BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Facilities With Voltages Between 50 kV and 200 kV: Santa Barbara County Reliability Project	)))))	Application No. __________

PROPONENT'S ENVIRONMENTAL ASSESSMENT
SANTA BARBARA COUNTY RELIABILITY PROJECT

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Acronyms and Abbreviations

3-D	3-dimensional
ACSR	aluminum conductor steel-reinforced
ADT	average daily traffic
AE	Agricultural Exclusive
AFY	acre-feet per year
AGCC	Alternate Grid Control Center
ANSI	American National Standards Institute
APCD	Air Pollution Control District
APM	Applicant Proposed Measure
AQMP	Air Quality Management Plan
Amsl	above .mean sea level
B.P.	Before Present
BE	Biological Evaluation
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Standards
CadnaA	Computer Aided Noise Abatement
Cal ARP	California Accidental Release Program
CalEEMod	California Emissions Estimator Model
CAP	Clear Air Plan
CARB	California Air Resources Board
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDOC	California Department of Conservation

CDP	Coastal Development Permit
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
CHL	California Historical Landmark
CJUTM	California Joint Utility Traffic Control Manual
CLUP	Coastal Land Use Plan
CMA	Congestion Management Agency
CMP	Comprehensive Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNG	compressed natural gas
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPHI	California Point of Historical Interest
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Places
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code

CVWD	Carpinteria Valley Water District
CWA	Federal Clean Water Act
DAI	Developed Area Interface
dB	decibels
dBA	A-weighted decibels
DPS	Distinct Population Segment
DTSC	California Department of Toxic Substances Control
EMFAC	Emissions Factor model
EMS	Emergency Management System
ENA	Electrical Needs Area
EOP	Emergency Operation Plan
EPRI	Electric Power Research Institute
ERME	Environmental Resources Management Element
ESA	Federal Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FRC	fault return conductor
FSM	Forest Service Manual
FTA	Federal Transit Administration
G.O.	General Order
GCC	Grid Control Center
GHG	greenhouse gas

GIS	geographic information system
GPS	global positioning system
GWP	global warming potential
HCP	Habitat Conservation Plan
HMBP	Hazardous Materials Business Plan
HRI	Historic Resources Inventory
HSWA	Hazardous and Solid Waste Act
HUC	hydrologic unit code
Hz	Hertz
ICU	intersection capacity utilization
IEEE	Institute of Electrical and Electronic Engineers
IOU	investor-owned utility
IPCC	Intergovernmental Panel on Climate Change
KCML	thousand circular mils
KOP	Key Observation Point
KPRA	kingpin-to-rear-axle
kV	kilovolt
L_{dn}	Day-Night Average Sound Level
L_{eq}	Equivalent Sound Level
L_{max}	Instantaneous Greatest Noise Level
L_{min}	Instantaneous Lowest Noise Level
LNG	liquefied natural gas
LOS	level of service
LST	lattice steel tower
LWS	lightweight steel
L_x	base sound level
MBTA	Migratory Bird Treaty Act

MEER	Mechanical Electrical Equipment Room
mgd	million gallons per day
MIS	Management Indicator Species
mm	millimeter
MMT	million metric tons
$MMTCO_2e$	MMT of carbon dioxide equivalents
MRZ	Mineral Resource Zone
MSDS	Material Safety Data Sheet
MT	metric tons
MWD	Municipal Water District
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAS	National Airspace System
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
O_3	ozone
OES	Office of Emergency Services
OHGW	Overhead Ground Wire

OHP	Office of Historic Preservation
OHV	off-highway vehicle
O&M	Operation and Maintenance
OS	open space
OSHA	Occupational Safety and Health Administration
PA	Participating Agency
PEA	Proponent's Environmental Assessment
PF	public facility
PGA	peak ground acceleration
PHT	peak hour trip
PLC	programmable logic controller
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PRC	Public Resources Code
PRMP	Paleontological Resources Management Plan
PRPA	Paleontological Resources Preservation Act
PT	potential transformer
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental concern
ROG	reactive organic gas
ROS	recreation opportunity spectrum
ROW	right-of-way
RPR	Rare Plant Rank
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SAC	Stranded Aluminum Conductor

SARA	Superfund Amendments and Reauthorization Act
SAS	Substation Automation System
SBCAG	Santa Barbara County Association of Governments
SBCAPCD	Santa Barbara County Air Pollution Control District
SBCFD HMU	Santa Barbara County Fire Department Hazardous Materials Unit
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Government
SCAQMD	South Coast Air Quality Management District
SCCAB	South Central Coast Air Basin
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SF_6	sulfur hexafluoride
SIO	Scenic Integrity Objective
SLR	single lens reflex
SMARA	Surface Mining and Reclamation Act
SO	Substation Operator
SO_2	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasure
SR	State Route
SRP	Scenic Resource Protection
SRRE	Source Reduction and Recycling Element
SWMP	Stormwater Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TPQ	total planning quality
TQ	threshold quantity

TSCA	Toxic Substances Control Act
TSP	tubular steel pole
UCMP	University of California Museum of Paleontology
UCNRS	University of California Natural Reserve System
UFC	Uniform Fire Code
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UT	Public Utility District zone
V/C	volume/capacity
VCAPCD	Ventura County Air Pollution Control District
VCTC	Ventura County Transportation Commission
VdB	vibration velocity decibel
VOC	volatile organic compound
VP	viewpoint
WATCH	Work Area Protection and Traffic Control Manual
WCD	Water Conservation District
WDR	Waste Discharge Requirement
WEAP	Worker Environmental Awareness Plan
WUI	Wildland Urban Interface

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Executive Summary

This Proponent's Environmental Assessment (PEA) evaluates the potential environmental impacts of Southern California Edison Company's (SCE) Santa Barbara County Reliability Project (Project) located in unincorporated areas of Ventura County, unincorporated areas of Santa Barbara County, and the City of Carpinteria, with portions in the Los Padres National Forest.

SCE commenced construction of the Project in 1999 under the assumption that the Project was exempt from permitting pursuant to California Public Utilities Commission (CPUC) General Order (G.O.) 131-D and the California Coastal Act (California Public Resources Code section 30000 et seq). In 2004, the Project's exemption from permitting under the California Coastal Act was questioned, and Coastal Commission staff determined that the Project did not qualify for an exemption. All construction activities on the Project ceased in late 2004 and SCE submitted an application for a Coastal Development Permit (CDP) to the County of Santa Barbara. Following discussions with the County of Santa Barbara and the CPUC, SCE has prepared this PEA to analyze the environmental impacts of the portions of the Project that have yet to be constructed, and those portions of the Project that require a CDP, to accompany an application to the CPUC for a Permit to Construct (PTC) for the Project.

The purpose of the Project is to ensure the availability of safe and reliable electric service to help meet customer electrical demand in the Santa Barbara County South Coast area (SB South Coast area) during emergency conditions while also enhancing operational flexibility. The SB South Coast area includes the cities of Goleta, Carpinteria, and Santa Barbara, and adjacent areas of unincorporated southern Santa Barbara County (Electrical Needs Area).

The Electrical Needs Area is primarily served by the Goleta-Santa Clara No. 1 220 kilovolt (kV) Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line. In addition, there are existing 66 kV subtransmission tie lines from the Santa Clara 66 kV Subtransmission System currently serving western Ventura County that also serve as a back-up source to the above-mentioned 220 kV transmission lines in the event the 220 kV transmission lines are out of service. However, the existing 66 kV facilities do not have adequate capacity to serve the entire load normally served by the 220 kV transmission lines. By reinforcing the 66 kV subtransmission system, the Project would increase the back-up or redundant 66 kV system capacity to better support the existing 220 kV system. This redundancy is necessary to avoid or minimize what would otherwise be potentially prolonged outages to the ENA if an outage were to occur on the existing 220 kV system.

The Project consists of the following major components:

- Reconstruct existing 66 kV subtransmission facilities within existing and new utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation located in the City of Carpinteria in Santa Barbara County

- Modify subtransmission, substation, and/or telecommunications equipment within the existing Carpinteria Substation, Casitas Substation, Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, Santa Clara Substation, and Ventura Substation

- Install fiber optic telecommunications equipment for the protection, monitoring and control of subtransmission and substation equipment

This PEA includes the information required by State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V, as well as the CPUC's requirements for a PTC pursuant to G.O. 131-D (D.94-06-014, Appendix A, as modified by D.95-08-038). The CPUC requires applicants to provide this information for review in compliance with the mandates of the California Environmental Quality Act (CEQA). This PEA is designed to meet the above-mentioned CPUC requirements.

Following a discussion of the purpose and need for the project (Chapter 1), the alternatives analysis (Chapter 2), and the project description (Chapter 3), this PEA evaluates the potential environmental impacts of the Project (Chapter 4). Potential impacts are assessed for all environmental factors contained in the most recent CEQA Environmental Checklist Form. With the implementation of the Applicant Proposed Measures (APMs), the PEA concludes that the Project would have less than significant impact or no impact in all environmental resource categories. No growth-inducing impacts are identified for the Project. A summary of the APMs is provided in Table ES-1.

Table ES-1: Applicant Proposed Measures

APM	Description
APM AQ-1	The following control measures stated in the VCAPCD *Ventura County Air Quality Assessment Guidelines* to minimize the generation of fugitive dust (PM_{10} and $PM_{2.5}$) would be implemented during construction of the Project: "1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. 2. 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. 3. Fugitive dust produced during grading, excavation, and construction

APM	Description
	activities shall be controlled by the following activities: a) All trucks shall be required to cover their loads as required by California Vehicle Code §23114. b) 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. 4. Graded and/or excavated inactive areas of the construction site shall be monitored by (indicate by whom) 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. 5. Signs shall be posted on-site limiting traffic to 15 miles per hour or less. 6. 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 APCD in determining when winds are excessive. 7. Adjacent 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. 8. 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." [1]
APM AQ-2	The following control measures stated in the VCAPCD *Ventura County Air Quality Assessment Guidelines* would be implemented during construction of the Project as feasible: [2] "1. Minimize equipment idling time. 2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. 3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time. 4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible."

APM	Description
BIO-1	Pre-construction biological surveys for special-status plants and wildlife would be conducted 0 to 45 days before the start of construction by a qualified biologist in all laydown/work areas. If a special-status species is encountered, biologists would record the location, take a photograph, and delineate a buffer area, as appropriate, where activities should be restricted for the protection of the resource. If impacts to the special-status plant(s) or wildlife cannot be avoided, SCE would consult with the appropriate resource agency or agencies.
BIO-2	To the extent feasible, SCE would minimize impacts and permanent loss to native vegetation types, vegetation that may support special-status species, and known populations of special-status plants at construction sites by avoiding construction activities in areas flagged to be avoided. If unable to avoid impacts to native vegetation, a project revegetation plan may be prepared in consultation with the appropriate agencies for areas of native habitat temporarily impacted during construction.
BIO-3	Biological monitors would monitor construction activities in wildlife habitat areas that may contain special-status species, critical habitat for those species, or unique resources to ensure such species, habitat, or resources are avoided.
BIO-4	SCE would conduct Project-wide nesting bird surveys. SCE would, if feasible, remove trees, vegetation, subtransmission structures, and poles outside of the nesting season. If a tree, subtransmission structure, or pole containing a raptor nest must be removed during nesting season, SCE biologists would consult with the appropriate resource agencies. If work is scheduled to take place in close proximity to an active nest, appropriate nesting buffers or other measures would be established based on consultation with the appropriate resource agencies or an adaptive management plan to address nesting birds which would be subject to the approval of the CDFG. This Project-specific Nesting Bird Management Plan would allow for implementation of species-specific buffer modification guidelines provided by a qualified utility avian biologist; nest buffers would be determined by species sensitivity to disturbance, the nature of the construction activity, and the environmental conditions surrounding the nest.
BIO-5	During the pre-construction surveys, a qualified biologist would identify any potential San Diego desert woodrat middens within 50 feet of Project activities. At the discretion of a qualified biologist, an exclusion buffer would be established around any woodrat middens that can be avoided, and these exclusion zones would be flagged or fenced to protect the nest during the breeding season (October through June). If a woodrat midden cannot be avoided by the Project's activities, an appropriate resource agency would be consulted regarding a potential buffer reduction.
BIO-6	A pre-construction, focused burrowing owl protocol survey shall be conducted no more than 30 days prior to commencement of ground-disturbing activities within suitable habitat to determine if any occupied burrows are present. If occupied burrows are found, adequate buffers shall be established around burrows based on a Project-specific nesting bird management plan or consultation with the appropriate agencies. If occupied burrows cannot be avoided, an appropriate relocation strategy would be developed in conjunction with the CDFG and may include collapsing burrows outside of nesting season and using exclusionary devices to reduce impacts to the burrowing owl. Biological monitors would monitor all construction activities that have the potential to impact active burrows.

APM	Description

CUL-01	Avoidance, Minimization, and Mitigation. Potential Project effects to historical resources may be mitigated or reduced to a less than significant level by implementing SCE's cultural resources Unanticipated Discovery Plan (see Section 3.11) and employing one or more standard practice mitigation scenarios including, but not limited to:
	• Prehistoric Resources
	  o avoid where feasible (avoidance by design, preserve in place, capping)
	  o minimize (reduction of Area of Direct Impact/Effect)
	  o mitigate (historic context statement, data recovery)
	• Historic Resources
	  o avoid where feasible (avoidance by design, preserve in place, capping)
	  o minimize (reduction of Area of Direct Impact/Effect)
	  o mitigate (historic context statement, data recovery)
	• Historic Architecture/Utility Infrastructure
	  o avoid where feasible (avoidance by design, preserve in place)
	  o minimize (reduction of Area of Direct Impact/Effect)
	  o mitigate (historic context statement, Historic American Engineering Record, Historic American Building Survey, advanced California Department of Parks and Recreation recordation)

CUL-02	Paleontological Resources Management Plan. SCE shall prepare and implement a PRMP that would include, but not be limited to: preconstruction coordination; recommended monitoring methods; emergency discovery procedures; sampling and data recovery methods, if needed; museum storage coordination for any specimens and data recovered; and reporting requirements. The PRMP would also provide for sediment screening, fossil preparation, curation, and preparation of a report detailing the results of the work. In addition, the PRMP would specify monitoring requirements such as the presence of a paleontological monitor when work is being done at formations with high paleontological sensitivity. If very few or no fossil remains are found during ground-disturbing activities, monitoring time can be reduced or suspended entirely, per recommendations of the paleontological field supervisor.
GEO-1	Based on the findings of the geotechnical analysis, SCE would design Project components to minimize the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Measures that may be used to minimize impacts could include, but are not limited to: stabilization fills, retaining walls, slope coverings, removal of unstable materials, avoidance of highly unstable areas, construction of pile foundations, ground improvements of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables.
NOISE-1	Construction activities will be conducted or phased to ensure that the noise generated during construction would not exceed significance thresholds or durations identified by the City of Carpinteria Resolution No. 408; the County of Ventura noise regulations set forth in the County's Construction Noise Threshold Criteria and Control Plan (2010); or the County of Santa Barbara Environmental Thresholds and Guidelines Manual (2008).

APM	Description
NOISE-2	Equipment and trucks used for Project construction shall employ the best available noise control techniques to the extent feasible.
NOISE-3	Stationary noise sources shall be located as far from adjacent noise sensitive receptors as reasonably possible and shall be enclosed if feasible.
NOISE-4	Where feasible, temporary portable sound barriers would be deployed where construction activities would cause noise levels at sensitive receptor locations to be in excess of an applicable criteria threshold. For purposes of this APM, schools would only be considered sensitive receptor locations during instruction hours.
NOISE-5	At least two weeks prior to the anticipated start of construction at a particular location, SCE will notify all property owners within 300 feet of that location that construction activities are about to commence at that location.

Notes:

1. Speed limit signs are generally located at SCE facilities such as substations. For all other project locations, speed limits would be covered under WEAP training and by Traffic Control Plan(s).
2. The measures contained in APM AQ-2 would be implemented if and when the VCAPCD Air Pollution Control Officer declares a Stage 1, Stage 2, or Stage 3 Episode as defined in Regulation VIII – Emergency Action.

A discussion of alternatives is provided in Chapter 5. Potential cumulative impacts and growth-inducing impacts are discussed in Chapter 6.

1.0 Purpose and Need

In 1998, Southern California Edison Company (SCE) initiated the Santa Barbara County Reliability Project (Project) to increase reliability by reinforcing its existing 66 kilovolt (kV) subtransmission system in northwestern Ventura County and southeastern Santa Barbara County (see Figure 1.1-1) to meet the electrical demands of the south coast of Santa Barbara County (SB South Coast area) during emergency conditions while also enhancing operational flexibility. The SB South Coast area includes the cities of Goleta, Carpinteria, and Santa Barbara, and adjacent areas of unincorporated southern Santa Barbara County (Electrical Needs Area or ENA). The ENA includes approximately 82,700 metered customers.[1] Additionally, customers in northwest Ventura County would also benefit from the modernized facilities.

The ENA (see Figure 1.1-2) is defined by those customers served from Goleta Substation, which is served by the Goleta-Santa Clara No. 1 220 kV Transmission Line and the Goleta-Santa Clara No. 2 220 kV Transmission Line. At Goleta Substation, voltage is reduced from the 220 kV transmission voltage to the 66 kV subtransmission voltage. Various 66 kV subtransmission lines emanate from Goleta Substation and feed eight SCE Distribution Substations and six customer substations.

The Goleta 66 kV System is isolated to the south and west by the Pacific Ocean and to the west and north by the Pacific Gas and Electric (PG&E) Service Territory. The only other electrical connectivity to SCE's grid is to the east to the Santa Clara 66 kV System by three open 66 kV subtransmission tie lines: the Santa Clara-Ojai-Santa Barbara 66 kV Subtransmission Line, the Carpinteria-Santa Clara 66 kV Subtransmission Line, and the Santa Clara-Getty 66 kV Subtransmission Line.

The existing SCE Santa Clara 220/66 kV Substation is fed from six other 220 kV transmission lines in addition to the Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line. At Santa Clara Substation, voltage is reduced from the 220 kV transmission voltage to the 66 kV subtransmission voltage. Various 66 kV subtransmission lines emanate from Santa Clara Substation and feed twelve SCE Distribution Substations and fifteen customer substations. Three 66 kV subtransmission lines connect to the Goleta 66 kV System via open tie lines: the Santa Clara-Ojai-Santa Barbara 66 kV Subtransmission Line, the Santa Clara-Getty 66 kV Subtransmission Line, and the Carpinteria-Santa Clara 66 kV Subtransmission Line.

As discussed above, there are existing 66 kV subtransmission tie lines from the Santa Clara 66 kV Subtransmission System currently serving western Ventura County that also serve as a back-up source to the above-mentioned 220 kV transmission lines in the event the 220 kV transmission lines are out of service. However, the existing 66 kV facilities do not have adequate capacity to serve the entire load normally served by the 220 kV

[1] Metered customers within the ENA include single and multi-family residential, industrial, commercial and institutional land uses (including the University of California Santa Barbara).

transmission lines. By reinforcing the 66 kV subtransmission system, the Project would increase the back-up or redundant 66 kV system capacity to better support the existing 220 kV system. This redundancy is necessary to avoid or minimize what would otherwise be potentially prolonged outages to the ENA if an outage were to occur on the existing Goleta-Santa Clara No. 1 220 kV Transmission Line and the Goleta-Santa Clara No. 2 220 kV Transmission Line.

The Project consists of the following major components:

- Reconstruct existing 66 kV subtransmission facilities within existing and new utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation located in the City of Carpinteria in Santa Barbara County

- Modify subtransmission, substation, and/or telecommunications equipment within the existing Carpinteria Substation, Casitas Substation, Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, Santa Clara Substation, and Ventura Substation

- Install fiber optic telecommunications equipment for the protection, monitoring and control of subtransmission and substation equipment

SCE commenced construction of the Project in 1999 under the assumption that the Project was exempt from permitting pursuant to California Public Utilities Commission (CPUC) General Order (G.O.) 131-D and the California Coastal Act (California Public Resources Code section 30000 et seq). Between 1999 and 2004, the following portions of the Project were constructed: (i) some substation upgrades at Carpinteria Substation, Santa Clara Substation, Goleta Substation, Ortega Substation and Isla Vista Substation; and (ii) approximately 18 miles of reconstructed 66 kV subtransmission infrastructure from Santa Clara Substation to just west of Lake Casitas in Ventura County, and from the Ventura County line west to Carpinteria Substation in Santa Barbara County.

In 2004, the Project’s exemption from permitting under the California Coastal Act was questioned. The County of Santa Barbara, which has delegated permitting authority from the California Coastal Commission (Coastal Commission) and has adopted a Local Coastal Program with regulations regarding such permitting, had determined that the Project was exempt from the requirement to obtain a Local Coastal Development Permit. However, Coastal Commission staff determined that the Project did not qualify for an exemption. All construction activities on the Project ceased in late 2004 and SCE submitted an application for a Coastal Development Permit (CDP) to Santa Barbara County in November 2005, which was subsequently replaced in August 2007 with an application to Santa Barbara County for a CDP Requiring a Public Hearing in order to comply with the Coastal Commission staff’s direction.

Following discussions with the County of Santa Barbara and the CPUC, SCE has prepared this Proponent's Environmental Assessment (PEA) to analyze the environmental impacts of the portions of the Project that have yet to be constructed, and those portions of the Project that require a CDP, to accompany an application to the CPUC for a Permit to Construct (PTC) for the Project. In addition, although the Project originally was designed to be constructed entirely on existing SCE property and within existing SCE rights-of-way (ROW), slight modifications have resulted in the need for SCE to locate some Project components within a small amount of new ROW yet to be acquired. As a result of the need to obtain new ROW, SCE acknowledges that the Project likely would no longer qualify for a G.O. 131-D exemption that would otherwise apply to projects constructed within existing utility ROWs.

1.1 Project Purpose

The purpose of the Project is to ensure the availability of safe and reliable electric service to help meet customer electrical demand in the ENA during emergency conditions.

Under the rules, guidelines, and regulations of the Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC), the Western Electricity Coordinating Council (WECC), and the CPUC, electrical transmission, subtransmission, and distribution systems must have sufficient capacity to maintain safe, reliable, and adequate service to customers. System safety and reliability must be maintained under normal system conditions, when all facilities are in service, and also under abnormal system conditions. Abnormal system conditions result from equipment or line failures, maintenance outages, or outages that cannot be predicted or controlled due to weather (e.g., major climate patterns such as El Niño), major fires, mudslides, earthquakes, traffic accidents, and other unforeseeable events.

1.2 Project Need

The Project is needed to improve reliability and address electrical demand under emergency conditions while also maintaining operational flexibility in the ENA. The ENA receives its electric service through SCE's existing Goleta 220/66 kV System. The Goleta 220/66 kV System is served via the Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line, which are located in a single ROW on the same double circuit structures due to the unique geographical features of the area. In particular, the ENA is located in the most westerly part of the SCE service territory and is relatively isolated as it is bounded by the Pacific Ocean to the south and west, Pacific Gas & Electric's (PG&E's) service territory to the north, and the Los Padres National Forest to the north and east.

If an outage of both 220 kV transmission lines were to occur, the approximately 82,700 metered customers served from the Goleta 220/66 kV Substation would lose power until emergency electrical power could be delivered to the ENA. This emergency back-up power would be delivered via the three existing 66 kV subtransmission tie-lines that extend from the Santa Clara 220/66 kV Substation in Ventura County to the Carpinteria 66/16 kV Substation and Santa Barbara 66/16 kV Substation in the ENA. Under normal operating conditions, these three 66 kV subtransmission tie-lines do not serve load in the ENA (although these lines do serve load in the ENA during emergency situations).

Unique climatic events have further highlighted the need for a redundant system that could be used in the event of an outage of both of the existing 220 kV transmission lines. The risk of a simultaneous outage is much greater in the ENA than in other areas of SCE's service territory where power is typically delivered via several different transmission routes and/or on separate sets of transmission towers. In the late 1990s, an extreme climatic condition known as El Niño emerged in southern California coastal waters. This phenomenon resulted in continuous heavy rainfall for many days which weakened soils and destabilized several 220 kV tower footings on the Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line. This condition, in addition to the geographical constraints discussed above, highlighted the risk of these 220 kV transmission lines being affected by a simultaneous outage. In particular, the loss of a single 220 kV tower could potentially result in prolonged outages to the ENA as repair crews would have to wait until the terrain was stabilized to repair or replace the tower, reconnect any interrupted lines and re-energize the system. SCE estimated that it could take several weeks until terrain was deemed dry and stable enough to support the heavy equipment associated with tower repair or replacement activities. In addition, even after terrain was deemed stable enough to support reconstruction and/or replacement activities, more time would be required to complete the actual replacement or reconstruction, potentially prolonging the timeframe that customers within the ENA may be subjected to rotating outages.[2]

In the event of a simultaneous outage on the Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line, load served by the Goleta 220/66 kV Substation would be immediately dropped. If the Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line do not reenergize, SCE's system operators would begin utilizing the 66 kV tie lines to pick up load in the Goleta System. However, the 2012 projected peak demand for the ENA served by Goleta Substation is 265 MVA, and the existing back-up 66 kV facilities would not have adequate capacity to serve the entire load if needed during emergency conditions.[3] The three existing back-up 66 kV subtransmission tie lines collectively have a maximum operating limit of 124 MVA under normal operating

[2] Although the late 1990s El Niño condition brought to light the need for back-up service to the ENA, subsequent natural disasters have reinforced the need. For example, portions of the existing 220 kV transmission lines are located in a State-designated Very High Fire Hazard Severity Zone (VHFHSZ). The 2008 Gap Fire in particular affected the 220 kV transmission facilities due to buildup of carbon deposits on the equipment, which resulted in multiple outages to the ENA. In addition, the 2007 Zaca Fire, 2008 Tea Fire, and 2009 Jesusita Fire also threatened the 220 kV transmission lines.

[3] This projected load is taken from SCE's 2012 planned load forecast. It excludes a large self-generating customer located within the ENA whose electrical load SCE may be required to serve in the event the customer's generation becomes unavailable.

conditions. However, two of these 66 kV subtransmission lines also serve load in the Santa Clara System, which reduces their capacity to serve the ENA if needed. As a result, for prolonged outages, only 100 MVA of load in the ENA can be supported from these 66 kV lines in an emergency situation.[4] Accordingly, SCE projects that 165 MVA of peak load would be dropped and rotating outages would occur in the ENA.

In order to minimize the potential for prolonged customer outages, SCE determined in 1998 that reconductoring to increase the capacity of two of the three existing 66 kV subtransmission tie-lines that connect the Santa Clara 66 kV Subtransmission System and Goleta 66 kV Subtransmission System would address the existing limitation in redundant service for the ENA.[5] Based on the forecasted 2012 peak load and considering existing operating procedures, this reconductoring and capacity increase of the 66 kV subtransmission lines would increase the electrical power delivered to the ENA by 80 MVA (from 100 MVA to 180 MVA) during a prolonged outage of both 220 kV transmission lines. This system work would enable SCE to serve a majority of the load in the ENA and decrease the amount of load that otherwise would be dropped.

The Project is described in Chapter 3 of this PEA. SCE is proposing to complete the Project so that it will be operational by June 2016.

1.3 Electrical System Alternatives

The California Environmental Quality Act (CEQA) and the CEQA Guidelines (Section 15126.6(a)) require consideration of a reasonable range of alternatives to a proposed project, or to the location of a project, which would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects of the project. CEQA Guidelines Section 15126.6(d) requires that sufficient information about each alternative be included to allow meaningful evaluation, analysis, and comparison with the proposed project. In addition, CEQA Guidelines Section 15126.6(e) requires the evaluation of a “no project” alternative to compare the impacts of approving the proposed project with the impacts of not approving the proposed project (No Project Alternative).

SCE first evaluates whether the existing electrical infrastructure can be modified to meet the project objectives. If not, SCE then evaluates what new infrastructure is required (System Alternatives) and where it would be located (Site and/or Route Alternatives) in order to meet project objectives. The following sections describe the methodology for screening System Alternatives. Alternatives developed by these methodologies are then screened for their ability to meet the project objectives. The section concludes with a brief description of the Alternatives retained for full analysis in the PEA.

[4] During a CAISO declared emergency, a third-party owned gas-fired generator could be dispatched by the CAISO to serve additional load in the ENA.

[5] The third 66 kV line does not require reconductoring because it already has sufficient, higher capacity.

System Alternatives Screening Methodology

The development of System Alternatives consists of the four-step process summarized below:

Step 1. Perform technical engineering analyses to determine whether modifying electrical equipment at existing facilities could accommodate the forecasted peak electrical demand.

Step 2. If the forecasted electrical demand cannot be accommodated by modifying existing electrical facilities, then develop System Alternatives upgrades that consider new facilities.

Step 3. Evaluate each System Alternative in consideration of the following criteria:

- The extent to which the System Alternative would substantially meet the forecasted electrical demand
- The feasibility of a System Alternative, considering capacity limits, the ability to upgrade the system on existing sites, and economic viability

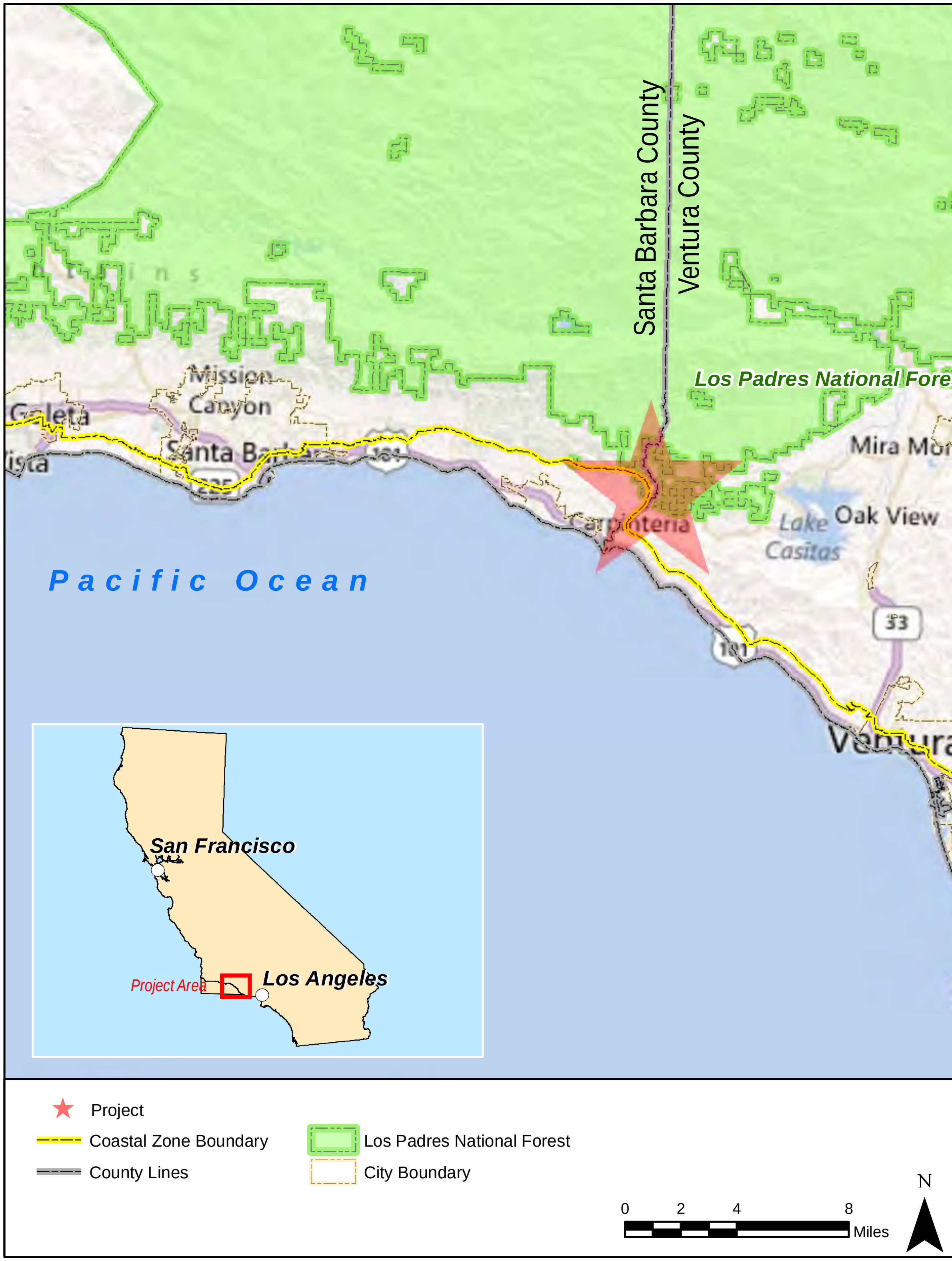
Step 4. If a System Alternative is not feasible, eliminate it from further consideration. If feasible, the System Alternative is retained for full analysis in the PEA, as required by CPUC G.O. 131-D.

SCE considered three System Alternatives when it originally proposed and initiated the Project in 1998, which are now described below in this chapter of the PEA:

- System Alternative 1: Construct a third Goleta-Santa Clara 220 kV Transmission Line in a new ROW
- System Alternative 2: Reconstruct two of the three existing 66 kV subtransmission tie lines between the Goleta 66 kV Subtransmission System and the Santa Clara 66 kV Subtransmission System
- System Alternative 3: No Project Alternative

1.3.1 System Alternative 1, Construct a Third Goleta-Santa Clara 220 kV Transmission Line in New ROW

System Alternative 1 would include the following components and provide the following benefits:



SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

REGIONAL MAP

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Figure
1.1-1

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SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

ELECTRICAL NEEDS AREA

County Lines
Los Padres National Forest
Electrical Needs Area
City Boundary

0 3 6 12 Miles

N

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Figure
1.1-2

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System Alternative 1 Components

- Construct approximately 50 miles of new 220 kV single circuit transmission line on new structures between the Santa Clara 220/66 kV Substation and Goleta 220/66 kV Substation
- Acquire new ROW for the new 220 kV single circuit transmission line, a majority of which would likely be through the Los Padres National Forest
- Complete additional required transmission system, substation, telecommunications and protection upgrades to accommodate the new 220 kV transmission line

System Alternative 1 Benefits

- This alternative would allow the Goleta 220/66 kV System to be supported in the event of a loss of the existing Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line
- This alternative would increase operability and minimize switching in the event of a loss of the existing Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line

1.3.2 System Alternative 2, Reconstruct Two of the Three 66 kV Subtransmission Tie Lines between the Goleta 66 kV Subtransmission System and the Santa Clara 66 kV Subtransmission System

System Alternative 2 would include the following components and provide the following benefits:

System Alternative 2 Components

- Reconstruct existing 66 kV subtransmission facilities primarily within existing utility ROW between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation located in Santa Barbara County
- Modify subtransmission, substation, and/or telecommunications equipment within the existing Carpinteria Substation, Casitas Substation, Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, Santa Clara Substation, and Ventura Substation
- Install fiber optic telecommunications equipment for the protection, monitoring and control of subtransmission and substation equipment

System Alternative 2 Benefits

- This alternative would increase the amount of load in the ENA that can be supported during loss of the existing 220 kV transmission source lines

- This alternative would increase capacity and improve operational flexibility between the Goleta 66 kV Subtransmission System and the Santa Clara 66 kV Subtransmission System
- This alternative would minimize new environmental impacts because System Alternative 2 would be constructed primarily in an existing utility ROW

1.3.3 No Project Alternative

Under the No Project Alternative, no action would be taken, and in particular no further construction or modification to the existing electrical system would be undertaken. Although work was initiated on this Project as described further in Chapter 3.0, the Project is not fully completed. Some minor benefits not related to the Project Objectives have been achieved to date, including a small reduction of line losses, as well as replacement of older facilities with newer facilities. Despite the fact that some lines have been reconstructed and energized, without completion of the entire project the work done to date has not resulted in an increase in the backup or redundant 66 kV system capacity to better support the existing 220 kV system. Therefore, the No Project Alternative would not achieve the Basic Objectives nor the purpose and need for the Project.

1.4 Basic Objectives

The Project has the following objectives:

- Provide long-term reliability and continuity of service to the ENA in the event of a natural disaster or other occurrence that affects the 220 kV transmission system serving the area.
- Enhance operational flexibility by providing the ability to transfer the electric load between local substations and remove existing 220 kV or 66 kV lines from service when needed for maintenance purposes.
- To the extent practicable, use existing ROWs and facilities constructed to date to minimize:
  (i) Environmental impacts
  (ii) Construction schedule, and
  (iii) Project cost and impact on ratepayers.
- Design and construct the Project in conformance with SCE's current engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.

1.5 System Alternatives Comparison

System Alternative 1 (Construct a Third Goleta-Santa Clara 220 kV Transmission Line in New ROW) would not achieve some of the basic objectives for the Project. In particular:

- System Alternative 1 would require acquisition of approximately 50 miles of new utility ROW. Large portions of the proposed ROW would likely pass through Federal lands including the Los Padres National Forest. This system alternative would likely require multiple years for licensing, permitting, ROW acquisition, and construction, meaning that SCE's proposed construction schedule would likely not be met. In addition, this long process could extend the potential for prolonged outages in the ENA for a longer period of time.

- Compared to System Alternative 2, System Alternative 1 would result in significantly more new environmental impacts due to the need for approximately 50 miles of new transmission ROW.
- A greater portion of a new 220 kV transmission line associated with this system alternative would likely be located in Very High Fire Hazard Severity Zones than the existing 66 kV ROW that would be utilized for System Alternative 2.
- The cost for constructing System Alternative 1, including approximately 50 miles of new 220 kV transmission facilities in new ROW, would be significantly more than the reconstruction and reconductoring activities required for System Alternative 2.

Although System Alternative 1 would provide adequate emergency redundant capacity to the ENA, it would likely cause significantly more environmental impacts due to new construction in a new ROW; would likely be located in Very High Fire Hazard Severity Zones to a greater extent; would require longer construction, operation and maintenance durations; and would be more costly. Therefore, System Alternative 1 would not achieve most of the basic project objectives to the same extent as System Alternative 2.

System Alternative 2 (Reconstruct Two of the Three 66 kV Subtransmission Tie Lines Between the Goleta 66 kV Subtransmission System and the Santa Clara 66 kV Subtransmission System) would meet more of the basic project objectives than System Alternative 1. For example:

- System Alternative 2 would increase SCE's electrical capacity to the Goleta System in the event of loss of the Goleta-Santa Clara No. 1 220 kV Transmission Line and Goleta-Santa Clara No. 2 220 kV Transmission Line.
- System Alternative 2 would primarily use existing utility ROW, therefore resulting in fewer new environmental impacts as opposed to constructing in approximately 50 miles of new ROW (as required for System Alternative 1).
- System Alternative 2 would require a shorter construction schedule to complete than System Alternative 1. System Alternative 1 would require approximately 50 miles of new 220 kV transmission line construction in new ROW, compared to System Alternative 2, which would require reconstruction of approximately 30 miles of subtransmission line located primarily within existing ROW.
- System Alternative 2 is partially complete and therefore the remaining cost to complete the Project would be considerably lower than the cost to complete System Alternative 1.

Because System Alternative 2 would provide increased redundant capacity to the ENA, would generate fewer new environmental impacts, would be constructed primarily within existing utility ROW, would require a shorter construction schedule and would be less costly, System Alternative 2 would achieve most of the basic project objectives to the greatest extent.

System Alternative 3 (No Project Alternative) would not achieve the basic objectives for the Project. In particular:

- The No Project Alternative would leave the majority of the ENA customers at risk for potentially multiple-week outages.
- The No Project Alternative would not provide a greater level of reliability or operational flexibility.

Although it would cause no additional environmental impacts, the No Project Alternative would not achieve the Basic Objectives nor the purpose and need for the Project . Therefore, for the above stated reasons, System Alternative 2 would be the preferred system alternative for the Project.

2.0 Project Alternatives

CEQA and the CEQA Guidelines (Section 15126.6(a)) require that an environmental impact report describe a reasonable range of alternatives to a proposed project or the location of the proposed project that 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 Section 15126.6(d) requires that sufficient information about each alternative be included to allow meaningful evaluation and analysis.

For this Project, SCE began planning in 1998 and initiated construction of the Project in 1999 under the assumption that the Project was exempt from permitting pursuant to G.O. 131-D and the California Coastal Act. Because the Project involved just the reconstruction and replacement of existing 66 kV subtransmission lines, there was no need to evaluate route alternatives.

However, for the purposes of this application and at the request of the County of Santa Barbara, this analysis includes certain alternatives developed in consultation with the County. It should be noted that the CPUC will be the lead agency under CEQA as part of its PTC process, and the County of Santa Barbara will be a Responsible Agency under CEQA. It is anticipated that the County of Santa Barbara will use the CEQA document prepared by the CPUC when the county considers whether to issue a CDP. Given its role, the County requested SCE to consider relocating certain segments of the existing subtransmission line so that those segments would follow existing roadways.

To address Santa Barbara County's request, the following sections describe potential route alternatives and identify the most appropriate subtransmission line route. Undergrounding of Project components is also discussed as a route alternative but only for those sections of the subtransmission line element of the Project that have not yet been constructed.

2.1 Subtransmission Line Route Alternatives Considered

The Project involves the reconstruction of some portions of existing 66 kV subtransmission lines located between Santa Clara Substation and Carpinteria Substation. As discussed below, based on input from the County of Santa Barbara, three alternative route scenarios were considered.

2.1.1 Subtransmission Line Alternative 1, Reconstruction of Aboveground Facilities within Existing Utility ROW

Under Subtransmission Line Route Alternative 1, the existing 66 kV subtransmission lines between Santa Clara Substation and Carpinteria Substation would be reconstructed primarily in the existing utility ROW. The reconstruction would entail reconductoring of the lines and the construction of new structures to accommodate the higher-capacity conductor. Existing access roads and disturbed areas around pole replacement locations would be employed where available, and some additional spur roads and equipment pads would be constructed where necessary within existing ROWs or on lands covered under easements. Under Alternative 1, environmental impacts would be minimized because reconstruction work would primarily occur in previously disturbed areas where 66 kV subtransmission lines are already present, and because the footprint of the newly-installed subtransmission structures would approximate those of the existing infrastructure.

