public school facilities to the project area during construction. The past, present, and reasonably foreseeable future projects described in Section 3.6, *Cumulative Projects*, include several development projects planned in the vicinity of the Proposed Project that may impact public services. These projects include numerous subdivisions for single- and multi-family residences, expanded facilities for assisted living facilities, a new park, a new fire station, and construction of numerous commercial and institutional public/quasi public areas. It is likely that this cumulative development would require expansion of existing, or development of new, public service infrastructure to support the planned population growth. If this growth were to occur prior to improvements in public service infrastructure, then there could be significant adverse effects on fire protection and emergency medical services, police protection, schools and other public facilities. However, the Proposed Project's impacts to public services would generally be limited to the

construction period of 13 to 20 months, after which the Proposed Project's demand on public services would be inconsequential. Therefore, the incremental effect of the Proposed Project on public services, in combination with other past, present and reasonably foreseeable projects, would not be cumulatively considerable (Class II).

6.4.14 Recreation

The geographic scope of potential cumulative impacts to recreation includes the regional park and recreation-related facilities and values in the project area, which are located within 1.0 mile of the Proposed Project and alternatives in unincorporated Ventura County and the cities of Thousand Oaks and Simi Valley. As described in Section 4.14, *Recreation*, the Proposed Project would result in no impacts to recreation during operations or maintenance. Accordingly, the timeframe within which the Proposed Project could contribute to any adverse cumulative condition would be limited to the construction period.

The past, present, and reasonably foreseeable future projects described in Section 3.6, *Cumulative Projects*, include several residential development projects in the cities of Thousand Oaks and Simi Valley that could increase the demand on existing and/or result in the need for new recreational facilities within the project vicinity by increasing the population in the project area. These projects include several single-family dwellings pending or approved for construction. Other projects involve the creation of new recreational areas, or conversion of current recreational area to a non-recreation use. These include the projects in **Table 6-1**.

Only one of the projects in Table 6-1 is in the vicinity of the Proposed: the renewal of an expired CUP for events at an equestrian center adjacent to Tierra Rejada Road, west of Hwy 23. Construction impacts of the Proposed Project would not combine with impacts related to the equestrian center project to create a significant impact. Regarding residential development projects in the cities of Thousand Oaks and Simi Valley, because the Proposed Project would cause no incremental demand on recreational facilities once construction is complete, it would not contribute to the long-term cumulative demand from the other planned development projects. In the short-term, the incremental impact of the Proposed Project would not be cumulatively considerable with respect to the occurrence or acceleration of deterioration at existing neighborhood and regional recreation facilities. Similarly the temporary Project-related disruption of recreational activities, including use of the bikeways on Olsen Road, Tierra Rejada Road, Read Road, the Underwood Family Farms, and equestrian activity on Read Road and Sunset Valley Road, in combination with the incremental impact of other projects in the cumulative scenario, would not have a cumulatively considerable adverse effect on the recreational value of these existing facilities (Class II).

6.4.15 Transportation and Traffic

The geographic area within which cumulative traffic-related impacts could occur consists of the circulation system that would be affected by the Project (i.e., temporary lane and road closures on Read Road and Sunset Valley Road; temporary closure of the eastbound bike lane on Olsen Road; and on the haul routes that would be used by construction vehicles traveling to and from the project work sites). The Proposed Project would not introduce any new land uses or activities to

Agency / Organization	Address / Location	Description/ Details	Status / Timeline	Distance from Proposed Project/Alternatives
County of Ventura	Adjacent to Tierra Rejada Road, west of State Highway 23	Equestrian Center. Renewal of an expired CUP (CUP 4696) for events. No new development proposed.	Incomplete	0.5 mile from Proposed Project and Alternative Subtransmission Alignment 3; within 1.0 mile of Alternative Subtransmission Alignment 1
City of Thousand Oaks	California Lutheran University Campus, 139 Overton Court	Phased construction of softball stadium for north campus area.	Institutional, Under Construction	Less than 0.5 mile from Alternative Subtransmission Alignment 2
City of Thousand Oaks	3620 Avienda Verano	Develop Northwood Neighborhood Park	Institutional, Under Construction	Less than 0.5 mile from Alternative Subtransmission Alignment 2
City of Thousand Oaks	California Lutheran University Campus, area north of Olsen Road, between Mountclef Blvd. and Campus	Construct sports/ fitness center, pool athletic fields, tennis courts, track, preschool, maintenance and facilities yard; lot line adjustment for three (3) lots; prune/ encroach seven (7)/ transplant 17 and remove seven (7) oak trees.	Institutional, Under Construction	Less than 0.5 mile from Alternative Subtransmission Alignment 2
City of Thousand Oaks	3525 Streamside Lane (near Dragon Fly off of Campus Drive, north of Olsen Road)	Construct trellis, BBQ and children's play area.	Institutional, Under Construction	Between 0.5 and 1.0 mile from Alternative Subtransmission Alignment 2
City of Simi Valley	Sinaloa Park, 980 Madera Road	 Create a community park facility with miniature golf and associated uses General Plan Amendment and Zone Change 	Incomplete Application	Less than 0.5 mile from Alternative Subtransmission Alignment 2
City of Simi Valley	Centre Court, 1308 Madera Road	1. Convert a soccer field in an existing retail center to a two-story 20,000 sq. ft. retail/ office building	In PCSI	Less than 0.5 mile from Alternative Subtransmission Alignment 2

TABLE 6-1 CUMULATIVE RECREATION PROJECTS IN THE VICINITY OF THE PROPOSED PROJECT AND ALTERNATIVES

SOURCE: ESA, 2011

the area that would generate long-term increases in traffic volumes, and operation and maintenancerelated impacts would be less than significant. As described in Section 4.15, *Transportation and Traffic* (Impacts 4.15-1 through 4.15-7), the Proposed Project would result in potential impacts on transportation and traffic, including temporary increased traffic delays (due to construction traffic and reduced road width), traffic safety issues, access disruption, and transit disruption. All identified impacts would be less than significant or could be mitigated to a less-than-significant level.

Section 3.6, *Cumulative Projects*, identifies projects (in Table 3-3 and on Figure 3-3) that could overlap (in time and proximity) with construction of the Proposed Project. Potential cumulative impacts could occur as a result of (1) infrastructure projects in roads that would be used by

project construction workers and trucks, which could delay project-generated vehicles past the work zones of those other projects; and (2) cumulative projects that generate increased traffic at the same time on the same roads as would the Proposed Project, causing increased congestion and delays. The schedule of the projects listed in Table 3-3 is not certain. Consequently, it is prudent to conclude that significant cumulative transportation and traffic impacts could occur. As stipulated in Mitigation Measure 4.15-1d, SCE would be required to coordinate with the appropriate local government departments in Thousand Oaks, Simi Valley, and Ventura County, with state agencies such as Caltrans, and with other utility districts and agencies as appropriate, regarding the timing of construction projects that would occur near the Proposed Project. Such coordination would help to minimize multiple disruptions to the same areas. SCE would provide verification of coordination to the CPUC. In addition, Mitigation Measures 4.15-1a and 4.15-1b require that SCE submit (to the CPUC prior to the commencement of construction activities) plans related to, and in compliance with, requirements of encroachment permits from local jurisdictions, which would provide further opportunity for coordination of multiple projects. Specific measures to mitigate significant impacts that could occur would be determined as part of the interagency coordination, but could include measures such as employing flagmen during key construction periods, designating alternate haul routes, and providing more outreach and community noticing. These measures would ensure that the Proposed Project's contribution to transportation and traffic-related cumulative impacts would not be cumulatively considerable.