2.1.2 Subtransmission Line Route Alternative 2, Partial New Line Route

Subtransmission Line Route Alternative 2 would involve the reconstruction of a portion of the existing 66 kV subtransmission line generally located along the southern base of Shepard Mesa in southeastern Santa Barbara County, south of Shepard Mesa Drive and west of Rincon Road/State Route (SR) 150.

This alternative would relocate the subtransmission line to a location other than the existing utility ROW where the existing line is currently located (see Figure 2.1-1). The new line route would diverge from the existing route by following SR-192 from its junction with SR-150 in the east to the point where SR-192 and Shepard Mesa Road intersect in the west. This new line route could be installed on either the north or south side of SR-192; in either event, it would be longer than the route within SCE's existing ROW and would require a significantly larger scope of work. The existing distribution facilities that are presently located along SR-192 would be transferred to the new subtransmission poles if the new subtransmission line were installed on the south side of SR-192. If the new subtransmission line were installed on the north side of SR-192, the existing distribution facilities would remain in place, thus resulting in pole lines along both sides of the roadway. The existing distribution facilities and associated poles located in the existing ROW along the base of Shepard Mesa would remain under Alternative 2.

Had this alternative been included in the original scope of the Project when it commenced construction between 1999 and 2004, this alternative would have necessitated obtaining new easements/land rights from private landowners and Caltrans. The alternative would have required: (i) the removal of subtransmission conductor from existing wood subtransmission poles along the southern base of Shepard Mesa; (ii) the topping of those wood subtransmission poles (note that subtransmission poles that would have been topped along the base of Shepard Mesa would have remained in-place to continue carrying the existing distribution lines);[6] (iii) the development of new work areas along SR-192, including the removal of agricultural trees along the north side of SR-192 and/or native or protected trees along the south side of SR-192; (iv) installation of LWS poles

[6] Topping refers to SCE's common practice of removing the upper portion of a pole (thereby reducing its overall height) after the conductor or circuits installed on that portion of the pole are removed. The remaining lower portion of the pole would continue to support the distribution circuit or third party facilities.

and conductor along the new line route adjacent to SR-192 (which would necessitate the daily closure of at least one lane of SR-192 in the work area); (v) potential transfer of existing distribution lines along SR-192 to the new LWS poles (if the route is located along the southern side of SR-192); and (vi) potential removal of the existing distribution poles along SR-192 (if the route is located along the southern side of SR-192).

Were this alternative to be included in the current scope of the Project, this alternative would necessitate obtaining new easements/land rights from both private landowners and Caltrans. Given that LWS poles have already been installed along the southern base of Shepard Mesa, this alternative would require the following work today: (i) the topping of some existing wood subtransmission poles along the southern base of Shepard Mesa; (ii) the likely removal of all LWS poles along the southern base of Shepard Mesa and installation of new replacement wood distribution poles; (iii) the removal of subtransmission conductor from subtransmission poles along the southern base of Shepard Mesa; (iv) the transfer of distribution line and third-party facilities from subtransmission structures to distribution structures along the southern base of Shepard Mesa; (v) the development of new work pads along SR-192, including the removal of agricultural trees and/or native or protected trees; (vi) installation of LWS poles and conductor along the new line route adjacent to SR-192 (which would necessitate the daily closure of at least one lane of SR-192 in the work area); (vii) potential transfer of existing distribution lines to the new LWS poles (if the route is located along the southern side of SR-192); and (viii) potential removal of the existing distribution poles along the southern base of Shepard Mesa (if the route is located along the southern side of SR-192).

Had this alternative been included in the original scope of the Project, this alternative would have resulted in greater land disturbance as a result of the need to develop new access for construction equipment and crane pads along either the north or south side of SR-192 for installation of LWS poles. In addition, this alternative would have resulted in minor disturbance associated with preparing the existing access road along the southern base of Shepard Mesa so that equipment could access and top the subtransmission poles and remove the subtransmission conductor. Additional environmental impacts would have been caused by the installation of a greater number of subtransmission poles and guy poles along the alternative route adjacent to SR-192. These additional environmental impacts would have included:

- Aesthetics: New aesthetic impacts associated with the placement of subtransmission structures and conductor in new locations that are more directly visible by a greater number of the public than the existing route. Minor positive aesthetic impacts could have been realized by a small number of residents of Shepard Mesa
- Agricultural Resources: Potential additional impacts in the form of removal of trees for pole installation along the north side of SR-192
- Air Quality and Greenhouse Gases: Potential increases in air pollutant and greenhouse gas emissions from the installation of a greater number of LWS poles and stringing of a longer length of conductor

- Biological Resources: Removal/trimming of native and/or protected trees if the line were routed along either the north or south side of SR-192
- Land Use: The need to acquire new land rights and coordinate with Caltrans for placing new subtransmission poles in a State highway ROW
- Noise: Increased number of sensitive receptors potentially affected by construction noise
- Traffic and Transportation: Impacts to local traffic flow along SR-192 south of the Shepard Mesa area during construction, as pole and conductor installation would require daily lane closures in the work area

Were this alternative to be included in the current scope of the Project, it likely would result in all of the additional impacts described above, as well as additional air quality and greenhouse gas impacts associated with removing all existing 66 kV LWS poles along the southern edge of Shepard Mesa, installing new distribution poles where LWS poles would be removed, removing subtransmission conductor, and transferring distribution lines.

Locating the 66 kV subtransmission facilities in an area other than the existing utility ROW would require construction in a newly defined route resulting in the potential for greater land use, biological, cultural, and other environmental impacts due to new disturbances. Any alternative route outside of the existing utility ROW would result in greater environmental impacts than the current Project route; therefore, this alternative was eliminated from further consideration in this document.

2.1.3 Subtransmission Line Route Alternative 3, Undergrounding

Subtransmission Line Route Alternative 3 would involve placing underground (a process known as 'undergrounding') all of the Project's overhead 66 kV subtransmission lines that have not yet been reconstructed. Whereas the Project as designed and proposed consists of the replacement of existing overhead infrastructure with new overhead infrastructure capable of supporting new conductor, an underground alternative would result in a significant change in the scope of the Project, and would result in greater potential environmental impacts, including:

- Aesthetics: Undergrounding would result in minor positive effects from the removal of some aboveground subtransmission structures; however, some subtransmission and distribution structures and lines, and third-party structures and lines, not associated with the Project would remain in-place
- Agricultural Resources: Undergrounding may necessitate the removal of agricultural resources within the ROW
- Air Quality and Greenhouse Gases: Undergrounding would likely result in greater air pollutant and greenhouse gas emissions due in part to the longer construction timeframe associated with undergrounding activities including additional excavation
- Biological Resources: Undergrounding may require the removal of native and/or protected trees within the ROW

- Cultural Resources: Undergrounding disturbs larger areas of land than overhead construction, thus increasing the chances of disturbing unidentified cultural resources
- Hydrology and Water Quality: Undergrounding disturbs larger areas of land, increasing the potential for hydrology and surface water quality impacts resulting from extensive soil disturbance and vegetation removal
- Noise: Sensitive receptors along the route would be potentially affected for a longer period of time due to the longer timeframe and additional equipment associated with underground construction activities

Undergrounding would be technically challenging due to the physical environment in the vicinity of the Project. For example, some portions of the 66 kV subtransmission line route traverse areas with steep slopes and grades, rocky terrain, and numerous intermittent or perennial streams. Underground construction in these areas would be challenging and much more costly when compared to aboveground construction given the diverse terrain. In fact, these areas are currently spanned by overhead conductor.

Undergrounding also presents operational and maintenance-related challenges. While underground lines are typically not subject to certain natural phenomena that can cause the failure of aboveground lines (such as windstorms and wildfires), they are not immune to failure as a function of natural events (such as flooding, landslides, earthquakes, and uprooted trees). In addition, while damage or failures on overhead lines are typically easy to identify, underground lines require additional time to investigate, locate and repair problems, likely resulting in longer service interruption periods than those typically experienced with overhead lines. As a result, reliability could be decreased.

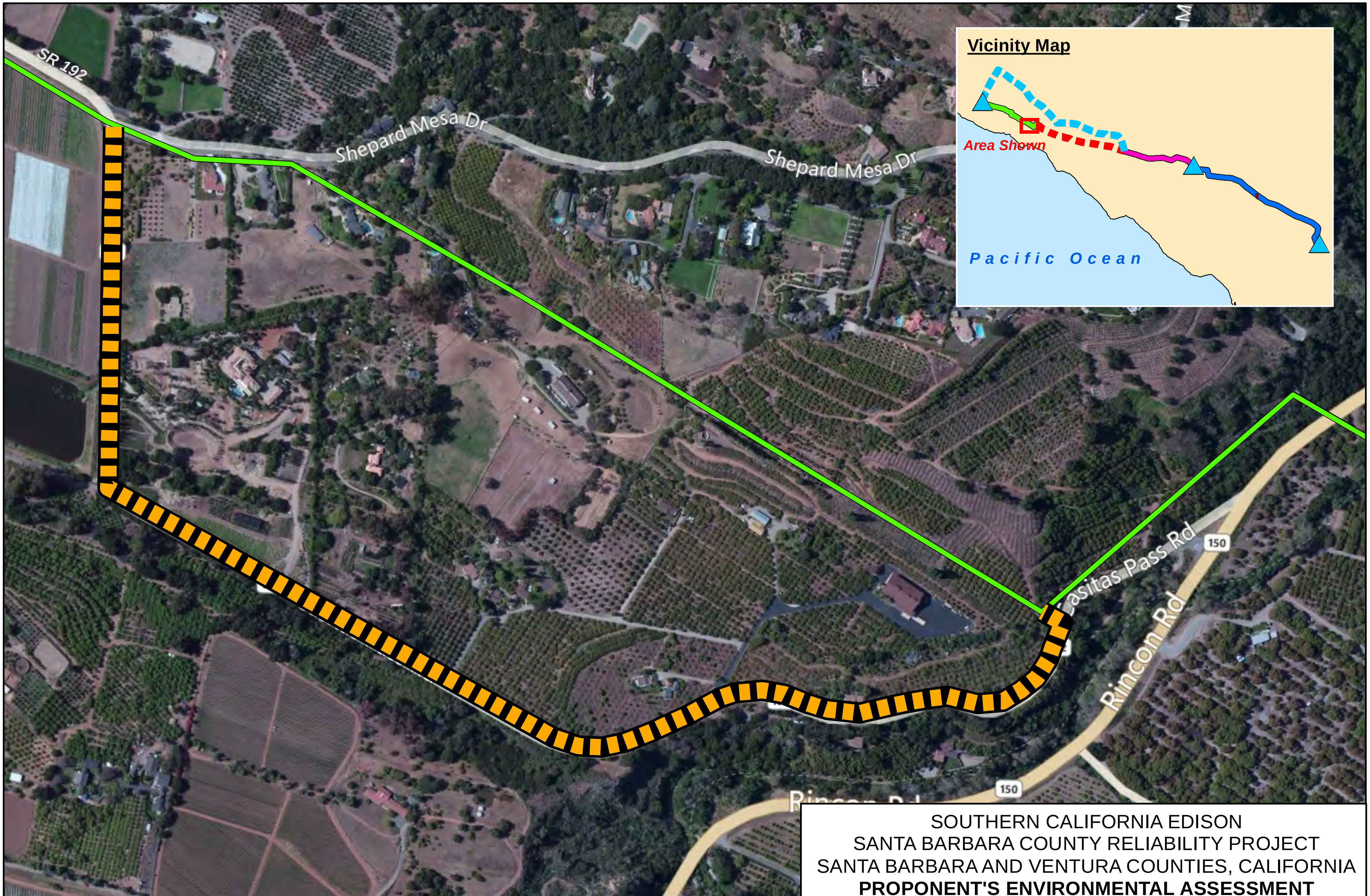
Many of the existing SCE easements permit only overhead infrastructure; therefore undergrounding would require the acquisition of new and/or upgraded easement rights. Additionally, without extensive engineering and other technical studies, it is difficult to determine whether the existing route could accommodate the placement of underground 66 kV lines and the associated construction, operations and maintenance activities. As a result, it is not possible at this time to rule out the potential need to identify and acquire a new ROW for an underground alternative. Such a change in Project scope would result in additional disturbance and potential environmental impacts.

For these reasons, the underground alternative has been eliminated from further consideration in this document.

2.2 Subtransmission Line Route Recommendation

Alternatives 1, 2 and 3 all meet the Purpose and Need for the Project. However, only Subtransmission Line Route Alternative 1 would most completely achieve the basic objectives for the Project. In addition, Subtransmission Line Route Alternative 2 and Subtransmission Line Route Alternative 3 both would likely result in additional environmental impacts compared to Subtransmission Line Route Alternative 1 and likely would be more costly to construct than Subtransmission Line Route Alternative 1.

Additionally, Subtransmission Line Route Alternative 2 would not use the existing ROW, and therefore would require the acquisition of a new ROW. Reconstructing the existing lines primarily within the existing ROW, as proposed by Subtransmission Line Route Alternative 1, is consistent with the policy of the CPUC, as reflected in the Garamendi Principles (SB 2431, Chapter 1457, Statutes of 1988, Garamendi), to encourage use of existing ROWs. Locating electric facilities in the same ROW maximizes the use of property already used for utility purposes and minimizes the potential environmental impacts. Therefore, Subtransmission Line Route Alternative 1 would meet the Purpose and Need and all basic objectives of the Project, and would result in the least potential environmental impacts of all the alternatives. For those reasons, Subtransmission Line Route Alternative 1 has been carried through for evaluation in this document. No alternatives for the Project are further considered in this PEA.



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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

ALTERNATIVE 2
PARTIAL LINE ROUTE

Segment 3A

Segment 3A Alternative

Partial Line Route Alternative

0 0.05 0.1 0.2 Miles

N

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Figure
2.1-1

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3.0 Project Description

This section provides a detailed description of SCE's Santa Barbara County Reliability Project (the Project). The Project would occur in the area generally between the City of San Buenaventura (Ventura) and the City of Carpinteria (Figure 3.0-1). The Project has been divided into discrete geographic segments to facilitate discussions in this PEA:

- Segment 1 spans from Santa Clara Substation in the east to Casitas Substation in the west.
- Segment 2 spans from Casitas Substation in the east to the 'Y' in the west. The 'Y' is the point along the corridor where Segments 2, 3B, and 4 converge; it is located near Casitas Pass.
- Segment 3A spans from Carpinteria Substation in the west to the Santa Barbara County/Ventura County border in the east.
- Segment 3B spans from the Santa Barbara County/Ventura County border in the west to the 'Y' in the east.
- Segment 4 spans from the 'Y' in the east to Carpinteria Substation in the west.
- The 'Getty Tap,' discussed below, is located approximately in the middle of Segment 1.

The Project includes the following activities:

- Reconstruct existing 66 kilovolt (kV) subtransmission facilities primarily within existing utility rights-of-way (ROW) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County.
- Install marker balls on overhead wire where determined to be necessary.
- Modify subtransmission and substation equipment within the existing Carpinteria Substation, Casitas Substation, and Santa Clara Substation.
- Replace line protection relays within existing substation equipment rooms or cabinets at Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation.
- Install telecommunications facilities to connect the Project to SCE's existing telecommunications system for the protection, monitoring and control of subtransmission and substation equipment. Install new telecommunications facilities along Segments 1, 2, and 4 and at Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation.
- Transfer distribution lines (and third-party infrastructure as necessary) to subtransmission structures along Segment 3A.
- Remove subtransmission infrastructure in Segments 1 and 2.

The components of the Project are displayed on Figure 3.0-1. As discussed in Chapter 1, SCE commenced construction of the Project in 1999; between 1999 and 2004, the following portions of the Project were constructed:

- Some substation modifications were completed at Carpinteria Substation, Goleta Substation, Isla Vista Substation, Ortega Substation, and Santa Clara Substation

- New subtransmission structures and 66 kV conductor were installed in Segment 1 from Santa Clara Substation to Casitas Substation, and existing 66 kV conductor was removed
- New subtransmission structures and 66 kV conductor were installed in Segment 2 from Casitas Substation to the ‘Y’ located near Casitas Pass just west of Lake Casitas in Ventura County, and existing 66 kV conductor was removed
- New subtransmission structures and 66 kV conductor were installed in Segment 3A from Carpinteria Substation to the Santa Barbara/Ventura County line, and existing wood subtransmission structures were removed or topped [7]
- Subtransmission structures in Segments 1 and 2 were partially removed
- Two footings for tubular steel poles (TSPs), two lightweight steel (LWS) H-frames, one LWS pole, and two switches at the Getty Tap location were installed, and two wood H-frames and one wood pole were removed

To provide a comprehensive understanding of the Project, all components of the Project are described in this Chapter. The description of the components previously constructed is provided in summary form and drawn from construction and engineering documents and discussions with construction and management personnel involved with the work. The description for work yet to be conducted is based on engineering documents. Exact details would be determined following identification of field conditions; availability of labor, material, and equipment; and compliance with applicable environmental and permitting requirements.

3.1 Project Components

3.1.1 Substations

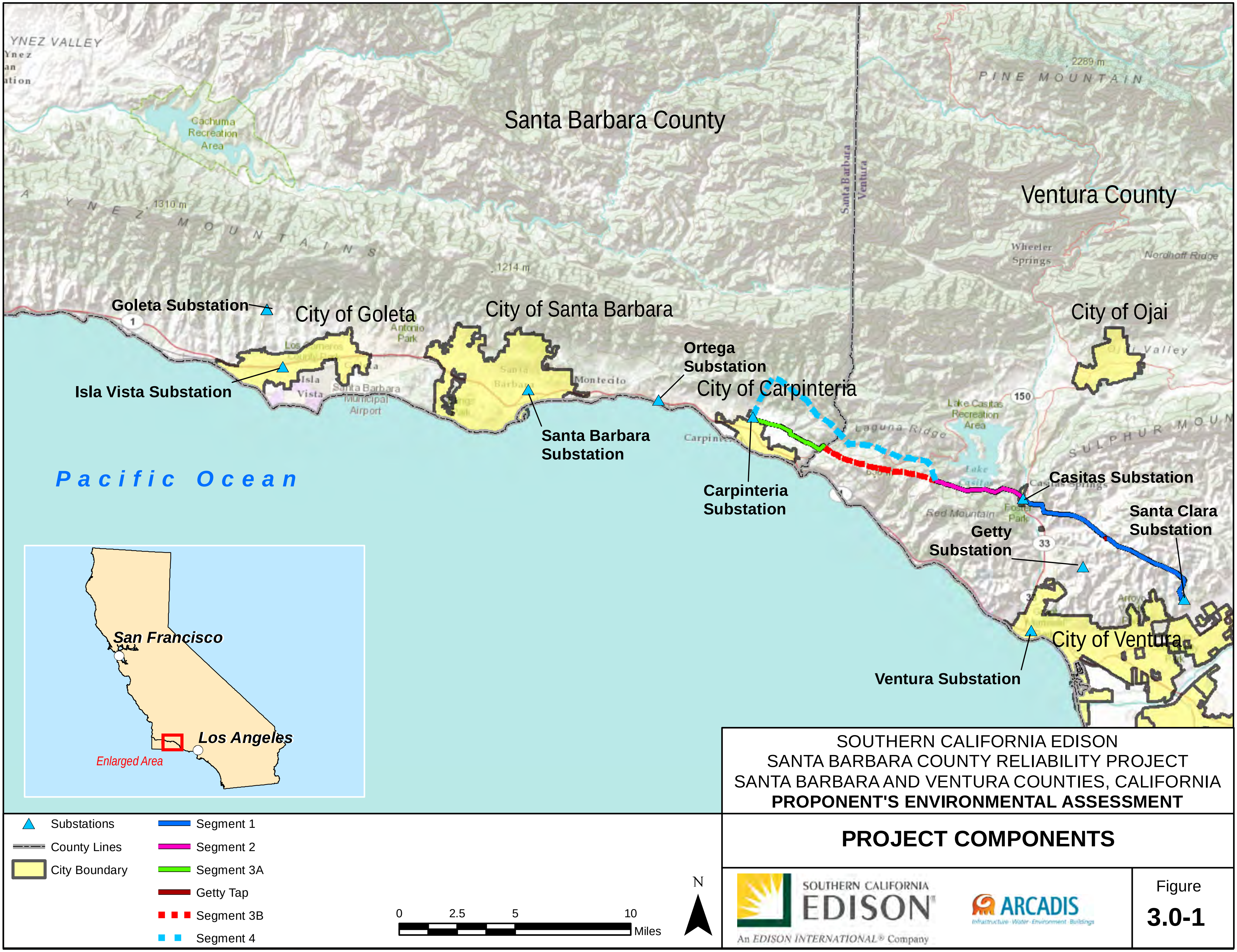
There are no new substations proposed as part of this Project. Modifications to existing substations described below in the following sections are being performed to accommodate the reconductoring of subtransmission lines between Santa Clara Substation, Casitas Substation, and Carpinteria Substation (Figures 3.1-1a, b, and c).

3.1.1.1 Modifications to Existing Substations

The Project includes work to be conducted at seven existing substations, including two 220/66 kV substations (Goleta Substation and Santa Clara Substation) and five 66/16 kV substations (Carpinteria Substation, Casitas Substation, Getty Substation, Ortega Substation, and Santa Barbara Substation).[8]

[7] As discussed in Chapter 1, the majority of work in Segment 3A has been completed. Because this work was retroactively determined to require a Coastal Development Permit, the environmental impacts of this completed work are assessed in Chapter 4 of this PEA.

[8] Note: Work will also be conducted at Ventura Substation as part of the telecommunications system. Such work would be conducted within the existing Mechanical Electrical Equipment Room (MEER); this work is described in Section 3.1.3.



SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PROJECT COMPONENTS

Figure **3.0-1**

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MAP SOURCE: http://server.arcgisonline.com/arcgis/services

0 200 400 Feet

GRAPHIC SCALE

SOUTHERN CALIFORNIA EDISON
CARPINTERIA SUBSTATION PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA

PROPONENT'S ENVIRONMENTAL ASSESSMENT

EXISTING CARPINTERIA SUBSTATION AREA

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FIGURE
3.1-1a

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0 200 400 Feet

GRAPHIC SCALE

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SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA

PROPONENT'S ENVIRONMENTAL ASSESSMENT

EXISTING CASITAS SUBSTATION AREA

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FIGURE
3.1-1b

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MAP SOURCE: http://server.arcgisonline.com/arcgis/services

0 200 400
Feet
GRAPHIC SCALE

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

EXISTING SANTA CLARA SUBSTATION AREA

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FIGURE 3.1-1c

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All substation-related work at the substations would be conducted within the existing substation walls or fence lines; subtransmission- and telecommunications-related work at the substations may require work outside the substation walls or fence lines. Regardless of the location of the work, the substation footprints or exterior dimensions of the substations would not be expanded as part of the Project.

SCE considers the California Building Code and the Institute of Electrical and Electronic Engineers (IEEE) 693, Recommended Practices for Seismic Design of substations when designing substation structures and equipment.

Figures 3.1-1a, b, and c show the dimensions of the fence lines surrounding each substation. Improvements to the existing substations are described below.

Carpinteria Substation

Work at Carpinteria Substation would occur on the 66 kV switchrack and within the MEER. Work within the MEER is discussed below in Section 3.1.3, Telecommunications.

The 66 kV operating bus at Carpinteria Substation currently has six positions and the transfer bus has five positions. The 66 kV transfer bus would be extended by one position to create a new line position. The capacity of the 66 kV operating and transfer buses would be increased by installing 1590 aluminum conductor steel-reinforced (ACSR) (see Section 3.1.4 below). To accomplish this, the following actions would be taken:

- All existing porcelain insulators on the 66 kV switchrack would be removed and replaced with polymer-type insulators.
- Three surge arresters would be installed on the 66 kV operating bus, and three surge arresters would be installed on the transfer bus.
- New group-operated disconnects would be installed at one new and four existing positions.
- Five new circuit breakers would be installed.
- New potential transformers (PTs) would be installed at one new and three existing line positions.
- New surge arresters would be installed at four positions.
- New protection equipment would be installed for four line and bus tie positions.

Following the modification to the 66 kV switchrack, the subtransmission lines routed into and out of the substation would be upgraded from 653 ACSR to 954 Stranded Aluminum Conductor (SAC). Approximately 1,100 feet of 653 ACSR would be removed, and 1,200 feet of 954 SAC would be installed. In addition, a 66 kV station switch and three subtransmission line switches located within the substation would be removed.

Casitas Substation

Work at Casitas Substation would occur on the 66 kV switchrack and within the MEER. Work within the MEER is discussed below in Section 3.1.3, Telecommunications.

The 66 kV switchrack currently has five positions; the following actions would be taken as part of the Project:

- Twelve surge arresters would be installed; three on each operating and transfer bus and three on each line position.
- New group-operated disconnects would be installed at one position.
- New protection equipment would be installed for two line positions.

Following the modifications to the 66 kV positions, both 66 kV subtransmission lines that enter the substation would be routed through new underground conduit to the switchrack, and the overhead conductor would be removed.

Santa Clara Substation

Santa Clara Substation contains both 220 kV and 66 kV equipment; the Project would involve only modifications to the 66 kV equipment. Work at Santa Clara Substation would occur on the 66 kV switchrack and within the communications room. Work within the communications room is discussed below in Section 3.1.3, Telecommunications.

The two 66 kV operating buses at Santa Clara Substation currently have 30 positions. The following work would be conducted at three positions as part of the Project:

- Six new PTs would be installed; a set of two PTs for three line positions.
- New protection equipment would be installed for three line positions.
- Circuit breakers, group-operated disconnects, other associated equipment, and 200 feet of 2/0 bare copper conductor would be removed from one position.

Following the upgrades to the 66 kV positions, subtransmission lines would be retired, removed, and/or reconfigured.

Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation

Work at the Getty Substation, Goleta Substation, Ortega Substation, and Santa Barbara Substation would include the installation of upgraded line protection relay equipment within existing substation equipment rooms or cabinets on the substation sites.

3.1.1.2 Substation Access

Access to the existing substations would not be modified as part of the Project.

3.1.1.3 Substation Parking Area

Parking at the existing substations would not be modified as part of the Project.

3.1.1.4 Substation Grading

No grading at existing substations would be required to accomplish the substation upgrades discussed in this section.

3.1.1.5 Substation Drainage

Drainage at the existing substations would not be modified as part of the Project.

3.1.1.6 Ground Surface Improvements

No ground surface improvements would be required to accomplish the substation upgrades discussed in this section.

3.1.1.7 Substation Lighting

Lighting at the existing substations would not be modified as part of the Project except for lighting at Carpinteria Substation. On-demand task lighting would be installed when the 66 kV switchrack is extended; this lighting would be similar in design to lighting already installed on the switchrack at Carpinteria Substation.

3.1.1.8 Substation Perimeter

There would be no permanent modifications to walls or fencing at the existing substations as part of the Project.

3.1.2 66 kV Subtransmission Line Description

3.1.2.1 Overview

The Project would include the reconstruction of existing 66 kV subtransmission line elements within existing SCE ROWs. The proposed subtransmission line elements have been subdivided into six geographically-defined Segments to facilitate California Environmental Quality Act (CEQA) analysis. These Segments are identified on Figure 3.0-1 and described below. Figure 3.1-2 identifies existing transmission and subtransmission lines located in the vicinity of these segments.

3.1.2.2 Segment 1

Segment 1 originates at Santa Clara Substation and terminates at Casitas Substation; the Getty Tap is located in Segment 1, but is discussed in a separate section below. The linear length of Segment 1 is approximately 9 miles. Between 1999 and 2004, 40 lattice steel towers (LSTs) and one wood H-frame structure were replaced with 37 TSPs and three LSTs (although some foundation material for the previous LSTs was not removed and remains in place), and two new 66 kV subtransmission lines of approximately 47,500 feet of 954 ACSR each were installed. Construction work in Segment 1 is largely complete; however, the following work would be conducted as part of the Project:

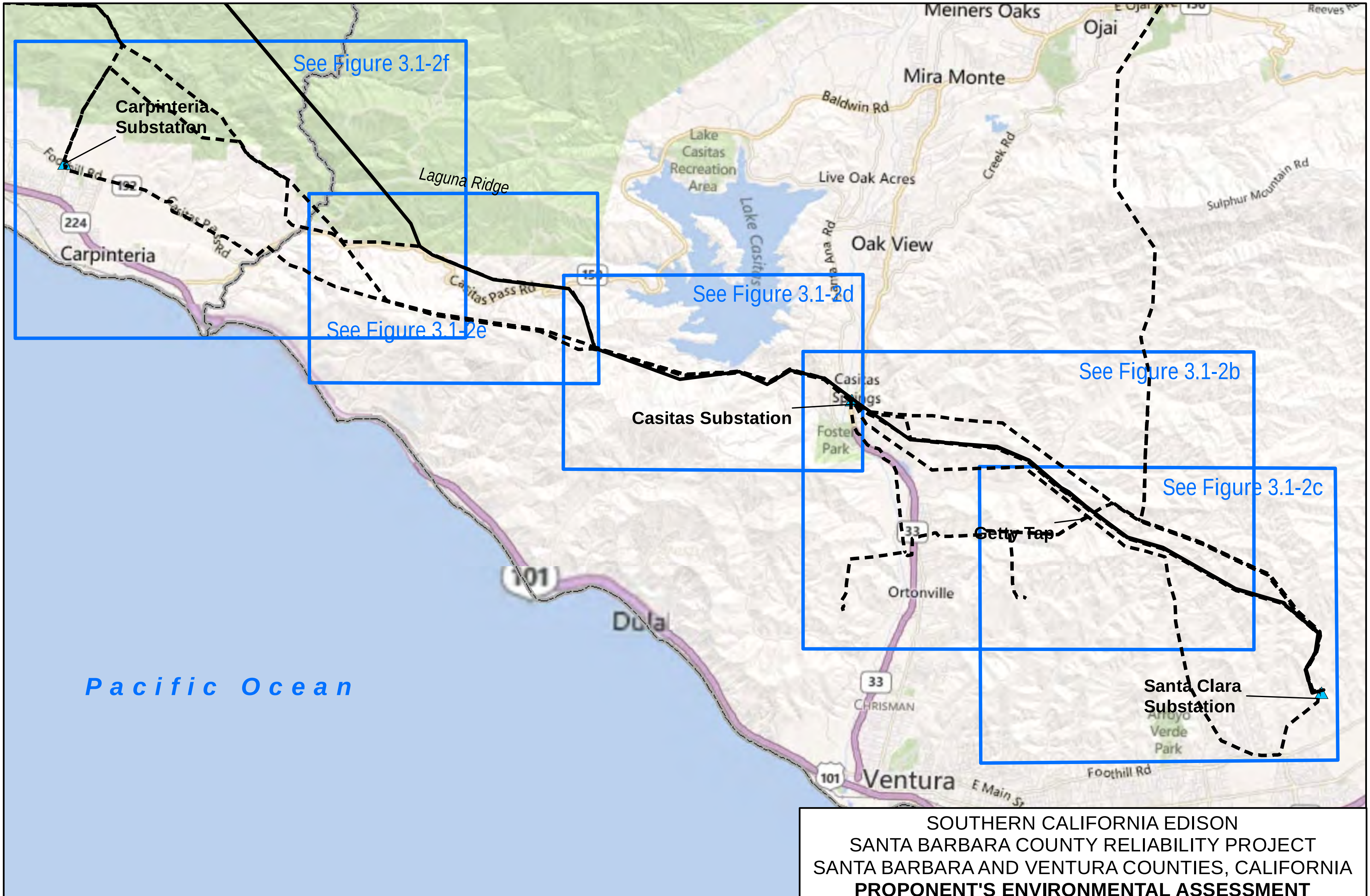
- Most structures installed in Segment 1 were built to accommodate the attachment of telecommunications cable. However, one TSP would be retrofitted to accommodate telecommunications cable. In addition, new fittings to accommodate the telecommunications cable would be installed on the three newly installed LSTs.
- Automation equipment would be installed on one switch currently existing on a TSP.
- One pole switch would be replaced on a single wood pole.
- Approximately 40 LST foundations would be removed to approximately 2 feet below grade; foundations would not be removed if removal would result in erosion concerns or if requested by the landowner.
- Marker balls would be installed on overhead wire where determined to be necessary.

3.1.2.3 Segment 2

Segment 2 originates at Casitas Substation and terminates at the 'Y', which is located south-southwest of Lake Casitas near Casitas Pass. The linear length of Segment 2 is approximately 4.1 miles. Between 1999 and 2004, 20 LSTs were replaced with 16 TSPs and two new LSTs. Approximately 21,500 feet of 954 ACSR was installed, and old conductor was removed. Some foundation material for the 20 LSTs was not removed and remains in place.

Construction work in Segment 2 is largely complete. The following work would be conducted as part of the Project:

- Automation equipment would be installed on one switch currently existing on a TSP.
- New fittings to accommodate telecommunications cable would be installed on one LST.
- Approximately 20 LST tower foundations would be removed to approximately 2 feet below grade; foundations would not be removed if removal would result in erosion concerns or if requested by the landowner.
- Marker balls would be installed on overhead wire where determined to be necessary.



Substations
66 kV Subtransmission Lines
Goleta-Santa Clara No. 1&2 220 kV Transmission Line
County Lines
Sheet Index

0 1 2 4 Miles

N

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TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: INDEX

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Infrastructure · Water · Environment · Buildings

Figure
3.1-2a

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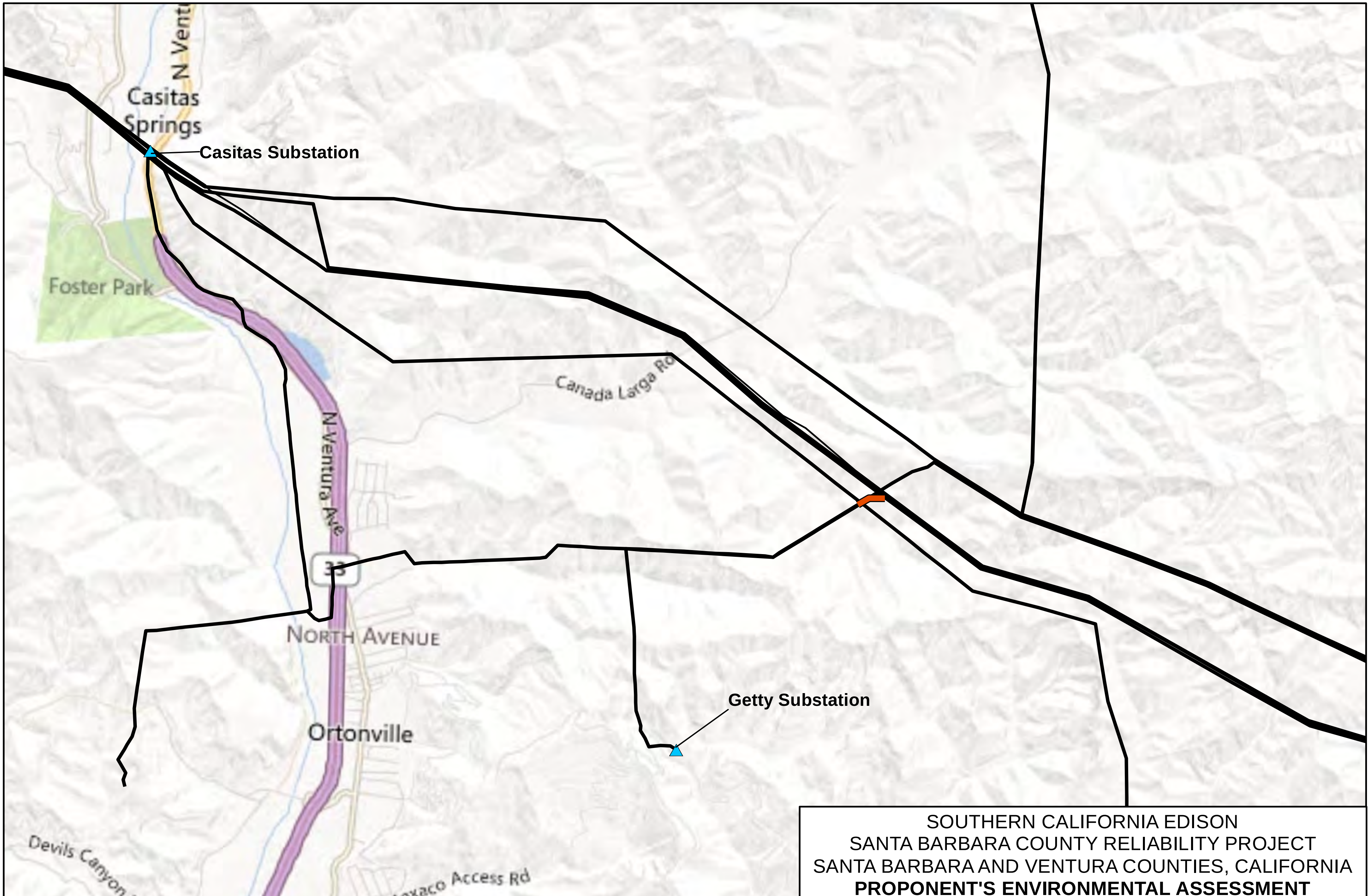

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TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SEGMENT 1, GETTY TAP LOCATION TO CASITAS SUBSTATION

- Substations
- Getty Tap
- 66 kV Subtransmission Lines
- Goleta-Santa Clara No. 1&2 220 kV Transmission Line
- County Lines

0 0.25 0.5 1 Miles

N

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Figure
3.1-2b

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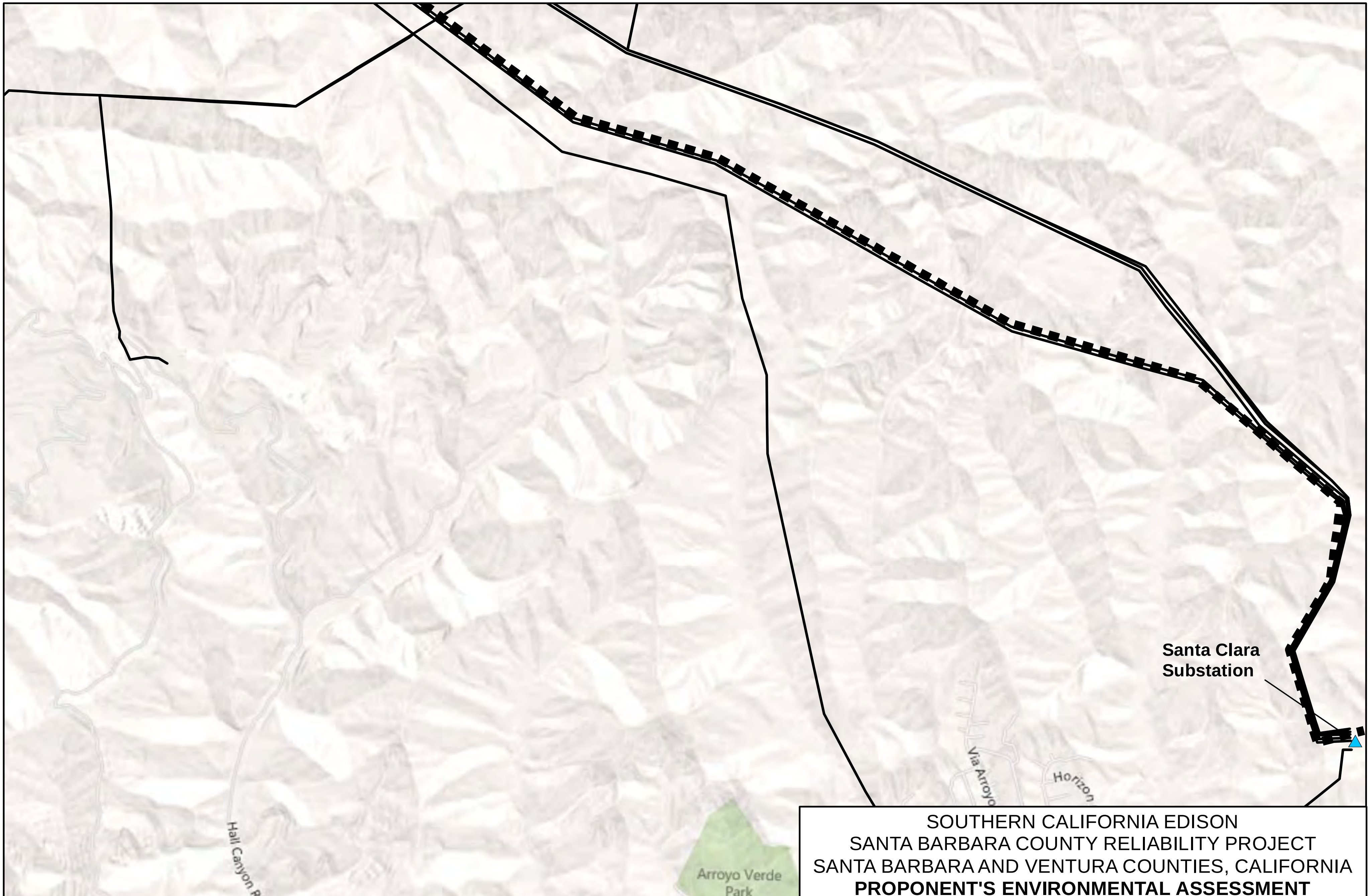

Substations

Goleta-Santa Clara No. 1&2 220 kV Transmission Line

66 kV Subtransmission Lines

0 0.25 0.5 1 Miles

N

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TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SEGMENT 1, SANTA CLARA SUBSTATION TO GETTY TAP LOCATION

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Figure
3.1-2c

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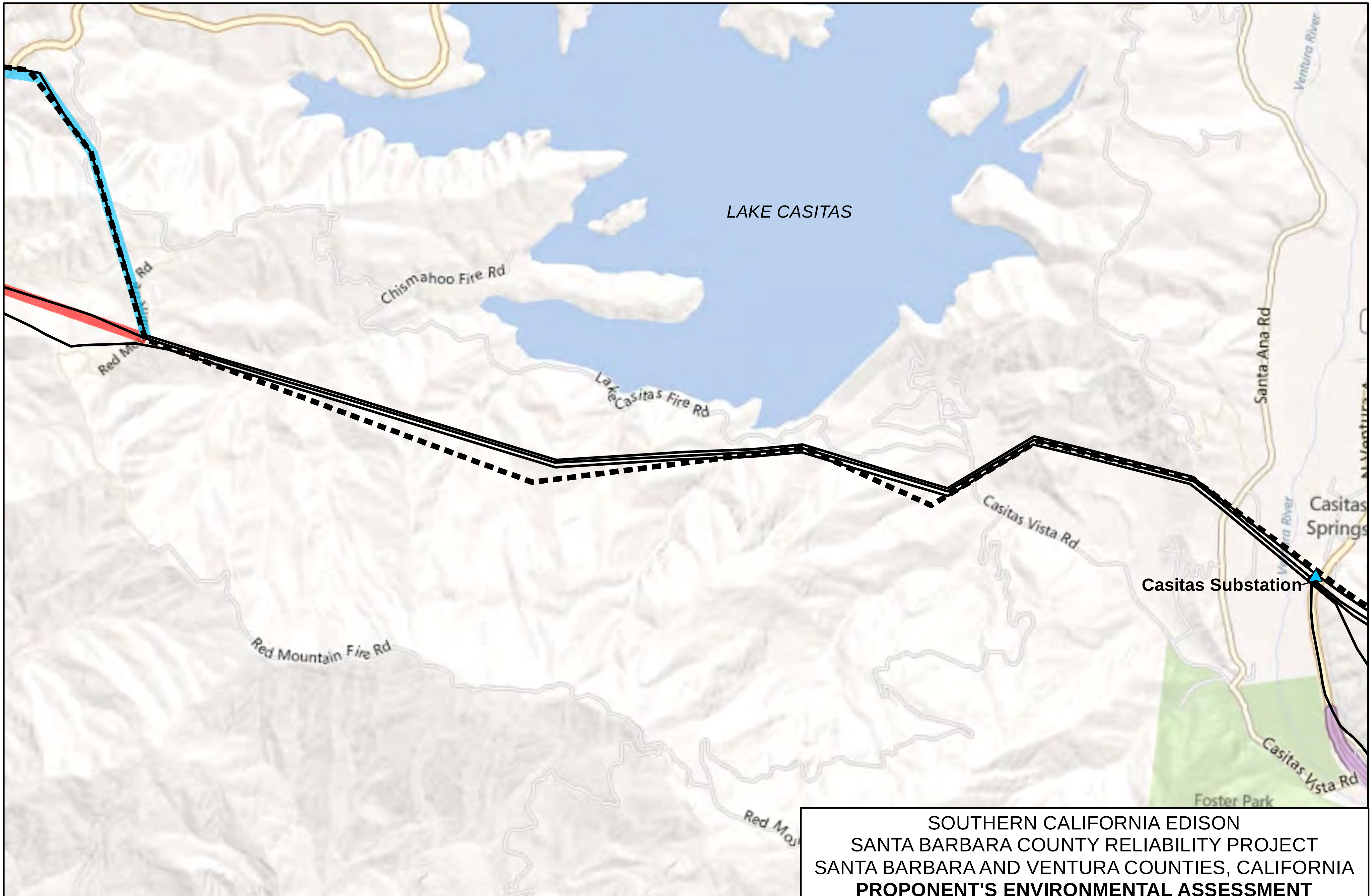

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Substations
Goleta-Santa Clara No. 1&2 220 kV Transmission Line
66 kV Subtransmission Lines
County Lines
Segment 3B
Segment 4

0 0.25 0.5 1 Miles

N

TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SEGMENT 2

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Figure
3.1-2d

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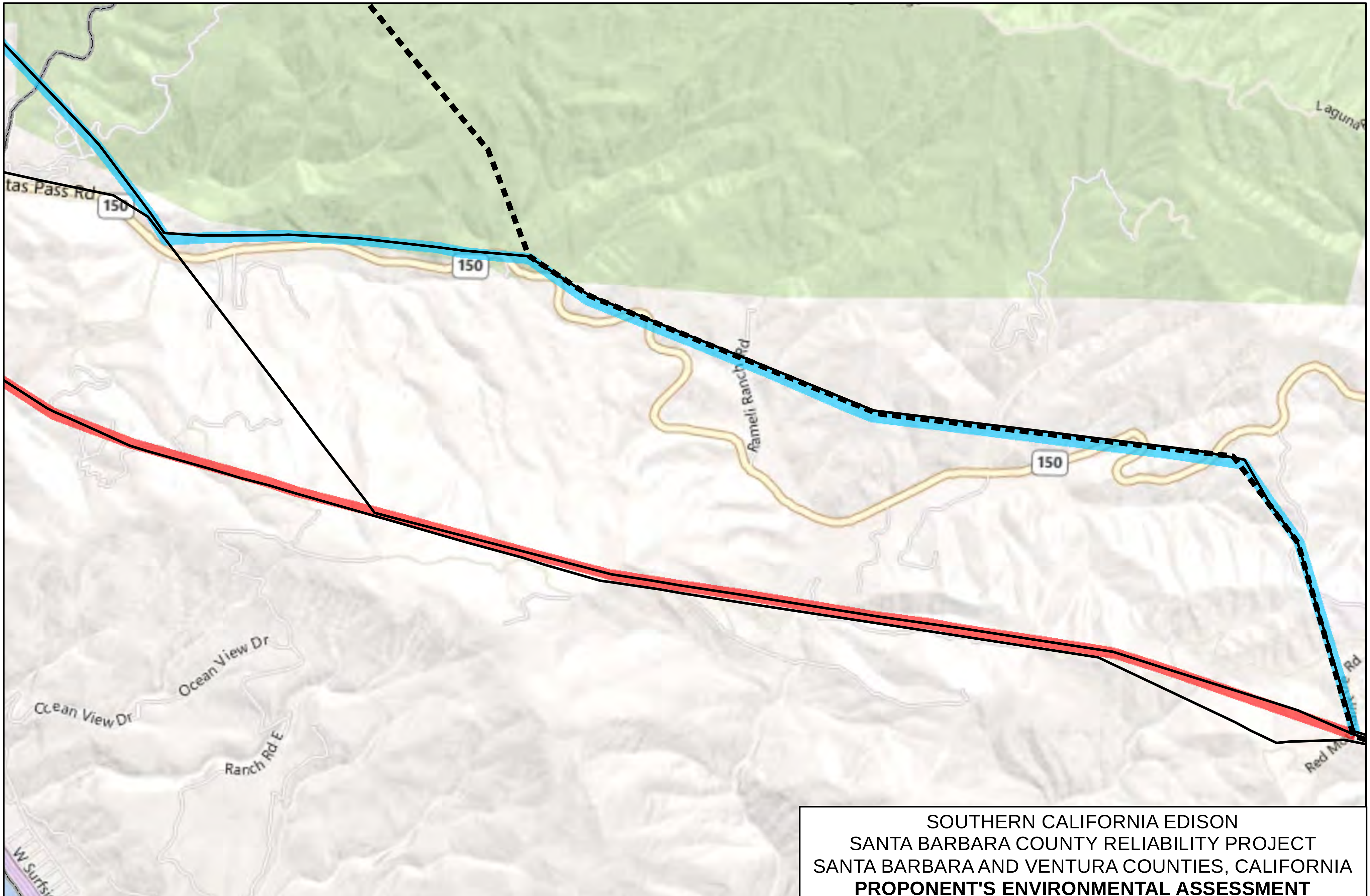

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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SEGMENT 3B AND EASTERN PORTION OF SEGMENT 4

Substations
Goleta-Santa Clara No. 1&2 220 kV Transmission Line
66 kV Subtransmission Lines
County Lines
Segment 3B
Segment 4

0 0.25 0.5 1 Miles

N

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Figure
3.1-2e

ARCADIS: SCE_093, 09/05/12, R02

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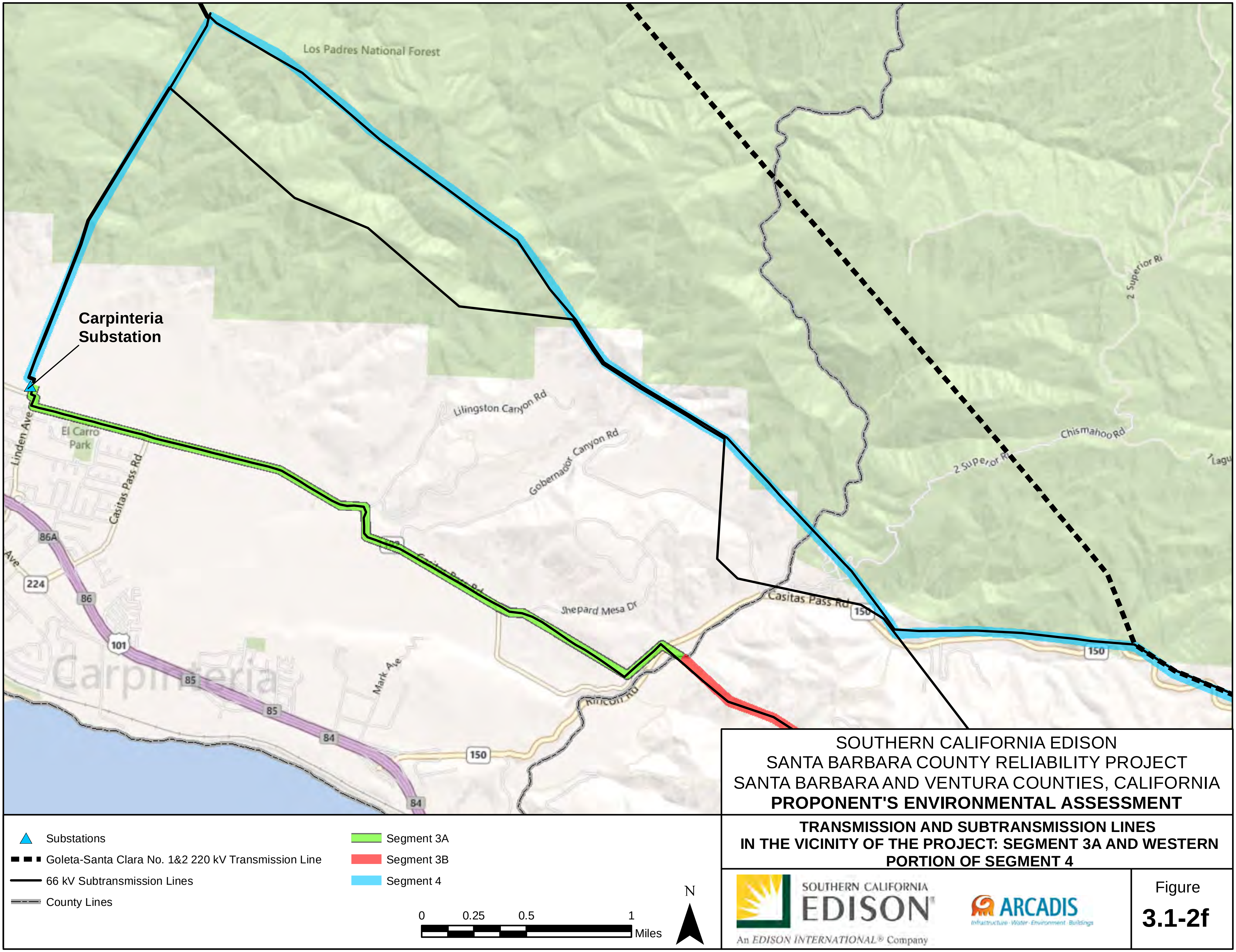

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TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SEGMENT 3A AND WESTERN PORTION OF SEGMENT 4

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Figure
3.1-2f

ARCADIS: SCE_094, 09/05/12, R02

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3.1.2.4 Segment 3A

Segment 3A originates at Carpinteria Substation and terminates at the border of Santa Barbara County and Ventura County. The linear length of Segment 3A is approximately 3.7 miles; the conductor spans in Segment 3A range from 105 to 425 feet in length. The following work was conducted within Segment 3A:

1. Approximately 32 existing wood poles along Segment 3A were not replaced; the condition of these poles was determined to be sufficient to support the new conductor, and the only work conducted on these poles was the installation of new conductor.

2. Forty-nine new LWS poles were installed to support the reconductoring. These new LWS poles took the place of approximately 49 wood subtransmission poles that previously supported 66 kV facilities. Work on these poles included the installation of new conductor and the transfer of distribution circuits.[9]

3. With respect to the pre-existing 49 wood subtransmission poles, some of these 49 wood subtransmission poles were removed entirely, and approximately 15 other wood poles were 'topped' by removing the upper portion of the pole, thus leaving shorter poles in place on which 16 kV distribution circuits and third-party telecommunications facilities remain.

4. Approximately 19,500 feet of single-circuit 954 SAC was installed to replace existing conductor.

5. One TSP was installed at the eastern terminus of Segment 3A; this TSP replaced an existing wood pole.

6. Approximately five wood guy stubs with heights between 20 and 30 feet were replaced with five new wood guy stubs with heights between 25 and 40 feet.

To complete the Project work in Segment 3A, the existing 16 kV distribution circuits and third-party telecommunications facilities that are collocated on the topped wood 66 kV subtransmission poles would be relocated to the LWS poles, and approximately 2.3 miles of fault return conductor (FRC) would be installed on LWS poles. In addition, the 15 previously topped subtransmission wood poles would be removed or relinquished:

1. Six poles contain distribution circuits that would be transferred to LWS poles prior to removal of the topped subtransmission wood poles.

2. Five poles contain third-party facilities that would be transferred by SCE or the third-party owner and the topped subtransmission wood poles would be removed or relinquished.

3. Four poles contain no equipment.

---

[9] Note: The wood subtransmission poles were replaced because it was determined they were unable to accommodate the new conductor due to their physical condition or pole loading considerations.

3.1.2.5 Segment 3B

Segment 3B originates at the Santa Barbara County/Ventura County line and terminates at the 'Y'. The linear length of Segment 3B is approximately 5.2 miles. Approximately 31 LSTs would be replaced with approximately 21 TSPs and one LWS pole, and approximately 27,500 feet of single-circuit 954 ASCR would be installed and existing conductor removed. A short (~2,500-foot) section of Segment 3B would be moved from the current alignment and constructed in new ROW. The superstructure of existing LSTs replaced as part of the Project would be removed, and the foundations removed to 2 feet below ground surface; foundations would not be removed if removal would result in erosion concerns or if requested by the landowner. Marker balls would be installed on overhead wire where determined to be necessary. The conductor spans between structures along Segment 3B range from 250 to 2,500 feet in length.

3.1.2.6 Segment 4

Segment 4 originates at the 'Y' and terminates at Carpinteria Substation. Approximately 70 LSTs, one wood H-frame, and seven wood poles would be replaced with approximately 63 TSPs and one LWS pole. The linear length of Segment 4 is approximately 10.8 miles. Approximately 57,000 feet of double-circuit 954 ACSR would be installed and existing conductor removed. In addition, two pole switches would be removed. The existing LSTs, H-frame structures and wood poles along Segment 4 that are part of the Project would be removed.[10] The superstructure of existing LSTs replaced as part of the Project would be removed, and the foundations removed to 2 feet below ground surface; foundations would not be removed if removal would result in erosion concerns or if requested by the landowner. All TSPs would be constructed to accommodate telecommunications cable. Marker balls would be installed on overhead wire where determined to be necessary. The conductor spans between structures along Segment 4 range from 110 to 1,800 feet in length.

3.1.2.7 Getty Tap

The Getty Tap is located approximately in the middle of Segment 1. In order to continue service to Getty Substation, the Getty Tap would be installed to connect conductor currently part of the existing (and soon-to-be-retired) Santa Clara-Getty 66 kV Subtransmission Line to the new Santa Clara-Carpinteria-Getty 66 kV Subtransmission Line (see Figure 3.1-3).

Between 1999 and 2004, two footings for TSPs, two LWS H-frames, and one LWS pole were installed. In addition, two switches were installed, and two wood H-frames and one wood pole were removed.

[10] Note: As shown in Figure 3.1-2, Segment 4 contains one set of transmission structures and three sets of subtransmission structures. The Project involves only the replacement of one set of subtransmission structures and the removal and replacement of conductor on those structures. The other two sets of transmission and subtransmission structures would be untouched by the Project.

The following work at the Getty Tap location would be conducted as part of the Project:

- Install two TSPs, three LWS poles, and four LWS H-frames
- Install three switches
- Remove two wood poles and four wood H-frames
- Install approximately 900 feet of 653 ACSR from the tap location to an existing 66 kV subtransmission line
- Remove approximately 200 feet of 2/0 bare copper conductor and 75 feet of 653 ACSR
- Install one switch and its automation equipment, and install and connect automation equipment for two existing pole switches
- Remove three switches.

3.1.2.8 Subtransmission Work at Carpinteria Substation

As presented in Section 3.1.1.1, 66 kV subtransmission conductor would be installed and realigned within Carpinteria Substation. To accommodate the conductor installation and realignment, three existing LSTs and two wood poles inside the substation fence line would be replaced with three TSPs; three switches would also be removed. Approximately 1,150 feet of 954 SAC would be routed overhead and connected to the 66 kV switchrack at Carpinteria Substation.

3.1.2.9 Subtransmission Work at Casitas Substation

As presented in Section 3.1.1.1, 66 kV subtransmission conductor would be installed and realigned within Casitas Substation. To accommodate this realignment, one TSP would be installed on the eastern portion of the substation property outside the substation fence. The new Santa Clara-Carpinteria-Casitas 66 kV Subtransmission Line and the existing Santa Clara-Casitas 66 kV Subtransmission Line would be attached to the new TSP and routed to the 66 kV switchrack. In addition, the idle Santa Clara-San Marcos 66 kV Subtransmission Line would be terminated on this structure. The TSP would function as a riser pole; subtransmission cable would be routed within the TSP, thus transitioning from an overhead to underground routing on the substation property. Two duct banks consisting of four 5-inch conduits each (a total of eight conduits) would be installed on SCE property both within and outside the substation fence from the base of the new TSP to the existing circuit breakers at two positions (Figure 3.1-4). A total of approximately 130 feet of duct in two duct banks would be installed. Each subtransmission cable would be placed in a conduit and then connected to the appropriate 66 kV position.

3.1.2.10 Access and Spur Roads

Subtransmission line roads are classified into two groups: access roads and spur roads. Access roads are through roads that run between structure sites along a ROW and serve as the main transportation route along the ROW. Spur roads branch from access roads and terminate at one or more structure sites.

Access to the Project's 66 kV subtransmission lines for construction, operation and maintenance activities would be accomplished by using a network of approximately 120 miles of existing dirt access roads and existing and new spur roads. Such roads are primarily located within existing ROWs or covered under easements.

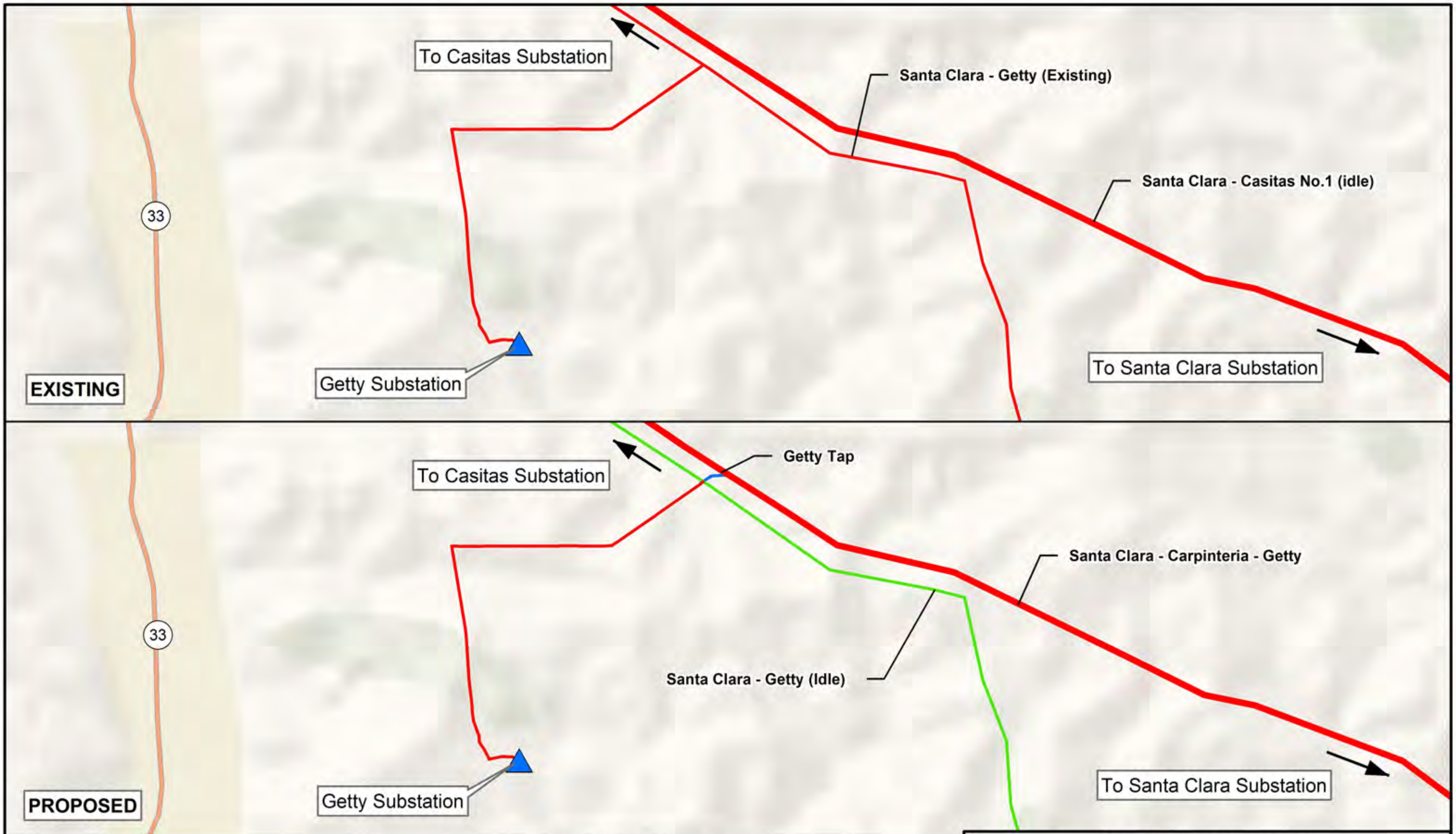
During construction, the Project would employ existing public roads and existing access and spur roads to the maximum extent practical. Rehabilitation and/or upgrades to existing access and spur roads and construction of new spur roads may be required to facilitate construction access and permanent maintenance access. In some locations, retaining wall-type structures would be installed to avoid extensive grading operations and minimize the area of surface disturbance (examples of such structures are shown in Figure 3.1-5a; the location of these structures is shown on Figure 3.1-5b). Short distances of new spur roads would be constructed to access structure sites. These spur roads would be constructed from native soils.

3.1.2.11 66 kV Subtransmission Line Infrastructure

Structures

The subtransmission line segments of the Project would be built using structures including LWS poles, LWS H-frames, and TSPs (see Figure 3.1-6 and Table 3.1-1). The 66 kV subtransmission structures would be designed consistent with the Suggested Practices for Raptor Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee [APLIC] 2006).

As discussed earlier, approximately 55 LWS poles would be used for the Project. LWS poles would be direct buried and extend approximately 60 to 85 feet above ground. The diameter of LWS poles would typically be 1 to 2 feet at ground level, tapering to the top of the pole. LWS poles are a functional equivalent to wood subtransmission poles as they are direct buried, and are generally of similar height and diameter (Figure 3.1-7).



MAP SOURCE: http://server.arcgisonline.com/arcgis/services

LEGEND

- Substation
- Existing Subtransmission Line
- Proposed Subtransmission Line
- De-energized Subtransmission Line

0 0.5 1 Miles

GRAPHIC SCALE

SOUTHERN CALIFORNIA EDISON
CARPINTERIA SUBSTATION PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

SUBTRANSMISSION LINES ASSOCIATED WITH THE PROPOSED GETTY TAP

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FIGURE 3.1-3

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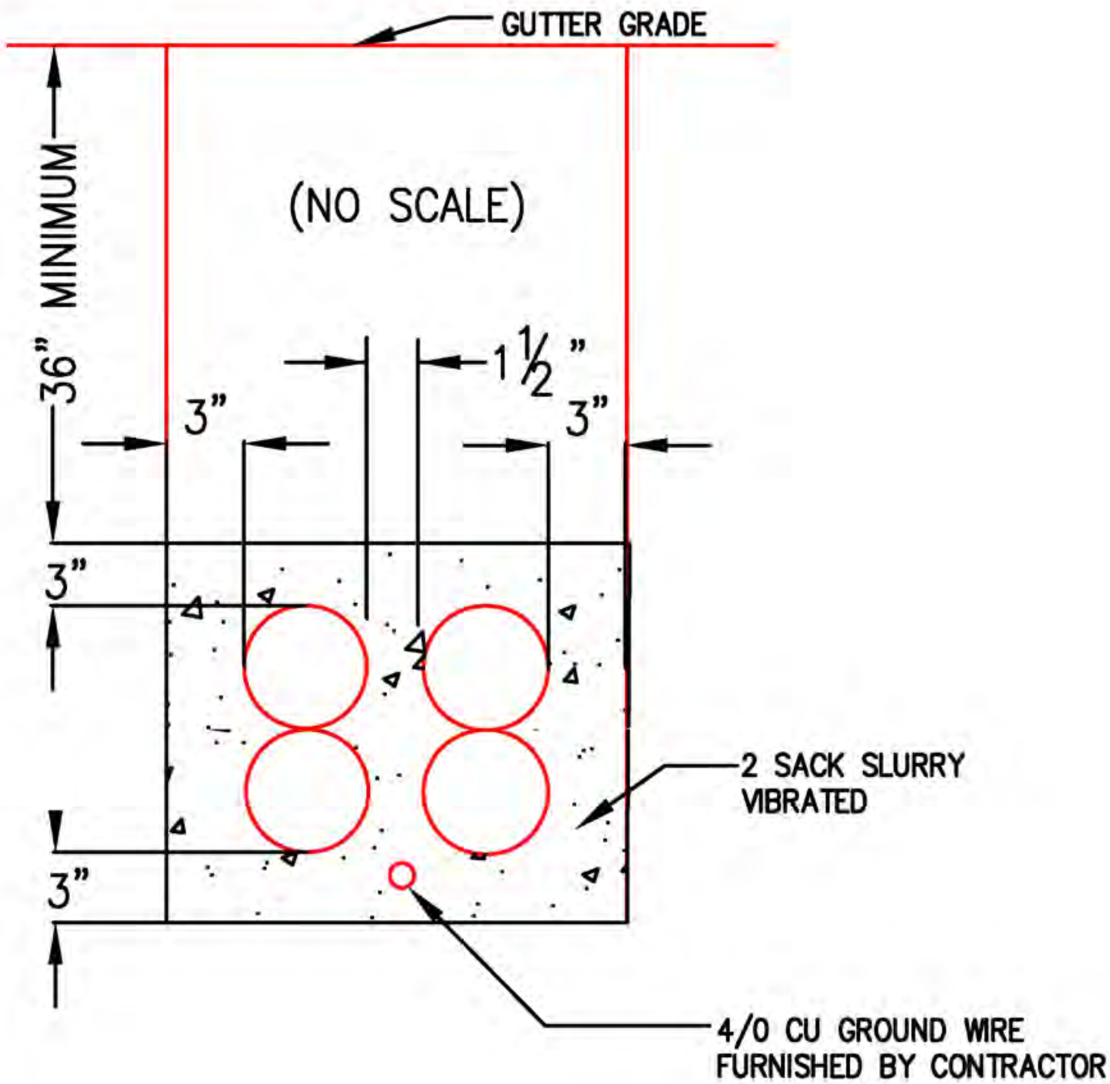

TYPICAL CONDUIT BANK SECTION
SHOWING FULL ENCASEMENT

SOUTHERN CALIFORNIA EDISON
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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

SUBTRANSMISSION
DUCT BANK DETAIL

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FIGURE
3.1-4

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CRIB WALL

WELDED WIRE WALL

SOLDIER PILE WALL

GABION WALL

Note:
Mechanically stabilized embankments are shown for illustrative purposes only. Appearance and materials are subject to change based on final civil engineering and findings of geotechnical investigations.

SOUTHERN CALIFORNIA EDISON
CARPINTERIA SUBSTATION PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
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TYPES OF MECHANICALLY STABILIZED EMBANKMENTS (TYPICAL)

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FIGURE
3.1-5a

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SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOCATION OF MECHANICALLY STABILIZED EMBANKMENTS

Preliminary Wall Locations

- MSE Wall
- Crib Wall
- Soldier Pile Wall

- Segment 2
- Segment 3A
- Segment 3B
- Segment 4
- County Lines

Includes only walls at pole construction sites and associated spur roads. Does not include walls potentially required for road rehabilitation sites along access roads not adjacent to pole construction sites. Locations of mechanically stabilized embankments are subject to change based on final civil engineering and findings of geotechnical investigations.

0 0.375 0.75 1.5 Miles

N

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Figure
3.1-5b

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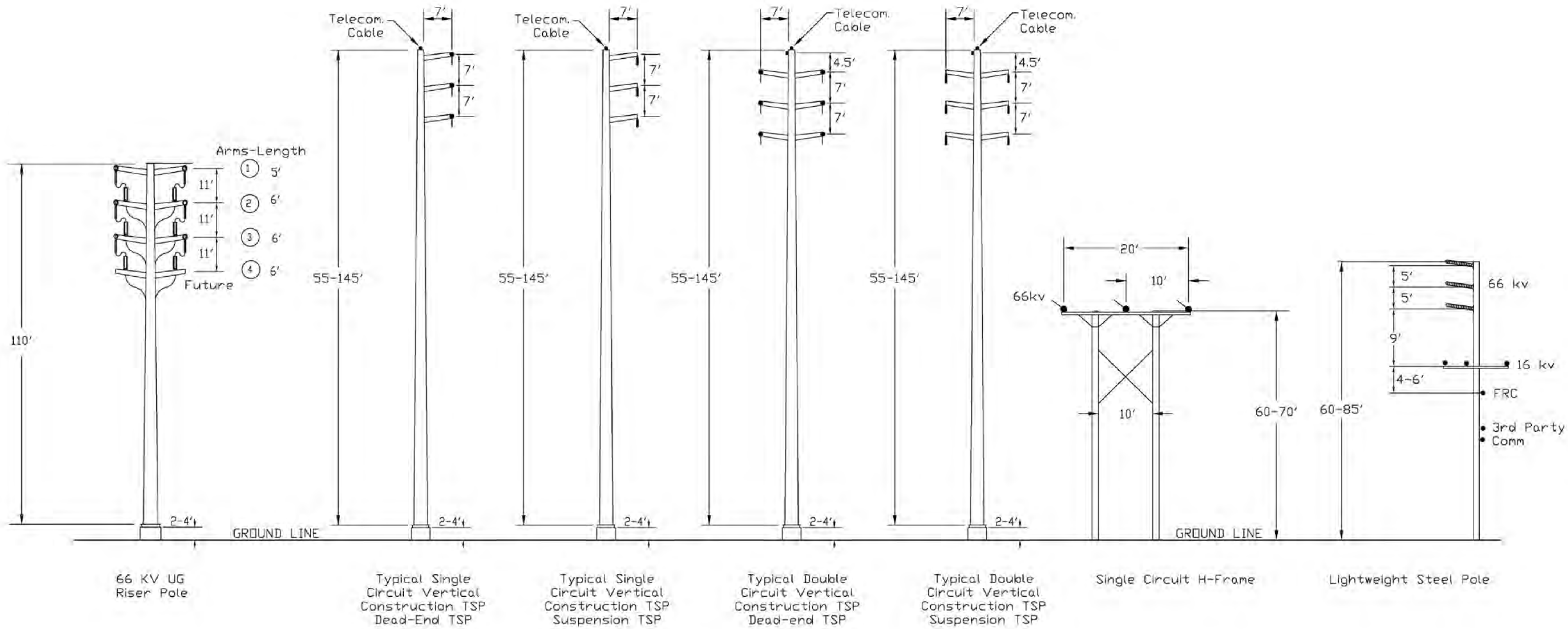

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TYPICAL POLE DESIGN

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FIGURE
3.1-6

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PROPONENT'S ENVIRONMENTAL ASSESSMENT

LWS POLE AND WOOD SUBTRANSMISSION POLE COMPARISON

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Figure
3.1-7

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Approximately four H-frames constructed from LWS poles would be installed for the Project; the Project would also use two previously installed LWS H-frames. The LWS H-frames would be direct buried and extend approximately 60 to 70 feet above ground. The diameter of the LWS poles would typically be 1 to 2 feet at ground level, tapering to the top of the pole.

Approximately 90 TSPs would be used for the Project. The TSPs would be approximately 4 to 6 feet in diameter at the base and extend approximately 55 feet to 145 feet above ground, including the above-ground height of the foundation. The TSPs would be attached to concrete foundations that would be approximately 5 to 9 feet in diameter and would extend underground approximately 15 to 70 feet with a projection of approximately 2 to 4 feet of concrete above ground. Correspondingly, TSP footings would use approximately 11 to 175 cubic yards of concrete depending upon diameter and depth of the footing. The TSPs would be all steel structures with a dulled finish. TSPs to be installed in Segment 4 and at Carpinteria Substation would be equipped with fittings to accommodate telecommunications cable.

Table 3.1-1: Typical Subtransmission Structure Dimensions

Pole Type	Proposed Number of Structures	Approximate Height Above Ground (feet)	Approximate Pole Diameter (feet)	Approximate Auger Hole Depth (feet)	Approximate Auger Diameter (feet)
TSP	89	55-145	4-6 at base	15-70	5-9
LWS pole	55	60-85	1-2 at base	9-11	2-2.5
LWS H-frame	6	60-70	1-2 at base	9-11	2-2.5
Guy pole	<10	25-40	1-2 at base	9-11	2-2.5

Notes:

Specific pole height and spacing would be determined upon final engineering and would be constructed in compliance with CPUC G.O. 95.

Structure count includes only those structures that would be permanently installed in Segments 3A, 3B, and 4; at the Getty Tap segment; and at Carpinteria Substation and Casitas Substation. Temporary structures are not included.

Insulators and Conductor

At a minimum, polymer insulators and 954 ASCR or 954 SAC would be installed on each overhead structure, except for at the Getty Tap. On the Getty Tap segment, 653 ACSR would be installed. All conductor would be non-specular.

The alignment of the lines and terrain in the region would require Federal Aviation Administration (FAA) notification due to the height above ground of the conductor or telecommunications cable between towers. SCE would file the necessary FAA Form 7460 for structures or lines as outlined in FAA Part 77. SCE would file the form upon completion of final engineering and prior to construction per FAA Part 77. All FAA recommendations would be implemented into the design of the Project. If a span requires three or fewer marker balls, then the marker balls on the span would all be aviation orange. If a span requires more than three marker balls, then the marker balls would alternate between aviation orange, white, and yellow. Marker balls would be 36 inches in diameter.

As of the time of the preparation of this PEA, SCE anticipates that the FAA will determine that marker balls should be installed on approximately 42 spans along the Project's 66 kV subtransmission line route. It should also be noted that SCE has undertaken a review of the heights of existing spans and structures on the adjacent 220 kV transmission line route that serves the SB South Coast area; this transmission infrastructure is generally located within the same utility corridor where the Project would be constructed. There are approximately 50 total spans on the 220 kV route within that corridor that SCE anticipates would also meet the FAA's guidelines for installation of marker balls. Of those approximately 50 spans, approximately 26 are located adjacent to 66 kV subtransmission line route spans that also meet the marking guidelines, and of the approximately 26 co-located spans, there are approximately 20 instances where the spans on the 220 kV route are taller than the spans on the adjacent 66 kV subtransmission line route.

At this time, SCE has neither determined nor been informed by the FAA as to whether the 220 kV transmission line route spans in the corridor would have to be marked in addition to, or instead of, nearby 66 kV subtransmission line route spans. SCE will submit all relevant information, including Form 7460, regarding the 66 kV subtransmission line route to the FAA, and would seek the FAA's recommendation as to a marking plan for any and all line routes within the corridor where the Project would be constructed. Pending the FAA's input, SCE has prepared this PEA to include analyses of the potential impacts associated with installation of marker balls on the approximately 42 66 kV subtransmission line route spans that the FAA is likely to determine should be marked. If the FAA determines that modifications to the 220 kV components should be made instead of or in addition to the marking of the 66 kV line route spans, it is anticipated that the additional marking would only generate incremental, but not significant, environmental impacts beyond those analyzed in this PEA.

Fault Return Conductor

Although LWS poles are earth-grounded structures, an FRC (bare 4/0 aluminum conductor) would be installed along approximately 12,000 feet (approximately 2.3 miles) of Segment 3A. This conductor would electrically ground the LWS poles. This conductor is typically located 1 to 2 feet above the telecommunications facilities and 4 to 6 feet below the distribution facilities. To maintain proper clearances, the telecommunication facilities and distribution facilities may need to be rearranged.

Guying and Guy Poles

Guying consists of a guy wire (down guy) attached to a buried anchor, or when there is not adequate space for the required down guy, a shorter guy pole (stub pole) is typically placed with a down guy and buried anchor in a location that has sufficient room for these facilities. Guy wires attached directly to wood poles or attached to wood stub poles were installed along Segment 3A to stabilize LWS and wood poles located on curves or at corners along the line route. The height, depth, and diameter of stub poles and guy wire anchors would be determined on a case-by-case basis (Table 3.1-1). In addition, guy wires could be attached to subtransmission structures along Segments 3B and 4.

Temporary Guard Structures for Construction

Guard structures are temporary facilities that may be installed at transportation, flood control, and utility crossings for wire stringing/removal activities. These structures are designed to stop the movement of a conductor should it momentarily drop below a conventional stringing height. If used, guard structures would be temporarily installed on each side of all public road crossings and where installation of the 66 kV subtransmission line crosses other utilities along the route. Guard structures could also be temporarily installed on each side of driveways and private roads that are crossed, where necessary. Guard structures could be constructed on-site using wood poles, and then removed after construction is complete.

Underground Facilities

Underground subtransmission facilities would be constructed at Casitas Substation to route subtransmission cable from a newly installed TSP at Casitas Substation to the 66 kV switchrack. An approximately 50-foot long duct bank would be constructed from the new TSP to the 66 kV switchrack; three 3,000 circular mils (KCML) copper underground cables approximately 175 feet in length each would be installed through the TSP and the duct bank, terminating at the switchrack. An approximately 100-foot long duct bank would be constructed from the new TSP to the 66 kV switchrack; three 3,000 KCML copper underground cables approximately 225 feet in length each would be installed through the TSP and the duct bank, terminating at the switchrack. No underground vaults would be necessary or installed at Casitas Substation as part of the subtransmission infrastructure.

3.1.3 Telecommunications System

Telecommunications infrastructure would be installed to connect the Project to SCE's existing telecommunications system and would provide Supervisory Control and Data Acquisition (SCADA), protective relaying, data transmission, and telephone services for the Project and associated facilities. A new telecommunications route is required to connect Carpinteria Substation, Casitas Substation, Santa Clara Substation, and Ventura Substation. The connection between Ventura Substation and Santa Clara Substation would use existing telecommunications facilities. All work conducted at Ventura Substation would be conducted within the MEER and would not include any ground-disturbing activities.

Approximately 127,000 feet (approximately 24 miles) of new telecommunication cable would be installed on 66 kV subtransmission structures in Segments 1, 2, and 4, connecting Carpinteria Substation, Casitas Substation, and Santa Clara Substation. The cable would be less than 0.5 inches in diameter.

Most of the telecommunications cable would be installed overhead on subtransmission structures above the subtransmission conductor. Short segments would be installed underground in conduit as the telecommunications cable enters and exits Carpinteria Substation, Casitas Substation, and Santa Clara Substation. In addition to the underground work at the substations, new relays would be installed in the existing MEERs at Carpinteria Substation and Casitas Substation, and in the communications room at Santa Clara Substation.

As previously discussed, SCE would file the necessary FAA Form 7460 for structures or lines that exceed notification requirements outlined in FAA Part 77. SCE would file the form upon completion of final engineering and prior to construction per FAA Part 77. All FAA recommendations would be implemented in the design of the Project. If a span requires three or fewer marker balls, then the marker balls on the span would all be aviation orange. If a span requires more than three marker balls, then the marker balls would alternate between aviation orange, white, and yellow. Marker balls would be 36 inches in diameter.

3.1.3.1 Telecommunications – Facilities at Existing Substations

New terminal equipment, channel multiplexer equipment, equipment cabling, and other telecommunication equipment devices would be installed within the MEERs at Carpinteria Substation, Casitas Substation, and Ventura Substation, and in the communication room at Santa Clara Substation. This work would provide the required telecommunication circuit connection to subtransmission line protection relay equipment within the substations.

3.1.3.2 Telecommunications Description

The Project's telecommunications route is presented in Figure 3.1-8; typical underground installations are shown on Figure 3.1-9.

Telecommunications Cable Configuration and Routing

The route would originate in the communications room at Santa Clara Substation. The telecommunications cable would be installed underground in an existing control cable trench and through approximately 225 feet of new conduit from the communications room to the easternmost TSP in Segment 1, where it would transition to an overhead configuration. Approximately 47,500 feet (approximately 9 miles) of telecommunications cable would be installed on subtransmission structures in Segment 1 from Santa Clara Substation to Casitas Substation.