6.4.16 Utilities and Services Systems

The geographic scope of potential cumulative impacts to utilities and service systems includes southern unincorporated Ventura County and the cities of Thousand Oaks and Simi Valley. As described in Section 4.16, Utilities and Service Systems, the Proposed Project would result in no impacts to utilities during operations or maintenance. Accordingly, the timeframe within which the Proposed Project could contribute to any adverse cumulative condition would be limited to the construction period. Construction activities associated with the Proposed Project would not result in significant impacts that would affect the ability of Ventura County, the cities of Thousand Oaks and Simi Valley, and other service providers to effectively deliver public water supply, sanitary sewer (wastewater), solid waste, and other utility services in the service area. The past, present, and reasonably foreseeable future projects described in Section 3.6, Cumulative Projects, include several development projects planned in the vicinity of the project area that may impact utility services. These include numerous subdivisions for single- and multi-family residences, expanded facilities for assisted living facilities, a new park, a new fire station, and construction of numerous commercial and institutional public/quasi public areas. It is likely that this cumulative development would require expansion of existing, or development of new, utility service infrastructure to support the planned population growth. However, these planned developments would be required to comply with all federal, State, and local regulations and ordinances protecting utility services, including complying with all standards of Title 24 of the California Code of Regulations, as well as water conservation measures and waste minimization efforts in accordance with Ventura County and cities of Thousand Oaks and Simi Valley requirements. Further, because the Proposed Project's demand for utility services would occur only during the construction period which would be completed well before the completion of most of the planned development projects

(and therefore also any demand such projects represent), the incremental impacts of the Proposed Project would have no cumulatively considerable impacts related to utilities and service systems (Class III).

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CHAPTER 8

Mitigation Monitoring, Reporting, and Compliance Program

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STATE OF CALIFORNIA

PUBLIC UTILITIES COMMISSION 505 VAN NESS AVENUE SAN FRANCISCO, CA 94102-3298



MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM

SOUTHERN CALIFORNIA EDISON'S PRESIDENTIAL SUBSTATION PROJECT (APPLICATION NO. **A.08-12-023**)

INTRODUCTION

This document describes the mitigation monitoring, reporting and compliance program (MMRCP) for ensuring the effective implementation of the mitigation measures required for the California Public Utilities Commission (CPUC) approval of the Southern California Edison's (SCE) application to construct, operate and maintain the Proposed Project. All mitigations are presented in Table 8-1 provided at the end of this MMRCP.

If the Proposed Project is approved, this MMRCP would serve as a self-contained general reference for the Mitigation Monitoring Program adopted by the CPUC for the project. If and when the Proposed Project has been approved by the CPUC, the CPUC will compile the Final Plan from the Mitigation Monitoring Program in the Final Environmental Impact Report (EIR), as adopted.

California Public Utilities Commission - MMRCP Authority

The California Public Utilities Code in numerous places confers authority upon the CPUC to regulate the terms of service and the safety, practices and equipment of utilities subject to its jurisdiction. It is the standard practice of the CPUC, pursuant to its statutory responsibility to protect the environment, to require that mitigation measures stipulated as conditions of approval be implemented properly, monitored, and reported on. In 1989, this requirement was codified statewide as Public Resources Code §21081.6. Public Resources Code §21081.6 requires a public agency to adopt a MMRCP when it approves a project that is subject to preparation of an EIR and where the EIR for the project identifies potentially significant environmental effects. California Environmental Quality Act (CEQA) Guidelines §15097 was added in 1999 to further clarify agency requirements for mitigation monitoring and reporting.

The purpose of a MMRCP is to ensure that measures adopted to mitigate or avoid significant impacts of a project are implemented. The CPUC views the MMRCP as a working guide to facilitate not only the

implementation of mitigation measures by the project proponent, but also the monitoring, compliance and reporting activities of the CPUC and any monitors it may designate.

The CPUC will address its responsibility under Public Resources Code §21081.6 when it takes action on SCE's applications. If the CPUC approves the applications, it will also adopt a Mitigation Monitoring, Compliance, and Reporting Program that includes the mitigation measures ultimately made a condition of approval by the CPUC.

Because the CPUC must decide whether or not to approve the SCE application and because the application may cause either direct or reasonably foreseeable indirect effects on the environment, CEQA requires the CPUC to consider the potential environmental impacts that could occur as the result of its decisions and to consider mitigation for any identified significant environmental impacts.

If the CPUC approves SCE's application for authority to construct the proposed Presidential Substation and subtransmission alignments, SCE would be responsible for implementation of any mitigation measures governing both construction and future operation of the proposed Presidential Substation and subtransmission lines. Though other State and local agencies would have permit and approval authority over construction of the Proposed Project, the CPUC would continue to act as the lead agency for monitoring compliance with all mitigation measures required by this EIR. All approvals and permits obtained by SCE would be submitted to the CPUC for mitigation compliance prior to commencing the activity for which the permits and approvals were obtained.

In accordance with CEQA, the CPUC reviewed the impacts that would result from approval of the application. The activities considered include the construction of the proposed Presidential Substation and associated subtransmission alignments, telecommunications connection, and 16 kV distribution getaways, as well as the future operation of these project components. The CPUC review concluded that implementation of the Proposed Project could result in significant unmitigable impacts to Aesthetic Resources, Air Quality, and Noise. All other potential impacts could be mitigated to less-than-significant levels. SCE has agreed to incorporate all the proposed mitigation measures into the project. The CPUC has included the stipulated mitigation measures as conditions of approval of the applications and has circulated a Draft EIR.

The attached EIR presents and analyzes potential environmental impacts that would result from construction, operation and maintenance of the project, and proposes mitigation measures, as appropriate. Based on the EIR, approval of the application would have no impact or less-than-significant impacts in the following area:

- Geology and Soils
- Land Use and Planning
- Population and Housing

- Public Services
- Recreation
- Utilities and Service Systems

The EIR indicates that approval of the application would result in potentially significant impacts in the areas of:

- Agriculture Resources
- Biological Resources
- Cultural Resources
- Geology, Soils and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Transportation and Traffic

The EIR indicates that approval of the application would result in significant unmitigable impacts in the in the area of:

- Aesthetics
- Air Quality
- Noise

Roles and Responsibilities

As the lead agency under CEQA, the CPUC is required to monitor this project to ensure that the required mitigation measures and any APMs are implemented. The CPUC will be responsible for ensuring full compliance with the provisions of this MMRCP and has primary responsibility for implementation of the monitoring program. The purpose of the monitoring program is to document that the mitigation measures required by the CPUC are implemented and that mitigated environmental impacts are reduced to the level identified in the Program. The CPUC has the authority to halt any activity associated with the Proposed Project if the activity is determined to be a deviation from the approved project or the adopted mitigation measures.

The CPUC may delegate duties and responsibilities for monitoring to other mitigation monitors or consultants as deemed necessary. The CPUC will ensure that the person(s) delegated any duties or responsibilities are qualified to monitor compliance.

The CPUC, along with its mitigation monitor, will ensure that any variance process, which will be designed specifically for the Proposed Project, or deviation from the procedures identified under the monitoring program is consistent with CEQA requirements; no project variance will be approved by the CPUC if it creates new significant environmental impacts. As defined in this MMRCP, a variance should be strictly limited to minor project changes that will not trigger other permit requirements, that does not increase the severity of an impact or create a new impact, and that clearly and strictly complies with the intent of the mitigation measure. A Proposed Project change that has the potential for creating significant environmental effects will be evaluated to determine whether supplemental CEQA review is required. Any proposed deviation from the approved project and adopted mitigation measures, including correction of such deviation, shall be reported immediately to the CPUC and the mitigation monitor assigned to the construction for their review and approval. In some cases, a variance may also require approval by a CEQA responsible agency.

Enforcement and Responsibility

The CPUC is responsible for enforcing the procedures for monitoring through the environmental monitor. The environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CPUC. The CPUC has the authority to

halt any construction, operation, or maintenance activity associated with the project if the activity is determined to be a deviation from the approved project or adopted mitigation measures. The CPUC may assign its authority to their environmental monitor.