At Casitas Substation, the telecommunications cable would transition from overhead to underground, entering the MEER through approximately 100 feet of new conduit and the existing control cable trench. The telecommunications cable would exit the MEER underground through a separate conduit within the same control cable trench and proceed to an LST located outside the substation fence, where it would transition to an overhead configuration. From the Casitas Substation, the telecommunications cable would proceed for approximately 68,500 feet (approximately 15 miles) on subtransmission structures in Segments 2 and 4 to Carpinteria Substation.

At Carpinteria Substation, the telecommunications cable would transition from an overhead to an underground configuration, entering the MEER through approximately 80 feet of new conduit and then the existing control cable trench.

Temporary Guard Structures for Construction

As previously presented in section 3.1.2.11, guard structures are temporary facilities that may be installed at transportation, flood control, and utility crossings for telecommunications cable stringing activities. These structures are designed to stop the movement of telecommunications cable should it momentarily drop below a conventional stringing height. If used, guard structures would be temporarily installed on each side of all public road crossings and where installation of the telecommunications cable crosses other utilities along the route. Temporary guard structures could also be installed on each side of driveways and private roads that are crossed, where necessary. Guard structures could be constructed on-site using wood poles, and then removed after construction is complete.

Table 3.1-2: Telecommunications Cable Undergrounding

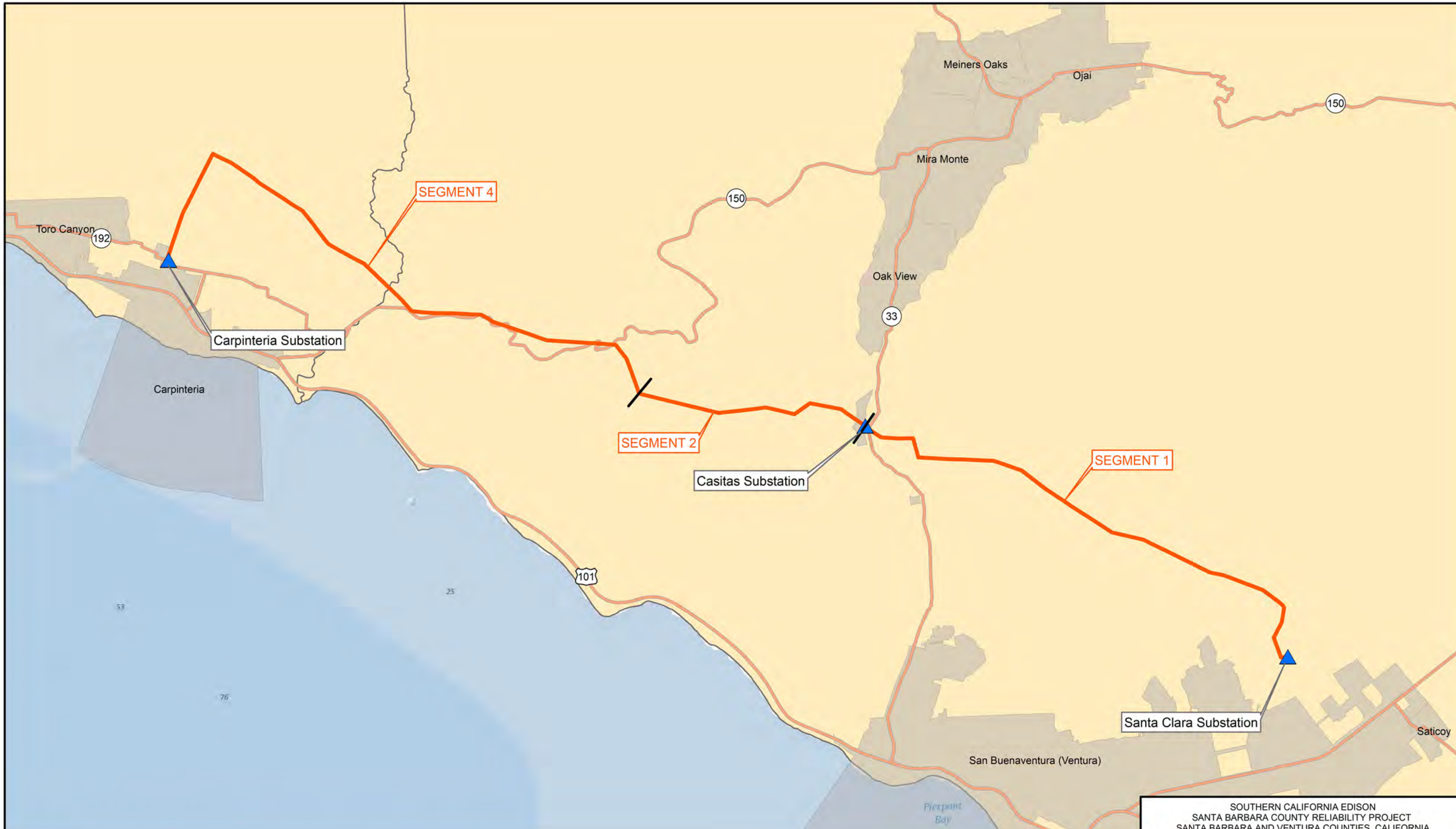
Substation	Length of Trench		Vault Size
	Inside Substation Fenceline (feet)	Outside Substation Fenceline (feet)	
Santa Clara	~ 80	~145	None
Casitas*	~25	~75	None
Carpinteria	~80	0	None

Notes:
All lengths are preliminary and would be determined upon final engineering.
* The conduit for both segments is routed through the same trench and duct bank at Casitas Substation.

3.1.4 Other Major Work

The Project would be constructed and operated in areas that contain existing irrigation systems and other private infrastructure. In coordination with landowners, these systems and infrastructure may be temporarily removed, relocated, and/or replaced to facilitate the safe and efficient construction of the Project and to protect the current uses of private lands.

Upon completion of the Project, an additional 11 existing LSTs, two wood H-frame structures, and approximately 11,000 feet of conductor would be removed due to their location on unstable slopes (see Figure 3.1-10). These structures are located between Segments 3B and 4, and adjacent to Segment 4 for approximately 1 mile.



Legend

Proposed Telecommunications Route (Overhead)

0 2 4 Miles

GRAPHIC SCALE

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

OVERVIEW OF PROPOSED TELECOMMUNICATIONS ROUTE

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FIGURE
3.1-8

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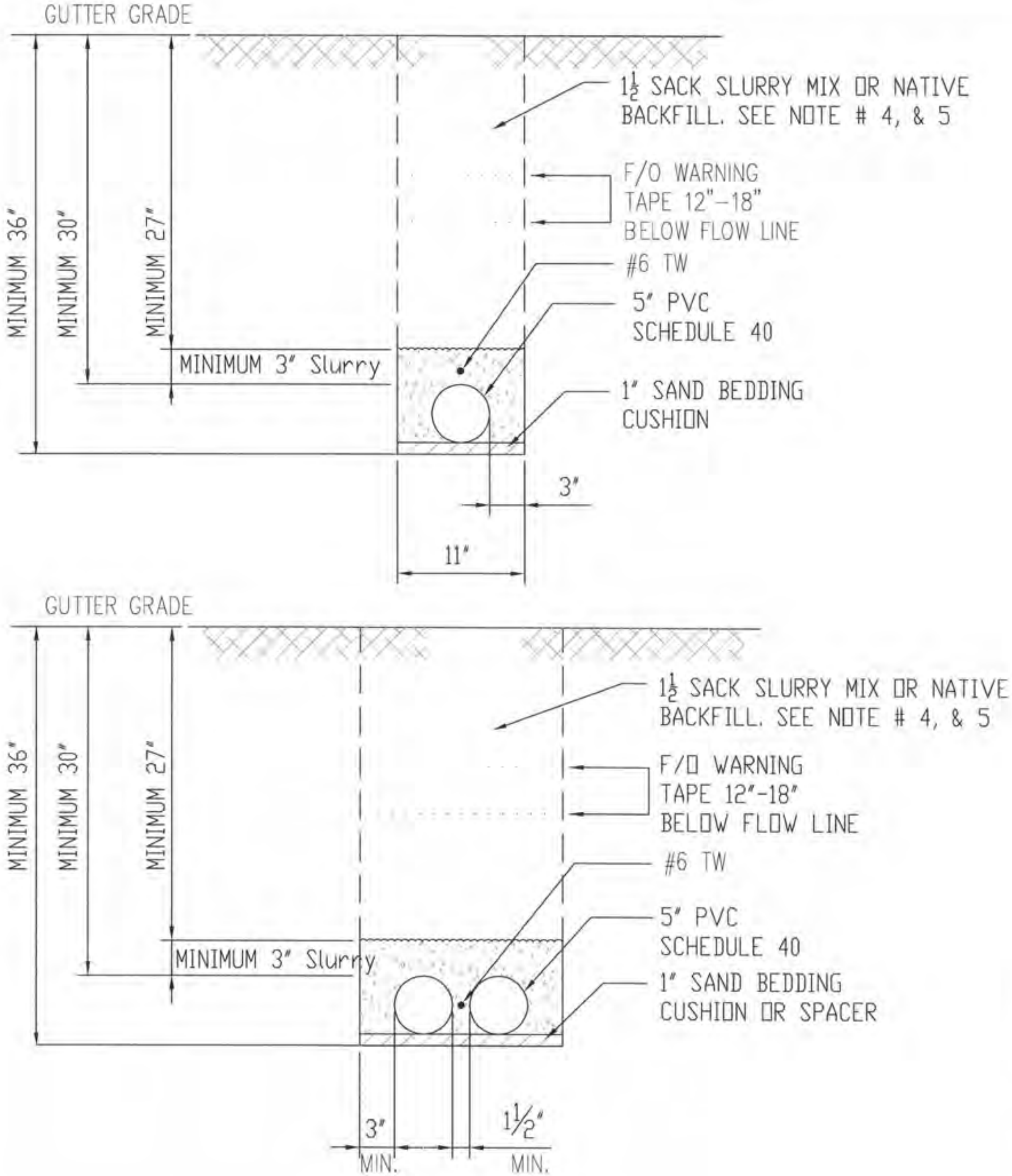

SOUTHERN CALIFORNIA EDISON
CARPINTERIA SUBSTATION PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

SCE TELECOMMUNICATIONS CONDUIT INSTALLATION DETAIL

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FIGURE 3.1-9

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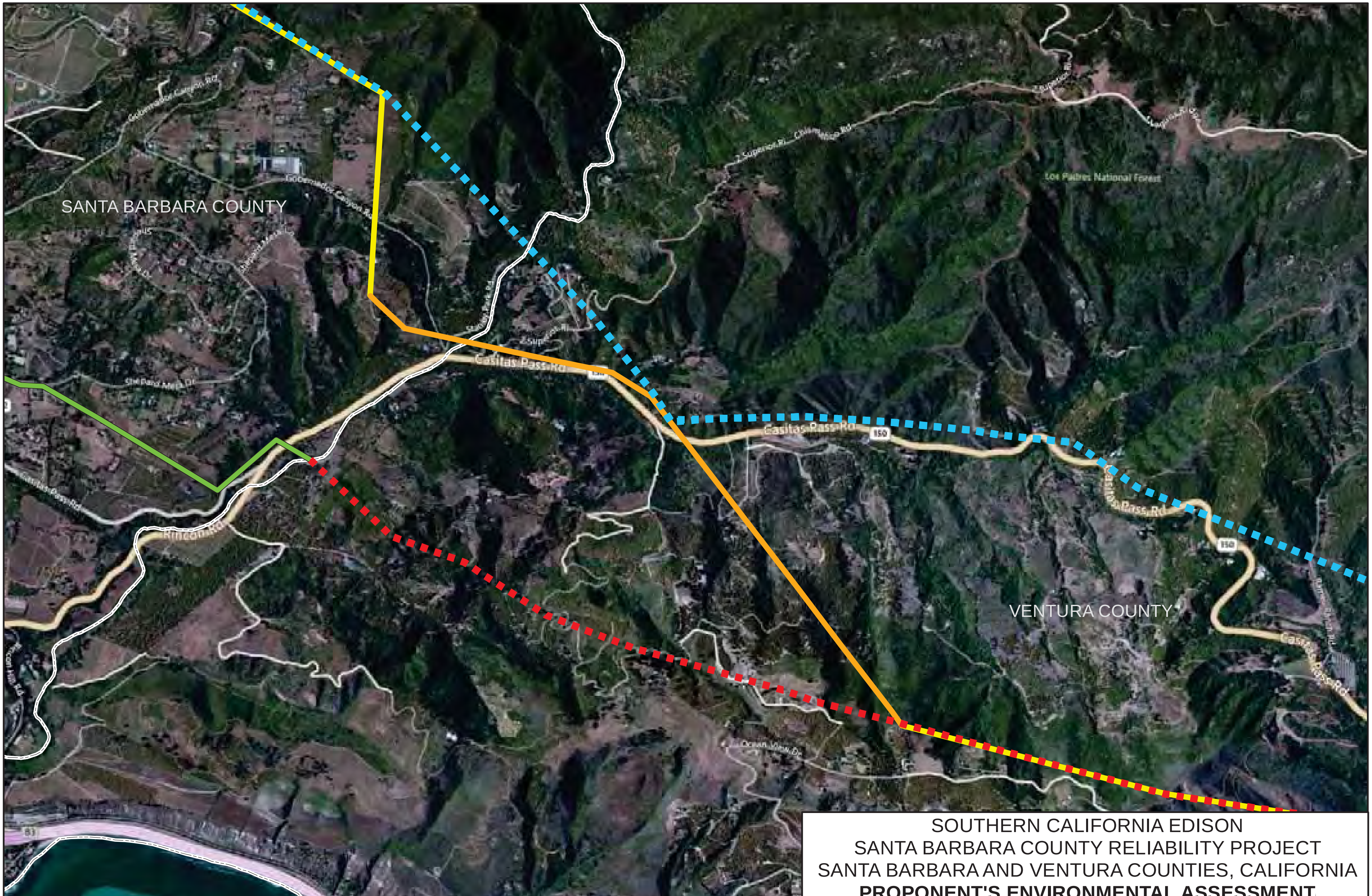

Substation
Conductor to be removed
Segment 3A
Idled
Segment 3B
Segment 4

0 0.25 0.5 1 Miles

N

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

OTHER MAJOR WORK, SUBTRANSMISSION STRUCTURE AND CONDUCTOR REMOVAL

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Figure
3.1-10

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3.2 Project Construction Plan

The following subsections describe the construction activities associated with the Project. Unless otherwise indicated in the text, the following construction descriptions are applicable across the Project in its entirety.

3.2.1 General Construction

3.2.1.1 Staging Areas

Construction of the Project would require the establishment of temporary staging yards. Staging yards would be used as reporting locations for workers, vehicle and equipment parking, and material storage. The yards may also have construction trailers for supervisory and clerical personnel. Staging yards may be lit for staging and security. Normal maintenance and refueling of construction equipment would also be conducted at these yards. All refueling and storage of fuels would be in accordance with the Storm Water Pollution Prevention Plan (SWPPP).

SCE anticipates using one or more of the locations listed in Table 3.2-1 and shown on Figure 3.2-1 as the potential staging yard(s) for the Project. Typically, each yard would be 0.5 to 3 acres in size. Preparation of the staging yard(s) would include temporary perimeter fencing and, depending on existing ground conditions at the site, the application of gravel or crushed rock. Following the completion of construction for the Project, any land that may be disturbed at the staging yard would be restored to as close to preconstruction conditions as possible or to the conditions agreed upon between the landowner and SCE.

Materials commonly stored at the staging yards would include, but not be limited to, construction trailers, construction equipment, portable sanitation facilities, steel bundles, steel/wood poles, conductor reels, telecommunications cable reels, hardware, insulators, cross arms, signage, consumables (such as fuel and filler compound), waste materials for salvaging, recycling, or disposal, and best management practice (BMP) materials (e.g., straw wattles, gravel, and silt fences).

A majority of materials associated with the construction efforts would be delivered by truck to designated staging yards and then transported by truck or helicopter from a staging yard to the construction or work areas; some materials may be delivered directly to the temporary subtransmission construction areas. Construction areas would be located at or near each structure within SCE or public ROWs. In addition to being the location where construction work would be done, project-related equipment and/or materials may be temporarily staged at these locations. Table 3.2-2 identifies the approximate land disturbance for construction areas associated with the Project.

The SCE Ventura Service Center would serve as the primary helicopter staging yard for the Project. If necessary, additional helicopter staging yards of approximately 0.5 acres in size would be sited at locations that optimize flight time to structure locations. Additionally, operation crews, as well as fueling and maintenance trucks, would be based in the helicopter staging yards. Helicopter staging yards would be used for material storage; in addition, helicopter staging yards would be used for tower assembly activities in the unlikely event that towers would be installed with a helicopter.

Final siting of helicopter staging yards would, if such yards are required, be conducted with the input of the subtransmission line contractor, land management agencies, private landowners, and the helicopter contractor as necessary.

Table 3.2-1: Potential Staging Yard Locations

Yard Name	Location	Condition	Approx. Area (acres)	Project Component
Yard 1- Stanley Avenue	South of Stanley Avenue & east of Hwy 33, Ventura County	Existing asphalted storage yard	0.8	Existing Pole Storage Yard
Yard 2	The ‘Y’	Disturbed grazing pasture	1.0	Material and Hardware Storage
Yard 3	6374 Casitas Pass Road, Ventura County	Disturbed grass meadow	0.80	Pole and Material Staging
Yard 4	4454 Casitas Pass Road, Ventura County	Disturbed grass meadow	0.80	Pole and Material Staging
Yard 5	SCE Ventura Service Center	Existing gravel and asphalted storage yards	4.0	Material and Hardware Storage, Pole and Material Staging
Yard 6	5901 Casitas Pass Rd, Ventura	Existing asphalted storage yard/ parking area	0.25	Pole and Material Staging

Table 3.2-2: Approximate Laydown/Work Area Dimensions

Laydown/Work Area Feature	Preferred Size (L x W; feet) *
Guard Structures	75 x 50
Lattice Steel Towers (Removal)	150 x 100
TSPs	200 x 150
H-Frames	150 x 100
LWS/Wood Poles	150 x 75
Wood Guy Poles	100 x 75
Stringing Setup Area	500 x 100

Note:
The dimensions provided in Table 3.2-2 are preferred for construction efficiency; actual dimensions may vary depending on project constraints.

3.2.1.2 Storm Water Pollution Prevention Plan

Construction of the Project would disturb a surface area greater than 1 acre. Therefore, SCE would be required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ from the State Water Resources Control Board. Commonly used BMPs are storm water runoff quality control measures (boundary protection), dewatering procedures, and concrete waste management. The SWPPP would be based on final engineering design and would include all project construction components.

3.2.1.3 Dust Control

During construction, migration of fugitive dust from construction sites would be limited by control measures set forth by Ventura County Air Pollution Control District (VCAPCD) Rule 55 and Santa Barbara County Air Pollution Control District (SBCAPCD) Rule 345, as further discussed in Section 4.3.

3.2.1.4 Traffic Control

Construction activities within public street ROWs would require the use of a traffic control service, and all lane closures would be conducted in accordance with local ordinances and city permit conditions. These traffic control measures would be consistent with those published in the California Joint Utility Traffic Control Manual (CJUTCM; California Inter-Utility Coordinating Committee 2010), as discussed in Section 4.16.

3.2.2 Substation Construction – Modifications to Existing Substations

The following section describes the construction activities associated with installing the components described in Section 3.1.1 at Carpinteria Substation, Casitas Substation, and Santa Clara Substation for the Project.

3.2.2.1 Site Preparation and Grading

As discussed in Section 3.1.14, no grading would be required to construct the necessary substation upgrades as part of the Project.

3.2.2.2 Below-Grade Construction

No below-grade construction for substation equipment would occur at the substations. However, as discussed earlier, below-grade facilities would be constructed at Carpinteria Substation, Casitas Substation, and Santa Clara Substation to accommodate the installation of subtransmission conductor and telecommunications cable. These facilities may include cable trenches, conduits, and duct banks. These facilities are described in Sections 3.1.2.9, 3.1.2.11, and 3.1.3.2.

3.2.2.3 Above-Grade Construction

As discussed in Section 3.1.1, above-grade installation of substation facilities such as disconnect switches, transformers, and circuit breakers, would be completed at Carpinteria Substation, Casitas Substation, and Santa Clara Substation. At Carpinteria Substation, a 66 kV bus tie would also be installed. These facilities would be installed on existing structures.

3.2.2.4 Substation Land Disturbance Table

All land disturbances at substations would be associated with telecommunications and/or subtransmission infrastructure installation. Therefore, those disturbances are described elsewhere in this Chapter.

3.2.2.5 Substation Construction Equipment and Workforce Estimates Table

The construction equipment and workforce estimates to be used to accomplish substation- and telecommunications-related work at the substations are presented in Table 3.2-3 below.

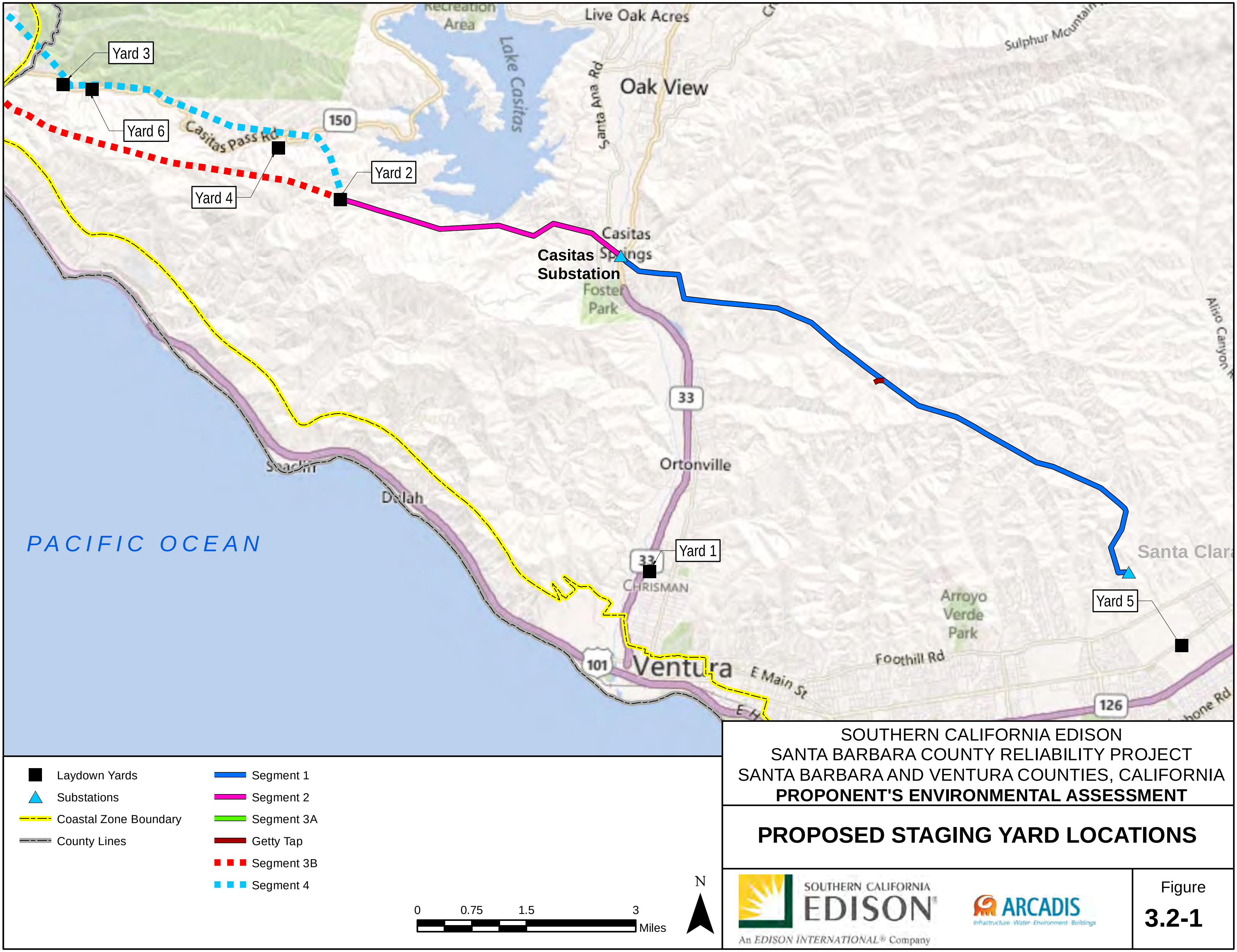

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Table 3.2-3: Substation Construction Equipment and Workforce Estimates

Primary Equipment Description	Estimated Horsepower	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Work Days)	Duration of Use (Hrs per Days)
Carpinteria Substation						
Civil Crew						
Driller	305	Diesel	1	2	8	6
Crew Trucks	180	Gas/Diesel	2	2	10	2
14 Ton Crane	180	Diesel	1	2	6	4
Dump Trucks	180	Gas/Diesel	1	1	8	6
Tractors	85	Diesel	1	1	8	6
Forklift	75	Diesel	1	1	10	2
Ditch Digger	75	Diesel	1	1	8	6
Electrical Crew						
14 Ton Crane	180	Diesel	1	2	80	4
Foreman Truck	180	Gas/Diesel	1	1	120	2
Manlifts	75	Gas/Diesel	2	2	80	6
5-Ton Truck	180	Gas/Diesel	1	1	30	2
Crew Trucks	180	Gas/Diesel	2	2	120	2
Forklift	75	Diesel	1	1	110	2
150 Ton Crane	250	Diesel	1	2	30	6

Table 3.2-3: Substation Construction Equipment and Workforce Estimates (continued)

Maintenance Crew						
Crew Pickup Trucks	180	Gas/Diesel	1	1	80	6
Gas/Processing Trailer	0	Electric	1	1	2	8
Test Crew						
Pickup Trucks	180	Gas/Diesel	1	1	100	2
Casitas Substation						
Civil Crew						
Driller	305	Diesel	1	2	6	6
Crew Trucks	180	Gas/Diesel	2	2	10	2
14 Ton Crane	180	Diesel	1	1	6	4
Dump Trucks	180	Gas/Diesel	1	1	10	6
Tractors	85	Diesel	1	1	10	6
Forklift	75	Diesel	1	1	10	2
Ditch Digger	75	Diesel	1	1	6	6
Electrical Crew						
14 Ton Crane	180	Diesel	1	1	50	4
Foreman Truck	180	Gas/Diesel	1	1	50	2
Manlifts	75	Gas/Diesel	2	2	20	6
5-Ton Truck	180	Gas/Diesel	1	1	30	4
Crew Trucks	180	Gas/Diesel	2	2	50	2
Forklift	75	Diesel	1	1	50	2

Table 3.2-3: Substation Construction Equipment and Workforce Estimates (continued)

Maintenance Crew						
Crew Pickup Trucks	180	Gas/Diesel	1	2	50	6
Gas/Processing Trailer	0	Electric	1	1	3	6
Forklift	75	Diesel	1	1	50	2
Checker/ w pickup truck	180	Gas/Diesel	1	1	50	2
Test Crew						
Pickup Trucks	180	Gas/Diesel	1	1	50	2
Santa Clara Substation						
Civil Crew						
Crew Trucks	180	Gas/Diesel	1	1	14	2
Dump Trucks	180	Gas/Diesel	1	1	14	6
Tractors	85	Diesel	1	1	10	6
Forklift	75	Diesel	1	1	10	2
Electrical Crew						
14 Ton Crane	180	Diesel	1	1	70	6
Foreman Truck	180	Gas/Diesel	1	1	70	2
Manlifts	75	Gas/Diesel	2	2	60	6
Crew Trucks	180	Gas/Diesel	2	2	70	2
Forklift	75	Diesel	1	1	70	2

Table 3.2-3: Substation Construction Equipment and Workforce Estimates (continued)

Maintenance Crew						
Crew Pickup Trucks	180	Gas/Diesel	1	1	5	6
Checker/ w pickup truck	180	Gas/Diesel	1	1	70	2
Test Crew						
Pickup Trucks	180	Gas/Diesel	1	1	70	2
Getty Substation						
Electrical Crew						
Crew Trucks	180	Gas/Diesel	1	2	10	2
Test Crew						
Pickup Trucks	180	Gas/Diesel	1	2	10	2
Ortega Substation						
Electrical Crew						
Crew Trucks	180	Gas/Diesel	1	2	10	2
Test Crew						
Pickup Trucks	180	Gas/Diesel	1	2	10	2
Goleta Substation						
Electrical Crew						
Crew Trucks	180	Gas/Diesel	1	2	25	2
Test Crew						
Pickup Trucks	180	Gas/Diesel	1	2	25	2

Table 3.2-3: Substation Construction Equipment and Workforce Estimates (continued)

Santa Barbara Substation						
Electrical Crew						
Crew Trucks	180	Gas/Diesel	1	2	25	2
Test Crew						
Pickup Trucks	180	Gas/Diesel	1	2	25	2

3.2.3 66 kV Subtransmission Line Installation

The following sections describe the construction activities associated with installing the subtransmission line segments for the Project.

3.2.3.1 Access and Spur Roads

As discussed earlier in Section 3.1.2.10, Project construction and operation and maintenance crews would employ a network of existing and new roads. The typical subtransmission access road consists of a network of dirt roads accessed from paved public and private roads.

Approximately 120 miles of existing access and spur roads would be employed for construction of the Project. At present, approximately 25 miles of those existing roads are projected to require minor restoration work, including regrading and repair of the existing roadbed. These roads would be cleared of vegetation; blade-graded to remove potholes, ruts, and other surface irregularities; and re-compacted to provide a smooth and dense riding surface capable of supporting heavy construction equipment.

At present, approximately 5 of the 120 miles of existing access and spur roads are projected to require more extensive rehabilitation, such as:

- Widening of the existing roadbed at curves and other locations.
- Installation of new, or repair of existing, drainage structures such as wet crossings, water bars, overside drains and pipe culverts to allow for construction traffic usage, as well as to prevent road damage due to uncontrolled water flow.
- Repair and stabilization of slides, washouts, and other slope failures by installing retaining walls or other means necessary to prevent future failures. The type of structure to be used would be based on specific site conditions.

In addition, the Project would require the construction of approximately 4 miles of new spur roads. Construction activities for new spur roads would be similar to those associated with the rehabilitation of existing roads.[11]

Access and spur roads would have a minimum drivable width of 14 feet (18 feet wide total with a 2-foot shoulder on each side of the road) but may be wider depending on final engineering requirements and field conditions.

The sustained grade of access and spur roads would not exceed 12 percent. Grades of approximately 14 percent would be permitted when such grades do not exceed 40 feet in length and are located more than 50 feet from any other excessive grade or any curve.

[11] The description for work yet to be conducted is based on preliminary engineering. Exact details would be determined following final engineering; completion of field analyses; availability of labor, material, and equipment; and compliance with applicable environmental and permitting requirements.

All curves would have a radius of curvature of not less than 50 feet, measured along the center line of the usable road surface.

All spur roads more than 500 feet long would include a Y-type or circle-type turnaround. Where a circle-type turnaround is not practical, an alternative turnaround configuration would be constructed to provide vehicle access to the structure location. This permanent area would also be used as a crane pad for both construction and ongoing operation and maintenance activities. Approximately 70 turnarounds would be constructed or reestablished.

All access and spur roads would be left in place to facilitate future access for operations and maintenance purposes.

3.2.3.2 Structure Site Preparation

Structure pad locations and laydown/work areas would first be graded and/or cleared of vegetation as required to provide a reasonably level and vegetation-free surface. Sites would be graded such that water would run toward the direction of the natural drainage. In addition, drainage would be designed to prevent ponding and erosive water flows that could cause damage to the structure footings. The graded area would be compacted to at least 90 percent relative density, and would be capable of supporting heavy vehicles.

A laydown/work area would be established adjacent to each pole installation location. This laydown/work area would be used for the temporary staging and assembly of the pole. In addition, within the laydown/work area, a crane pad of approximately 40 feet by 40 feet could be established. Where existing terrain within the laydown/work area is sufficient to support crane operations, the crane pad would be developed within the laydown/work area, adjacent to the pole installation location. In those areas where the existing terrain within the laydown/work area is insufficient to support crane operations, a separate crane pad may be cleared of vegetation and/or graded as necessary to provide an appropriate and level surface for crane operation.

In some steep and/or rugged terrain, benching may be required to provide access for footing construction, assembly, erection, and wire stringing activities during line construction. Benching is a technique in which an earth moving vehicle excavates a terraced access to structure locations.

Structure foundations for each TSP would require a single drilled, poured-in-place concrete footing. The foundation process begins with the drilling of a foundation hole. The holes would be drilled using truck- or track-mounted excavators with various diameter augers to match the diameter requirements of the structure type. TSPs would require an excavated hole approximately 5 feet to 9 feet in diameter and approximately 15 feet to 70 feet deep. TSP footings would project approximately 2 to 4 feet above ground level. Actual footing diameters and depths for each of the structure foundations would depend on the soil conditions and topography at each site and would be determined during final engineering.

The excavated material would be distributed at each structure site, used to backfill excavations from the removal of nearby structures (if any), or used in the rehabilitation of existing access roads. Alternatively, the excavated soil may be disposed of at an off-site disposal facility in accordance with all applicable laws.

Following excavation of the foundation footings, steel reinforced rebar cages would be set, survey positioning would be verified, and concrete would then be placed. Steel reinforced rebar cages may be assembled at staging yards and delivered to each structure location by flatbed truck or assembled at the job site. Depending upon the type of structure being constructed, soil conditions, and topography at each site, TSPs would require approximately 11 to 175 cubic yards of concrete delivered to each structure location.

The use of water, fluid stabilizers, drilling mud, and/or casings would be made available to control ground caving and to stabilize the sidewalls from sloughing. If fluid stabilizers are used, mud slurry would be added in conjunction with the drilling. The concrete for the foundation is then pumped to the bottom of the hole, displacing the mud slurry. Mud slurry brought to the surface is typically collected in a pit adjacent to the foundation and/or vacuumed directly into a truck to be reused or discarded at an off-site disposal facility in accordance with all applicable laws.

Concrete samples would be drawn at the time of pour and tested to ensure that engineered strengths were achieved. A normally specified SCE concrete mix typically takes approximately 20 days to cure to an engineered strength. This strength is verified by controlled testing of sampled concrete. Once this strength has been achieved, crews would be permitted to commence erection of the structure.

Conventional construction techniques as described above would generally be used for new foundation installation. Alternative foundation installation methods may be used where conventional methods are not practical. In certain cases, equipment and material may be deposited at structure sites using helicopters or by workers on foot, and crews may prepare the foundations using hand labor assisted by hydraulic or pneumatic equipment, or other methods.

During construction, existing concrete supply facilities would be used where feasible. If concrete supply facilities do not exist in certain areas, a temporary concrete batch plant would be set up in an established material staging yard. Equipment would include a central mixer unit (drum type); three silos for injecting concrete additives, fly ash, and cement; a water tank; portable pumps; a pneumatic injector; and a loader for handling concrete additives not in the silos. Dust emissions would be controlled by watering the area and by sealing the silos and transferring the fine particulates pneumatically between the silos and the mixers.

Prior to drilling for foundations, SCE or its Contractor would contact Underground Service Alert to identify any underground utilities in the construction zone.

3.2.3.3 Tubular Steel Pole Installation

TSPs consist of multiple sections. The pole sections would be placed in temporary laydown/work areas at each pole location (see Table 3.2-2 for approximate laydown/work area dimensions). Depending on conditions at the time of construction, the top sections may come pre-configured, may be configured on the ground, or may be configured after pole installation with the necessary cross arms, insulators, and wire stringing hardware. A crane would then be used to set each steel pole base section on top of the previously prepared foundations. If existing terrain around the TSP location is not suitable to support crane activities, as discussed previously in Section 3.2.3.2 a temporary crane pad would be constructed within the laydown/work area. When the base section is secured, the subsequent section of the TSP would be placed on the base section. The pole sections may also be spot-welded together for additional stability. Depending on the terrain and available equipment, the pole sections could also be pre-assembled into a complete structure prior to setting the TSPs.

3.2.3.4 Lightweight Steel Pole Installation

Each LWS pole would require a hole to be excavated using an auger or a backhoe. Excavated material would be used as described in Section 3.7, Reusable, Recyclable, and Waste Material Management. LWS poles consist of separate base and top sections and may be placed in temporary laydown/work areas at each pole location. Depending on conditions at the time of construction, the top sections may come pre-configured, may be configured on the ground, or may be configured after pole installation with the necessary cross arms, insulators, and wire-stringing hardware. The LWS poles would then be installed in the holes, typically by a line truck with an attached boom. When the base section is secured, the top section would be placed on the base section. Depending on the terrain and available equipment, the pole sections could also be assembled into a complete structure on the ground prior to setting the poles in place within the holes.

3.2.3.5 Lightweight Steel Pole H-Frame Installation

Each LWS pole for an H-frame structure would require a hole to be excavated using an auger or a backhoe. Excavated material would be used as described in Section 3.7, Reusable, Recyclable, and Waste Material Management. LWS H-frame poles consist of separate base and top sections and may be placed in temporary laydown/work areas at each pole location. Depending on conditions at the time of construction, the top sections may come pre-configured; may be configured on the ground; or may be configured after pole installation with the necessary cross arms, insulators, and wire-stringing hardware. The LWS poles would then be installed in the holes, typically by a line truck with an attached boom. The cross-bracings used to connect the two poles would be installed after the structure is erected.

3.2.3.6 Guy Pole Installation

Where required to stabilize LWS poles as discussed in Section 3.1.2.11, each wood guy pole would require a hole to be excavated using an auger, backhoe, or hand tools.

Excavated material would be used as described in Section 3.7, Reusable, Recyclable, and Waste Material Management. The wood poles would be placed in temporary laydown/work areas at each pole location. The wood poles would then be installed in the holes, typically by a line truck with an attached boom.

3.2.3.7 Guard Structures

As presented in Sections 3.1.2.11 and 3.1.3.2, guard structures are temporary facilities that would typically be installed at transportation, flood control, and utility crossings for wire stringing/removal activities. These structures are designed to stop the movement of a conductor should it momentarily drop below a conventional stringing height. SCE estimates that approximately 60 guard structures may need to be constructed as part of the Project.

Typical guard structures are standard wood poles. Depending on the overall spacing of the conductors being installed, approximately two to four temporary guard poles would be required on either side of a crossing. In some cases, specifically equipped boom trucks or, at highway crossings, temporary netting could be installed instead of guard poles. The temporary guard structures would be removed after the conductor is secured into place.

For highway and certain water crossings, and where the proposed route would cross telecommunications and other wires, SCE would work closely with the applicable jurisdiction or owner entity to secure the necessary approvals to string conductor over the applicable infrastructure.

3.2.3.8 Wire Stringing

Wire stringing activities would be in accordance with SCE common practices and similar to process methods detailed in the IEEE Standard 524-2003 (Guide to the Installation of Overhead Transmission Line Conductors).

To ensure the safety of workers and the public, safety devices such as traveling grounds; guard structures; radio-equipped roving vehicles; and safety personnel would be in place prior to the initiation of wire stringing activities. Advanced planning would be implemented to determine circuit outages, pulling times, and safety protocols to ensure the safe installation of wire.

Wire stringing activities include the installation of conductor, telecommunications cable, FRC, insulators, stringing sheaves (rollers or travelers), vibration dampeners, weights, suspension and dead-end hardware assemblies onto subtransmission line structures.

Each wire-stringing operation would include a wire puller positioned at one end and a tensioner and wire reel stand truck positioned at the other end of the line segment to be pulled.

The following five steps describe typical wire stringing activities:

- Step 1. Planning: Develop a wire stringing plan to determine the sequence of wire pulls and the set-up locations for the wire pull/tensioning/splicing equipment.
- Step 2. Sock Line Threading: A bucket truck is typically used to install a lightweight sock line from structure to structure. The sock line would be threaded through the wire rollers in order to engage a camlock device that would secure the pulling sock in the roller. This threading process would continue between all structures through the rollers of the particular set of spans selected for a conductor pull. In areas where a bucket truck is unable to install a lightweight sock line, a helicopter would fly the lightweight sock line from structure to structure. The sock line would be threaded through the wire rollers in order to engage a camlock device that would secure the pulling sock in the roller. This threading process would continue between all structures through the rollers of a particular set of spans selected for a conductor pull.
- Step 3. Pulling: The sock line would be used to pull in the conductor pulling rope and/or cable. The pulling rope or cable would be attached to the conductor using a special swivel joint to prevent damage to the wire and to allow the wire to rotate freely to prevent complications from twisting as the conductor unwinds off the reel.
- Step 4. Splicing, Sagging, and Dead-Ending: Once the conductor is pulled in, if necessary, all mid-span splicing would be performed. Once the splicing has been completed, the conductor would be sagged to proper tension and dead-ended to structures.
- Step 5. Clipping-In: After the conductor is dead-ended, the conductors would be secured to all tangent structures; a process called clipping in.

Where possible, the conductor being replaced would be used to pull in the new conductor.

3.2.3.9 Subtransmission Wire Pulling and Splicing Locations

The puller, tensioner, and splicing set-up locations associated with the Project would be temporary and the land that may be disturbed would be restored to as close to preconstruction conditions as possible or to the conditions agreed upon between the landowner and SCE. The set-up locations require level areas to allow for maneuvering of the equipment and, when possible, these locations would be located on existing roads and level areas to minimize the need for grading and cleanup. The number and location of these sites would be determined during final engineering. The approximate area needed for stringing set-ups associated with wire installation is variable and depends upon terrain. See Table 3.2-2 for approximate size of pulling, tensioning and splicing equipment set-up areas and laydown/work dimensions.