Mitigation Compliance Responsibility

SCE is responsible for successfully implementing all the adopted mitigation measures in this MMRCP. The MMRCP contains criteria that define whether mitigation is successful. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

SCE shall inform the CPUC and its mitigation monitor in writing of any mitigation measures that are not or cannot be successfully implemented. The CPUC in coordination with its mitigation monitor will assess whether alternative mitigation is appropriate and specify to SCE the subsequent actions required.

Dispute Resolution Process

This MMRCP is expected to reduce or eliminate many of the potential disputes concerning the implementation of the adopted measures. However, in the event that a dispute occurs, the following procedure will be observed:

- **Step 1.** Disputes and complaints (including those of the public) should be directed first to the CPUC's designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.
- **Step 2.** Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the Proposed Project or adopted Mitigation Monitoring Program.
- Step 3. If a dispute or complaint regarding the implementation or evaluation of the MMRCP or the mitigation measures cannot be resolved informally or through enforcement or compliance action by the CPUC, any affected participant in the dispute or complaint may file a written "notice of dispute" with the CPUC's Executive Director. This notice should be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the Executive Director or designee(s) shall meet or confer with the filer and other affected participants for purposes of resolving the dispute. The Executive Director shall issue an Executive Resolution describing his/her decision, and serve it on the filer and other affected participants.
- **Step 4.** If one or more of the affected parties is not satisfied with the decision as described in the Resolution, such party(ies) may appeal it to the CPUC via a procedure to be specified by the CPUC.

Parties may also seek review by the CPUC through existing procedures specified in the CPUC's Rules of Practice and Procedure for formal and expedited relief.

General Monitoring Procedures

Mitigation Monitor

Many of the monitoring procedures will be conducted during the construction phase of the project. The CPUC and the mitigation monitor are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with SCE. To oversee the monitoring procedures and to ensure success, the mitigation monitor assigned to the construction must be on site during that portion of construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The mitigation monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

Construction Personnel

A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures included in the MMRCP, will be taken:

- Procedures to be followed by construction companies hired to do the work will be written into contracts between SCE and any construction contractors. Procedures to be followed by construction crews will be written into a separate agreement that all construction personnel will be asked to sign, denoting agreement.
- One or more pre-construction meetings will be held to inform all and train construction personnel about the requirements of the MMRCP.
- A written summary of mitigation monitoring procedures will be provided to construction supervisors for all mitigation measures requiring their attention.

General Reporting Procedures

Site visits and specified monitoring procedures performed by other individuals will be reported to the mitigation monitor assigned to the construction. A monitoring record form will be submitted to the mitigation monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the mitigation monitor. A checklist will be developed and maintained by the mitigation monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The mitigation monitor will note any problems that may occur and take appropriate action to rectify the problems. SCE shall provide the CPUC with written quarterly reports of the project, which shall include progress of construction, resulting impacts, mitigation implemented, and all other noteworthy elements of the project. Quarterly reports shall be required as long as mitigation measures are applicable.

Public Access to Records

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CPUC on request. The CPUC and SCE will develop a filing and tracking system.

Condition Effectiveness Review

In order to fulfill its statutory mandates to mitigate or avoid significant effects on the environment and to design a MMRCP to ensure compliance during project implementation (CEQA 21081.6):

- The CPUC may conduct a comprehensive review of conditions which are not effectively mitigating impacts at any time it deems appropriate, including as a result of the Dispute Resolution procedure outlined above; and
- If in either review, the CPUC determines that any conditions are not adequately mitigating significant environmental impacts caused by the project, or that recent proven technological advances could provide more effective mitigation, then the CPUC may impose additional reasonable conditions to effectively mitigate these impacts.

These reviews will be conducted in a manner consistent with the CPUC's rules and practices.

Applicant Proposed Measures

The following APMs would be implemented to avoid or reduce potential impacts from the Proposed Project.

- **APM-BIO-01: Minimize Impacts to Coastal Sage Scrub.** To the extent feasible, the Proposed Project would be designed to avoid or minimize impacts to coastal sage scrub. Mitigation measures and compensation for impacts to coastal sage scrub would be developed in consultation with USFWS and CDFG to reduce the impacts to less than significant.
- APM-BIO-02: Minimize Impacts to Jurisdictional Drainages. A jurisdictional drainage delineation would be conducted during Spring 2009 to describe and map the extent of resources under the jurisdiction of the USACE, the RWQCB, and/or the CDFG following the guidelines presented in the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. As appropriate, SCE would secure a Streambed Alteration Agreement from the CDFG, and Clean Water Act Section 404 and 401 permits from the USACE and LARWQCB, respectively, prior to disturbing the jurisdictional drainage.
- **APM CUL-1: Cultural Resources Treatment Plan.** SCE will develop a Cultural Resources Treatment Plan that would define appropriate actions necessary to lessen or avoid potential impacts to sites CA-VEN-1571 and CA-VEN-744.
- **APM CUL-2: Installation of Geotextile Type Fabric along Access Road.** Prior to construction, SCE will address the drivability of the access road leading to site CA-VEN-744. In the event that the road is determined to be inadequate for transporting of equipment, SCE would design and implement the placement of geotextile-type fabric and fill soil along the road prior to access road usage. The placement of the geotextile-type fabric and fill soil would protect the archaeological site

from potential impacts such as increased displacing of artifacts of the existing site surface due to vehicle traffic and road maintenance.

- **APM CUL-3: Capping of Archaeological Site on Potential Impact Areas.** Prior to installation of the subtransmission structure located at site CA-VEN-744, SCE will cap the portions of the site that have the potential to be impacted. To cap the site, SCE will place geotextile-type fabric on the surface of the archaeological site and then spread imported fill soil or other suitable material over the geotextile-type fabric. The capping will prevent future erosion of the site surface as a result of SCE's ingress and egress for maintenance and inspection activities. The archaeological site cap will not be removed after construction.
- **APM CUL-4: Construction of Earthen Pad.** SCE will install an earthen pad adjacent to the existing subtransmission structure location. The earthen pad is necessary to support heavy equipment required to install the subtransmission structure safely, while preserving archaeological site CA-VEN-744 from potential construction related impacts. The earthen pad area will be covered by geotextile-type fabric and then overlaid by "honey comb structure." The honey comb structure will be filled with imported fill soil. The earthen pad would not be removed after construction and will be utilized for maintenance activities.
- **APM CUL-5: Fencing of an Environmentally Sensitive Area.** SCE would install an Environmentally Sensitive Area (ESA) fence to protect portions of archaeological sites CA-VEN-744 and CA-VEN-1571 from potential impacts.
- **APM CUL-6: Native American Monitoring.** SCE will retain the services of a Chumash Native American representative to conduct monitoring activities during work carried out within sites CA-VEN-744 and CA-VEN-1571 and in their vicinity. The Native American representative will be present during any archaeological excavations and during project construction in those areas determined by SCE's project archaeologist as having the potential to contain archaeological resources.
- **APM CUL-7: Archaeological Monitoring.** A qualified archaeologist will be on site to monitor ground-disturbing activities within or in the vicinity of sites CA-VEN-744 and CA-VEN-1571. If archaeological resources were identified during construction activities, construction would be halted in that area and away from the discovery, until a qualified archaeologist assesses the significance of the resource. The archaeologist would recommend appropriate measures to record, preserve or recover the resources.
- **APM-PAL-01: Develop and Implement a Paleontological Monitoring Plan.** A project paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists shall be retained by SCE to develop and implement a Paleontological Monitoring Plan prior to the start of ground disturbing activities at the Proposed Project substation site. As part of the Paleontological Monitoring Plan, the project paleontologist shall establish a curation agreement with an accredited facility prior to the initiation of ground-disturbing activities. The Paleontological Monitoring Plan shall also include a final monitoring report. If fossils are identified, the final monitoring report shall contain an appropriate description of the fossils, treatment, and curation.
- **APM-PAL-02: Paleontological Monitoring.** A paleontological monitor shall be on site to observe ground-disturbing activities within the paleontologically sensitive formations at the Proposed Project substation site. If fossils are found during ground-disturbing activities, the paleontological

monitor shall be empowered to halt the ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment.