Wire pulls are the length between two wire installation points along the line. Wire pulls are designed based on availability of dead-end structures, conductor size, geometry of the line as affected by points of inflection, terrain, and suitability of stringing and splicing equipment set-up locations. On relatively straight alignments, typical wire pulls occur approximately every 10,000 to 12,000 feet. When the line route alignment contains multiple deflections or is situated in rugged terrain, the length of the wire pull is decreased. Generally, pulling locations and equipment set-ups would be in direct line with the direction of the overhead conductors and established approximately a distance of three times the height away from the adjacent structure.

Each stringing operation consists of a puller set-up positioned at one end and a tensioner set-up with wire reel stand truck positioned at the other end of the wire pull. Pulling and wire tensioning locations may also be used for splicing and field snubbing of the conductors. Field snubs (i.e., anchoring and dead-end hardware) would be temporarily installed to sag conductor wire to the correct tension at locations where stringing equipment cannot be positioned in back of a dead-end structure.

3.2.3.10 Helicopter Use

Helicopters would be used to support construction activities in areas where access is limited (e.g., no suitable access road, limited construction area to facilitate on-site structure assembly, and/or environmental constraints to accessing project components with standard construction vehicles and equipment) or system outage constraints are a factor. Project-related helicopter activities could include transportation of construction workers, delivery of equipment and materials to structure sites, structure placement, hardware installation, conductor and telecommunications cable stringing operations, and installation of marker balls. Helicopters may be used in other areas to facilitate construction depending on recommendations by the installation contractor.

Helicopter operations would occur in areas necessary to support the construction and operation of the Project. Helicopters and their associated support vehicles and equipment may be based at a local airport at night or on off days. Associated ground-based support vehicles would utilize existing, rehabilitated, or new access or spur roads as described in this PEA.

3.2.3.11 Subtransmission Undergrounding

Installing the underground 66 kV subtransmission cable at Casitas Substation would require surveying, trenching, duct bank installation, pulling and splicing of the cable, and construction of transition structures as presented below.

- Surveying: Construction activities would begin with the survey of existing underground utilities along the proposed underground subtransmission source line route. SCE would notify all applicable utilities via Underground Service Alert to locate and mark existing utilities and conducting exploratory excavations (potholing) as necessary to verify the location of existing utilities.
- Trenching: The Project includes a total of approximately 130 feet of new underground 66 kV subtransmission lines and associated transition and support structures. An approximately 20 to 24-inch wide by 60-inch deep trench would be required to place the 66 kV subtransmission line underground. This depth is required to meet the minimum 36 inches of cover above the duct bank and may vary to avoid other existing utilities. Trenching would be performed in the following manner: mark the location and applicable underground utilities, lay out trench line, saw or cut

asphalt or concrete pavement as necessary, dig to appropriate depth with a backhoe or similar equipment, and install duct bank. Once the duct bank has been installed, the trench would be backfilled with a two-sack sand slurry mix. Excavated materials would be disposed of at an off-site disposal facility in accordance with all applicable laws. Should groundwater be encountered, it would be pumped into a tank and disposed of at an off-site disposal facility in accordance with all applicable laws.

  The trench would be widened and shored where appropriate to meet California Occupation and Safety Health Administration requirements. Trenching would be staged so that open trench lengths would not exceed that which is required to install the duct banks. Where needed, open trench sections would have steel plates placed over them in order to maintain vehicular and pedestrian traffic. Provisions for emergency vehicle access would be arranged with local jurisdictions in advance of construction activities.

- Duct Bank Installation: As trenching for the underground 66 kV subtransmission line progresses, SCE would begin to install the underground duct bank. Collectively, the duct bank is comprised of cable conduit, spacers, ground wire, and concrete encasement. The duct bank would consist of two sets of four 5-inch diameter polyvinyl chloride (PVC) conduits fully encased with a minimum of 3 inches of concrete (Figure 3.1-4).

  The majority of the 66 kV duct banks would be installed in a vertically stacked configuration and each duct bank would be approximately 21 inches in height by 20 inches in width. In areas where underground utilities are highly congested or areas where it is necessary to fan out the conduits to reach termination structures, a flat configuration duct bank may be required. However, for the Project it is not anticipated that a flat underground duct bank configuration would be required.

  In instances where a subtransmission duct bank would cross or run parallel to other substructures that operate at normal soil temperature (gas lines, telephone lines, water mains, storm drains, sewer lines), a minimal radial clearance of 6 inches for crossing and 12 inches for paralleling these substructures would be required, respectively. Where duct banks cross or run parallel to substructures that operate at temperatures significantly exceeding normal soil temperature (other underground transmission circuits, primary distribution cables, steam lines, heated oil lines), additional radial clearance may be required. Clearances and depths would meet requirements set forth within Rule 41.4 of CPUC General Order (G.O.) 128.

- Cable Pulling, Splicing, Termination: Following the duct bank installation, SCE would pull the electrical cables through the duct bank and terminate cables at the transition structures where the subtransmission line would transition from underground to overhead. To pull the cables through the duct banks, a cable reel would be placed at one end of the conduit segment, and a pulling rig would be placed at the opposite end. The cable from the cable reel would be attached to a rope in the duct bank, and the rope linked to the pulling rig, which would pull the rope and the attached cable through the duct banks. A lubricant would be applied as the cable enters the ducts to decrease friction and facilitate travel through the PVC conduits.

- Transition Structure Construction: At the eastern end of the underground segment, the cables would transition from an underground to an overhead configuration via a TSP riser pole. The cable would exit the ground at the base of the TSP riser pole and continue upwards through the inside of the pole to overhead exit openings where the conductors would then connect to attachment hardware. The TSP riser transition structure would support cable terminations, lightning arresters, and dead-end hardware for overhead conductors. Construction methods for these structures would be substantially similar to those described in Section 3.2.3.3, Tubular Steel Pole Installation. Within the substation fenceline at the western end of the duct bank, the cables would transition through conduit sweeps and connect to rack positions within the substation.

3.2.3.12 Transfer/Removal of Existing Structures/Facilities

The Project would involve removing structures, conductor, and associated hardware. These would be removed in the following sequence:

- Wire pulling locations: Wire pulling sites would be located approximately every 10,000 to 12,000 feet along the existing 66 kV subtransmission lines, and would include locations at dead-end structures and turning points. Pull and tensioning equipment would be sited at the wire pulling sites to facilitate removal of the existing conductors.
- Conductor removal: After the wire pulling equipment is in place, the old conductor would be transferred to the new structures that would be pre-rigged with rollers. The old conductor would then be pulled out with a pulling rope and/or cable attached to the trailing end of the conductor which would be used to pull in the new conductor. The old conductor wire would be transported to a construction yard, where it would be prepared for recycling.
- Structure removal: For each structure to be removed, an approximately 100-foot by 150-foot work area would be required. Most structure removal activities would use the crane pad or other previously disturbed areas established for structure installation. If previously disturbed areas adjacent to the structure are not available, an area would be cleared of vegetation and graded if the ground is not level. The crane would be positioned approximately 60 feet from the tower location to dismantle the tower. Structures would be dismantled down to the foundations and the materials would be transported to a staging yard where they would be prepared for recycling.
- Footing/Foundation removal: Footings would be removed to a point 1 to 2 feet below grade, and the holes would be filled with excess soil and smoothed to match the surrounding grade. Footing materials would be transported to a staging yard where they would be prepared for disposal.

Prior to removal of existing structures, existing subtransmission lines would be transferred to new structures.

As presented in Section 3.1.2.4, approximately 15 wood poles that are adjacent to previously installed LWS poles in Segment 3A would be removed as part of the Project. Six of these 15 poles currently have distribution facilities. Prior to the removal of existing poles, the existing distribution lines and associated hardware would be transferred to the LWS poles. All remaining distribution equipment that is not reused by SCE would be removed and delivered to a facility for recycling. Typical distribution transfer would include the use of two bucket trucks.

A separate five of these 15 existing wood poles currently have only third-party telecommunications facilities. The third-party equipment would be transferred by SCE or its owner to the subtransmission poles in Segment 3A as part of the Project, or SCE would relinquish these poles to the third party.

Four of the 15 existing wood poles have no equipment installed on them. These wood poles would be removed by SCE as part of the Project.

Wood poles not relinquished to a third-party joint utility owner as described in Section 3.1.2.4 would be completely removed once the subtransmission, distribution, and telecommunication lines are transferred to new poles. The removal would consist of the entire pole, including above- and below-grade portions. The holes left from removing the poles would be backfilled with spoils that may be available as a result of the excavation for new poles and imported fill as needed. No non-relinquished existing wood poles would be topped and left in place. Typical pole removal would include the use of a boom truck to support the structure during dismantling and removal of the pole as well as one companion truck. Backfilled holes would be compacted and smoothed to match the surrounding grade.

Depending on their type, condition, and original chemical treatment, removed wood poles could be reused by SCE for other purposes, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a Regional Water Quality Control Board (RWQCB) certified municipal landfill.

The structures and conductor lengths to be removed as part of the Project are presented in Table 3.2-4 below.

Table 3.2-4: Structures and Conductor to be Removed

Location	Structures	Structure Foundations	Conductor Type/Length (feet)
Segment 1	0	40	0
Segment 2	0	20	0
Segment 3A	50 wood poles 5 wood guy poles	0	2/0 bare copper / 18,600’ 336 ACSR / 740’
Segment 3B	31 LSTs 2 wood H-frames	31	2/0 bare copper / 27,220’
Segment 4	70 LSTs 7 wood poles 1 wood H-frame	70	2/0 bare copper / 28,540’ 653 ACSR / 47,600’
Getty Tap	4 wood H-frames 3 wood poles	0	2/0 bare copper / 200’ 653 ACSR / 75’
Carpinteria Substation	3 LSTs 2 wood poles	3	653 ACSR / 1,070’
Casitas Substation	0	0	2/0 bare copper / 60’ 336 ACSR / 20’
Other Major Work	11 LSTs 2 wood H-frames	11	2/0 bare copper / 10,670’

3.2.3.13 De-Energized Facilities

At the conclusion of construction of the Project, sections of several retired 66 kV subtransmission line sections would be de-energized:

- Approximately 6,000 feet of 653 ACSR between Santa Clara Substation and the Getty Tap in Segment 1
- Approximately 49,200 feet of 2/0 bare copper conductor between the Getty Tap and Casitas Substation in Segment 1
- Approximately 16,300 feet of 2/0 bare copper conductor on the Santa Clara-Getty 66 kV Subtransmission Line in Segment 3B
- Approximately 12,000 feet of 653 ACSR and 8,000 feet of 2/0 bare copper conductor would be idled in and adjacent to Segment 4
- Approximately 24,200 feet of 2/0 bare copper conductor and 23,500 feet of 653 ACSR would be de-energized in Segment 4

The de-energized conductor would be grounded on the existing subtransmission structures, and these conductors and structures would not be removed as part of the

Project. De-energized line sections would be secured by attaching to newly installed subtransmission structures installed as part of the Project, or by using guy wires attached to the existing structures.

3.2.3.14 Installation of Marker Balls

As presented earlier in Section 3.1.2.11, all FAA recommendations, including the installation of marker balls on appropriate infrastructure where necessary, would be implemented into the design of the Project. In most cases, marker balls would be installed by helicopter because of this method's efficiency, minimal ground disturbance, and ability to operate in rugged terrain. In limited circumstances, marker balls may be installed using a spacer cart, but this method is generally less efficient and may result in additional ground disturbance.

SCE would select the most suitable installation method for a particular span. SCE would generally use a light-duty helicopter to install the marker balls. Installation by helicopter may require an outage that de-energizes nearby energized subtransmission lines and transmission lines.

Helicopter installation requires staging at a landing zone where the helicopter would pick up the construction worker and a marker ball(s) and travel to the installation location. To minimize ground disturbance, SCE would propose to use previously disturbed areas as landing zones.

In limited circumstances, SCE may employ a spacer cart to install marker balls and associated hardware. The spacer cart would be installed on the overhead wire by installation crews, either by helicopter or by using a crane placed on an existing crane pad created during the construction of the structure. Because any installation of spacer carts by crane would take place during construction, it is not expected that installation or use of spacer carts would cause any additional ground disturbance.

Due to the terrain in the areas where marker balls may be required, installation by crane would likely be infeasible, and may entail significant additional ground disturbance. For these reasons, crane installation would not be considered for the Project.

3.2.3.15 Subtransmission Land Disturbance Table

The estimated land disturbances associated with subtransmission work conducted in Segment 3A are presented in Table 3.2-5a, and the estimated land disturbances associated with future subtransmission work that has yet to be conducted as part of the Project are presented in Table 3.2-5b.

Table 3.2-5a: Subtransmission Approximate Land Disturbance Table, Work Previously Completed in Segment 3A

Project Feature	Sites / Miles	Calculation (L x W; feet)	Acres Disturbed During Construction	Acres to be Restored	Acres Permanently Disturbed
Rehabilitate Existing Access/Spur Roads (1)	0.25	# of miles x 18' wide	0.12	0	0.12
Construction Area - 66 kV LWS or Wood Pole (2)	54	150 x 75	13.95	13.41	0.54
Construction Area - 66 kV TSP (2)	1	200 x 150	0.69	0.63	0.06
Conductor Transfer, Removal, and Installation Setup Area (3)	6	Available previously disturbed areas	0	0	0
Total Estimated (4)			14.76	14.04	0.72

Notes:

1. Based on length of road in miles multiplied by road width of 14 feet plus a 2-foot shoulder on each side of road; additional disturbance area beyond the standard 18-foot wide access road for curves due to radius requirements, as well as area required for upslope/downslope remediation adjacent to the access roads.
2. Includes foundation installation, structure assembly and erection, structure removal, conductor transfer, conductor removal, conductor installation, and conductor splicing; non-permanent area to be returned/restored after construction; most of this work was performed within existing previously disturbed access and/or public roads. The permanent area of disturbance includes that portion of ROW within 25 feet of a TSP or 10 feet of an LWS pole and will remain cleared of vegetation; permanently disturbed area is approximately 0.06 ac/TSP, 0.01 ac/LWS or wood pole.
3. The area used for stringing setup sites was existing previously disturbed road or the area of the TSP installation.
4. The disturbed acreage data and calculations are estimates based upon SCE's preferred area of use for described project features and the construction work that was performed on the completed portions of Segment 3A, the areas of disturbed acreages are not representative of the actual work that was performed. These data are subject to revision and may change based on more accurate information becoming available.

Table 3.2-5b: Subtransmission Approximate Land Disturbance Table, Work to Be Completed

Project Feature	Sites / Miles	Calculation (L x W; feet)	Acres Disturbed During Construction	Acres to be Restored	Acres Permanently Disturbed
SCE Material Staging Yards	2	irregular dimensions	3.00	3.00	0.00
New Access/Spur Roads (1)	4	# of miles x 25' wide	12.12	0.00	12.12
Rehabilitate Existing Access/Spur Roads (1)	5	# miles x 90' wide	46.06	31.00	15.06
Construction Area - 66 kV LWS Pole (2)	5	150 x 75	1.29	1.24	0.05
Construction Area - 66 kV LWS H-Frame (2)	4	150 x 100	1.38	1.14	0.24
Construction Area - 66 kV TSP (2 & 3)	89	200 x 150	61.29	54.03	7.27
Conductor / Ground Wire Removal & Installation Setup Area (4)	13	500 x 100	14.92	14.92	0.00
Tower / H-Frame Removal Sites (5)	116	150 x 150	59.92	59.92	0.00
LST Footing Only Removal Sites (6)	61	75 x 50	7.88	7.88	0.00
Guard Structures	60	50 x 75	5.17	5.17	0.00
Total Estimated (7)			213.03	178.29	34.74

Notes:

1. Based on length of road in miles multiplied by road width of 14 feet plus a 2-foot shoulder on each side of road; additional disturbance area beyond the standard 18-foot wide access road for curves due to radius requirements, as well as area required for upslope/downslope remediation adjacent to the access roads, as well as the area required for the construction of approximately 40 mechanically stabilized earth crib and pile type retaining structures.
2. Includes foundation installation, structure assembly and erection, structure removal, conductor and/or overhead groundwire (OHGW) installation, conductor transfer, conductor removal, and conductor splicing; non-permanent area to be returned/restored after construction. The permanent area of disturbance includes that portion of ROW within 25 feet of a TSP or 10 feet of an LWS pole and will remain cleared of vegetation; permanently disturbed area is approximately 0.06ac/TSP, 0.06ac/H-frame, 0.01ac/LWS or wood pole.
3. A portion of the disturbed area will include the area necessary to construct a permanent 40-foot x 40-foot turnaround area (approx. 70 locations) needed due to terrain and slope stabilization issues at these structure locations. The permanent pad will therefore also be used for operations and maintenance access needs, and will become part of the permanent disturbance area around the structures. This area has been included in those calculations.
4. Based on 13,000-foot conductor reel lengths, number of circuits, and route design.
5. Includes all remaining existing tower/wood H-frame/wood poles structures to be removed in Segments 1, 2, 3A, 3B, and 4 that are not included within the temporary and/or permanently disturbed area of the new/replacement structures.
6. In Segments 1 and 2, there also remain tower stub angles and footings from LSTs previously cut off above ground that require excavation and removal to a minimum of 2 feet below ground level.
7. The disturbed acreage calculations are estimates based upon SCE’s preferred area of use for construction work for the described project feature; these estimates are subject to revision based upon final engineering and review of the project by SCE's Construction Manager and/or Contractor awarded project.

NOTE - All data provided in this table are based on planning level assumptions and may change based on any of the following: the completion of preliminary and final engineering; any updates and/or changes in project scope; any updates and/or changes to the project description; any changes to existing field conditions and/or the identification of yet unknown field conditions; outage constraints; the availability of labor, material, and equipment; as well as any constraints caused by environmental and/or permitting requirements.

Subtransmission Workforce and Construction Equipment Table

The workforce and construction equipment used in the construction of Segment 3A to date is presented in Table 3.2-6a, and the workforce and construction equipment required to complete the balance of the Project is presented in Table 3.2-6b. Because the number of marker balls that may be required for the Project is unknown at this time, equipment and workforce estimates for this activity is not included in the table.

3.2.4 Energizing Subtransmission Lines

Energizing the new lines is the final step in completing the subtransmission construction. To reduce the need for electric service interruption, de-energizing and re-energizing the existing lines may occur at night when electrical demand is low. Only the Getty Substation and its single customer would experience a short-duration service outage as new lines are energized.

3.2.5 Other Major Work

As presented in Section 3.1.4, portions of the Project would be constructed on irrigated agricultural lands. These properties contain irrigation infrastructure including pumps, sprinklers, supply lines, and other equipment that would need to be removed, relocated, and/or replaced to facilitate construction of the Project. Prior to construction, SCE would consult with property owners to locate irrigation infrastructure and determine appropriate protection measures. Actions could include the marking of agricultural infrastructure, installation of steel or wood plating on access roads to distribute the weight of construction vehicles and protect shallow-buried irrigation piping, or the installation of temporary protection structures (bollards, jersey walls) adjacent to infrastructure along access roads. Protection, replacement, or relocation measures would be accomplished using conventional construction equipment. Where infrastructure cannot be protected in place, SCE would temporarily relocate infrastructure to prevent damage, and would then re-site the infrastructure following completion of construction. Infrastructure damaged during construction or relocation would be repaired or replaced to as close to pre-construction conditions as feasible, or to the conditions agreed upon between the landowner and SCE following the completion of construction of the Project.

In addition, as presented in Section 3.1.4, the Project includes the removal of 11 existing LSTs and two wood H-frame structures and approximately 11,000 feet of conductor would be removed due to their location on unstable slopes (see Figure 3.1-10). These structures are located between Segments 3B and 4 and adjacent to Segment 4 for approximately 1 mile. These structures and conductor would be removed as described in Section 3.2.3.12.

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work Previously Completed in Segment 3A

Work Activity				Activity Production			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Survey (1)				**4**	**5**		**3.7 Miles**
1-Ton Truck, 4x4	300	Gas	2		5	8	1 Mile
Material Staging Yards (2)				**4**	**DOP**		
1-Ton Truck, 4x4	300	Diesel	1		Duration of Project	4	
R/T Forklift	125	Diesel	1			6	
Boom/Crane Truck	350	Diesel	1			2	
Water Truck	300	Diesel	1			8	
Truck, Semi Tractor	400	Diesel	1			2	
Tree Trimming (3)				**3**	**1**		**12 Trees**
Dump Truck, 4x4	380	Diesel	1		1	8	40 Trees
I Ton Truck	300	Diesel	1		1	8	
Chipper	50	Gas	1		1	4	
Road & Landing Work (4)				**5**	**2**		**0.25 Miles & 1 TSP Pads**
1-Ton Truck, 4x4	300	Diesel	2		2	8	Existing Roads: 1 Miles or Structure Pads (Flat to Mod Terrain) 4 Pads
Mechanized Brusher	110	Gas	1		1	8	
2-Ton Stake-Bed Truck	300	Gas	1		1	8	
Chipper	50	Gas	1		1	8	
Backhoe/Front Loader	125	Diesel	1		1	4	
Track Type Dozer	150	Diesel	1		1	4	
Motor Grader	250	Diesel	1		1	6	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work Previously Completed in Segment 3A (continued)

Water Truck	300	Diesel	2		1	8	
Drum Type Compactor	100	Diesel	1		1	6	
Excavator	250	Diesel	1		1	4	
Lowboy Truck/Trailer	450	Diesel	1		1	4	
Install TSP Foundations (5)				**6**	**3**		**1 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		3	4	0.5 TSPs
Boom/Crane Truck	350	Diesel	1		3	4	
Backhoe/Front Loader	125	Diesel	1		3	6	
Auger Truck	210	Diesel	1		3	6	
Water Truck	300	Diesel	1		3	8	
Dump Truck	350	Diesel	1		3	4	
Concrete Mixer Truck	350	Diesel	3		3	2	
TSP Haul (6)				**4**	**1**		**1 TSPs**
3/4-Ton Truck, 4x4	275	Gas	1		1	8	2 TSPs
Boom/Crane Truck	350	Diesel	1		1	6	
Flat Bed Pole Truck	400	Diesel	1		1	8	
TSP Assembly (7)				**8**	**1**		**1 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		1	4	1 TSP
1-Ton Truck, 4x4	300	Diesel	2		1	4	
Compressor Trailer	60	Diesel	1		1	6	
Boom/Crane Truck	350	Diesel	1		1	8	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work Previously Completed in Segment 3A (continued)

TSP Erection (8)				**8**	**1**		**1 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		1	4	1 TSP
1-Ton Truck, 4x4	300	Diesel	2		1	4	
Compressor Trailer	60	Diesel	1		1	4	
Boom/Crane Truck	350	Diesel	1		1	8	
LWS or Wood Pole Haul (9)				**4**	**14**		**54 Poles**
3/4-Ton Truck, 4x4	275	Gas	1		14	8	4 Poles
Boom/Crane Truck	350	Diesel	1		14	6	
Flat Bed Pole Truck	400	Diesel	1		14	8	
LWS or Wood Pole Assembly (10)				**8**	**14**		**54 Poles**
3/4-Ton Truck, 4x4	275	Gas	2		14	4	4 Poles
1-Ton Truck, 4x4	300	Gas	2		14	4	
Compressor Trailer	60	Diesel	1		14	6	
Boom/Crane Truck	350	Diesel	1		14	8	
Install LWS or Wood Pole (11)				**6**	**14**		**54 Poles**
1-Ton Truck, 4x4	300	Gas	1		14	8	4 Poles
Manlift/Bucket Truck	250	Diesel	1		14	6	
Boom/Crane Truck	350	Diesel	1		14	6	
Auger Truck	210	Diesel	1		14	4	
Backhoe/Front Loader	125	Diesel	1		14	8	
Extendable Flat Bed Pole Truck	400	Diesel	1		14	8	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work Previously Completed in Segment 3A (continued)

Transfer Existing Conductor (12)				**20**	**18**		**3.7 Circuit Miles & 6 Wire Set ups**
1-Ton Truck, 4x4	300	Diesel	4		18	4	Non-Bundled: 0.5 Miles or one wire set up pull
Manlift/Bucket Truck	250	Diesel	4		18	8	
Boom/Crane Truck	350	Diesel	2		18	8	
Water Truck	300	Diesel	2		18	4	
Bull Wheel Puller	350	Diesel	1		18	6	
Sock Line Puller	300	Diesel	1		18	6	
Static Truck/ Tensioner	350	Diesel	1		18	6	
Wire Truck/Trailer	350	Diesel	2		18	6	
Lowboy Truck/Trailer	450	Diesel	2		18	4	
Remove or Top Wood Poles (13)				**6**	**7**		**55 Wood Poles**
1-Ton Truck, 4x4	300	Diesel	2		7	9	9 Poles
Compressor Trailer	60	Diesel	1		7	5	
Manlift/Bucket Truck	250	Diesel	1		7	9	
Boom/Crane Truck	350	Diesel	1		7	9	
Flat Bed Pole Truck	400	Diesel	1		7	9	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work Previously Completed in Segment 3A (continued)

Install Conductor (14)				**20**	**15**		**3.7 Circuit Miles& 6 Wire Set ups**
1-Ton Truck, 4x4	300	Diesel	4		15	4	0.5 Miles or one wire set up pull
Manlift/Bucket Truck	250	Diesel	4		15	8	
Boom/Crane Truck	350	Diesel	2		15	8	
Dump Truck	350	Diesel	1		15	2	
Water Truck	300	Diesel	2		15	8	
Wire Truck/Trailer	350	Diesel	2		15	6	
Sock Line Puller	300	Diesel	1		15	6	
Bull Wheel Puller	350	Diesel	1		15	6	
Static Truck/ Tensioner	350	Diesel	1		15	6	
Backhoe/Front Loader	125	Diesel	1		15	2	
Lowboy Truck/Trailer	450	Diesel	2		15	4	
Restoration (15)				**7**	**4**		**3.7 Miles**
1-Ton Truck, 4x4	300	Gas	2		4	4	1 Mile
Backhoe/Front Loader	125	Diesel	1		4	4	
Motor Grader	250	Diesel	1		4	6	
Water Truck	300	Diesel	1		4	8	
Drum Type Compactor	100	Diesel	1		4	4	
Lowboy Truck/Trailer	450	Diesel	1		4	4	

Note:
All data provided in this table are estimates based on SCE's current preferred methods of construction for the described construction activity of the work that was performed on the completed portions of Segment 3A, the types of vehicles & equipment, workforce, scheduled, and durations are not representative of the actual work that was performed, and it is subject to revision and may change based on more accurate information becoming available.

Table 3.2-6b: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed

WORK ACTIVITY				ACTIVITY PRODUCTION			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Survey (1)				**4**	**17**		**16.5 Miles**
1-Ton Truck, 4x4	300	Gas	2		17	8	1 Mile
Material Staging Yards (2)				**4**	**DOP**		
1-Ton Truck, 4x4	300	Diesel	1		Duration of Project	4	
R/T Forklift	125	Diesel	1			6	
Boom/Crane Truck	350	Diesel	1			2	
Water Truck	300	Diesel	1			8	
Truck, Semi Tractor	400	Diesel	1			2	
Tree Trimming (3)				**3**	**14**		**530 Trees**
Dump Truck, 4x4	380	Diesel	1		14	8	40 Trees
I Ton Truck	300	Diesel	1		14	8	
Chipper	50	Gas	1		14	4	
R/W Clearing (4)				**5**	**20**		**5.0 Miles**
1-Ton Truck, 4x4	300	Diesel	1		20	8	0.25 Mile
Backhoe/Front Loader	125	Diesel	1		20	6	
Track Type Dozer	150	Diesel	1		20	6	
Motor Grader	250	Diesel	1		20	6	
Water Truck	300	Diesel	1		20	8	
Lowboy Truck/Trailer	450	Diesel	1		20	4	

Table 3.2-6b: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

Roads & Landing Work (5)				**5**	**49**		**9 Miles & 70 Pads**
1-Ton Truck, 4x4	300	Diesel	2		49	8	Brushing/Trimming 2 Miles Existing Roads: 1 Miles New Roads (Mod): 1 Mile New Roads (Mtns): 0.5 Mile Structure Pads (Flat to Mod): 4 Pads Structure Pads (Mtns): 2 Pads
Mechanized Brusher	110	Gas	1		16	8	
2-Ton Stake-Bed Truck	300	Gas	1		16	8	
Chipper	50	Gas	1		16	8	
Backhoe/Front Loader	125	Diesel	1		49	4	
Track Type Dozer	150	Diesel	1		49	4	
Motor Grader	250	Diesel	1		49	6	
Water Truck	300	Diesel	2		49	8	
Drum Type Compactor	100	Diesel	1		29	6	
Excavator	250	Diesel	1		49	4	
Lowboy Truck/Trailer	450	Diesel	1		49	4	
Guard Structure Installation (6)				**6**	**12**		**60 Structures**
3/4-Ton Truck, 4x4	275	Gas	1		12	8	5 Structures
1-Ton Truck, 4x4	300	Diesel	1		12	8	
Compressor Trailer	60	Diesel	1		12	4	
Manlift/Bucket Truck	250	Diesel	1		12	4	
Boom/Crane Truck	350	Diesel	1		12	6	
Auger Truck	210	Diesel	1		12	4	
Extendable Flat Bed Pole Truck	400	Diesel	1		12	8	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

Remove Existing Conductor & GW (7)				**20**	**32**		**20 Circuit Miles**
1-Ton Truck, 4x4	300	Diesel	4		32	4	Non-Bundled: 0.5 Mile
Manlift/Bucket Truck	250	Diesel	4		32	8	
Boom/Crane Truck	350	Diesel	2		32	8	
Bull Wheel Puller	350	Diesel	1		23	6	
Sock Line Puller	300	Diesel	1		23	6	
Water Truck	300	Diesel	2		23	4	
Static Truck/ Tensioner	350	Diesel	1		23	6	
Lowboy Truck/Trailer	450	Diesel	2		23	4	
LST Removal (8)				8	**230**		**115 LSTs**
1-Ton Truck, 4x4	300	Gas	2		230	4	0.5 LSTs
Compressor Trailer	60	Diesel	1		230	8	
R/T Crane (M)	215	Diesel	1		230	6	
Boom/Crane Truck	350	Diesel	1		230	6	
Flat Bed Truck/Trailer	400	Diesel	1		230	4	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

LST Foundation Removal (9)				**4**	**88**		**176 LSTs**
3/4-Ton Truck, 4x4	275	Gas	1		88	4	2 LSTs
Compressor Trailer	60	Diesel	1		88	8	
Backhoe/Front Loader	125	Diesel	1		88	6	
Dump Truck	350	Diesel	1		88	6	
Excavator	250	Diesel	1		88	4	
Remove Wood H-Frame or Wood Poles (10)				**6**	**4**		**5 H-Frames** **11Wood Poles**
1-Ton Truck, 4x4	300	Diesel	2		4	9	9 Poles or 4 H-Frames
Compressor Trailer	60	Diesel	1		4	5	
Manlift/Bucket Truck	250	Diesel	1		4	9	
Boom/Crane Truck	350	Diesel	1		4	9	
Flat Bed Pole Truck	400	Diesel	1		4	9	
Install TSP Foundations (11)				**6**	**178**		**90 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		178	4	0.5 TSPs
Boom/Crane Truck	350	Diesel	1		178	4	
Backhoe/Front Loader	125	Diesel	1		178	6	
Auger Truck	210	Diesel	1		178	6	
Water Truck	300	Diesel	1		178	8	
Dump Truck	350	Diesel	1		178	4	
Concrete Mixer Truck	350	Diesel	3		178	2	
TSP Haul (12)				**4**	**45**		**90 TSPs**
3/4-Ton Truck, 4x4	275	Gas	1		45	8	2 TSPs
Boom/Crane Truck	350	Diesel	1		45	6	
Flat Bed Pole Truck	400	Diesel	1		45	8	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

TSP Assembly (13)				**8**	**89**		**90 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		89	4	1 TSP
1-Ton Truck, 4x4	300	Diesel	2		89	4	
Compressor Trailer	60	Diesel	1		89	6	
Boom/Crane Truck	350	Diesel	1		89	8	
TSP Erection (14)				**8**	**89**		**89 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		89	4	1 TSP
1-Ton Truck, 4x4	300	Diesel	2		89	4	
Compressor Trailer	60	Diesel	1		89	4	
Boom/Crane Truck	350	Diesel	1		89	8	
Wood/LWS Pole Haul (15)				**4**	**4**		**13 Poles**
3/4-Ton Truck, 4x4	275	Gas	1		4	8	4 Poles
Boom/Crane Truck	350	Diesel	1		4	6	
Flat Bed Pole Truck	400	Diesel	1		4	8	
LWS H-Frame or LWS Pole Assembly (16)				**8**	**4**		**5 Poles & 4 LWS H-Frame**
3/4-Ton Truck, 4x4	275	Gas	2		4	4	4 Poles
1-Ton Truck, 4x4	300	Gas	2		4	4	
Compressor Trailer	60	Diesel	1		4	6	
Boom/Crane Truck	350	Diesel	1		4	8	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

Install LWS H-Frame or LWS Pole (17)				**6**	**4**		**5 Poles & 4 LWS H-Frame**
1-Ton Truck, 4x4	300	Gas	1		4	8	4 Poles or 2 H-Frames
Manlift/Bucket Truck	250	Diesel	1		4	6	
Boom/Crane Truck	350	Diesel	1		4	6	
Auger Truck	210	Diesel	1		4	4	
Backhoe/Front Loader	125	Diesel	1		4	8	
Extendable Flat Bed Pole Truck	400	Diesel	1		4	8	
Install Conductor (18)				**20**	**44**		**16.5 Circuit Miles**
1-Ton Truck, 4x4	300	Diesel	4		44	4	0.5 Mile
Manlift/Bucket Truck	250	Diesel	4		44	8	
Boom/Crane Truck	350	Diesel	2		44	8	
Dump Truck	350	Diesel	1		44	2	
Water Truck	300	Diesel	2		21	8	
Wire Truck/Trailer	350	Diesel	2		44	6	
Sock Line Puller	300	Diesel	1		32	6	
Bull Wheel Puller	350	Diesel	1		32	6	
Static Truck/ Tensioner	350	Diesel	1		44	6	
Backhoe/Front Loader	125	Diesel	1		44	2	
Lowboy Truck/Trailer	450	Diesel	2		44	4	
Hughes 500 E Helicopter		Jet A	1		12	6	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

Install Telecommunications Cable & FRC (19)				**20**	**21**		**24 Miles-Telecom & 2.3 Miles-FRC**
1-Ton Truck, 4x4	300	Diesel	3		21	4	2.0 Mile
Manlift/Bucket Truck	250	Diesel	4		21	8	
Boom/Crane Truck	350	Diesel	1		21	8	
Dump Truck	350	Diesel	1		21	2	
Water Truck	300	Diesel	1		21	8	
Wire Truck/Trailer	350	Diesel	2		21	6	
Sock Line Puller	300	Diesel	1		21	6	
Bull Wheel Puller	350	Diesel	1		21	6	
Static Truck/ Tensioner	350	Diesel	1		21	6	
Backhoe/Front Loader	125	Diesel	1		21	2	
Lowboy Truck/Trailer	450	Diesel	2		21	4	
Hughes 500 E Helicopter		Jet A	1		7	6	
Guard Structure Removal (20)				**6**	**9**		**60 Structures**
3/4-Ton Truck, 4x4	275	Gas	1		9	8	7 Structures
1-Ton Truck, 4x4	300	Diesel	1		9	8	
Compressor Trailer	60	Diesel	1		9	4	
Manlift/Bucket Truck	250	Diesel	1		9	4	
Boom/Crane Truck	350	Diesel	1		9	6	
Extendable Flat Bed Pole Truck	400	Diesel	1		4	8	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

Duct Bank Installation (21)				**6**	**3**		**130 Trench Feet**
1-Ton Crew Cab, 4x4	300	Diesel	2		3	4	250 Feet/Day
Backhoe/Front Loader	125	Diesel	1		3	6	
Dump Truck	350	Diesel	2		3	6	
Pipe Truck/Trailer	275	Diesel	1		3	6	
Water Truck	300	Diesel	1		3	8	
Concrete Mixer Truck	350	Diesel	3		3	2	
Compressor Trailer	60	Diesel	1		3	4	
Lowboy Truck/Trailer	450	Diesel	1		3	4	
UG Cable Installation (22)				**8**	**1**		**130 Circuit Feet**
1-Ton Truck, 4x4	300	Gas	2		1	4	0.33 Mile
Manlift/Bucket Truck	250	Diesel	1		1	6	
Boom/Crane Truck	350	Diesel	1		1	6	
Wire Truck/Trailer	350	Diesel	2		1	6	
Puller	350	Diesel	1		1	6	
Static Truck/Tensioner	350	Diesel	1		1	6	

Table 3.2-6a: Subtransmission Construction Equipment and Workforce Estimates, Work To Be Completed (continued)

Restoration (23)				**7**	**17**		**16.5 Miles**
1-Ton Truck, 4x4	300	Gas	2		17	4	1 Mile
Backhoe/Front Loader	125	Diesel	1		17	4	
Motor Grader	250	Diesel	1		17	6	
Water Truck	300	Diesel	1		17	8	
Drum Type Compactor	100	Diesel	1		17	4	
Lowboy Truck/Trailer	450	Diesel	1		17	4	

Note:
All data provided in this table are based SCE’s preferred methods of construction for the described activity and planning level assumptions, it is subject to revision and may change based on any of the following: the completion of preliminary and final engineering; any updates and/or changes in project scope; any updates and/or changes to the project description; any updates and/or changes to existing field conditions; identification of yet unknown field conditions; outage constraints; the availability of labor, material, and equipment; any constraints caused by environmental and/or permitting requirements, as well as the final review of the project by SCE's Construction Manager and/or Contractor awarded project.

Crew Size Assumptions:

#1 Survey = one 4-man crew
#2 Material Staging Yards = one 4-person crew
#3 Tree Trimming = one 3-person crew
#4 Right-of-way Clearing = one 5-person crew
#5 Roads & Landing Work = one 5-person crew
#6 Guard Structure Installation = one 6-person crew
#7 Remove Existing Conductor & GW = two 10-person crews
#8 Remove LSTs = one 8-person crew
#9 Remove Existing LST Foundations = one 4-person crew
#10 Remove Existing Wood/LWS Poles = one 6-person crew
#11 Install Foundations for TSPs = one 6-person crew
#12 TSP Haul = one 4-person crew
#13 TSP Assembly = one 8-person crew
#14 TSP Erection = one 8-person crew
#15 Wood/LWS Pole Haul = one 4-person crew
#16 Wood/LWS Pole Assembly = one 8-person crew
#17 Install Wood/H-Frame/LWS Pole = one 6-person crew
#18 Install Conductor = two 10-person crews
#19 Install Telecommunications Cable & FRC = two 10-man crews
#20 Guard Structure Removal = one 6-person crew
#21 Duct Bank Installation = one 6-person crew
#22 UG Cable Installation = one 8-person crew
#23 Restoration = one 7-person crew

3.2.5.1 Estimated Land Disturbance – Other Major Work

The potential workforce and construction equipment necessary to protect or relocate agricultural infrastructure during construction cannot be estimated at this time; the number, type, and extent of infrastructure requiring protection or relocation would be identified during final engineering and in consultation with property owners.

The workforce and construction equipment required for the removal of 11 existing LSTs and two wood H-frame structures and approximately 11,000 feet of conductor between Segments 3B and 4 and adjacent to Segment 4 for approximately 1 mile along a portion of Segment 4 is detailed in Table 3.2-4.

3.2.6 Telecommunications Construction

The following sections describe the construction activities associated with installing the telecommunications infrastructure. As presented in Section 3.1.3, telecommunications infrastructure would be installed to connect the Project to SCE's existing telecommunications system and would provide Supervisory Control and Data Acquisition (SCADA), protective relaying, data transmission, and telephone services for the Project and associated facilities.

3.2.6.1 Telecommunications Equipment Installation

New terminal equipment, channel multiplexer equipment, and other telecommunication equipment devices would be installed on equipment racks located within the Casitas Substation MEER, Carpinteria Substation MEER, Goleta Substation communications room, Ortega Substation MEER, Santa Barbara Substation MEER, Santa Clara Substation communications room, and the Ventura Substation MEER. The new telecommunication equipment installation and the attachment of the proposed new telecommunication cable would allow the configuration of new optical cable lightwave systems connecting the above locations. Telecommunication circuits for line protection, SCADA, communication, control, and monitoring would be configured and wired to the appropriate transmission/substation relays or equipment.

3.2.6.2 Telecommunications Cable Installation

Telecommunications cable would be installed at or near the top of overhead structures in Segments 1, 2, and 4 as described in Section 3.2.3.8. Pulling and splicing locations would be the same as those used for installation of subtransmission conductor and as described in Section 3.2.9.

Telecommunication cable splices would be made within 36 x 36 x 10-inch metal enclosures that would be attached to subtransmission structures with metal straps. Along Segments 1, 2, and 4, splice boxes would be installed on subtransmission structures at locations of no more than 2 miles apart.

At Santa Clara Substation, Casitas Substation, and Carpinteria Substation, the telecommunications cable would transition from an overhead configuration to an underground configuration through risers installed on TSPs, and by using metal banding to attach the cable to the legs of an LST. Risers would be installed on a TSP at Carpinteria Substation, and on the easternmost TSP in Segment 1 adjacent to Santa Clara Substation.

New underground facilities would be installed at Casitas Substation, Carpinteria Substation, and Santa Clara Substation (see Table 3.1-2 for the conduit lengths that would be undergrounded, and Figure 3.1-9 for an illustration of typical conduit installation). Conduit would be installed in trenches that are approximately 11 inches wide and 36 inches deep. New underground conduit and structures would typically be installed with a backhoe. PVC conduit would be placed in the trench and covered with a minimum of approximately 3 inches of concrete slurry, then backfilled and compacted.

The telecommunications cable would be installed in an innerduct that protects and identifies the cable within the underground conduit and structures. To install the innerduct, it would first be pulled in the conduit from structure to structure using a pull rope and pulling machine or truck-mounted hydraulic capstan. Then the telecommunications cable would be pulled inside the innerduct using the same procedure.

3.2.6.3 Road Access for Telecommunications Installation

Existing access roads, spur roads, crane pads, and pulling and stringing sites established in Segments 1, 2, and 4 for the installation of subtransmission conductor would be used for installation of the proposed telecommunication facilities

3.3 Land Rights

Except for a short (approximately 2,500 linear foot) realignment within Segment 3B, the Project's physical infrastructure would be built within existing SCE fee-owned or easement ROW. The width of these ROWs varies over the length of the Project from 24 feet to 165 feet. Existing and proposed access roads and spur roads are primarily located within existing ROWs or covered under easements. On federal lands, SCE has existing Special Use Permits for transmission facilities and access roads.

Except for new land rights necessary to accommodate the short realignment within Segment 3B, no acquisition of additional or upgraded rights on private lands is anticipated. SCE would upgrade existing rights on public lands where necessary to include the addition of telecommunication cable. SCE also would acquire temporary construction easements where necessary, particularly for pulling sites and staging areas/laydown/work yards.

Table 3.2-7: Telecommunication System, Approximate Land Disturbance

Project Feature	Site Quantity	Disturbance Acreage Calculation (L x W; feet)	Square Feet Disturbed During Construction	Square Feet to be Restored	Square Feet Permanently Disturbed
Trench, Santa Clara Substation, Outside fenceline	1	145 x 20	2,900	2,900	0
Trench, Santa Clara Substation, Inside fenceline	1	75 x 20	1,500	0*	NA*
Trench, Carpinteria Substation, Inside fenceline	1	80 x 20	1,600	0*	NA*
Trench, Casitas Substation, Outside fenceline	1	75 x 20	1,500	1,500	0
Trench, Casitas Substation, Inside fenceline	1	15 x 20	300	0*	NA*

Notes:
NA – not applicable
* All trenches inside the fenceline of the substations would be installed on previously-disturbed lands; the previous disturbances are considered permanent. Therefore, these disturbances would not be restored, although the surface of the substations would be returned to their original, previously-disturbed state.

Table 3.2-8: Telecommunication System Construction Equipment and Workforce Estimates

Primary Equipment Description	Estimated horsepower	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Work Days)	Duration of Use (Hrs perDays)
Telecom installation, Carpinteria Substation						
Crew truck	255	Gas	2	2	30	4
Foreman Truck	385	Gas	1	1	12	4
Telecom installation, Casitas Substation						
Crew truck	255	Gas	2	2	20	4
Foreman Truck	385	Gas	1	1	10	4
Telecom installation, Goleta Substation						
Crew truck	255	Gas	2	2	5	4
Foreman Truck	385	Gas	1	1	1	4
Telecom installation, Ortega Substation						
Crew truck	255	Gas	2	2	5	4
Foreman Truck	385	Gas	1	1	1	4
Telecom installation, Santa Barbara Substation						
Crew truck	255	Gas	2	2	5	4
Foreman Truck	385	Gas	1	1	1	4

Primary Equipment Description	Estimated horsepower	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Work Days)	Duration of Use (Hrs perDays)
Telecom installation, Santa Clara Substation						
Crew truck	255	Gas	2	2	30	4
Foreman Truck	385	Gas	1	1	12	4
Telecom installation, Ventura Substation						
Crew truck	255	Gas	2	2	30	4
Foreman Truck	385	Gas	1	1	12	4

3.4 Land Disturbance

As described in this chapter, land disturbance includes all areas that would be affected by construction of the Project, and includes areas that were affected by construction in Segment 3A.

It is estimated that the total permanent land disturbance associated with components of the Project that have yet to be constructed (as defined in Section 3.1) would be 34.74 acres, and that temporary disturbances would total approximately 178.29 acres.

It is estimated that the total permanent land disturbance associated with components of the Project that have already been constructed in Segment 3A (as defined in Section 3.1) was 0.72 acres, and temporary disturbances totaled approximately 14.76 acres.

The estimated amount of land disturbance for each project component is summarized in Table 3.4-1.

3.4.1 Land Disturbance Summary Tables

The projected land disturbance associated with each of the three major components of the Project for the past construction in Segment 3A and the future construction are shown in Tables 3.4-1a and 3.4-1b.

Table 3.4-1a: Approximate Land Disturbance Summary, Work Completed in Segment 3A

Project Element	Acres Disturbed During Construction	Acres Temporarily Disturbed	Acres Restored	Acres Permanently Disturbed
Substation	0	0	0	0
Subtransmission	14.76	14.04	14.04	0.72
Telecommunications	0	0	0	0

Table 3.4-1b: Approximate Land Disturbance Summary, Work To Be Conducted

Project Element	Acres Disturbed During Construction	Acres Temporarily Disturbed	Acres Restored	Acres Permanently Disturbed
Substation	0	0	0	0
Subtransmission	213.03	178.29	178.29	34.74
Telecommunications	0.18	0.18	0.18	0

3.5 Post-Construction Activities

Following the completion of construction of the Project, SCE would clean up all areas that would be temporarily disturbed by construction of the Project (which may include the material staging yard, construction setup areas, pull and tension sites, and splicing sites) to as close to pre-construction conditions as feasible, or to the conditions agreed upon between the landowner and SCE.

3.6 Hazardous Materials

Construction of the 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 applicable regulations. Material Safety Data Sheets would be made available at the construction site for all crew workers.

The Spill Prevention Control and Countermeasure Plans (SPCC Plans) for the existing substations would be updated by SCE before any new oil-containing equipment would be brought to the substation locations. The SPCC Plans for the substations would be updated to describe how hazardous materials released from electrical equipment would be diverted and directed toward containment structures, and how containerized hazardous materials would be stored within a temporary containment area with sufficient containment capacity.

3.7 Reusable, Recyclable, and Waste Material Management

Construction of the Project would result in the generation of various waste materials, including wood, metal, soil, vegetation, and sanitation waste (portable toilets). Sanitation waste (i.e., human generated waste) would be disposed of in accordance with sanitation waste management practices. Material from existing infrastructure that would be removed as part of the Project, such as conductor, steel, concrete, and debris, would be temporarily stored as the material awaits salvage, recycling, or disposal.

The existing wood poles removed as part of the Project would be returned to a staging yard, and either reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a RWQCB-certified municipal landfill.

Material excavated during construction of the Project would either be used as fill or made available for use by the landowner; it is not anticipated that any excavated materials would be disposed of off-site. If contaminated material is encountered during excavation, work would stop at that location and SCE's Spill Response Coordinator would be called to the site to make an assessment and notify the proper authorities.

3.8 Geotechnical Studies

Geotechnical studies were conducted for the Project in the 2000-2001 period. These studies were conducted along Segment 1, Segment 2, Segment 3B, and Segment 4.

Prior to construction, further geotechnical investigations would be initiated to compile information required to complete final engineering. The results of these studies would provide an evaluation of the depth to the water table, liquefaction potential, physical properties of subsurface soils, slope stability, and the presence of hazardous materials and common contaminants; the studies may also include recommendations for the final engineering design. Soil borings advanced for geotechnical purposes would typically occur every mile and at angle points.

3.9 Environmental Surveys

SCE has conducted initial biological and cultural resources surveys and would conduct further focused environmental surveys prior to the start of construction. A cultural resources survey of those areas that could not be previously accessed would be conducted prior to the start of construction. These surveys would identify and/or address any potential sensitive biological and cultural resources that may be impacted by the Project, including the substation sites, subtransmission line and telecommunication cable routes, wire stringing locations, access and spur roads, drilling and crane pads, and staging yards. The information gathered from these surveys may be used to finalize project design in order to avoid sensitive resources, or to minimize the potential impact to sensitive resources from Project-related activities. The results of these surveys would also determine the extent to which environmental specialist construction monitors may be used.

Biological resources in the vicinity of the Project are presented in detail in Section 4.4, Biological Resources. Cultural resources in the vicinity of the Project are presented in detail in Section 4.5, Cultural Resources.

Within 30 days prior to the start of ground disturbing activity, the following surveys would be conducted:

- San Diego Desert Woodrat Survey. During the pre-construction surveys, a qualified biologist would identify any potential San Diego desert woodrat middens within 50 feet of Project activities.
- Burrowing Owl Survey. A pre-construction, focused burrowing owl protocol survey shall be conducted no more than 30 days prior to commencement of ground disturbing activities within suitable habitat to determine if any occupied burrows are present.
- Clearance Surveys. A clearance survey would be conducted no more than 30 days prior to the start of construction in a particular area to identify potential plant and animal species, including special-status plants and wildlife, that may be impacted by

construction activities. Clearance surveys include a field survey by a qualified botanist and wildlife biologist and would be limited to areas directly impacted by construction activities.

- Active Nests. Work near nests would be scheduled to take place outside the nesting season when feasible. Prior to the start of construction in a particular area during nesting season, a qualified wildlife biologist would conduct a pre-construction focused nesting survey.

3.10 Worker Environmental Awareness Training

Prior to construction, a Worker Environmental Awareness Plan (WEAP) would be developed. A presentation would be prepared by SCE and used to train all site personnel prior to the commencement of work. A record of all trained personnel would be kept.

In addition to instruction on compliance with Applicant Proposed Measures and any mitigation measures identified, all construction personnel would also receive the following:

- A list of phone numbers of SCE environmental specialist personnel associated with the Project (archaeologist, biologist, environmental compliance coordinator, and regional spill response coordinator).
- Instruction on the Santa Barbara County Air Pollution Control District and Ventura County Air Pollution Control District fugitive dust rules.
- Instruction on biological resources (including special-status species and other sensitive habitats and resources that could occur in the vicinity of the Project); the locations of sensitive resources; the legal status and protection afforded these species; and the measures to be implemented for avoidance and minimization of impacts to the resources. Penalties for violations of environmental laws will also be incorporated into the training.
- A review of applicable local, State and federal ordinances, laws and regulations pertaining to historic preservation; a discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and SCE policies; a review of archaeology, history, prehistory, Native American cultures and paleontological resources in the Project vicinity; and instruction on what typical cultural resources look like.
- Instruction on the procedures to be implemented should unanticipated cultural resources (as well as paleontological resources) be encountered during construction activities, including stopping work in the vicinity of the find and contacting the archaeologist or environmental compliance coordinator who would provide guidance on how to proceed (see also Section 3.11 below).
- Instruction on the importance of maintaining a clean construction site, inclusive of ensuring all food scraps, wrappers, food containers, cans, bottles, and other trash from the Project are deposited in closed trash containers. Trash containers would be removed from the Project as required and would not be permitted to overfill.

- Instruction on the individual responsibilities under the Clean Water Act, the project SWPP plan, site-specific BMPs, and the location of Material Safety Data Sheets for the Project.
- Instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination.
- A copy of the truck routes to be used for material delivery.
- 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 Project.

3.11 Cultural Resources Unanticipated Discovery Plan

SCE's Unanticipated Discovery Plan would describe the procedures to be followed in the event that previously unidentified cultural resources are discovered during construction of the Project. If previously unidentified cultural resources are discovered during construction, personnel would be instructed to suspend work in the vicinity of the find. The resource would then be evaluated for listing in the California Register of Historical Resources (CRHR) by a qualified archaeologist, and, if the resource is determined to be eligible for listing in the CRHR, the resource would either be avoided or appropriate archaeological protective measures would be implemented.

If human skeletal remains are uncovered during Project construction, SCE and/or its contractors shall immediately halt all work in the immediate area, contact the applicable County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. Per Health and Safety Code 7050.5, upon the discovery of human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. If the applicable County Coroner determines that the remains are Native American, it is anticipated that the coroner would contact the Native American Heritage Commission in accordance with Health and Safety Code Section 7050.5(c) and Public Resources Code 5097.98 (as amended by AB 2641). In addition, SCE shall ensure that the immediate vicinity where the Native American human remains are located is not damaged or disturbed by further development activity until SCE has discussed and conferred, as prescribed in PRC 5097.98, with the most likely descendants regarding their recommendations.

3.12 Construction Equipment and Personnel

The estimated elements, materials, and number of personnel and equipment required for construction of the Project are summarized for each project component in their respective Construction Equipment and Workforce Estimates Tables detailed in previous sections.

Construction would be performed by either SCE construction crews or Contractors. If SCE construction crews are used, they would be based at SCE's Ventura Service Center or one or more staging yards set up for the Project. Contractor construction personnel would be managed by SCE construction management personnel and based out of the Contractor's existing yard or one or more staging yards set up for the Project. SCE anticipates a total of approximately 75 construction personnel working on any given day. SCE anticipates that crews would work concurrently whenever possible; however, the estimated deployment and number of crew members would vary depending on factors such as material availability, resource availability, weather factors, and construction scheduling.

In general, construction would occur in accordance with accepted construction industry standards. SCE would comply with applicable local ordinances for construction activities, or would request a variance from the applicable jurisdiction.

3.13 Construction Schedule

SCE anticipates that construction of the Project would take approximately 24 months. Construction would commence following regulatory approvals, final engineering, procurement activities, and receipt of all applicable permits.

3.14 Project Operation and Maintenance

Ongoing operation and maintenance activities are necessary to ensure reliable service, as well as the safety of utility workers and the general public, as mandated by the CPUC.

All substations associated with the Project are, and would continue to function as, remotely controlled substations. The SCE Grid Control Center (GCC), Alternate Grid Control Center (AGCC), and all Switching Centers are equipped with Energy Management System (EMS) workstations allowing them to monitor and respond to alarms as the system status changes. All workstation users have the ability to perform supervisory control of remote station equipment within their jurisdictional area.

Remote substations with Supervisory control are equipped with a Programmable Logic Controller (PLC) integrated with Substation Automation System (SAS). All automatic functions and data acquisition is performed by the SAS. When a station is supervisory controlled, controllable points can be initiated from the switching center with operational jurisdiction.

Substation Operators (SO) perform station inspections in unmanned substations when there is an indication of trouble. Routine circuit breaker and disconnect switching operations at remotely controlled stations would normally be performed by remote control on orders by the responsible switching center. The System Operators are responsible for maintaining the correct status of all lines and equipment under their jurisdiction.

The subtransmission lines would be maintained in a manner consistent with CPUC G.O. 95 and G.O. 128 as applicable. Normal operation of the lines would be controlled remotely through SCE control systems, and manually in the field as required. SCE inspects the subtransmission overhead facilities in a manner consistent with CPUC G.O. 165 a minimum of once per year via ground and/or aerial observation, but usually occurs more frequently based on system reliability. Maintenance would occur as needed and could include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. Most regular operations and maintenance (O&M) activities for overhead facilities are performed from existing access roads with no surface disturbance. Work done to existing facilities, such as repairing or replacing existing poles and towers, might occur in undisturbed areas. Existing conductors could require re-stringing to repair damaged equipment. Some pulling sites could be located in previously undisturbed areas and at times, conductors could be passed through existing vegetation on route to their destination.

Routine access and spur road maintenance would be conducted on an annual or an as-needed basis. Access and spur road maintenance includes maintaining a vegetation-free corridor (to facilitate access and for fire prevention) and blading to smooth over washouts, eroded areas, and washboard surfaces as needed. Access and spur road maintenance could include brushing (i.e., trimming or removal of shrubs) approximately 2 to 5 feet beyond the edge of the road or roadside berm when necessary to keep vegetation from intruding into the roadway. Access and spur road maintenance would also include cleaning ditches, moving and establishing berms, clearing and making functional drain inlets to culverts, culvert repair, clearing and establishing water bars, and cleaning and repairing over-side drains. Access and spur road maintenance includes the repair, replacement and installation of storm water diversion devices on an as-needed basis.

Insulators could require periodic washing with water to prevent the buildup of contaminants (e.g., dust, salts, droppings, smog, condensation) and reduce the possibility of electrical arcing which can result in circuit outages and potential fire. Frequency of insulator washing is region-specific and based on local conditions and build-up of contaminants. Insulators, hardware, and other components are replaced as needed to maintain circuit reliability.

Wood pole testing and treating is a necessary maintenance activity conducted to evaluate the condition of wood structures both above and below ground level. Intrusive inspections require the temporary removal of soil around the base of the pole, usually to a depth of approximately 12 to 18 inches, to check for signs of deterioration. Public roads and existing access and spur roads would be employed to access poles. All soil removed during intrusive inspections would be replaced and compacted at the completion of the testing.

Regular tree pruning would be performed in compliance with existing State and federal laws, rules, and regulations and is crucial for maintaining reliable service, especially during severe weather or disasters. Tree pruning standards for distances from overhead lines have been set by the CPUC (G.O. 95, Rule 35), Public Resources Code Section 4293, California Code of Regulations Title 14, Article 4, and other government and regulatory agencies. SCE's standard approach to tree pruning is to remove at least the minimum required by law plus 1 year's growth (species dependent).

In addition to maintaining vegetation-free access and spur roads and clearances around electrical lines, clearance of brush and weeds around poles, and as required by local jurisdictions on fee-owned ROWs, is necessary for fire protection. Section 4292 of the California Public Resources Code directs the owner, controller, operator, or maintainer of electrical transmission lines in mountainous land, or forest-covered land, brush-covered land, or grass-covered land, to maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower, and to maintain a clearance of 4 feet from any line which is operating at 2,400 or more volts, but less than 72,000 volts.

G.O. 95, Rule 35 mandates that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, and establishes minimum clearances between line conductors and vegetation that under normal conditions shall be maintained. These requirements apply to all overhead electrical supply and communication facilities that are covered by this General Order, including facilities on lands owned and maintained by California State and local agencies.

O&M-related helicopter activities could include transportation of workers, delivery of equipment and materials to structure sites, structure placement, hardware installation, and conductor or telecommunications cable stringing operations. Helicopter landing areas could be located where access by road is infeasible. In addition, helicopters must be able to land within SCE ROWs, which could include landing on access or spur roads.

In addition to regular O&M activities, SCE conducts a wide variety of emergency repairs in response to emergency situations including, but not limited to, damage resulting from high winds, storms, fires, other natural disasters, and accidents. Such repairs could include replacement of downed poles or lines or re-stringing conductors. Emergency repairs could be needed at any time.

The telecommunication equipment would be subject to maintenance and repair activities on an as-needed or emergency basis. Activities could include replacing defective circuit boards, damaged radio antennas, or feedlines and testing the equipment. Telecommunication equipment would also be subject to routine inspection and preventative maintenance such as filter change-outs or software and hardware upgrades. Most regular O&M activities of telecommunication equipment would be performed at substations and would be accessed from existing access roads with no surface disturbance. Access road maintenance would be performed as discussed above.

Telecommunication cable maintenance activities would include patrolling, testing, repairing and replacing damaged cable and hardware. Most regular maintenance activities of overhead facilities would be performed from existing access and spur roads with no surface disturbance, although some activities could occur in undisturbed areas. Repairs done to existing facilities, such as repairing or replacing existing cables and re-stringing cables, could occur in undisturbed areas. Access and habitat restoration may be required for routine or emergency maintenance activities.

3.15 Reference

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA.

4.0 Environmental Impact Assessment

This chapter examines the potential environmental impacts of the Project. The analysis of each resource category begins with an examination of the existing physical setting (baseline conditions as determined pursuant to Section 15125(a) of the California Environmental Quality Act (CEQA Guidelines) that may be affected by the Project. The effects of the Project are defined as changes to the environmental setting that are attributable to project construction and operation.[12]

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

4.0.1 Environmental Assessment Methodology

As presented in Chapter 1, SCE has prepared this Proponent's Environmental Assessment (PEA) to analyze the environmental impacts of the portions of the Project that have yet to be constructed, and those portions of the Project that require a local Coastal Development Permit (CDP), to accompany an application to the CPUC for a Permit to Construct (PTC) for the Project.

Segment 3A, which is wholly located within the Coastal Zone in Santa Barbara County, was partially constructed during the 1999-2004 period. As described in more detail in Chapter 1, all construction activities on the Project ceased in late 2004 and SCE submitted an application for a local CDP. In order to support the County of Santa Barbara's review of SCE's application for a local CDP, this PEA analyzes the environmental impacts of work previously conducted in Segment 3A (in addition to work yet to be completed as part of the Project).

Examination of ground, aerial, and satellite imagery and consultation with SCE staff indicate that the physical environment in which Segment 3A was constructed in the 1999-2004 period does not differ significantly from the current physical environment. Therefore, the currently observed environment is used as the baseline environment for the analysis of potential environmental impacts that may result from work that remains to be completed, as well as for the work that has already been conducted in Segment 3A.

[12] For the purposes of the analyses presented in Chapter 4, the term 'operations' is defined to also include project-related maintenance activities.

4.1 Aesthetics

This section discusses the visual resources in the area of the Project and the potential impacts to visual resources associated with construction and operation of the Project.

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that can be seen and that contribute to the public's experience and appreciation of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics, potential visibility, and the extent to which a project's presence could alter the perceived visual character and quality of the environment.

4.1.1 Environmental Setting

4.1.1.1 Regional and Local Landscape Setting

The Project occupies a landscape corridor characterized by open grazing lands, orchards, greenhouses, low-density residential development, and chaparral-covered mountain slopes. Some taller trees are found on northern slopes and along riparian corridors. The majority of the length of the Project is generally sparsely populated; however, the western portion passes through an area containing residential development situated at the northern edge of suburban Carpinteria. Many residences in the hills above the coastal plain are sited to take advantage of panoramic views of the hillsides and ocean.

Project elevations range from approximately 30 to 1,500 feet above sea level in both mountainous topography and relatively level coastal areas. Linear segments of the Project cross the Ventura River, Cañada Larga, Carpinteria Creek, Rincon Creek, Los Sauces Creek, and Gobernador Creek. Peaks near the Project include Rincon Mountain at 2,161 feet and Snowball Mountain at 1,680 feet in elevation.

Nighttime lighting in the area includes highway and street lights, lighting at public and recreational facilities such as parks and school yards, and localized lighting sources associated with residences.

4.1.1.2 Project Viewsheds

The Project viewshed is defined as the general area from which the Project is visible or can be seen by a member of the public from a public viewpoint. For purposes of describing the Project's visual setting and assessing potential visual impacts, the viewshed can be broken down into distance zones of foreground, middleground, and background. The foreground is defined as the zone approximately within 0.25 to 0.50 miles from the viewer. Landscape detail is most noticeable and objects generally appear most prominent when seen in the foreground. The middleground is defined as a zone that extends from the foreground up to approximately 3 to 5 miles from the viewer, and the background extends from about 3 to 5 miles to the horizon. Analysis of the Project primarily considers the potential effects on foreground viewshed conditions, although consideration is also given to the potential effects on the middleground and background views.

In many areas, components of the Project are not visible to the public due to intervening topography and vegetation and/or lack of public access. Due to the remote location of much of the Project, and the fact that most of the Project is located on private lands, there are few public viewpoints. In addition, some components of the Project are not visible from any public viewpoints. For example:

- The Getty Tap would be located wholly on undeveloped private lands with no public viewpoint; the nearest public road is more than 1 mile away, and the topography between the road and the Getty Tap location prevents it from being viewed. Therefore, this component of the Project is not further addressed in this section.
- Work to be conducted at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation would occur exclusively within existing enclosures on the substation properties, or would be conducted in areas with no public viewpoint. Because none of the modifications would be visible to the public, these components of the Project are not further addressed in this section.

Telecommunications cable would be installed on or near the top of subtransmission structures in Segments 1, 2, and 4. This cable would be less than 0.5 inches in diameter, would be installed above the subtransmission conductor, and would be dull gray in color. Due to the presence of larger-diameter subtransmission conductor installed on each structure, and the presence of additional structures supporting other transmission and subtransmission lines within the right-of-way (ROW) in Segments 1 and 2, this telecommunications cable would not be noticeable to most viewers.

The removal of structures and conductor described in Other Major Work in Chapter 3 is not addressed in this section. This work would require only the removal of existing structures and conductor, and would not have a detrimental impact on visual resources in the area.

4.1.1.3 Potentially Affected Viewers

The primary potentially affected viewer groups within the Project area include motorists, nearby residents, and recreational users.

Motorists, the largest viewer group, include people traveling on public roadways including regional highways such as State Route 33 (SR-33), SR-150, and SR-192, as well as local streets. Motorists include a variety of roadway travelers: both local and regional travelers who are familiar with the visual setting, and travelers who use these streets on a less regular basis such as those traveling to or through the Los Padres National Forest. Public roadways in the area are generally well traveled. Affected views are typically brief in duration, generally lasting less than 1 minute. Viewer sensitivity is considered low to moderate.

Residents in the immediate vicinity are another viewer group. Those who may have partial views of the Project include nearby residents in Carpinteria and unincorporated portions of Santa Barbara and Ventura counties. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

Another viewer group includes recreational users of the parks and open space facilities located in the vicinity of the Project. This group includes people using Los Padres National Forest and local parks including El Carro Park in Carpinteria. Recreational views tend to be brief or moderate in duration, and the sensitivity of this viewer group is considered moderate to high.

4.1.1.4 Visual Character and Representative Views of the Project Area

The visual character of the area around the Project is described in the following section. Figure 4.1-1 illustrates the locations of Project components. Figure 4.1-2 delineates the locations of photograph viewpoints (VPs) along these Segments and in the vicinity of the listed substations. Figure 4.1-3 presents a set of 22 photographs that show representative visual conditions and public views in the vicinity of the Project; because of the limited number of public viewpoints along the Project, these photographs focus on Segments 3A, 3B, and 4, and Carpinteria Substation, Casitas Substation, and Santa Clara Substation. Table 4.1-1 identifies the potentially affected viewers. Because of the length of the Project, the rugged intervening topography, and mature vegetation, the Project is not visible in its entirety from a single viewing location.

Table 4.1-1: Summary of Project Components, Primary Viewers, and Representative Photographs

Project Component	Potentially Affected Viewers	Representative Photographs and Visual Simulations
Segment 3A	Motorists, Limited Residents	1 through 6 VP 4
Segment 3B	Motorists, Limited Residents,	7 through 12
Segment 4, Telecommunications	Motorists, Limited Residents, Recreation Users	12 through 20 VPs 2, 12, 13, 14, 15, and 18
Carpinteria Substation, Telecommunications	Motorists, Residents	1 and 12 VP 12
Casitas Substation, Telecommunications	Motorists, Residents	21
Santa Clara Substation, Telecommunications	No Affected Viewers	22

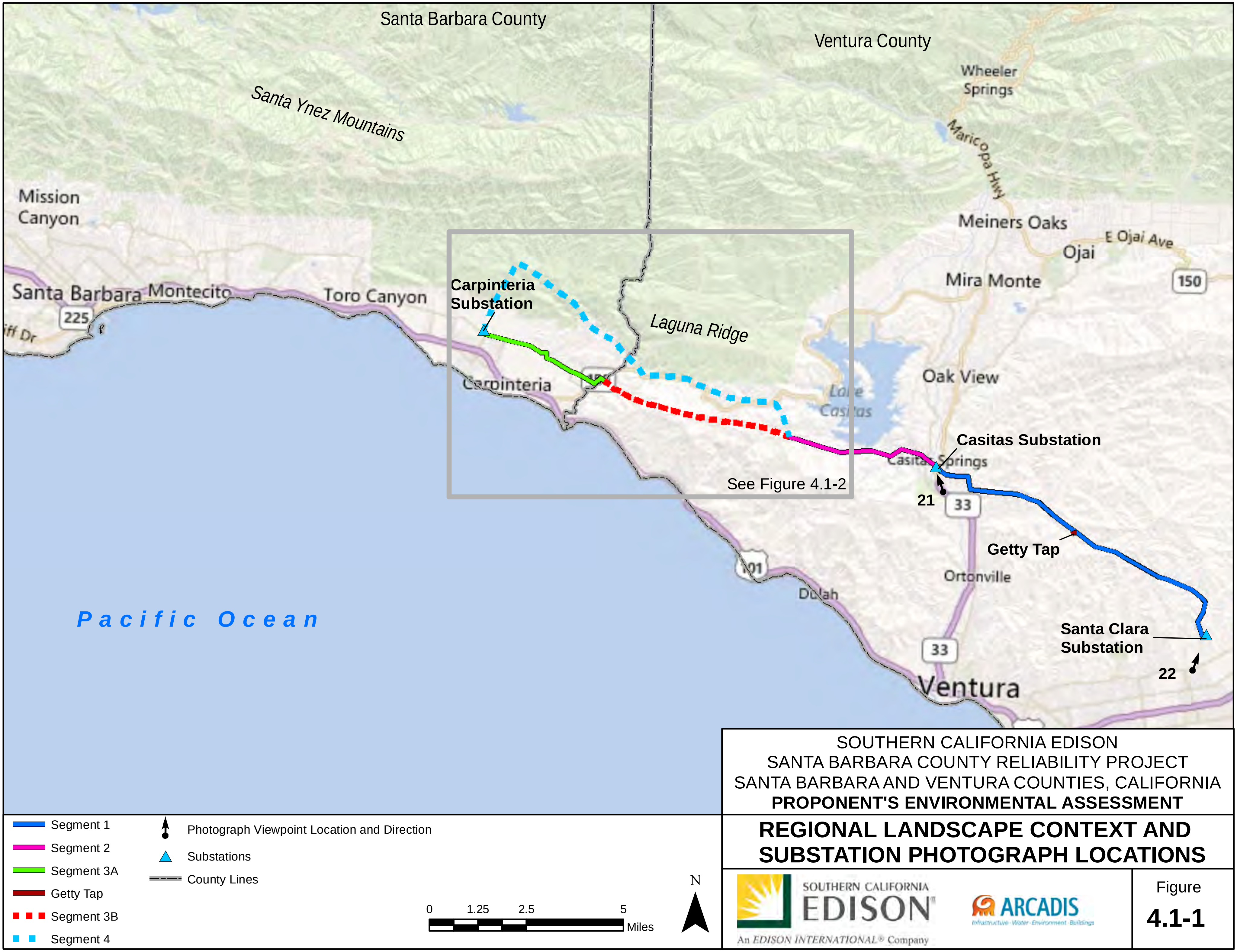

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Figure
4.1-1

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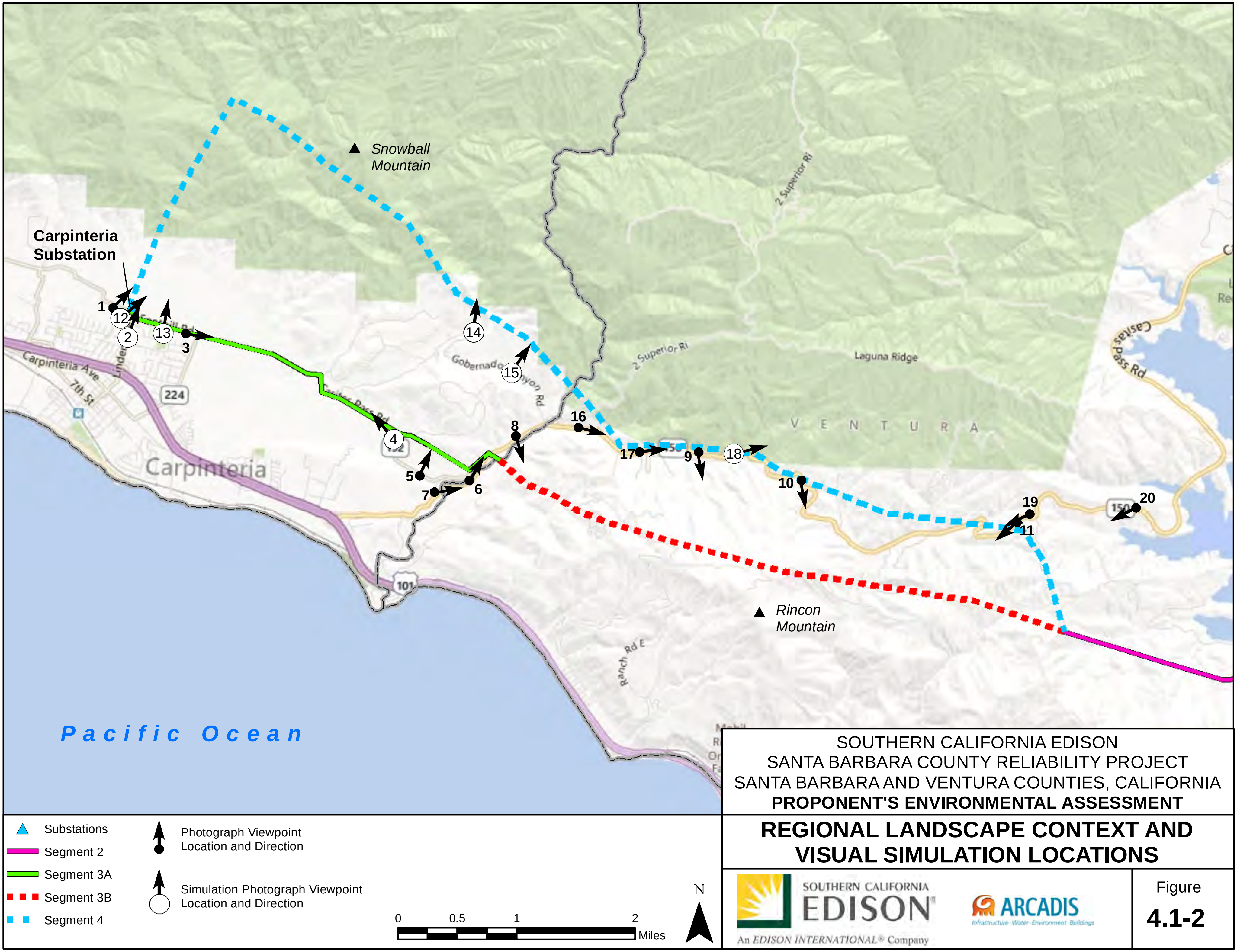

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Figure
4.1-2

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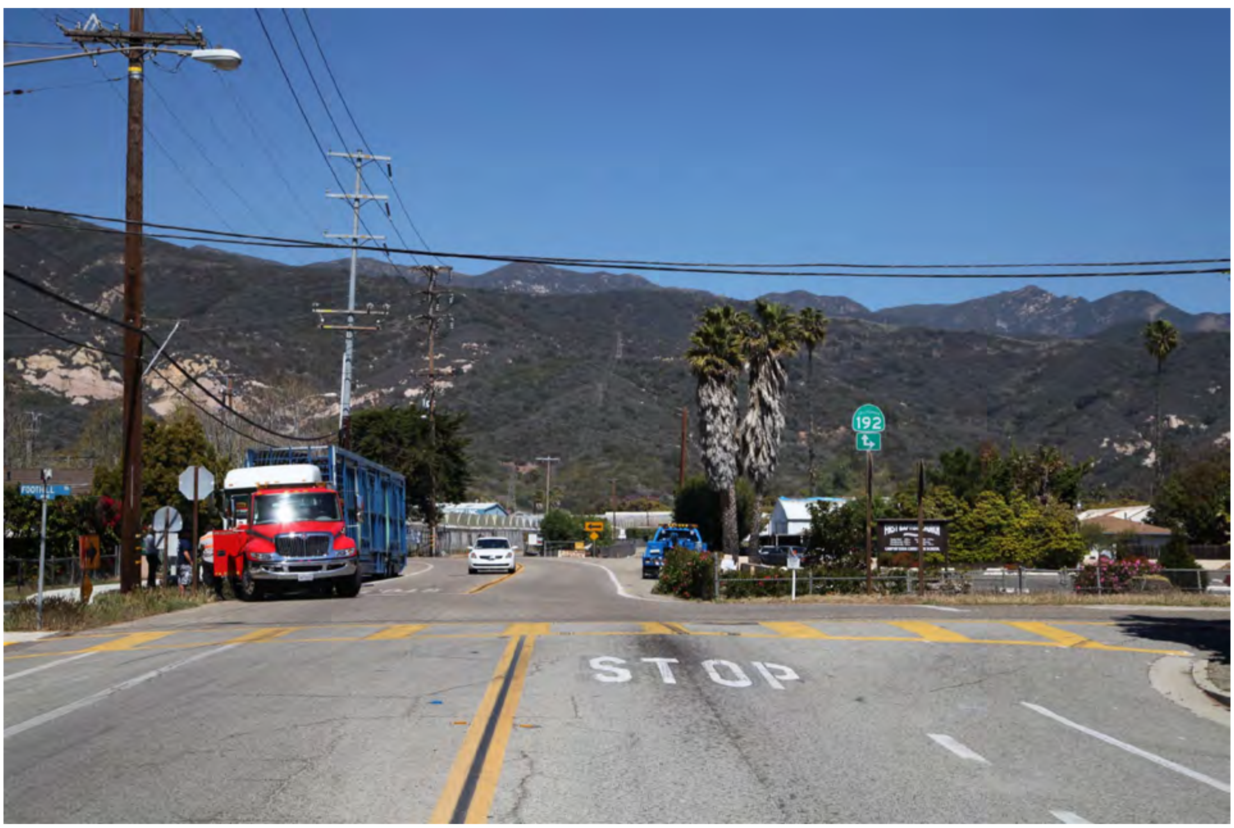
1. Carpinteria High School parking lot looking east toward Carpinteria Substation (Segments 3A and 4)



2. Linden Avenue near SR-192/Foothill Road looking north (Segment 3A)

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
4.1-3a

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3. SR-192/Foothill Road near Linden Avenue looking east (Segment 3A)

4. SR-192/Casitas Pass Road near Shepard Mesa Road looking northwest (Segment 3A)
*Simulation Location

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
4.1-3b

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5. SR-192/Casitas Pass Road looking north (Segment 3A)

6. SR-150 near SR-192 looking north (Segment 3A)

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
4.1-3c

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7. SR-150 south of SR-192 looking east (Segments 3B and 4)

8. SR-150 north of SR-192 looking south (Segment 3B)

NOTE: Refer to Figure 4.1-2 for viewpoint location

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4.1-3d

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9. SR-150 looking south (Segment 3B)

10. SR-150 west of Rameli Ranch Road looking south (Segment 3B)

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
4.1-3e

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11. SR-150 looking southwest (Segment 3B)

12. SR-192/Foothill Road at Carpinteria High School looking northeast (Segment 4) *Simulation Viewpoint

NOTE: Refer to Figure 4.1-2 for viewpoint location

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13. Foothill Road at El Carro Park looking north (Segment 4) *Simulation Viewpoint

14. Gobernador Canyon Road looking north (Segment 4) *Simulation Viewpoint

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
4.1-3g

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15. Gobernador Canyon Road looking northwest (Segment 4)

16. SR-150 near Mission Ranch Road looking east (Segment 4)

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
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17. SR-150 at Rincon Mountain Road looking east (Segment 4)

18. SR-150 looking northeast (Segment 4) *Simulation Viewpoint

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
4.1-3i

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19. SR-150 near Red Mountain Road looking southwest (Segment 4)

20. SR-150 near Lake Casitas looking southwest (Segment 4)

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
4.1-3j

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21. SR-33/North Ventura Avenue at Casitas Substation looking north

22. Foothill Road near Imperial Avenue looking northeast toward Santa Clara Substation

NOTE: Refer to Figure 4.1-2 for viewpoint location

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Figure
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Segment 3A (Photographs 1 through 6)

As presented in Chapters 1 and 3, significant work has already been completed in Segment 3A, including the installation of lightweight steel (LWS) poles, the topping and removal of existing wood subtransmission poles, and the installation of subtransmission conductor along the length of the segment. This section describes Segment 3A as it exists today. Assessment of aerial and satellite images indicates little change in land uses and visual environment along Segment 3A between 1999 and today; therefore, the visual images presented in Photographs 1 through 6 approximate the visual environment as it was at the start of construction, with the addition of the LWS subtransmission poles and conductor installed in the 1999-2004 period.

The subtransmission line in Segment 3A originates at Carpinteria Substation on SR-192/Foothill Road. From the substation, the subtransmission line travels east approximately 2.6 miles parallel to Casitas Pass Road/Foothill Road. At Shepard Mesa Road, it continues east across the hillside below the Shepard Mesa residential area until it reaches SR-192/Casitas Pass Road, and then continues northeast for approximately 0.2 miles, terminating near the Ventura County border near the intersection of SR-150/Rincon Road and SR-192/Casitas Pass Road.

Photograph 1 shows Carpinteria Substation, a facility enclosed by a chain link fence and a concrete wall, as seen from the Carpinteria High School parking lot. From this location, mountains appear in the backdrop and taller components of the substation and LSTs and wood poles are visible above the fence. The subtransmission line in Segment 3A begins at the substation (to the right in the photograph). Photograph 2, taken from the intersection of Foothill Road with Linden Avenue, shows the subtransmission line crossing Foothill Road and continuing east along the north side of the road. Photograph 3 shows the subtransmission line with roadside vegetation and mountains in the backdrop as it passes adjacent to a residential neighborhood located south of Foothill Road in Carpinteria. More distant views of the subtransmission line are available from some roadways within this neighborhood. Wood distribution poles can be seen along the south side of the road. In this area, nurseries, orchards, and open fields occupy the area along the north side of the road. Near this location, the subtransmission line is adjacent to El Carro Park, a municipal park with sports fields, picnic facilities, and a playground. Mature trees generally screen views of the subtransmission line from the interior of the park. Photograph 4 depicts the subtransmission line along Casitas Pass Road near Shepard Mesa Road. Along this part of the Project, the Santa Ynez Mountains form a backdrop for views to the north.

Photograph 5 depicts the subtransmission line in Segment 3A at the base of Shepard Mesa, a hillside residential area in southeastern Santa Barbara County. The subtransmission infrastructure is approximately 800 feet away from the Photograph 5 viewpoint. This rural landscape setting includes fields, orchards, greenhouses, and hillside residences. A limited number of residences in this area may have views of the subtransmission infrastructure in Segment 3A. In general, dense orchards and mature trees that border the roadway partially screen north-facing views toward the mountains. Photograph 6 shows the eastern portion of Segment 3A. Rolling topography in this area provides for varied viewing conditions where the subtransmission structures are set against a combination of landscape and sky. When seen in the distance against a landscape backdrop as shown in Photograph 5, the subtransmission infrastructure in Segment 3A is barely visible. In this area, where the Project does not run adjacent to roadways, it is not particularly visible from public viewpoints. In Photograph 6, the subtransmission infrastructure is more visible at closer range.