Mitigation Monitoring, Reporting and Compliance Program

Table 8-1 presents a compilation of the mitigation measures in the EIR. The purpose of the table is to provide a single comprehensive list of impacts, mitigation measures, monitoring and reporting requirements, and timing.

 TABLE 8-1

 MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM FOR THE PRESIDENTIAL SUBSTATION PROJECT

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Aesthetics				
Impact 4.1-2: The Proposed Project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a county scenic highway. <i>Less than</i>	Mitigation Measure 4.1-2a: For all structures that are visible from viewsheds where visual impacts are significant (i.e., Highway 23, Read Road, and Underwood Family Farms), SCE shall install tubular steel poles or light-weight steel poles made of self-weatherizing steel, which would oxidize to a natural-looking rust color within approximately one year.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction of new poles/towers.
significant with mitigation (Class II)	Mitigation Measure 4.1-2b: The subtransmission line conductors shall be non-specular and non-reflective and the insulators shall be non-reflective and non-refractive.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During installation of subtransmission line conductors.
Impact 4.1-3: The Proposed Project would substantially damage scenic resources, including, but	Mitigation Measure 4.1-3a: Implement Mitigation Measure 4.1-2b.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During installation of subtransmission line conductors.
not limited to, trees, rock outcroppings, and historic buildings within a city-designated scenic highway. Significant unavoidable (Class I)	Mitigation Measure 4.1-3b: For all structures that are visible from Olsen Road, SCE shall install tubular steel poles or light-weight steel poles made of self-weatherizing steel, which would oxidize to a natural-looking rust color within about one year.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction of new poles/towers.
	Alternately, in lieu of installing self-weatherizing steel poles SCE may install standard tubular steel or light-weight steel poles and apply surface coatings with appropriate colors, finishes and textures to most effectively blend the structures with the visible backdrop landscape. For structures that are visible from one or more sensitive viewing location, the darker color shall be selected, because darker colors tend to blend into landscape more effectively than lighter colors, which may contrast and produce glare. At locations where a tubular steel pole or light-weight steel pole would be silhouetted against the skyline, non-reflective, light-gray colors shall be selected to blend with the sky. SCE shall develop a Structure Surface Treatment Plan for the tubular steel poles, light-weight steel poles, and any other visible structures.			
Impact 4.1-5: Construction of the proposed Presidential Substation could result in a temporary adverse impact to visual quality. <i>Less than significant</i> <i>with mitigation</i> (Class II)	Mitigation Measure 4.1-5: The temporary fencing used during construction at the Presidential Substation site shall incorporate aesthetic treatment through use of appropriate, non-reflective materials, such as chain link fence with light brown or green vinyl slats. SCE shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Submit plans to CPUC at least 60 days prior to commencement of construction activities.
Impact 4.1-6: Use of construction pulling/stringing set-up locations during the approximately 13-20 month construction period could result in temporary adverse impacts to visual quality. <i>Less than</i> <i>significant with mitigation</i> (Class II)	Mitigation Measure 4.1-6: SCE shall not place equipment on the pulling/splicing sites any sooner than two weeks prior to the required use.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and installation of pulling/splicing sites.
Impact 4.1-8: The Proposed Project could substantially degrade the existing visual character or	Mitigation Measure 4.1-8a: Implement Mitigation Measure 4.1-2b and Mitigation Measure 4.1-3b.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance. CPUC mitigation monitor to inspect compliance.	During installation of subtransmission line conductors and
quality of the Proposed Project site and its surroundings from public views. <i>Significant</i>	Mitigation Measure 4.1-8b: Implement Mitigation Measures 4.1-2a and 4.1-2b.			new poles and towers.
unavoidable (Class I)				During installation of subtransmission line conductors and new poles and towers.
Impact 4.1-9: The Proposed Project would create new sources of light or glare that could adversely affect views in the project area. <i>Less than significant</i> <i>with mitigation</i> (Class II)	Mitigation Measure 4.1-9a: Reduce Night Lighting and Glare Impacts. SCE shall design and install all lighting at project facilities, including construction and storage yards and the staging area, such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Construction and Operation Lighting Mitigation Plan to the CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the Construction and Operation Lighting Mitigation Plan is approved by the CPUC. The Plan shall include but is not limited to the following measures:	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	At least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components.
	• Lighting shall be designed so exterior lighting is hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary, and to reduce glare.			
	All lighting shall be of minimum necessary brightness consistent with worker safety.			
	High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	At least 90 days prior to the start of construction or the ordering of any
	Mitigation Measure 4.1-9b: Implement Mitigation Measure 4.1-9a.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	exterior lighting fixtures or components.
	Mitigation Measure 4.1-9c: Only low profile shaded street lighting, if needed, shall be used to reduce down slope light spillover and night glare.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation.
	Mitigation Measure 4.1-9d: Implement Mitigation Measure 4.1-2b.			During installation of subtransmission line conductors.

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Agriculture and Forestry Resources				
Cumulative Impact for Agricultural Resources	Mitigation Measure 4.2-Cumulative: SCE shall obtain agricultural conservation easements at a one to one (1:1) ratio for each acre of Farmland that is permanently converted by the Proposed Project. An agricultural conservation easement is a voluntary, recorded agreement between a landowner and a holder of the easement that preserves the land for agriculture. The easement places legally enforceable restrictions on the land. The exact terms of the easement are negotiated, but restricted activities shall include subdivision of that property, non-farm development, and other uses that are inconsistent with agricultural production. The mitigation lands must be of equal or better quality (according to the latest available FMMP data) and have an adequate water supply. In addition, the mitigation lands must be within the same county as the impact.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.
Air Quality				
Impact 4.3-1: Project construction activities would generate ozone precursor emissions that could contribute substantially to a violation of ozone air quality standards. <i>Significant unavoidable</i> (Class I)	Mitigation Measure 4.3-1: For off-road construction equipment of more than 50 horsepower and on-road diesel fueled vehicles, SCE shall ensure achievement of a Project-wide fleet-average 20 percent NOx and 20 percent ROC reduction compared to the most recent CARB fleet average. A Construction Equipment NOx and ROC Reduction Plan to achieve these reductions shall be submitted to CPUC for review and approval prior to commencement of construction activities. Construction activities cannot commence until the plan has been approved. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as such become available.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.
Impact 4.3-2: Project construction activities would generate fugitive dust emissions of criteria pollutants that could contribute substantially to an existing or projected air quality violation. <i>Less than significant</i> with mitigation (Class II)	 Mitigation Measure 4.3-2: SCE shall reduce construction-related fugitive dust emissions by implementing the following VCAPCD dust control measures. SCE shall require all contractors to comply with the following requirements: Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. All soil and fill haul trucks shall be required to have covered loads. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. Graded and/or excavated inactive areas of the construction site shall be monitored by the mitigation monitor at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust control materials, and excavation operations shall be curated to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall be whet off to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or h	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to or during construction activities.
Impact 4.3-4: Construction activities would result in emissions of NOx that would be cumulatively considerable. <i>Significant unavoidable</i> (Class I)	Mitigation Measure 4.3-4: Implement Mitigation Measures 4.3-1 (Construction Equipment NOx Reductions) and 4.3-2 (Fugitive Dust Mitigation Plan).	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.

TABLE 8-1 (Continued) MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM FOR THE PRESIDENTIAL SUBSTATION PROJECT

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Biological Resources				
Impact 4.4-1: Construction activities associated with the Proposed Project could result in adverse impacts to the following federal and/or State-Listed Endangered or Threatened plant species: Braunton's milk-vetch, Agoura Hills dudleya, Conejo dudleya, and Lyon's pentachaeta as well as other non listed special-status species. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.4-1: SCE and or its contractors shall develop and implement a Noxious Weed and Invasive Plant Control Plan consistent with standard BMPs (see for example: Department of Transportation, State of California (Storm Water Quality Handbook - Project Planning and Design Guide [Caltrans, 2010]; and Construction Site Best Management Practices Manual [Caltrans, 2003]). The Plan shall be reviewed and approved by the Ventura County Office of the Agricultural Commissioner and the CPUC. At a minimum, the Plan shall address any required cleaning of construction vehicles to minimize spread of noxious weeds and invasive plants.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction activities.
Impact 4.4-2: Construction activities associated with the Proposed Project could result in adverse impacts to the following special-status wildlife species, if present: western pond turtle, coast horned lizard, Swainson's hawk, American peregrine falcon, coastal California gnatcatcher, and San Diego desert	Mitigation Measure 4.4-2a: Within areas that provide potentially suitable habitat, SCE and/or its contractors shall perform preconstruction surveys within 24 hours of initial ground disturbance to identify the potential presence of western pond turtle, coast horned lizard and San Diego desert woodrat within work areas. If any of these species are identified during surveys of the immediate project footprint, individuals shall be relocated from work areas by an individual who is authorized by CDFG to undertake species relocation. A suitable relocation area shall be identified and approved by CDFG prior to preconstruction surveys.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Twenty-four hours prior to initial ground disturbance activities.
California gnatcatcher, and San Diego desert woodrat. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.4-2b: Where impacts to coastal sage scrub cannot be avoided (e.g. at the proposed Presidential Substation site), SCE and/or its contractors shall contact CDFG and the USFWS to coordinate coastal scrub avoidance measures that have been incorporated into the project design, and determine if additional measures are needed to reduce impacts to coastal California gnatcatcher habitat. Avoidance measures may include limiting the seasonal timing of work outside the breeding so that active gnatcatcher nesting is not disrupted during construction, limiting project disturbances to the smallest possible area in or near areas with suitable habitat, and providing environmental training to construction workers. In addition, the following actions will be carried out:	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction activities.
	Coastal sage scrub shall be restored at a 1:1 ratio in areas where it is temporarily disturbed.			
	• A qualified ecologist shall prepare a restoration and mitigation plan in coordination with CDFG to mitigate for temporarily impacts to coastal sage scrub habitat. The plan shall include a full description of microhabitat conditions necessary for each affected species, seed germination and planting requirements, restoration techniques for temporarily disturbed occurrences, assessments of potential transplant and enhancement sites, success and performance criteria, and monitoring requirements, as well as measures to ensure long-term sustainability. The mitigation plan shall apply to portions of the project alignment that support restored coastal sage scrub habitat (e.g. at the proposed subtransmission alignment).			
Impact 4.4-3: Construction activities may impact common or protected nesting migratory birds. <i>Less</i> <i>than significant with mitigation</i> (Class II)	Mitigation Measure 4.4-3: SCE and/or its contractors shall implement the following measures to avoid impacts on nesting raptors and other protected birds for construction activities that are scheduled during the breeding season (February 1 through August 31):	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Within two weeks of construction activity near all potential nesting habitat.
	No more than two weeks before construction within each new construction area, a qualified wildlife biologist shall conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction sites. If active nests are not identified, no further action is necessary. If active nests are identified, a no-disturbance buffer shall be created around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers are 300 to 500 feet for raptors and 150 to 250 feet for other nesting birds (e.g., waterfowl and songbirds), depending upon species. The size of these buffer zones and types of construction activities that are allowed in these areas could be further modified during construction in coordination with CDFG and shall be based on existing and anticipated levels of noise and disturbance.			
Impact 4.4-4: Operation of new transmission lines could impact raptors as a result of electrocution or collision. <i>Less than significant with mitigation</i> (Class	Mitigation Measure 4.4-4: SCE shall follow APLIC guidelines for avian protection on powerlines. SCE and/or its contractors shall use current guidelines to reduce bird mortality from interactions with powerlines. The APLIC (2005) and USFWS recommend the following:	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During installation of conductors, poles, and power lines.
II)	 Provide 60-inch minimum horizontal separation between energized conductors or energized conductors and grounded hardware; 			
	Insulate hardware or conductors against simultaneous contact if adequate spacing is not possible;			
	Use pole designs that minimize impacts to birds, and;			
	Shield wires to minimize the effects from bird collisions.			
Impact 4.4-5: Construction of the proposed subtransmission alignment could impact designated critical habitat for coastal California gnatcatcher. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.4-5: Mitigation Measure 4.4-2a and 4.4-2b, above.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to ground disturbance and othe construction activities.

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Biological Resources (cont.)				
Impact 4.4-6: Construction activities could impact jurisdictional waters of the United States and waters of the State, including drainages and seasonal	Mitigation Measure 4.4-6a: SCE and/or its contractors shall through project design, avoid jurisdictional waters of the U.S. and waters of the State. This includes minimizing the footprint during construction of poles for the proposed subtransmission line and spanning drainages that occur within the alignment.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction activities.
wetlands. Less than significant with mitigation (Class II)	Mitigation Measure 4.4-6b: In the event of any project changes that involve ground disturbance outside of the boundary of the existing wetland delineation, a new wetland delineation shall be performed.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to or during construction activities
	Mitigation Measure 4.4-6c: Where jurisdictional wetlands and other waters cannot be avoided, e.g., at the Proposed Presidential Substation site, to offset temporary and permanent impacts that occur as a result of the project, restoration, enhancement or compensatory mitigation shall be provided through the following mechanisms:	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction activities.
	 To compensate for wetland impacts from the Proposed Presidential Substation, wetland enhancement and/or restoration shall be performed at a suitable off-site drainage or stream that is suitable to CDFG, RWQCB, and the Corps. Wetland mitigation and/or enhancement shall be provided at a minimum 2:1 replacement ratio in one of several nearby unnamed intermittent drainages to offset wetland losses. 			
	• If temporary impacts are anticipated to wetlands, a Wetland Mitigation and Monitoring Plan shall be developed by a qualified biologist or wetland scientist in coordination with CDFG, RWQCB and the Corps that details mitigation and monitoring obligations for temporary impacts to wetlands and other waters as a result of construction activities. The Plan shall quantify the total acreage lost, monitoring and reporting requirements, and site specific plans to compensate for wetland losses resulting from the project at the ratios described above. The Plan shall be submitted to the appropriate regulatory agencies for approval. The Plan and documentation of such agency approval shall be submitted to the CPUC prior to construction.			
Cultural Resources				
Impact 4.5-1: Project construction could cause an adverse change in the significance of a historical resource [inclusive of archaeological resources] which is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or a local register of historic resources. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.5-1: A qualified archaeologist shall be retained to serve as lead archaeologist and shall prepare a Cultural Resources Treatment and Discovery Plan prior to issuance of a grading permit. The Cultural Resources Treatment and Discovery Plan shall address the implementation of protective measures (as detailed in APMs CUL-2 through CUL-5), archaeological monitoring, and procedures for discovery of cultural resources. The Cultural Resources Treatment and Discovery Plan shall provide detailed plans for data recovery for those components of eligible resource CA-VEN-744 that cannot be avoided during project implementation, and for the capping of those portions of site CA-VEN-744 that may be indirectly impacted. The plan shall also address the creation of Environmentally Sensitive Areas within sites CA-VEN-744 and CA-VEN-1571. The Cultural Resources Treatment and Discovery Plan shall also state that if significant portions of either site are encountered during project implementation outside of protected areas, Proposed Project redesign should be considered in order to avoid impacts to significant areas. If avoidance is infeasible, then data recovery shall be implemented.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to issuing a grading permit.
	The Cultural Resources Treatment and Discovery Plan shall detail the duration and locations of archaeological and Native American monitoring during project implementation and shall provide for discretionary modifications to monitoring procedures by the lead archaeologist based on observations made by the monitor as construction progresses. The Cultural Resources Treatment and Discovery Plan shall also create measures for the accidental discovery of archaeological resources during project implementation.			
Impact 4.5-2: Project construction could adversely impact a unique archaeological resource. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.5-2a: Prior to issuance of a grading permit, an archaeological monitor shall be retained by SCE and/or its contractors to monitor all ground-disturbing activities, including grading, excavation, vegetation clearance and grubbing, and implementation of cultural resources protective measures (i.e. site capping, pad construction). The procedures for monitoring shall be outlined in the Cultural Resources Treatment and Discovery Plan as described in Mitigation Measure 4.5-1, and shall include provisions for discretionary modifications to monitoring procedures by the lead archaeologist based on observations made by the monitor as construction progresses.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to issuing a grading permit and during construction activities.
	The monitor shall be a qualified archaeologist and shall work under the supervision of an archaeologist who meets the Secretary of the Interior's professional qualification standards for archaeology. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated.			
	Due to the sensitivity of the project area for Native American resources, at least one Native American monitor shall also monitor ground-disturbing activities in the project area, including the implementation of protective measures and data recovery. Selection of monitors shall be made from the Native American Heritage Commission list provided for the Project.			
	Mitigation Measure 4.5-2b: If archaeological resources are encountered at any point during Proposed Project implementation, SCE and/or its contractors shall cease all activity within 50 feet of the find until the find can be evaluated by a qualified archaeologist. If the archaeologist determines that the resources may be significant, and	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation of the Proposed Project.