Segment 3B (Photographs 6 through 11)

Photograph 6 from SR-150 near SR-192 includes the last subtransmission structure in Segment 3A and the origin of Segment 3B. Segment 3B originates at the Santa Barbara County/Ventura County border. The segment crosses rugged mountainous terrain across orchards and undeveloped land roughly paralleling SR-150 at a distance of 0.25 miles to 1 mile south of the road. Photographs 7 through 10 depict views toward Segment 3B from SR-150 that portray varied landscape and visual conditions.

Roadside vegetation in this area ranges from open chaparral to mature tree cover, allowing intermittent views of the existing subtransmission infrastructure in Segment 3B. Photograph 7 from SR-150 south of SR-192 shows an open view toward existing lattice steel towers (LSTs) located within Segment 3B. LSTs appear along ridgelines in the background. In contrast, Photograph 8, which is taken from approximately 0.25 miles north of SR-192, shows mature trees that largely screen views of existing subtransmission infrastructure. One existing LST located approximately 0.25 miles away on the hillside is barely noticeable when looking through vegetation at the left of the image. Photograph 9 shows a more open roadside condition where existing subtransmission infrastructure in Segment 3B is visible to the south approximately 0.75 miles away. In photograph 10 from SR-150 east of Rameli Ranch Road, orchard trees are set back from the roadside allowing a view of existing LSTs on a hillside approximately 0.75 miles away. Photograph 11 shows rugged hillsides and a view of existing LSTs along the ridgeline.

Although visible from isolated residences in the mountains, in general, the existing subtransmission structures in Segment 3B are not particularly noticeable from public vantage points given the topography, intervening vegetation, and distance from roads.

Segment 4 (Photographs 12 through 20)

Photograph 12, taken from Foothill Road at Carpinteria High School, shows the origin of Segment 4 at Carpinteria Substation. This view shows the existing LSTs and wood poles located adjacent to the high school parking lot. The mountains appear in the backdrop and existing LSTs can be seen on the hillside as the existing subtransmission line runs north into the Santa Ynez Mountains. Open views toward this portion of Segment 4 are available from some places within the City of Carpinteria. Photograph 13, taken from Foothill Road at El Carro Park, shows a view of Segment 4 on the hillside. At this location, nursery plants and structures dominate the foreground, and largely screen the LSTs located at the base of the hillside. Other LSTs appear on the chaparral-covered hillside in the background.

Segment 4 continues east through the mountains above Carpinteria. Because of rugged topography and distance from public viewpoints, the existing subtransmission structures are only visible in the background until reaching the eastern edge of unincorporated Santa Barbara County. Photographs 14 and 15 show the 66 kilovolt (kV) subtransmission structures as seen from Gobernador Canyon Road in the eastern portion of unincorporated Santa Barbara County, a winding hillside road that leads to several residences and ranches. Photograph 14, a view from the road near Gobernador Creek, shows three parallel 66 kV subtransmission lines; however, only one of these three lines is proposed to be replaced and reconductored as part of the Project (note: these three parallel 66 kV subtransmission lines are also shown in Photographs 15 through 17). Two residences also appear in the foreground nestled amidst mature trees and vegetation; these trees and vegetation provide considerable visual screening. Photograph 15 is a view from Gobernador Canyon Road looking across a relatively flat, open pasture punctuated with mature trees. In the foreground, light colored houses are also visible and LSTs can be seen near the base of the mountains. In this area, the existing LSTs are set against a backdrop of hillside chaparral and sky, and although they are visible, the LSTs are not prominent.

Segment 4 parallels and crosses SR-150; the topography of the area provides intermittent views from this road. LSTs located in Segment 4 are visible from this roadway, as are distribution poles and wires not associated with the Project. Photograph 16, a view from SR-150 north of the intersection with SR-192, shows dense roadside vegetation with three LSTs and conductor visible above the trees along the skyline. A view from further east on SR-150 at Rincon Mountain Road also shows three LSTs (Photograph 17). These three LSTs appear at various distances from the road—some partially appear against a landscape backdrop, while others appear on the ridge against the sky. Photograph 18, another view from SR-150, includes hillside vegetation and two parallel 66 kV subtransmission lines as well as a parallel 220 kV transmission line; the structures of all three lines are relatively prominent along the skyline. From this location, a metal guard rail, traffic sign, a wood pole, and overhead conductor are also seen along the roadside.

Photograph 19, taken from near Red Mountain Road, is a view showing where Segment 4 crosses SR-150. LSTs and wood H-frame structures are visible near the center of this view with overhead conductor crossing the roadway. A wood pole and distribution line are prominent in the foreground.

Photograph 20 is a view from SR-150 taken near Lake Casitas looking toward Segment 4 that includes varied roadside vegetation and undulating terrain; the photograph was taken from within the Lake Casitas Scenic Resource Area. From this location, the LSTs are located approximately 0.85 miles away and are barely noticeable on the hillside and along the ridgeline.

Carpinteria Substation (Photographs 1 and 12)

Photographs 1 and 12 depict views of Carpinteria Substation from the parking lot at Carpinteria High School and from Foothill Road near the high school, respectively. In these views, the substation, LSTs, and wood poles are established landscape features that appear alongside the high school, nearby warehouse buildings, street lights, signs, and trees.

Casitas Substation (Photograph 21)

Casitas Substation is located in the unincorporated community of Casitas Springs along SR-33/North Ventura Avenue. Photograph 21 is a wide-angle view from North Ventura Avenue taken near the substation entry road. This photograph portrays the characteristic dense tree cover along the roadside that substantially screens the substation facility. Although LSTs are visible from the road, mature trees nearly completely screen views of lower portions of the substation. Roadway views of this substation are generally brief in duration and partially screened.

Santa Clara Substation (Photograph 22)

Santa Clara Substation is located in a valley at the base of chaparral-covered hills in rural, unincorporated Ventura County. The substation is located approximately 0.5 miles from Foothill Road, the nearest public road. A gated private drive, Elizabeth Road, leads from Foothill Road to the substation. Photograph 22 is a view from Foothill Road at the edge of a nearby residential development. The substation lies almost 1 mile away. From this location, existing LSTs are visible on the ridgeline; however, the substation is not visible. As seen in this photograph, the substation is largely screened from public views due to its distance from roadways and intervening topography.

Telecommunications

Telecommunications cable would be installed in Segments 1, 2, and 4, and at Carpinteria Substation, Casitas Substation, and Santa Clara Substation. The majority of the telecommunications cable route would not be visible from publicly accessible points due to its location on private property in rural areas. The few publicly accessible points from which the telecommunications cable may be seen are shown in Photographs 1, 2, and 12 through 22.

4.1.2 Methodology

The visual analysis is based on review of technical data including project maps and drawings, aerial and ground level photographs of the area around the Project, and local planning documents; computer-generated visual simulations; and field observations.

The visual analysis employs methods based, in part, on the United States (U.S.) Department of Transportation Federal Highway Administration, and other accepted visual analysis techniques as summarized in Smardon et al. (1986). The analysis describes potential changes to existing visual resources and assesses potential viewer response to that change.

Central to the visual analysis is an evaluation of representative views from which the Project would likely be visible to the public. To document the potential changes, visual simulations were created to illustrate the future state of the Project as seen from key observation points (KOPs). Five KOP locations were selected to represent views potentially seen by a large number of viewers, primarily within residential or public recreation areas and along scenic routes or other public roadways.

The visual simulation images portray the location, scale, and appearance of the Project as it would be seen from the five publicly accessible KOPs within the Project area. These potential changes were assessed, in part, by evaluating computer-generated visual simulations and comparing them to the existing visual environment.

Technical methods employed for producing the computer-generated visual simulations include high resolution digital site photography using a single lens reflex (SLR) camera with a 50 millimeter (mm) lens or equivalent that represents a horizontal view angle of 40 degrees. Systematic documentation of photograph viewpoints employed Global Positioning System (GPS) recording and photograph log sheet and basemap annotation. Three-dimensional computer modeling for proposed structures, developed using engineering design data, was combined with geographic information system (GIS) and engineering data and digital aerial photographs of the existing site to produce digital modeling for visual analysis and simulation. Simulation viewpoint locations were incorporated based on GPS field data, using an assumed eye level of 5 feet above ground.

To verify scale and viewpoint locations, computer "wireframe" perspective plots were overlain on the KOP photographs. Digital visual simulation images were then produced based on computer renderings of the three-dimensional (3-D) modeling combined with selected photographs. The final "hardcopy" visual simulation images contained in this visual analysis were printed from the digital image files and produced in color on 11x17 inch sheets. The simulation figures present two images per sheet: an existing view along with a simulation below that portrays the Project from the corresponding KOP (Figures 4.1-4 through 4.1-8).

4.1.3 Regulatory Setting

4.1.3.1 Federal Regulatory Setting

Los Padres National Forest Land Management Plan

The Los Padres National Forest comprises approximately 1.8 million acres along the Pacific coast and encompasses areas ranging from wilderness to areas near urbanization. The Forest Service assigns Scenic Integrity Objectives (SIOs) for all forest lands to help guide the management objectives for aesthetics and scenery. Areas where the Project crosses the Forest have an SIO of High (U.S. Forest Service 2005c). Characteristics of lands with an SIO of High are as follows:

> "This SIO is used for landscapes where the valued landscape character 'appears' intact. Deviations may be present but they must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident." (U.S. Forest Service 1995)

4.1.3.2 State Regulatory Setting

California Department of Transportation (Caltrans): Scenic Highway Program

California's Scenic Highway Program was created by the California Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a State scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and State legislation is passed to make the designation official.

California Streets and Highways Code §§ 260-263

These Sections define California's scenic highways. There are no Designated State Scenic Highways crossed by or adjacent to any components of the Project; a portion of SR-33 located more than 10 miles north of the Project is a Designated State Scenic Highway.

California Coastal Commission

The 1976 Coastal Act establishes the California Coastal Commission's jurisdiction over the State's Coastal Zone. The Coastal Act provides for protection of coastal visual resources, stating as follows:

> "The scenic and visual qualities of coastal areas will be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with surrounding areas, and where feasible to restore and enhance visual quality in visually degraded areas." (Pub. Resources Code § 30251)

Santa Barbara County and Ventura County both have approved coastal plans. The Project does not lie within the Coastal Zone in Ventura County; however, portions of the Project lie within the Coastal Zone in Santa Barbara County.

Original View near Casitas Pass Road
looking southeast (VP 4)

Existing View from Casitas Pass Road near Shepard
Mesa Road looking northwest (VP 4)

Visual Simulation of Project (Segment 3A)

NOTE: Refer to Figure 4.1-2 for viewpoint location

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EXISTING VIEW AND VISUAL SIMULATION FROM CASITAS PASS ROAD NEAR SHEPARD MESA ROAD

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Figure
4.1-4

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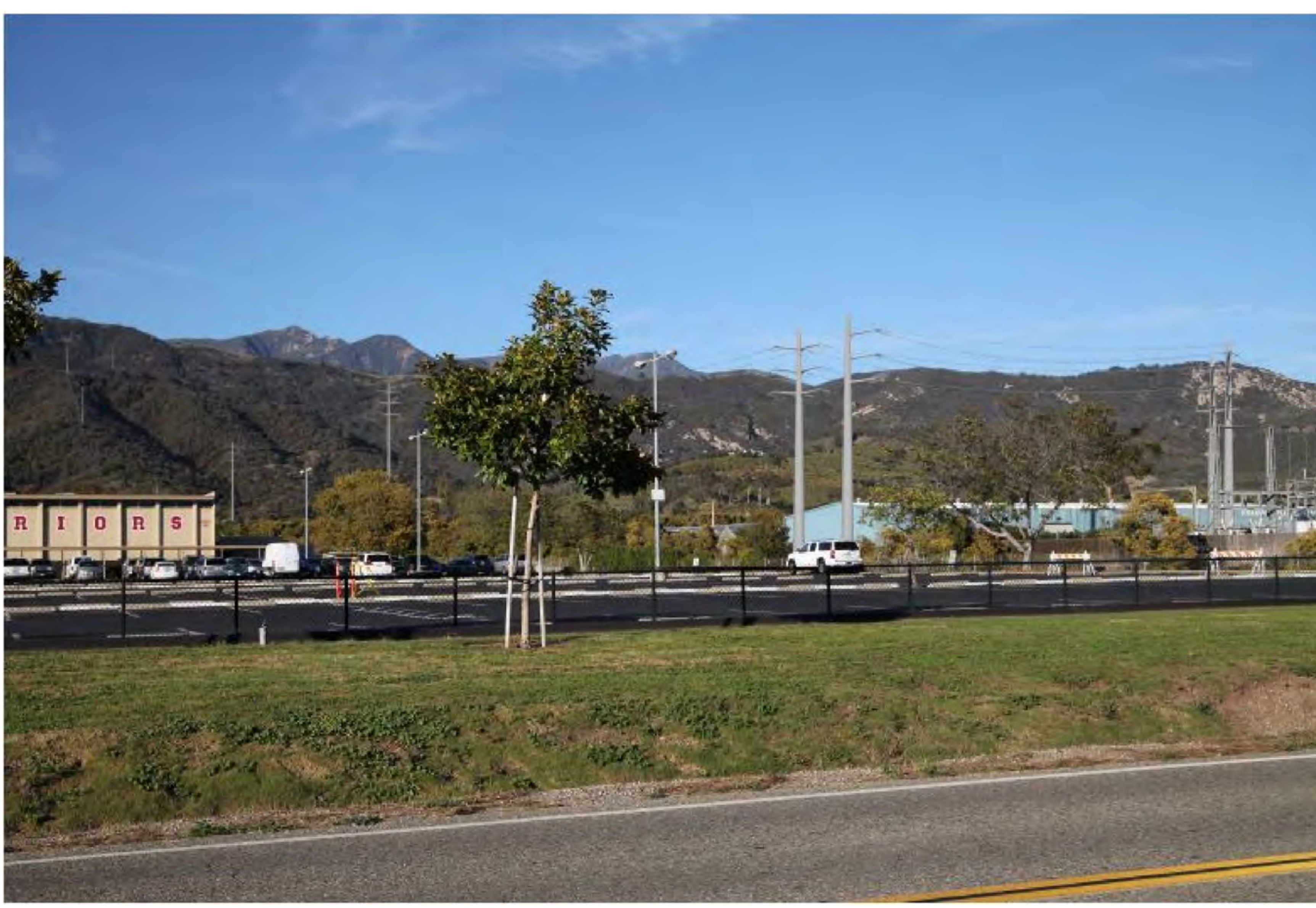
Existing View from SR-192/Foothill Road at Carpinteria High School looking northeast (VP12)



Visual Simulation of Project

NOTE: Refer to Figure 4.1-2 for viewpoint location

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EXISTING VIEW AND VISUAL SIMULATION FROM SR-192/FOOTHILL ROAD AT CARPINTERIA HIGH SCHOOL

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Figure
4.1-5

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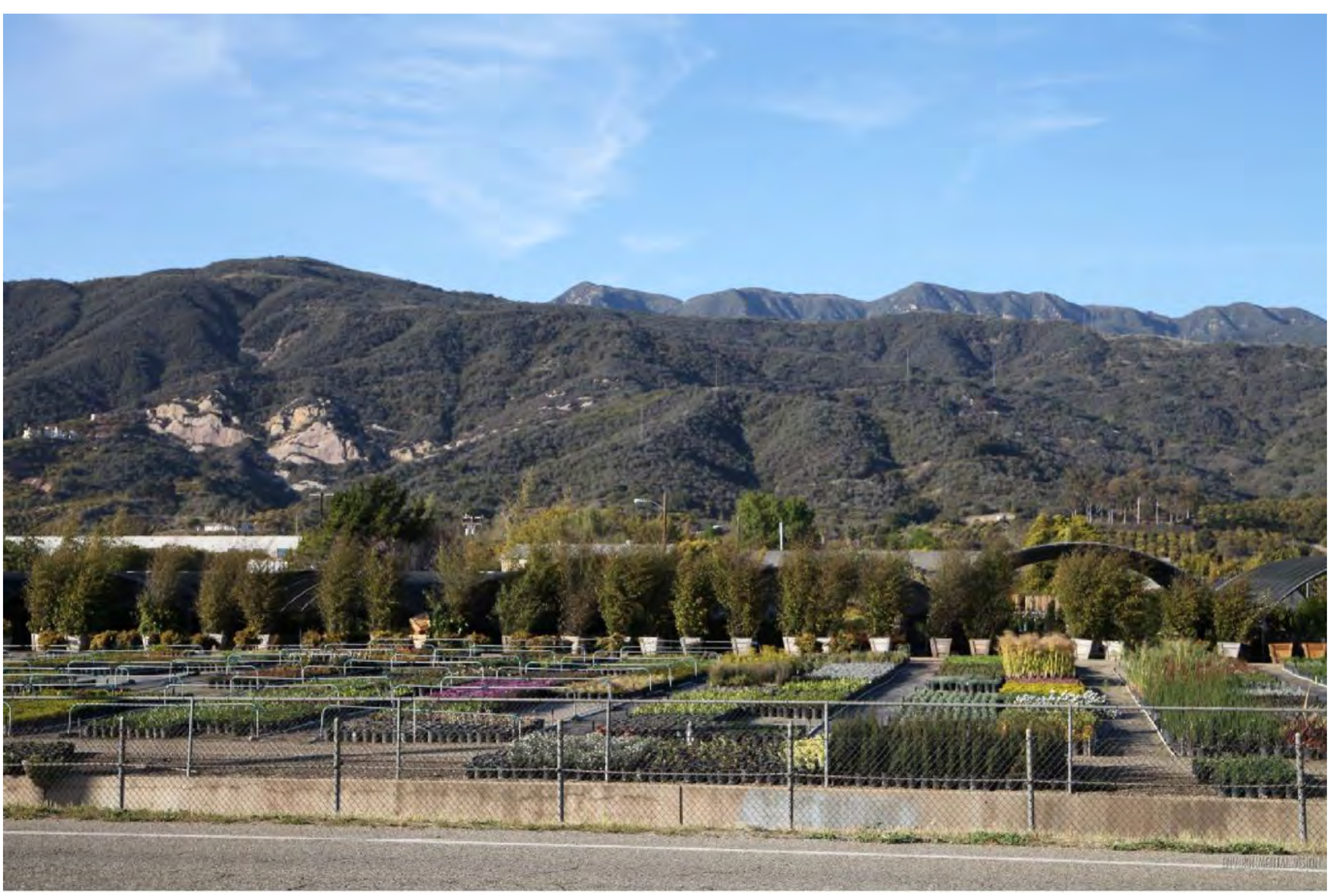
Existing View from Foothill Road at El Carro Park looking north (VP 13)



Visual Simulation of Project

NOTE: Refer to Figure 4.1-2 for viewpoint location

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EXISTING VIEW AND VISUAL SIMULATION FROM FOOTHILL ROAD AT EL CARRO PARK

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Figure
4.1-6

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Existing View from Gobernador Canyon Road looking north (VP 14)

Visual Simulation of Project

NOTE: Refer to Figure 4.1-2 for viewpoint location

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EXISTING VIEW AND VISUAL SIMULATION FROM GOBERNADOR CANYON ROAD

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Figure
4.1-7

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Existing View from SR-150 looking northeast (VP 18)

Visual Simulation of Project

NOTE: Refer to Figure 4.1-2 for viewpoint location

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EXISTING VIEW AND VISUAL SIMULATION FROM SR-150

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Figure
4.1-8

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Existing View from Linden Avenue near Foothill Road looking north (VP 2)

Visual Simulation of Project

NOTE: Refer to Figure 4.1-2 for viewpoint location

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EXISTING VIEW AND VISUAL SIMULATION FROM LINDEN AVENUE NEAR FOOTHILL ROAD

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Figure
4.1-9

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Existing View from Gobernador Canyon Road looking northeast (VP 15)

Visual Simulation of Project

NOTE: Refer to Figure 4.1-2 for viewpoint location

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EXISTING VIEW AND VISUAL SIMULATION FROM GOBERNADOR CANYON ROAD

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Figure
4.1-10

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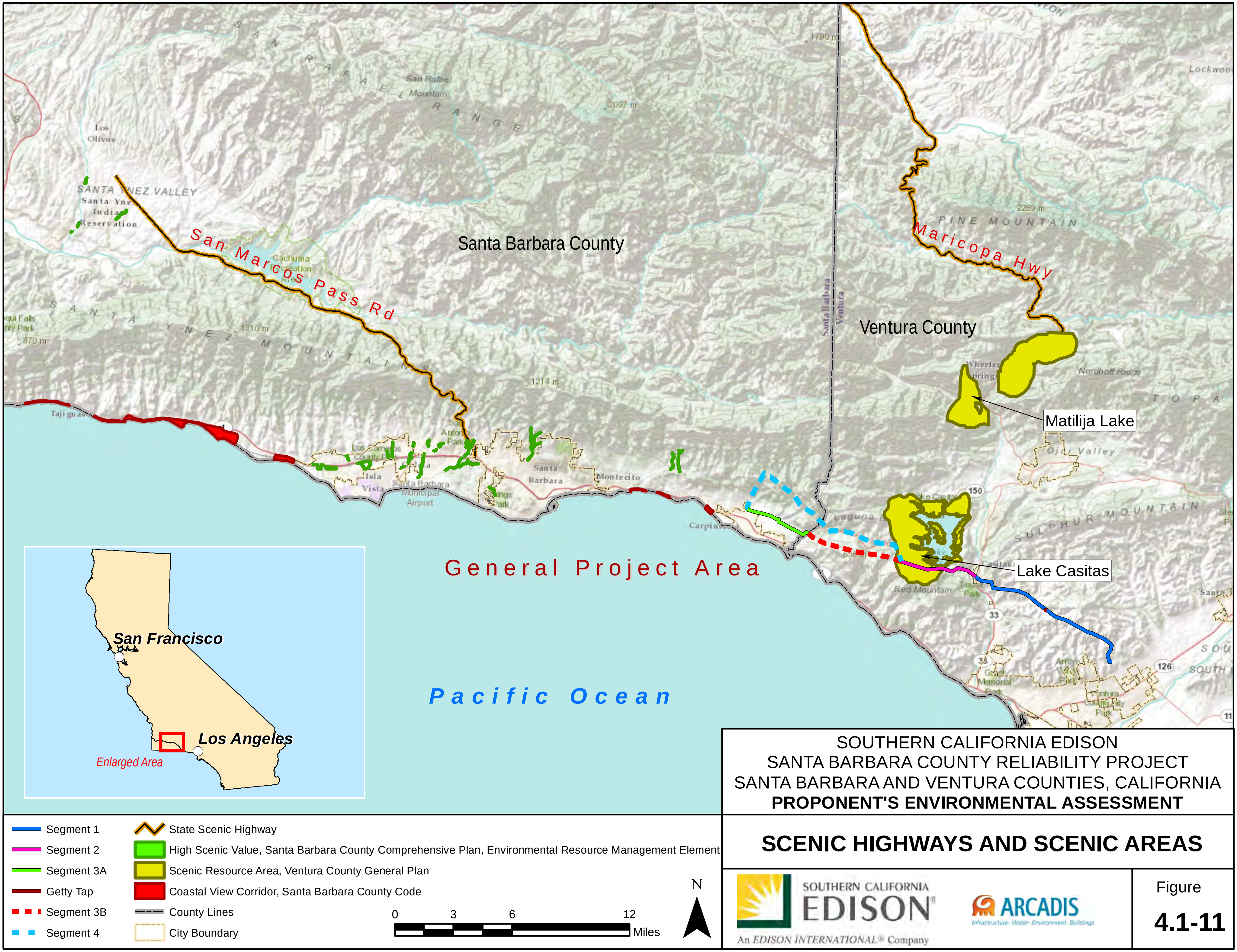

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

SCENIC HIGHWAYS AND SCENIC AREAS

SOUTHERN CALIFORNIA EDISON
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Figure
4.1-11

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4.1.3.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted General Order 131-D (G.O. 131-D) to regulate the construction of investor-owned utility (IOU) facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Santa Barbara County Comprehensive Plan, Scenic Highways Element

The Scenic Highways Element of the Santa Barbara County Comprehensive Plan recognizes SR-150 as an eligible State Scenic Highway (Santa Barbara County 2009b).

Santa Barbara County Coastal Land Use Plan

The Santa Barbara County Coastal Land Use Plan notes that "[i]ndustrial and energy facilities, particularly when sited within view corridors, may represent major impacts on scenic and visual resources. Electric transmission lines, for example, have long-term effects on visual resources." The Plan contains the following policies that may be of relevance to the Project:

- Policy 6-20: Transmission line rights-of-way shall be routed to minimize impacts on the viewshed in the Coastal Zone, especially in scenic rural areas, and to avoid locations which are on or near habitat, recreational, or archaeological resources, whenever feasible. Scarring, grading, or other vegetative removal shall be repaired, and the affected areas revegetated with plants similar to those in the area to the extent safety and economic considerations allow.
- Policy 6-21: In important scenic areas, where above-ground transmission line placement would unavoidably affect views, undergrounding shall be required where it is technically and economically feasible unless it can be shown that other alternatives are less environmentally damaging. When above-ground facilities are necessary, design and color of the support towers shall be compatible with the surroundings to the extent safety and economic considerations allow. (Santa Barbara County 2009a)

Ventura County General Plan

The viewshed of Lake Casitas is identified in the Ventura County General Plan as a Scenic Resource Area; portions of Segment 2 and 4 are located along the edge of this area. Section 1.7 of the Ventura County General Plan describes polices for Scenic Resources in Ventura County; those policies that may be relevant to the Project include the following:

- Scenic Resource Policy 2. Scenic Resource Areas, which are depicted on the Resource Protection Map, shall be subject to the Scenic Resource Protection (SRP) Overlay Zone provisions and standards set forth in the Non-Coastal Zoning Ordinance, which include the following:
  - 2) Removal, damaging or destruction of protected trees shall be in compliance with the County's "Tree Protection Regulations" of the Non-Coastal Zoning Ordinance.

City of Carpinteria General Plan

The City of Carpinteria General Plan contains policies focusing on preserving views of the ocean from Carpinteria Bluffs, areas near the water, and Highway 101 (City of Carpinteria 2003).

4.1.4 Impact Analysis

As presented earlier in this PEA, SCE has applied to Santa Barbara County for a Coastal Development Permit to cover construction of portions of the Project located within the Coastal Zone in Santa Barbara County; this includes a portion of Segment 4 and the entirety of Segment 3A. Between 1999 and 2004, some wood subtransmission structures in Segment 3A were replaced with LWS subtransmission poles, new conductor was installed, and the wood subtransmission structures that were identified for replacement with LWS poles were topped before work was stopped (SCE typically tops poles, i.e. removes the portion of the pole that previously carried the subtransmission conductor, for the purposes of continuing to carry the distribution lines while reducing the total height of the pole). In the intervening 8 years, the previously constructed LWS subtransmission structures, conductor, and topped wood subtransmission poles in Segment 3A have become part of the existing visual environment along Segment 3A.

Two visual analyses have been conducted for Segment 3A; one analysis examines the change due to the replacement of some wood subtransmission structures with LWS subtransmission poles, installation of new conductor, and the topping of wood subtransmission structures as completed in the 1999-2004 period. The second visual analysis examines the change from the current state to the final state with completion of the Project; this change would include removal of the previously topped wood subtransmission poles, transfer of distribution line to the LWS poles, and installation of a fault return conductor (FRC).

To simplify the presentation of this material, the Impact Analysis has been divided into two portions: one portion focuses solely on Segment 3A, while the second portion focuses on the balance of the Project.

4.1.4.1 Significance Criteria

The significance criteria for assessing the impacts to aesthetics come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

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

4.1.4.2 Impact Analysis, Segment 3A, Work Previously Conducted

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

Assessment Summary: No Impact

Neither CEQA nor the CEQA Guidelines provide a definition of what constitutes a "scenic vista" or a "scenic resource" or a reference as to from what vantage point(s) the scenic vista and/or resource, if any, should be observed. For the purposes of this evaluation, a scenic vista is considered to be a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality.

<u>Construction Impacts</u>

Segment 3A is located in the Carpinteria Valley; there is very little topographical relief along Segment 3A, and no identified publicly accessible scenic vistas in which Segment 3A could be included. Therefore, the past construction activities in Segment 3A would not have had any effect on a scenic vista; similarly, future construction in Segment 3A would not have any effect on a scenic vista.

<u>Operation Impacts</u>

Segment 3A is located in the Carpinteria Valley; there is very little topographical relief along Segment 3A, and no identified publicly accessible scenic vistas in which Segment 3A could be included. Therefore, the past and current operation of subtransmission facilities in Segment 3A has not had any effect on a scenic vista; similarly, future operation of subtransmission facilities in Segment 3A would not have any effect on a scenic vista.

Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Assessment Summary: No Impact

<u>Construction Impacts</u>

No portion of Segment 3A is currently, or has been, located within or adjacent to a Designated State Scenic Highway. SR-154, the nearest Designated State Scenic Highway to Segment 3A, is located approximately 14 miles away (Figure 4.1-9). Therefore, past construction activities have not damaged any scenic resources within a State Scenic Highway, and future construction activities would not damage any scenic resources within a State Scenic Highway. Therefore, there have not been, and would not be, any impacts under this criterion.

<u>Operation Impacts</u>

As presented above, no portion of Segment 3A is currently, or has been, located within or adjacent to a Designated State Scenic Highway. Therefore, current operation of subtransmission infrastructure in Segment 3A has not damaged any scenic resources within a Designated State Scenic Highway, and future operation of subtransmission infrastructure within Segment 3A would not damage any scenic resources within a State Scenic Highway. Therefore, there have not been, and would not be, any impacts under this criterion.

Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Assessment Summary: Less Than Significant Impact

<u>Construction Impacts</u>

Construction-related visual impacts would result from the presence and operation of construction equipment, materials, and work crews along Segment 3A. Past Project construction required limited grading and tree trimming to access pole installation and removal locations, and the construction of a single crane pad at the eastern terminus of Segment 3A. Construction work anticipated to be conducted for remaining work in Segment 3A that could result in visual impacts would involve the presence of construction equipment along the Segment to remove topped wood subtransmission poles, to transfer distribution lines to the new subtransmission infrastructure, and to install the fault return conductor.

Past construction activities in Segment 3A took place over an approximately 9-month period; projected future construction activities would take place over a shorter period. To varying degrees, construction activity could be seen by local residents and motorists. Because construction activities have been (and would be) temporary, construction activities would not result in permanent changes to the visual landscape, and therefore impacts would be less than significant.

Operation Impacts

The Project's appearance is portrayed in a set of 'before' and 'after' views, as seen from a single KOP within the area (Figure 4.1-4). Table 4.1-2 presents an overview of the visual simulations including the view location, project-related change, and visual effect. As documented in Section 4.1.2.4, Segment 3A is located within viewsheds where numerous existing utility structures are established features in the landscape setting. A comparison between the KOP existing view and corresponding simulation image demonstrates that work in Segment 3A has not, and would not, substantially change the existing landscape character found within these viewsheds. The following subsections provide detailed discussion and evaluation of the potential visual effects on key public viewing locations, as represented by the visual simulations.

The operation of subtransmission infrastructure in Segment 3A has not substantially degraded the visual character or quality of the surrounding area. In the 1999-2004 period, the Project introduced LWS poles and new overhead conductor into a landscape in which existing wood poles and overhead lines were already visible to the public. The LWS poles were approximately the same height as the wood subtransmission poles they replaced; 16 of the LWS poles were 5 to 10 feet taller than the wood poles they replaced, and one was 15 feet taller than the original wood pole. However, the lighter color of the steel poles made them appear less prominent against the sky and lighter-colored landscape backdrops than the original poles. The addition of these poles resulted in a less than significant visual impact within Segment 3A. However, because construction was halted, separate distribution infrastructure (including topped wood subtransmission poles) remained in Segment 3A, resulting in a somewhat cluttered visual resource (Figure 4.1-4). The changes in the visual character and quality were, and have been, visible to the public traveling along SR-192 and Shepard Mesa Road. However, because affected motorists' views are generally brief in duration and because the visual effect was minor and incremental, the overall visual effect was not substantial. Portions of the project were, and are, also visible from a limited number of residences. From the majority of these residences, existing vegetation provides partial or substantial screening, thus minimizing the impact to the existing visual character of the surroundings.

Remaining construction in Segment 3A that may impact visual resources would entail the removal of the existing topped wood subtransmission poles, the transfer of distribution lines to the previously-installed LWS subtransmission poles, and the installation of an FRC. This final completed state would result in a streamlined visual impression, thus improving the visual character and quality of the surroundings (Figure 4.1-4). The FRC would be the only new infrastructure installed in Segment 3A; given the less than 0.5 inches diameter of the FRC and the presence of existing subtransmission conductor, distribution lines, and third-party lines within Segment 3A, the FRC would not result in a significant visual impact. Therefore, the past and proposed operation of subtransmission facilities in Segment 3A would have a less than significant impact under this criterion.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction equipment and activities are generally not substantial sources of permanent light and glare. Glare generated during daytime hours would be temporary and dependent upon the location of the sun and the orientation of the construction equipment. Construction of Segment 3A occurred, and would occur, primarily during daytime hours. Therefore, extensive nighttime lighting is not anticipated, and thus construction of Segment 3A has not, and would not, constitute a new source of substantial light that would adversely affect nighttime views in the area. Accordingly, construction impacts under this criterion have been, and would be, less than significant.

Operation Impacts

No permanent lighting would be installed along Segment 3A to support operation of the subtransmission facilities. The subtransmission conductor installed in Segment 3A was non-specular, and the subtransmission structures were constructed of dull gray galvanized steel, and thus were not a source of substantial glare when installed; these poles and conductor have weathered in the intervening years, and are not a source of glare. The FRC to be installed along Segment 3A would be a 4/0 bare aluminum conductor with a diameter of less than 0.5 inch. Given the existing subtransmission conductor, distribution lines, and third-party communications lines located along Segment 3A, the FRC would not be a new source of substantial glare. Considering these factors, operation of the subtransmission infrastructure in Segment 3A would not introduce a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and thus impacts would be less than significant.

4.1.4.3 Impact Analysis, Balance of Project

Note: The balance of the Project includes subtransmission-related work in Segments 3B and 4; substation modifications at Carpinteria Substation, Casitas Substation, and Santa Clara Substation; and the work related to the installation of telecommunications infrastructure along Segments 1, 2, and 4.

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

Assessment Summary: Less than Significant Impact

As discussed above, neither CEQA nor the CEQA Guidelines provide a definition of what constitutes a “scenic vista” or a “scenic resource” or a reference as to from what vantage point(s) the scenic vista and/or resource, if any, should be observed. For the purposes of this evaluation, a scenic vista is considered to be a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality.

Construction Impacts

Public views from locations in the Lake Casitas Scenic Resource Area in Ventura County could be considered scenic vistas. Portions of Segment 2 and 4 are located adjacent to or within the Lake Casitas Scenic Resource Area; telecommunications cable would be installed along this portion of Segment 2, and new TSPs, subtransmission conductor, and telecommunications cable would be installed along this portion of Segment 4. As demonstrated in Photograph 20, the existing infrastructure in these portions of Segment 2 and 4 is barely visible in the distant background from the established recreational area and campground on the north side of Lake Casitas as well as from SR-150 along the western edge of the lake. The construction activities that would occur along these portions of Segments 2 and 4 are identified in Chapter 3; vehicles and activities would be barely visible in the distant background, and would be present only for a short period of time as construction activities progress along the Segments. Because these vehicles and activities would be barely visible, and would be temporary features in the visual environment, construction would not substantially affect a scenic vista or public views in this area. Therefore, construction of the Project would have a less than significant impact under this criterion.

Operation Impacts

Public views from locations in the Lake Casitas Scenic Resource Area in Ventura County could be considered scenic vistas. Portions of Segment 2 and 4 are located adjacent to or within the Lake Casitas Scenic Resource Area; telecommunications cable would be installed along this portion of Segment 2, and new TSPs, subtransmission conductor, and telecommunications cable would be installed along this portion of Segment 4. As demonstrated in Photograph 20, the existing infrastructure in these portions of Segment 2 and 4 are barely visible in the distant background from the established recreational area and campground on the north side of Lake Casitas as well as from SR-150 along the western edge of the lake. The telecommunications and subtransmission infrastructure that would be installed would be of similar scale to the infrastructure currently installed; therefore, it too would be barely visible, and would not substantially affect a scenic vista or public views in this area. Consequently, the physical infrastructure of the Project would have a less than significant impact under this criterion.

Operations and maintenance activities would generally require the use of a small number of vehicles, with activities occurring on a scheduled but infrequent basis. Because these vehicles and activities would be barely visible, and would be temporary features in the visual environment, operation and maintenance activities would not substantially affect a scenic vista or public views in this area. Therefore, operations and maintenance activities would have a less than significant impact under this criterion.

Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Assessment Summary: No Impact

Construction Impacts

No portion of the Project is located within or adjacent to a Designated State Scenic Highway. The closest Designated State Scenic Highway is a portion of SR-33 in Ventura County located approximately 10 miles to the north of Casitas Substation. Therefore, no impacts would occur under this criterion associated with construction of the Project.

Operation Impacts

No portion of the Project is located within or adjacent to a Designated State Scenic Highway. The closest Designated State Scenic Highway is a portion of SR-33 in Ventura County located approximately 10 miles to the north of Casitas Substation. Therefore, no impacts would occur under this criterion as a result of operation of the Project.

Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction-related visual impacts would result from the presence of heavy equipment, materials, and work crews along Segments 1, 2, 3B, and 4; and at Carpinteria Substation, Casitas Substation, and Santa Clara Substation. Construction of the Project would require rehabilitating access roads and establishing temporary staging yards for vehicle parking and equipment and material storage. In addition, Project construction is anticipated to require limited grading and tree removal and/or trimming to construct access or spur roads and crane pad/turnaround areas in some locations that may be noticeable to the public.

Construction activities would take place over an approximately 24-month period; however, the duration of construction at individual construction locations would be considerably shorter. To varying degrees, construction activity could be seen by local residents, landowners, motorists, and recreational users. It is expected that construction would be most noticeable along portions of Segments 3B and 4, at Carpinteria Substation, and at Casitas Substation from the few residential areas located in close proximity to the Project and by motorists along local roadways. The installation of the telecommunications cable along Segments 1, 2, and 4 would largely be hidden from public view except in the vicinity of Carpinteria Substation, Casitas Substation, and Santa Clara Substation. However, work at Carpinteria Substation, Casitas Substation, and Santa Clara Substation would be shielded from public view by substation walls or fences, topography, vegetation, and distance.

Because construction activities are temporary, and because the Project includes restoration of laydown/work areas through recontouring and revegetation at the end of construction, construction activities would not result in permanent changes to the visual landscape, and therefore construction-related impacts would be less than significant.

Operation Impacts

The Project's appearance is portrayed in a set of 'before' and 'after' views, as seen from KOPs within the area (Figures 4.1-5 through 4.1-10). Table 4.1-2 presents an overview of the visual simulations including the view location, the Project component portrayed, project-related change, and visual effect. As documented in Section 4.1.2.4, the Project would be located within viewsheds where numerous existing utility structures are established features in the landscape setting. A comparison between the set of KOP existing views and corresponding simulation images demonstrates that the Project would not substantially change the existing landscape character found within these viewsheds. The following subsections provide detailed discussion and evaluation of the Project's potential visual effects on key public viewing locations, as represented by the visual simulations that incorporate Project components.

Figure 4.1-5, a view from Foothill Road at Carpinteria High School, represents the view experienced by motorists as well as high school students, staff, and visitors looking toward Segment 4 and Carpinteria Substation. Chaparral-covered slopes of the Santa Ynez Mountains provide a vivid landscape backdrop in this view. Beyond the landscaped roadway edge and black chain link fence, the high school parking lot and some school buildings can be seen in the foreground. In this view, LSTs can also be seen against the hillside and part of the Carpinteria Substation is visible on the right. A blue warehouse building is partially visible beyond the substation. Existing LSTs in Segment 4 are visible near the high school and on the hillside to the north. Noticeable vertical elements in the landscape setting include LSTs, wood poles, and overhead light standards. Beyond that, orchards are visible at the base of the mountains.

The simulation portrays the visual environment following the removal of LSTs and wood poles and their replacement with TSPs, new conductor, new telecommunications cable, marker balls, and installation of retaining wall structures. Replacement TSPs would generally be taller than the LSTs, but TSPs on the hillside above the high school would not be particularly noticeable because of their distance from the KOP. Most noticeable would be the two new TSPs in the foreground near the parking lot that would replace an LST and two wood poles. Although somewhat noticeable, the replacement TSP structures are simpler in form compared to the LSTs, and more similar in form to the light standards currently installed in the high school parking lot. The simulation also portrays somewhat taller replacement TSPs in place of the two existing LSTs near the substation on the right side of the view. A comparison of the existing view and the simulation image indicates that, given the presence of existing utility structures including the substation facility, the Project would not substantially alter the character of this landscape setting.