TABLE 8-1 (Continued) MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM FOR THE PRESIDENTIAL SUBSTATION PROJECT

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Cultural Resources (cont.)				
Impact 4.5-2 (cont.)	if avoidance is determined to be infeasible, the archaeologist shall notify the lead agency and shall follow procedures outlined in the Cultural Resources Treatment and Discovery Plan (Mitigation Measure 4.5-1), in consultation with the lead agency and with appropriate Native American representatives (if the resources are prehistoric or Native American in nature).			
Impact 4.5-3: The project could adversely affect unidentified paleontological resources. Less than significant with mitigation (Class II)	Mitigation Measure 4.5-3: Applicant Proposed Measures PAL-01 and PAL-02 shall be implemented for all paleontologically sensitive portions of the project area. The Paleontological Mitigation Plan, as described in Applicant Proposed Measure PAL-01, shall be based on prior paleontological evaluations, shall identify paleontologically sensitive formations within the project area, and shall address the locations of and procedures for paleontological resources monitoring, including the identification of specific paleontological monitoring locations; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils; and the preparation of a final mitigation report.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction activities.
	All earth moving activities within those formations identified as sensitive within the Paleontological Mitigation Plan shall be monitored on a full-time basis, unless the project paleontologist determines that sediments are previously disturbed or there is no reason to continue monitoring in a particular area due to other depositional factors, which would make fossil preservation unlikely or deemed scientifically insignificant. In the event fossils are exposed during earth moving, construction activities shall be redirected to other work areas until the procedures outlined in the Paleontological Mitigation Plan have been implemented or the paleontologist determines work can resume in the vicinity of the find.			
Impact 4.5-4: Project construction could result in damage to previously unidentified human remains. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.5-4: If human remains are uncovered during construction, SCE and/or its contractors shall immediately halt all work, contact the Ventura County Coroner to evaluate the remains, and follow the procedures and protocols set forth in §15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, SCE shall contact the NAHC, in accordance with Health and Safety Code §7050.5, subdivision (c), and PRC5097.98 (as amended by AB 2641). Per PRC 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC §5097.98), with the most likely descendents regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction activities.
Geology, Soils, Seismicity, and Mineral Resources				
No Impacts	No Mitigations	N/A	N/A	N/A
Greenhouse Gas Emissions		J		
Impact 4.7-2 : The Proposed Project could conflict with CARB's Climate Change Scoping Plan. <i>Less</i> <i>than significant with mitigation</i> (Class II)	Mitigation Measure 4.7-2: SCE shall ensure that the circuit breakers installed at the proposed Presidential Substation have a guaranteed SF6 annual leak rate of no more than 0.5 percent by volume. SCE shall provide CPUC with documentation of compliance, such as specification sheets, prior to installation of the circuit breakers. In addition, SCE shall annually monitor the SF6-containing circuit breakers at the proposed Presidential Substation for the detection and repair of leaks. SCE shall annually report its Presidential Substation-related SF6 emissions to the CPUC until a regulation is approved by the State of California Office of Administrative Law that approves a regulation requiring annual reporting of SF6 emissions to the CARB.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to installation of circuit breaker and annual monitoring of the SF6- containing circuit breakers.
Hazards and Hazardous Materials)		
Impact 4.8-1: Construction, operations, and maintenance activities would require the use of certain materials such as fuels, oils, solvents, and	Mitigation Measure 4.8-1a: SCE and/or its contractors shall implement BMPs including but not limited to the following:	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation o the Proposed Project.
other chemical products that could pose a potential hazard to the public or the environment through	 Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction; 			
routine transport and use or accidental release. Less than significant with mitigation (Class II)	Avoid overtopping construction and maintenance equipment fuel gas tanks;			
	Use tarps and adsorbent pads under vehicles when refueling to contain and capture any spilled fuel;			
	During routine maintenance of construction and operations equipment, properly contain and remove grease and oils; and			
	Properly dispose of discarded containers of fuels and other chemicals.	SCE and its contractors to implement	CPLIC mitigation monitor to increat	During construction and oneration a
	Mitigation Measure 4.8-1b: SCE and/or its contractors shall prepare a Hazardous Substance Control and Emergency Response Plan and implement it during construction, operations, and maintenance to ensure compliance with all applicable federal, State, and local laws and guidelines regarding the handling of hazardous	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation o the Proposed Project.

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Hazards and Hazardous Materials (cont.)				
Impact 4.8-1 (cont.)	materials. The plan shall prescribe hazardous material handling procedures to reduce the potential for a spill during construction, or exposure of the workers or public to hazardous materials. The plan shall also include a discussion of appropriate response actions in the event that hazardous materials are released or encountered during excavation activities. The plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities.			
	• Hazardous Materials and Hazardous Waste Handling: A project operations-specific hazardous materials management and hazardous waste management program shall be developed prior to operations of proposed Presidential Substation project. The program shall outline proper hazardous materials use, storage, and disposal requirements, as well as hazardous waste management procedures. The program shall identify types of hazardous materials to be used at the proposed Presidential Substation project and the types of wastes that would be generated. All project personnel shall be provided with project-specific training. This program shall be developed to ensure that all hazardous materials and wastes are handled in a safe and environmentally sound manner. Employees handling wastes would receive hazardous materials training and shall be trained in hazardous waste procedures, spill contingencies, waste minimization procedures and Treatment, Storage, and Disposal Facility training in accordance with OSHA Hazard Communication Standard.			
	• Transport of Hazardous Materials: Containers used to store hazardous materials shall be properly labeled and kept in good condition. Written procedures for the transport of hazardous materials used shall be established in accordance with U.S. Department of Transportation and Caltrans regulations. A qualified transporter shall be selected to comply with U.S. Department of Transportation and Caltrans regulations.			
	• Emergency Release Response Procedures: An Operations Emergency Response Plan detailing responses to releases of hazardous materials would be developed prior to Substation operational activities. It would prescribe hazardous materials handling procedures for reducing the potential for a spill and would include an emergency response program to ensure quick and safe cleanup of accidental spills. All hazardous materials spills or threatened release, including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of the quantity spilled, would be immediately reported to the applicable agencies if the spill enters a storm drain, if the spill migrates from the site, or if the spill causes injury to a person or threatens injury to public health. The plan shall identify and make all personnel aware of the local, State, and federal emergency response reporting guidelines.			
	Mitigation Measure 4.8-1c: SCE and/or its contractors shall prepare and implement a Health and Safety Plan to ensure the health and safety of construction workers and the public during construction, operations, and maintenance. The plan shall include information on the appropriate personal protective equipment to be used during construction, operations, and maintenance. The plan shall include information construction shall be submitted to the CPUC for review and approval prior to the commencement of construction activities.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation of the Proposed Project.
	Mitigation Measure 4.8-1d: SCE and/or its contractors shall ensure that oil-absorbent material, tarps, and storage drums shall be used to contain and control any minor releases. Emergency spill supplies and equipment shall be kept at the project staging areas and adjacent to all areas of work, and shall be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials shall be provided in the project's Hazardous Substance Control and Emergency Response Plan (see Mitigation Measure 4.8-1b), which shall be implemented during construction operations, and maintenance.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation of the Proposed Project.
	Mitigation Measure 4.8-1e: SCE shall prepare and submit a Hazardous Materials Business Plan for the proposed Presidential Substation project. The required documentation shall be submitted to the Ventura County Department of Environmental Health and the CPUC. The Hazardous Materials Business Plan would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation of the Proposed Project.
Impact 4.8-2: Project activities could release previously unidentified hazardous materials into the environment. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.8-2: SCE's Hazardous Substance Control and Emergency Response Plan (as required under Mitigation Measure 4.8-1b) shall include provisions that would be implemented if any subsurface hazardous materials are encountered during construction. Provisions outlined in the plan shall include immediately stopping work in the contaminated area and contacting appropriate resource agencies, including the CPUC designated monitor, upon discovery of subsurface hazardous materials. The plan shall include the phone numbers local and State agencies and primary, secondary, and final cleanup procedures. The Hazardous Substance Control and Emergency Response Construction Plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction of the Proposed Project
Impact 4.8-3: Project activities could release hazardous materials within the vicinity of an existing day care facility. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.8-3: Implement Mitigation Measures 4.8-1a through 4.8-1e, and 4.8-2.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation of the Proposed Project.

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Hazards and Hazardous Materials (cont.)				
Impact 4.8-4: The Proposed Project could result in a safety hazard for people working in the project area because a nearby private airstrip. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.8-4: SCE shall provide written notification to the Ventura County Sheriff Department and the land owner of the Tierra Rejada Valley landing strip stating when the new subtransmission line and poles would be erected. SCE shall also provide the Sheriff Department and the landing strip owner with recent aerial photos or topographic maps clearly showing the location of the new lines and poles. The photos or maps shall also indicate the heights of the poles and conductors. SCE shall provide documentation of compliance to the CPUC.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction and installation of new subtransmission lines and poles.
Impact 4.8-5: Construction of the Proposed Project could interfere with an emergency response or evacuation plan. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.8-5: Implement Mitigation Measures 4.15-1b.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction of the Proposed Project.
Impact 4.8-6: Construction and maintenance-related activities could ignite dry vegetation and start a fire. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.8-6: SCE and/or its contractors shall have water tanks and/or water trucks sited/available at active project sites for fire protection. All construction and maintenance vehicles shall have fire suppression equipment. Construction personnel shall be required to park vehicles away from dry vegetation. Prior to construction, SCE and its contractors shall contact and coordinate with the California Department of Forestry (CalFire) and applicable local fire departments (i.e., Ventura County) to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate locations for the water tanks if water trucks are not used. SCE shall submit verification of its consultation with CalFire and the local fire departments to the CPUC.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction and maintenance activities.
Hydrology and Water Quality				
Impact 4.9-1: Construction and maintenance activities associated with the Proposed Project could result in increased erosion and sedimentation and/or pollutant (e.g., fuels and lubricants) loading to surface waters, which could increase turbidity, suspended solids, settleable solids, or otherwise degrade water quality. <i>Less than significant with mitigation</i> (Class II)	 Mitigation Measure 4.9-1: For all segments of new or improved access roads that would be within 300 feet of an existing surface water channel (i.e., one that has a distinct bed and banks, including irrigation ditches where no berm/levee is currently in place) and traverse a ground slope greater than two percent, the following protective measures shall be adhered to and/or installed: All access roads shall be out-sloped; Cross-drains (road surface drainage, e.g., waterbars, rolling dips, or channel drains) shall be installed at intervals based upon the finished road slope: road slope 5 percent or less, cross-drain spacing shall be 150 feet; road slope 6 to 15 percent, cross-drain spacing shall be 100 feet; 16 to 20 percent, cross-drain spacing shall be 75 feet; and 21 to 25 percent, cross-drain spacing shall be 50 feet; Energy dissipation features (e.g., rock rip-rap, or a rock-filled container) shall be installed at all cross-drain outlets; and No new or improved road segments with finished slopes greater than 25 percent. 	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to construction and maintenance activities.
Impact 4.9-2: Dewatering during Project construction activities could release previously contaminated groundwater to surface water bodies and/or increase sediment loading to local surface water channels through overland discharge and subsequent erosion, both processes could degrade water quality in receiving surface waters. <i>Less than significant with</i> <i>mitigation</i> (Class II)	 Mitigation Measure 4.9-2: Regarding dewatering activities and discharges (if necessary), the following measures shall be implemented as part of Proposed Project construction: If degraded soil or groundwater is encountered during excavation (e.g., there is an obvious sheen, odor, or unnatural color to the soil or groundwater), SCE and/or its contractor shall excavate, segregate, test, and dispose of degraded soil or groundwater in accordance with State hazardous waste disposal requirements. All dewatering activities shall, where feasible, ultimately discharge to the land surface in the vicinity of the particular installation or construction site. The discharges shall be contained, such that the water is allowed to infiltrate back into the soil (and eventually to the groundwater table) and the potential for inducing erosion and subsequent sediment delivery to nearby surface waterways is eliminated. Further, the holding tank or structure shall be protected from the introduction of pollutants (e.g., oil or fuel contamination from nearby equipment). Concerning such activities, SCE shall apply and comply with the provisions of SWRCB Order 2003-0003-DWQ, including develop and submit to the LARWQCB a discharge monitoring plan. If discharging to a community sewer system is feasible or necessary, SCE shall discharge to a community sewer system that flows to a wastewater treatment plant. Prior to discharging, SCE shall obtain and comply with the provisions of the LARWQCB Dewatering General Permit. SCE shall or municipality may have. If discharging to surface waters (including to storm drains) would be necessary, SCE shall obtain and comply with the provisions of the LARWQCB Dewatering General Permit. SCE shall perform a reasonable potential analysis using a representative sample(s) of the groundwater to be discharge would not exceed any of the apalyzing the sample(s) for the constituents listed in the LARWQCB Dewatering General Permit. SCE shall notuce analyzing the sample(s) for the co	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction activities.

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Hydrology and Water Quality (cont.)				
Impact 4.9-3: Installation of the proposed Presidential Substation would alter the local drainage pattern, potentially resulting in substantial on- or off-site erosion or sedimentation, and/or substantially increasing the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. <i>Less than significant with mitigation</i> (Class II)	 Mitigation Measure 4.9-3: The following storm water quality control measures and BMPs shall be implemented at the proposed Presidential Substation site (see Appendix D for the related worksheet and calculations): SCE shall implement a Retention BMP(s) (as defined in the Ventura County TGM [2010]) with a design volume of approximately 0.01 acre-feet. The drainage area to this feature shall comprise at least 0.17 acre of the proposed impervious surface area. This BMP shall be selected, designed, and implemented according to the guidance and requirements summarized in the Ventura County MS4 Permit and the Ventura County TGM (2010). Alternatively, SCE shall demonstrate that the proposed storm water infiltration swale, or modifications thereto, would meet these mitigation requirements. SCE shall implement a Treatment Control BMP(s) (as defined in the Ventura County TGM [2010]) with a design volume of approximately 0.05 acre-feet. The drainage area to this feature shall comprise at least the remaining 3.83 acres of the proposed Presidential substation site (i.e., the residual drainage area not captured by the Retention BMP(s)). This BMP shall be selected, designed, and implemented according to the guidance and requirements summarized in the Ventura County MS4 Permit and the Ventura County TGM (2010). Alternatively, SCE shall demonstrate that the proposed storm water infiltration swale, or modifications thereto, would meet these mitigation requirements. 	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction and operation of the Proposed Project.
Land Lice and Diapping	would meet these mitigation requirements.			
Land Use and Planning				
No Impacts	No Mitigations	N/A	N/A	N/A
Noise				
Impact 4.11-1: Construction activities would generate noise levels in unincorporated Ventura County that would exceed Ventura County construction noise	Mitigation Measure 4.11-1a : SCE and/or its contractors shall develop a Construction Noise Reduction Plan. The Plan shall be submitted to the CPUC for review and approval prior to the commencement of construction activities. The Plan shall include, but not be limited to, the following measures for daytime construction activities:	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction activities.
threshold criteria. Significant unavoidable (Class I)	 Publish and distribute to the potentially affected community within 300 feet, a "Hot Line" telephone number or pager number, which shall be attended during active construction working hours, for use by the public to register complaints. All complaints shall be logged noting date, time, complainants' name, nature of complaint, and any corrective action taken. 			
	 All construction equipment shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise limitations. 			
	 Maximize physical separation, as far as practicable, between noise sources (construction equipment) and noise receptors. Separation may be achieved by providing enclosures for stationary items of equipment and noise barriers around particularly noisy areas at the project sites and by locating stationary equipment to minimize noise impacts on the community. 			
	 Utilize construction noise barriers such as paneled noise shields, barriers, or enclosures adjacent to or around noisy equipment associated with access road construction, pole installation and removal, and underground trenching for distribution line and fiber optic cable in the immediate vicinity (i.e., within 200 feet) of sensitive receptors. Noise control shields shall be made featuring a solid panel and a weather-protected, sound- absorptive material on the construction-activity side of the noise shield. Shields used during linear construction activities shall be readily removable and moveable so that they may be repositioned, as necessary, to provide noise abatement for construction activities located near residential receptors. 			
	Mitigation Measure 4.11-1b: The Construction Noise Reduction Plan required by Mitigation Measure 4.11-1a shall include a nighttime noise and nuisance reduction strategy in the event that nighttime construction activity is determined to be necessary within 1,000 feet of sensitive receptors. The strategy shall include a set of site-specific noise attenuation measures that apply state of the art noise reduction technology to ensure that nighttime construction noise levels and associated nuisances are reduced to the extent feasible.	SCE and its contractors to implement measure as defined. CPUC mitigation monitor to inspect compliance.		During construction activities.
	The attenuation measures may include, but not be limited to, the control strategies and methods for implementation that are listed below. If any of the following strategies are determined by SCE to not be feasible, an explanation as to why the specific strategy is not feasible shall be included in the Construction Noise Reduction Plan.			
	Plan construction activities to minimize the amount of nighttime construction.			
	Offer temporary relocation of residents within 200 feet of nighttime construction activities.			
	• Temporary noise barriers, such as shields and blankets, shall be installed immediately adjacent to all nighttime stationary noise sources (e.g., auger rigs, bore rigs, generators, pumps, etc.).			
	 Install temporary noise barriers that block the line of sight between nighttime activities and the closest residences within 1,000 feet. 			
	• The notification requirements identified in Mitigation Measure 4.11-1a shall be extended to include residences within 1,000 feet of pending nighttime construction activities.			

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing
Noise (cont.)				
Impact 4.11-4: Construction activities could increase ambient noise levels in Thousand Oaks and Simi Valley. Less than Significant with Mitigation (Class II)	Mitigation Measure 4.11-4: Implement Mitigation Measures 4.11-1a and 4.11-1b.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During construction activities.
Population and Housing				
No Impacts	No Mitigations	N/A	N/A	N/A
Public Services				
No Impacts	No Mitigations	N/A	N/A	N/A
Recreation		, 		
No Impacts	No Mitigations	N/A	N/A	N/A
Transportation and Traffic		,		
Impact 4.15-1: Project construction would temporarily increase traffic volumes on roadways in the study area, and would potentially conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. <i>Less than significant with mitigation</i> (Class II)	Mitigation Measure 4.15-1a: SCE shall obtain and comply with local road encroachment permits for public roads that are crossed by the proposed subtransmission alignment. SCE shall also coordinate short-term construction activities at private road crossings with the applicable private property owners. Copies of all encroachment permits and evidence of private property coordination shall be provided to the CPUC prior to the commencement of construction activities.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.
	Mitigation Measure 4.15-1b: SCE shall prepare and implement a Traffic Management Plan subject to approval of the appropriate state agency and/or local government(s). The approved Traffic Management Plan and documentation of agency approvals shall be submitted to the CPUC prior to the commencement of construction activities. The plan shall:	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.
	Include a discussion of work hours, haul routes, work area delineation, traffic control and flagging;			
	Identify all access and parking restriction and signage requirements;			
	Require workers to park personal vehicles at the approved staging area and take only necessary Project vehicles to the work sites;			
	• Lay out plans for notifications and a process for communication with affected residents and landowners prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which road/lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints; and			
	 Include plans to coordinate all construction activities with emergency service providers in the area prior to construction to ensure that construction activities and associated lane closures would not significantly affect emergency response vehicles. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times. SCE shall submit verification of its consultation with emergency service providers to the CPUC. 			
	Identify all roadway locations where special construction techniques (e.g., night construction) would be used to minimize impacts to traffic flow.			
	Mitigation Measure 4.15-1c: The County and SCE shall insure that appropriate warning signs are posted alerting bicyclists to bike lane closures and instructing motorists to share the road with bicyclists. In addition, in order to remove potential roadway hazards to bicyclist in the construction areas the SEC shall ensure that all contract haul trucks are covered to prevent spillage of materials onto haul routes, and that the area adjacent to the Substation site shall be kept free of debris and dirt that may accumulate from entering and exiting trucks by conducting regular sweeping of the project area.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.
	Mitigation Measure 4.15-1d: SCE shall coordinate with the appropriate local government departments in Thousand Oaks, Simi Valley, with county agencies such as the Ventura County Public Works Agency, with state agencies such as Caltrans, and with other utility districts and agencies as appropriate, regarding the timing of construction projects that would occur near the Proposed Project. The Ventura County Public Works Agency reviews environmental documents to ensure that all individual and cumulative adverse impacts to the Regional Road Network and County-maintained local roads have been adequately evaluated and mitigated to insignificant levels. SCE shall submit verification of its coordination to the CPUC. This multi-agency coordination, and implementation of Mitigation Measures 4.15-1a and 4.15-1b, would ensure that the cumulative effect of simultaneous construction activities in overlapping areas would be minimized.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.

Environmental Impact	Mitigation Measures Proposed in this EIR	Implementing Actions	Monitoring/Reporting Requirements	Timing			
Transportation and Traffic (cont.)							
Impact 4.15-3: Project construction would increase potential traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways. <i>Less than significant with mitigation</i> (Class II)	 Mitigation Measure 4.15-3a: Implement Mitigation Measure 4.15-1a, Mitigation Measure 4.15-1b and Mitigation Measure 4.15-1c. Mitigation Measure 4.15-3b: Roads damaged by construction would be repaired to a structural condition equal 	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.			
	to that which existed prior to construction activity. The Project Partners and the local jurisdiction shall enter into an agreement prior to construction that will detail the pre-construction conditions and the post-construction requirements of the rehabilitation program.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.			
Impact 4.15-4: The Proposed Project would not result in inadequate emergency access. <i>Less than</i> <i>significant with mitigation</i> (Class II)	Mitigation Measure 4.15-4: Implement Mitigation Measure 4.15-1b.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.			
Impact 4.15-5: The Proposed Project would temporarily conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, and would temporarily decrease the performance or safety of such facilities. <i>Less than</i> <i>significant with mitigation</i> (Class II)	Mitigation Measure 4.15-5: Implement Mitigation Measure 4.15-1c.	SCE and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	Prior to commencement of construction activities.			
Utilities and Service Systems							
No Impacts	No Mitigations	N/A	N/A	N/A			