Table 4.1-2: Summary of Visual Effects at Key Observation Points

Location Viewpoint (VP) Number (Figure)	Project Component	Project–related Change and Visual Effect
SR-192 at Shepard Mesa Road VP 4 (Figure 4.1-4)	Segment 3A	• Replacement of wood poles with LWS poles of similar height • Installation of FRC • Transfer of distribution infrastructure to LWS poles • Removal of topped wood subtransmission poles
Foothill Road at Carpinteria High School VP 12 (Figure 4.1-5)	Carpinteria Substation and Segment 4	• Replacement of LSTs and wood poles with somewhat taller TSPs, removal of wood poles, modification of existing substation • Replacement of LSTs with tubular steel poles on hillside above residential neighborhood • Installation of retaining wall structures • Installation of marker balls* • Installation of telecommunications cable on TSPs • The Project would not substantially alter the character of this landscape setting.
Foothill Road at El Carro Park VP 13 (Figure 4.1-6)	Segment 4	• Replacement of LSTs with somewhat taller TSPs on hillside • Installation of retaining wall structures • Installation of marker balls* • Installation of telecommunications cable on TSPs • Project-related change would be minor and not particularly noticeable given the viewing distance. Therefore, it would not substantially alter the existing character of the landscape setting.
Gobernador Canyon Road VP 14 (Figure 4.1-7)	Segment 4	• Replacement of three LSTs with taller TSPs in a hillside residential landscape • Installation of telecommunications cable on TSPs • Installation of marker balls* • Installation of a retaining wall structure • Project- related change would be minor and incremental and would not substantially alter the visual character of this residential landscape setting.
SR-150 VP 18 (Figure 4.1-8)	Segment 4	• Replacement of two LSTs with somewhat taller TSPs in a hillside landscape where multiple transmission structures are visible • Installation of marker balls* • Installation of telecommunications cable on TSPs • Although somewhat noticeable, Project-related change would not substantially alter motorists' views of the landscape setting as seen from this roadway.

Table 4.1-2: Summary of Visual Effects at Key Observation Points (continued)

Linden Avenue near Foothill Road VP 2 (Figure 4.1-9)	Segment 4	• Replacement of LSTs with somewhat taller TSPs on hillside • Installation of retaining wall structures • Installation of marker balls* • Installation of telecommunications cable on TSPs • Project-related change would be minor and not particularly noticeable given the viewing distance. Therefore, it would not substantially alter the existing character of the landscape setting.
Gobernador Canyon Road VP 15 (Figure 4.1-10)	Segment 4	• Replacement of two LSTs with somewhat taller TSPs in a hillside landscape where multiple transmission structures are visible • Installation of telecommunications cable on TSPs • Installation of marker balls* • Although somewhat noticeable, Project-related change would not substantially alter views of the landscape setting as seen from this roadway.

Note:
* If so determined by the FAA, SCE may install marker balls on subtransmission conductor or telecommunications cable

Figure 4.1-6 portrays an existing view and visual simulation of the Project as seen from Foothill Road at El Carro Park, a view that is representative of what would be seen by motorists on Foothill Road and recreational visitors from the parking lot area at El Carro Park. Views from the interior of El Carro Park toward the Project are largely screened by trees. The Santa Ynez Mountains, including portions of Los Padres National Forest, rise to approximately 3,500 feet, forming a backdrop to this view. In this area, greenhouses and orchards occupy most of the level land up to the base of the hills. Beyond the chain-link fence and concrete drainage ditch seen at the roadway edge, a plant nursery dominates the foreground. On the hillside beyond, LSTs currently installed in Segment 4 are visible to the north, ascending the scrub vegetation-covered mountainsides. Given the viewing distance, and because they blend in with the muted color of the landscape backdrop, the existing LSTs are not particularly noticeable.

The visual simulation shows LSTs on the hillside replaced by taller TSPs, new conductor, new telecommunications cable, marker balls, and installation of retaining wall structures. At this distance, the increased height is almost imperceptible, and the new conductor, telecommunications cable, marker balls, and retaining wall structures are not visible; thus, the overall visual change is minor. Given the distance and presence of existing overhead utility structures, the change would not be particularly noticeable and would not affect the character of the landscape seen from this location.

Figure 4.1-7 is a view from Gobernador Canyon Road, a winding roadway in the rugged hills above Carpinteria. The figure is representative of residential views in this area and that of the limited number of motorists on this road. Orchards and residences are found across these hills. In the foreground, a residence is partially visible along with mature orchard trees; several other houses appear on the hillside beyond. On the slope above the houses, LSTs are visible at a distance of approximately 0.25 miles away. Dense vegetation screens the lower portions of some of the structures and, except for a small portion of one LST that skylines, the LSTs are visible against a backdrop of muted green hillside vegetation.

In the simulation view, two LSTs are replaced by two taller TSPs, while the other four LSTs, which carry subtransmission lines not related to the Project, would be untouched and would remain. The closest new TSP, seen on the right of the simulation, is noticeably taller than the original LST that would be replaced; however, it would not project into the skyline above the hillside. A retaining wall structure would be installed to gain access to the TSP on the right of the simulation; this retaining wall structure will have an average height of 7 feet, and would range in height from approximately 2 to 11 feet. The native vegetation present in the area currently obscures the base of existing LSTs; the Project revegetation plan would enable the quick reestablishment of this vegetation, and thus approximately one-half of the retaining wall structure would be shielded from view. The retaining wall would be constructed of wire and native soil. A comparison of the existing view and the visual simulation indicates that Project-related infrastructure (TSP, new conductor, new telecommunications cable, marker balls, and retaining wall) is somewhat noticeable; however, given the presence and scale of numerous existing transmission structures, the change would not substantially affect the character or composition of the landscape setting as viewed from this hillside residential location.

Figure 4.1-8 shows the view seen by an eastbound motorist on SR-150/Casitas Pass Road west of Rameli Ranch Road. The road affords a mixture of open panoramic views of rugged hillsides and views that are enclosed by mature trees. A wood pole with overhead conductor paralleling the road appears in the foreground with roadway elements including the metal guard rail and a traffic sign. Beyond the roadway, LSTs carrying 66 kV subtransmission lines and 220 kV transmission lines appear prominently against the sky along the ridgeline. Overhead conductors are visible between these LSTs. In this area vegetation is composed of low shrubs and hillside orchards interspersed with exposed soil and rock.

The simulation portrays the replacement of two LSTs in each group of three structures with a TSP, and the installation of marker balls. The replacement TSP structures are different in form and somewhat taller than the original LSTs being replaced. However, the new structures do not appear as tall as the larger LSTs that currently exist and would remain in each group. In addition, the new structures are similar in form to the wood utility poles seen along the roadside. As in the visual simulation from this roadway location, the new Project infrastructure (TSPs, new conductor, new telecommunications cable, and marker balls) represents a minor change and, given the presence of existing overhead transmission and subtransmission facilities, it would not substantially affect the area's landscape character.

Figure 4.1-9 portrays an existing view and visual simulation of the Project as seen from Linden Avenue near Foothill Road, a view that is representative of what would be seen by motorists on Linden Avenue. The Santa Ynez Mountains, including portions of Los Padres National Forest, rise to approximately 3,500 feet, forming a backdrop to this view. In this area, greenhouses and orchards occupy most of the level land up to the base of the hills. Numerous signs, existing subtransmission and distribution lines, and the roofs of buildings and houses are visible in the foreground. On the hillside beyond, LSTs currently installed in Segment 4 are visible to the north, ascending the scrub vegetation-covered mountainsides. Given the viewing distance, and because they blend in with the muted color of the landscape backdrop, the existing LSTs are not particularly noticeable.

The visual simulation shows LSTs on the hillside replaced by taller TSPs, new conductor, new telecommunications cable, marker balls, and retaining wall structures. At this distance, the increased height is almost imperceptible, and the new conductor, telecommunications cable, marker balls, and retaining wall structures are not visible; thus, the overall visual change is minor. Given the distance and presence of existing overhead utility structures, the change would not be particularly noticeable and would not affect the character of the landscape seen from this location.

Figure 4.1-10 shows a view from Gobernador Canyon Road, a winding roadway in the rugged hills above Carpinteria. The figure is representative of the views available to the limited number of motorists or bicyclists on this road. Orchards and residences are found across these hills. In the foreground, a paddock fence is visible along with mature orchard trees; several houses and equestrian and agricultural structures appear on the hillside beyond. On the slope above the houses, LSTs are visible at a distance of more than 0.3 miles away. Dense vegetation screens the lower portions of some of the structures; the LSTs are visible against a backdrop of muted green hillside vegetation.

In the simulation view, two LSTs are replaced by two taller TSPs, while the other four LSTs, which carry subtransmission lines not related to the Project, would be untouched and would remain. The closest new TSP, seen on the right of the simulation, is noticeably taller than the original LST that would be replaced; however, it would not project into the skyline above the hillside, and would be seen as only slightly taller than the existing and remaining LSTs behind it. The new TSP on the left of the simulation is also noticeably taller than the original LST that would be replaced; however, it would not project into the skyline above the hillside. A comparison of the existing view and the visual simulation indicates that the Project-related infrastructure (TSP, new conductor, and new telecommunications cable) is somewhat noticeable; however, given the presence and scale of numerous existing transmission structures, the change would not substantially affect the character or composition of the landscape setting as viewed from this location.

Impact Summary, Segments 3B and 4

The Project would introduce TSPs, new conductor, and retaining wall structures in Segments 3B and 4 (and telecommunications cable and marker balls along Segment 4) into a landscape in which existing electric utility structures including LSTs, wood poles, and overhead lines are currently seen by the public. As presented above, installation of new subtransmission structures and conductor along Segment 4 would not substantially degrade the visual character or quality of the surrounding area. As shown in Photographs 9, 10, and 11 (which depict Segment 3B), the distance from SR-150 results in existing infrastructure in Segment 3B being barely discernible from public vantage points. Because of the distance of Segment 3B from SR-150 and other public viewpoints, the impacts associated with the installation of new TSPs, conductor, and retaining wall structures in Segment 3B would be less than significant. Therefore, the new subtransmission structures, conductor, telecommunications cable, marker balls, and retaining wall structures would represent a minor, incremental change, and would not substantially degrade the visual character or quality of the surrounding area in either Segment 3B or 4.

Impact Summary, Substation Locations

The Project includes installation of TSPs at Carpinteria Substation and Casitas Substation. The Project also includes modifications to the switchracks and associated equipment within the existing substation fencelines and would not involve permanent vegetation removal.

A majority of the modifications that would occur at Carpinteria Substation are shown on Figure 4.1-5. At this location, where multiple utility structures including the existing substation are established visual elements, the modifications would not substantially alter the character of the landscape setting.

As demonstrated in Photograph 21, Casitas Substation is substantially screened from public view. However, the TSP that would be installed at Casitas Substation would be noticeable to motorists traveling SR-33, while the other work at Casitas Substation would be obscured by vegetation. Because the TSP and other substation modifications generally would appear similar in scale and visual character to existing substation features, and because the changes would be partially screened from public views, the modifications would not substantially alter the character of the landscape setting.

Santa Clara Substation is located in a remote area; access is via a controlled access, gated road. The minor changes to the substation equipment associated with this Project would represent a minor, incremental aesthetic change that would not substantially alter the visual setting or character of the landscape setting.

Impact Summary, Telecommunications Infrastructure

The Project involves the installation of telecommunications cable on or near the top of subtransmission structures in Segments 1, 2, and 4. Because the small-diameter telecommunications cable would be seen within the context of new and existing utility structures and conductor, it would not be particularly noticeable; therefore, it would have a negligible effect on public views, and would not alter the character of the landscape setting.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction equipment and activities are generally not substantial sources of permanent light and glare. Glare generated during daytime hours would be temporary and dependent upon the location of the sun and the orientation of the construction equipment. Construction of the Project would occur primarily during daytime hours. However, there is a possibility that some construction could occur at night, and temporary artificial illumination could be required. Lighting, if needed, would be used to protect the safety of the construction workers; lights would be oriented and shielded to minimize their effect on any nearby sensitive receptors. Extensive nighttime lighting is not anticipated, and potential impacts from lighting that may be needed during construction would be temporary and considered less than significant. Accordingly, construction impacts under this criterion would be less than significant.

Operation Impacts

No new lighting would be needed at Casitas Substation or Santa Clara Substation. Existing lighting at Carpinteria Substation would be modified; however, the change would involve the installation of task lighting similar to what is currently installed at the existing substation. Therefore, the change would be minor and incremental, particularly given the existing overhead lighting at the adjacent high school parking lot and along Foothill Boulevard. This new task lighting would not create a new source of substantial light that would adversely affect day or nighttime views in the area, and thus the impact would be less than significant.

If determined necessary, lighting would be installed on some structures as recommended by the Federal Aviation Administration (FAA). These lights may be visible to nighttime viewers in the area; however, these lights would be red in color, located at a significant distance from viewers, and light would be directed upwards and outwards toward potential aviation traffic without creating illumination in nearby areas. Therefore, these lights would not introduce a new source of substantial light that would adversely affect daytime or nighttime views in the area, and the impact would be less than significant.

With respect to potential glare effects, the new towers and conductors would weather to a dull gray finish. New telecommunications cable would be a dull aluminum gray. Therefore, no substantial light and glare effects would occur.

4.1.5 Applicant Proposed Measures

Because the Project would not result in significant impacts to aesthetics, no Applicant Proposed Measures are proposed.

4.2 Agricultural and Forestry Resources

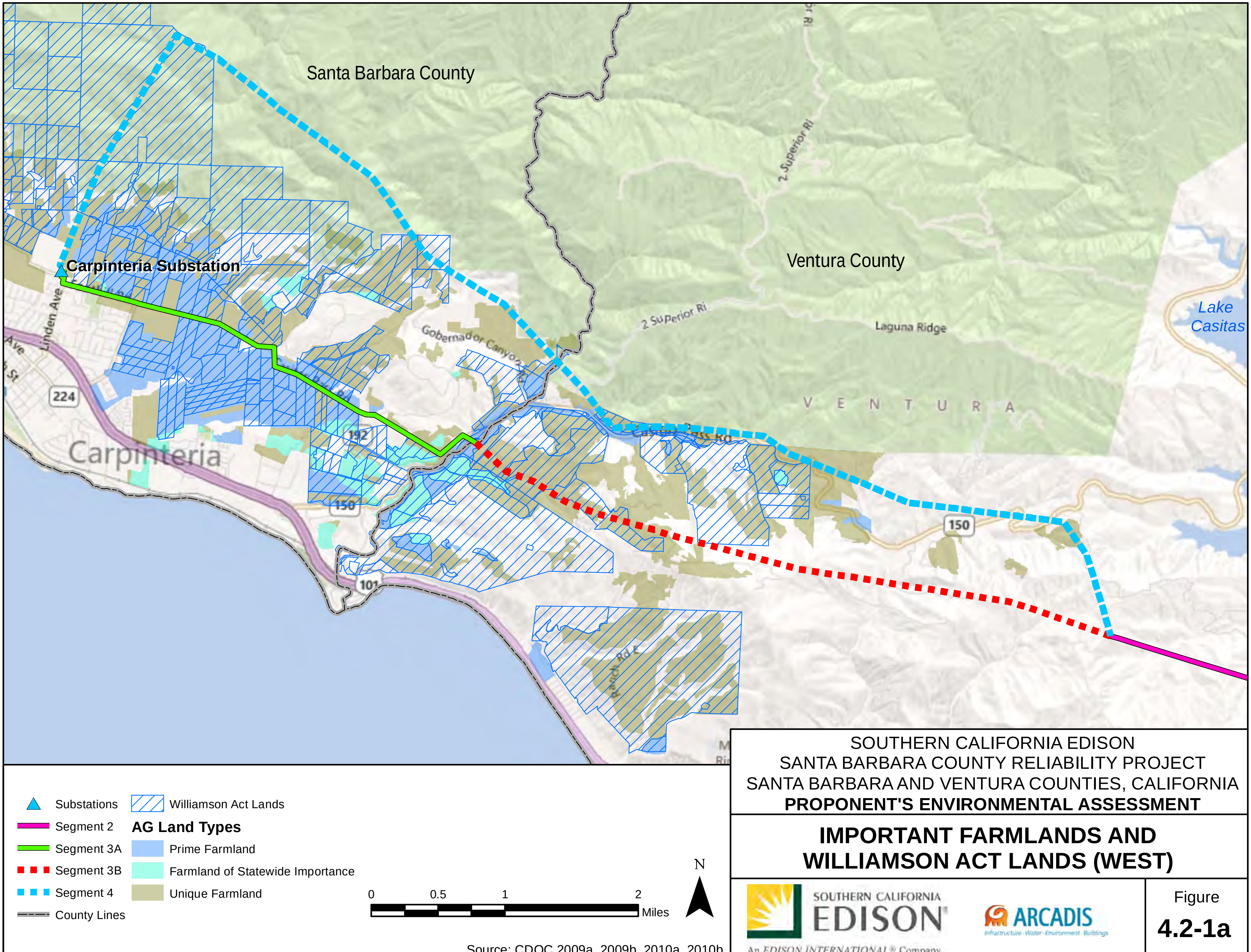
This section describes the agriculture and forestry resources in the area of the Project. The potential impacts along Segments 3A, 3B, and 4 are discussed. Work conducted at the substations would occur on SCE-owned property that is not used for agricultural purposes. Helicopters would be used to install telecommunications cable along Segments 1 and 2, with light- and medium-duty vehicles in support using existing access and spur roads and cleared areas around subtransmission structures. The Getty Tap is not located on agricultural lands. Therefore, these activities would have no impact on agricultural resources, and are not discussed in this section. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.2.1 Environmental Setting

Agricultural land uses are common in the vicinity of the Project and involve the production of a wide variety of crops including vegetables, fruits and nuts, flowers and ornamentals, field crops, and the raising of livestock (Santa Barbara County 2009a). Within the Project area, most agricultural operations are farms that cultivate avocado, lime, lemon, and other fruit trees and cattle ranches.

California Public Resources Code Section 21060.1 defines agricultural land as “prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California.” The State of California has modified the farmland classifications such that no farmland would be designated as Prime Farmland or Farmland of Statewide Importance unless it is irrigated.

Within Ventura and Santa Barbara counties, the Project would cross farmlands included in the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (FMMP). GIS data for both counties were obtained from the FMMP website (CDOC 2010a, 2010b). Most areas of Prime Farmland and Farmland of Statewide Importance in the vicinity of the Project are located in the Carpinteria Valley. Unique Farmland is found along Segments 3A, 3B, and 4 both within and outside the Carpinteria Valley. Soils that fail to meet criteria for Prime Farmland or Statewide Importance are generally located on steeper slopes on valley fringes (Figures 4.2-1a and 4.2-1b). Agricultural lands covered by Williamson Act contracts are also illustrated in Figures 4.2-1a and 4.2-1b.



Source: CDOC 2009a, 2009b, 2010a, 2010b

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

IMPORTANT FARMLANDS AND WILLIAMSON ACT LANDS (WEST)

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Figure
4.2-1a

ARCADIS: SCE_009, 6/19/12, R11

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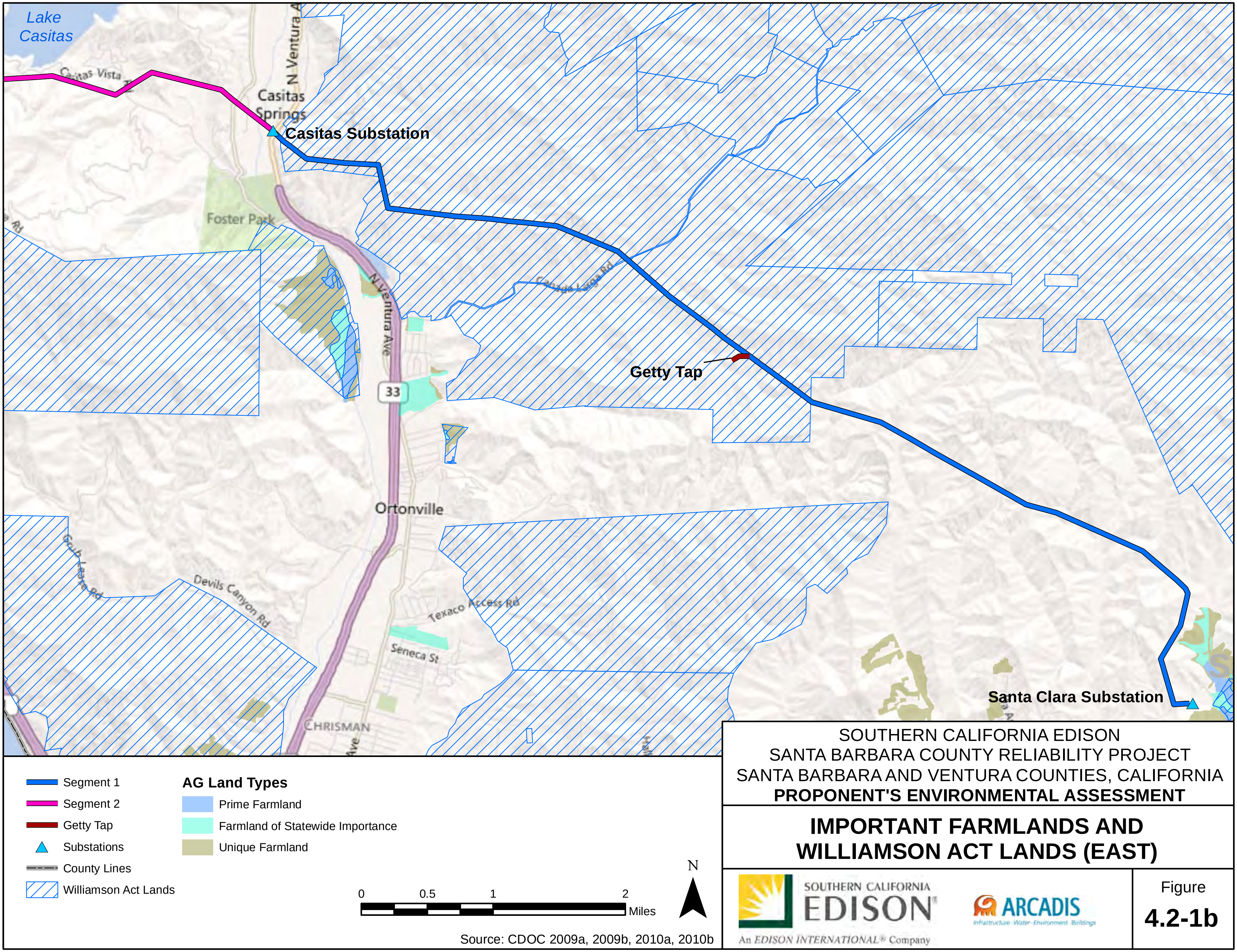

Source: CDOC 2009a, 2009b, 2010a, 2010b

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

IMPORTANT FARMLANDS AND WILLIAMSON ACT LANDS (EAST)

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Figure
4.2-1b

ARCADIS: SCE_019, 6/19/12, R05

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Forest lands are defined in California Public Resources Code Section 12220(g) as being capable of supporting "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." Figures 4.2-2a and 4.2-2b illustrate the distribution of lands categorized by the California Department of Forestry and Fire Protection (CalFire) as having greater than 10 percent tree density. The approximately 120 acres of forest lands crossed by the substransmission infrastructure in Segments 3A, 3B, and 4 are composed of coastal oak, coastal scrub, or chaparral habitats. Lesser amounts of montane riparian and valley foothill riparian habitats with greater than 10 percent tree cover are also present (CalFire 2002).

Ventura County has established Timberland Preserve Zones for six Christmas tree farms in the County, none of which are located within the vicinity of the Project (Ventura County 2011d). There are no timberlands zoned or identified on lands that would be traversed by the Project.

4.2.2 Regulatory Setting

4.2.2.1 Federal Regulatory Setting

Farmland Protection Policy Act

The National Agricultural Land Study of 1980-1981 found that millions of acres of farmland were being converted out of agricultural production in the United States each year. The 1981 Congressional report, "Compact Cities: Energy-Saving Strategies for the Eighties" (Compact Cities report), identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development.

The Compact Cities report indicated that much of the sprawl was the result of programs funded by the Federal Government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994. The FPPA and its implementing rules and regulations set forth provisions intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses.

4.2.2.2 State Regulatory Setting

Williamson Act

The California Land Conservation Act of 1965 (Williamson Act) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the State via the Open Space Subvention Act of 1971. California Government Code Section 51238 (the Williamson Act) indicates that, unless local organizations declare otherwise, the erection, construction, alteration, or maintenance of gas, electric, water, or communication facilities is compatible with Williamson Act contracts.

Both Ventura County and Santa Barbara County voluntarily participate in the Williamson Act program. Guidelines for qualification and participation in the program are provided in the Ventura County Land Conservation Act Guidelines (Ventura County 2011c) and the Santa Barbara County Uniform Rules for Agricultural Preserves and Farmland Security Zones (Santa Barbara County 2007), respectively.

4.2.2.3 Local Regulatory Setting

CPUC G.O. 131-D, Section XIV. B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction. However in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Local zoning maps and ordinances were reviewed during preparation of this PEA to determine whether the Project would be consistent with local agricultural zoning.

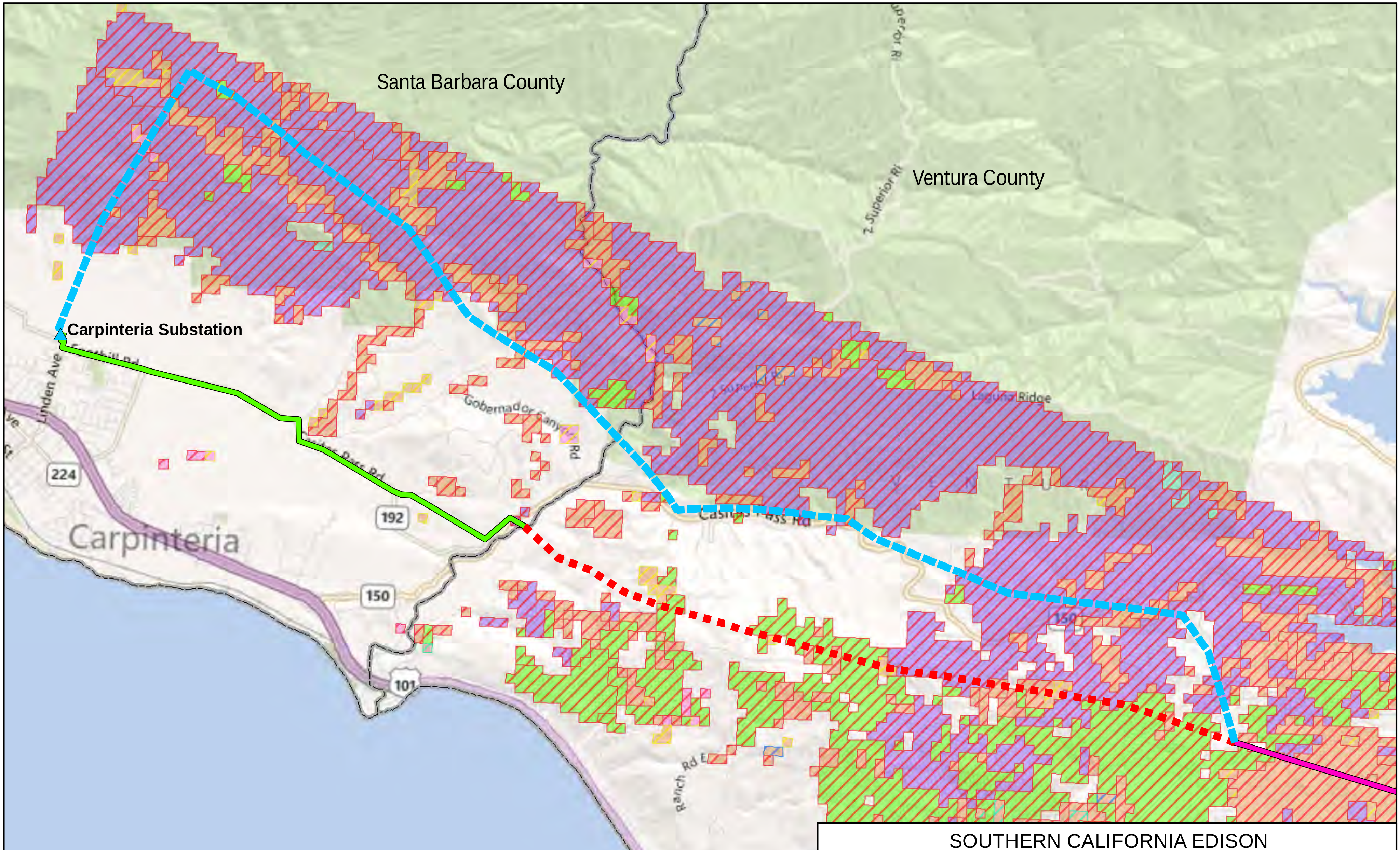
Santa Barbara County Comprehensive Plan

The Agricultural Element of the Comprehensive Plan contains six goals that, in summary, speak to the preservation, encouragement, and enhancement of agriculture within the county. The Carpinteria – Summerland Area Goal states "[t]he agricultural economy and the semi-rural qualities of the area should be preserved. Every effort should be made to preserve fertile lands for agriculture."

Public works, public service, public utility, and oil drilling uses which are found to be compatible with agriculture may be permitted (Santa Barbara County 2009a).

Santa Barbara County Coastal Land Use Plan

The County of Santa Barbara's Local Coastal Program manages the County's Coastal Land Use Plan, which is implemented by the Coastal Zoning Ordinance. Under the Santa Barbara County Coastal Land Use Plan, all electric transmission lines proposed for the Santa Barbara County Coastal Zone are developments subject to permitting under the terms of the California Coastal Act. Combined, these implement the California Coastal Act.



Segment 2
Segment 3A
Segment 3B
Segment 4
Substations
County Lines

Habitat Type
- Chamise-Redshank Chaparral
- Coastal Oak Woodland
- Coastal Scrub
- Mixed Chaparral
- Montane Riparian
- Valley Foothill Riparian

Tree Density
- 10 to 24%
- 25 to 39%
- 40 to 59%
- 60 to 100%

0 0.5 1 2 Miles

N

Source: CDFFP 2002

SOUTHERN CALIFORNIA EDISON
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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
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FOREST LANDS (West)

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Figure
4.2-2a

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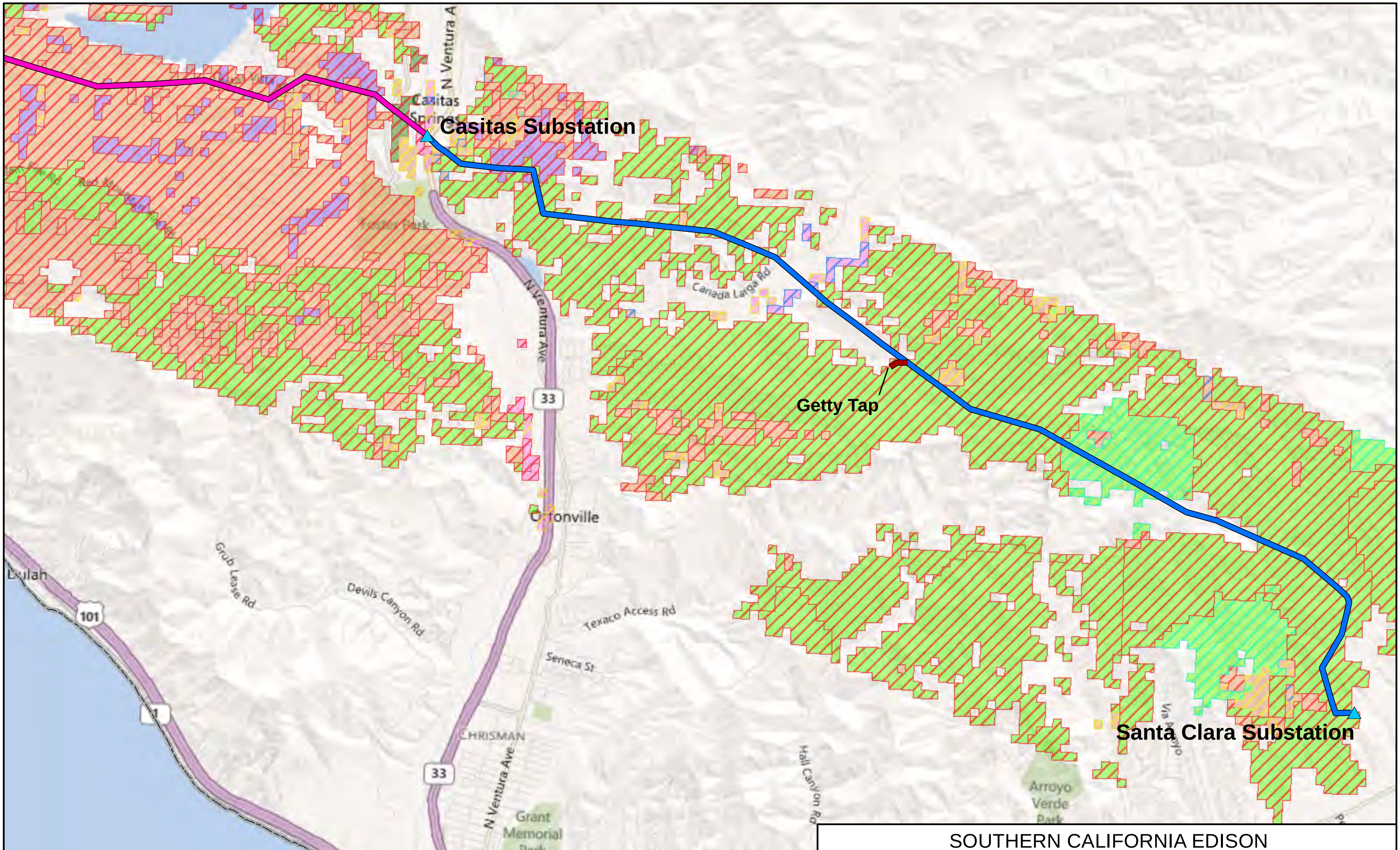

Segment 1	
Segment 2	
Getty Tap	
Substations	
County Lines	

Habitat Type

- Chamise-Redshank Chaparral
- Coastal Oak Woodland
- Coastal Scrub
- Mixed Chaparral
- Montane Riparian
- Valley Foothill Riparian

Tree Density

- 10 to 24%
- 25 to 39%
- 40 to 59%
- 60 to 100%

0 0.5 1 2 Miles

N

Source: CDFFP 2002

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FOREST LANDS (East)

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Figure
4.2-2b

ARCADIS: SCE_020, 6/18/12, R03

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Coastal Land Use Plan Policies applicable to evaluation of agricultural impacts include Policy 6-20, which states "…[s]carring, grading, or other vegetative removal shall be repaired, and the affected areas revegetated with plants similar to those in the area to the extent safety and economic considerations allow."

The Coastal Land Use Plan also sets forth regulations that apply to agricultural lands, many of which are specifically tailored to evaluation of residential development and greenhouse development proposals. Regulations relevant to transmission line construction include:

- Section 3.8, Agriculture, 3.81 Coastal Act Policies.
  30241. The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

  …

  e. By assuring that public service and facility expansions and non-agricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

- 30242. All other lands suitable for agricultural use shall not be converted to non-agricultural uses unless: (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

- 30243. The long-term productivity of soils and timberlands shall be protected and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber, processing and related facilities.

In the Carpinteria Valley, a range of minimum agricultural parcel sizes from 5 to 40 acres is used to provide for flexibility and to adjust for topographic and soil constraints. Coastal Land Use Plan Policy 8-1 provides criteria for designating agricultural land uses within the Coastal Zone. Coastal Land Use Plan Policies regarding agricultural land uses do not apply to transmission line proposals that do not involve division or conversion of entire agricultural parcels.

Santa Barbara County Coastal Zoning Ordinance

Section 35-68 and Section 35-69 of the Santa Barbara County Coastal Zoning Ordinance define the purpose and intent for two agricultural districts within the coastal zone as follows:

AG-I – Agricultural I: “The purpose of the Agriculture I district is to designate and protect lands appropriate for long-term agricultural use within or adjacent to urbanized areas, and to preserve prime agricultural soils.”

AG-II – Agricultural II “The purpose of the Agriculture II district is to establish agricultural land use for large prime and non-prime agricultural lands in the rural areas of the County (minimum 40 to 320 acre lots) and to preserve prime and non-prime soils for long-term agricultural use.”

Santa Barbara County Land Use and Development Code

Chapter 35.21—Agricultural Zones, identifies two agricultural zones; the purposes of the individual Agricultural zones and the manner in which they are applied are as follows.

“A. AG-I (Agricultural I) zone.

1. The AG-I zone is applied to areas appropriate for agricultural use within Urban, Inner Rural, Rural (Coastal Zone only), and Existing Developed Rural Neighborhood areas, as designated on the Comprehensive Plan maps. The intent is to provide standards that will support agriculture as a viable land use and encourage maximum agricultural productivity.

2. Within the Coastal Zone, the AG-I zone is intended to designate and protect lands appropriate for long term agricultural use within or adjacent to urbanized areas and to preserve prime agricultural soils.

B. AG-II (Agricultural II) zone.

1. The AG-II zone is applied to areas appropriate for agricultural land uses on prime and non-prime agricultural lands located within the Rural Area as shown on the Comprehensive Plan maps. The intent is to preserve these lands for long-term agricultural use.

2. Within the Coastal Zone, the AG-II zone is intended to provide for agricultural land uses on large properties (a minimum of 40- to 320-acre lots) with prime and non-prime agricultural soils in the rural areas of the County, and to preserve prime and non-prime soils for long-term agricultural use.”

Ventura County General Plan

The Ventura County General Plan establishes multiple land use designations for agriculture, including the Coastal Agriculture and non-coastal Agricultural Exclusive and Rural Agriculture zones. The non-coastal Open Space Zone is also managed, in part, for agricultural production (Ventura County 2011b). The Agricultural Exclusive Zone serves to preserve and protect commercial agricultural lands from the encroachment of non-agricultural uses which could have detrimental effects upon the agricultural industry. Rural Agricultural Zones are managed for a wide range of agricultural uses in conjunction with residential land uses (Ventura County 2011d).

Policy 4.5.2 of the General Plan states in part that "[a]ll transmission lines should be located and constructed in a manner which minimizes disruption of … agricultural activities … when not in conflict with the rules and regulations of the California Public Utilities Commission."

City of Carpinteria General Plan and Local Coastal Plan

The City of Carpinteria designates areas appropriate for continued agricultural production as AG – Agriculture.

4.2.3 Significance Criteria

The significance criteria for assessing the impacts to Agricultural and Forestry Resources come from the CEQA Environmental Checklist. A project causes a potentially significant impact if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g]).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- 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.

4.2.4 Impact Analysis

Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Work conducted at the substations, installation of telecommunications cable in Segments 1 and 2, and work related to the Getty Tap would not be conducted on any lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; therefore, these activities would not result in any conversion to nonagricultural use.

Work in Segments 3A, 3B, and 4 of the Project includes the rehabilitation of access and spur roads; construction of new spur roads, retaining wall structures, and crane pad/turnaround areas; installation of subtransmission structures; stringing of conductor; and installation of telecommunications infrastructure (along Segment 4). These activities would traverse lands identified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. The locations of these lands are shown on Figures 4.2-1a and 4.2-1b.

During construction of the Project, clearing would be required for installation of retaining wall structures, drill pads, crane pad/turnaround areas at subtransmission structure locations as well as at stringing and pulling sites along Segments 3A, 3B, and 4. Where feasible, crane pad/turnaround areas would also be used as stringing/pulling sites to minimize the area of temporary disturbance. Drill pads, retaining wall structures, crane pad/turnaround areas and stringing/pulling sites would be developed by grading and cutting/filling soils. The soil management activities would be balanced at each location or in conjunction with work at nearby locations to the extent feasible to reduce the need to import or remove soil. These pads and sites would result in the temporary disturbance of approximately 31.7 acres (see Table 4.2-1). At the conclusion of construction, the majority of disturbed areas would be returned to as close to pre-construction conditions as feasible, or to the conditions agreed upon between the landowner and SCE. Therefore, the temporary impacts of construction are considered to be a less than significant impact under this criterion.

Table 4.2-1: Significant Agricultural Lands within Segments 3A, 3B, and 4

Farmland Category	Total Acreage, Santa Barbara County and Ventura County	Total Acreage, Santa Barbara County	Total Acreage, Ventura County	Permanently Disturbed, Total (ac)	Temporarily Disturbed, Total (ac)
Prime Farmland	109,083	66,658	42,425	0.6	3.7
Farmland of Statewide Importance	45,979	12,492	33,487	0	0
Unique Farmland	64,446	35,652	28,794	7.2	28.0
Williamson Act Land	683,072	551,330	131,742	9.3	39.1

Note:
Williamson Act contracts may overlap with Important Farmland designations.
Sources: CDOC 2009a, 2009b, 2010a, 2010b

Operation Impacts

Some components of the Project would represent a permanent impact to the current use of lands. The footings of TSPs and the footprints of LWS poles, for example, cannot be used for any other purpose, and per California Public Resources Code Section 4292, a10-foot area around each TSP and LWS pole would be maintained in a cleared state. The rehabilitation of existing access and spur roads and the construction of new spur roads would also represent a permanent impact.

The footings of the TSPs installed on agricultural lands as part of the Project would permanently disturb approximately 531 square feet of land each, which would account for a total of 0.23 acre. Each LWS pole installed on agricultural lands represents a permanent disturbance of approximately 450 square feet. The five LWS poles installed on agricultural lands would occupy approximately 0.05 acre.

As discussed in Chapter 3, construction locations (drill pads, retaining walls, crane pad/turnaround areas, and stringing/pulling locations) would be accessed using existing private roads, agricultural roads, and dedicated SCE access and spur roads. The Project includes the rehabilitation of some access and spur roads and the construction of new spur roads. In addition, some crane pads would be maintained permanently as turnaround areas to allow for the safe movement of vehicles during normal and emergency operations. The rehabilitation and new road construction activities and maintenance of crane pads/turnarounds would result in new permanent disturbance of 7.5 acres.

As presented above, a total of approximately 7.8 acres of lands identified as Important Farmland would be newly and permanently disturbed as a function of the operation of the Project (0.6 acre of Prime Farmland and 7.2 acres of Unique Farmland). These conversions would represent a loss of 0.00000036 percent of the approximately 219,508 acres of Important Farmland identified in Santa Barbara and Ventura counties. By comparison, 11,079 acres of Important Farmland were converted to non-agricultural uses in Santa Barbara and Ventura counties during the 2006-2008 period (CDOC 2011). The permanent disturbance of 0.00000036 percent of the Important Farmlands inventory in Santa Barbara and Ventura counties would be less than significant.

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

Assessment Summary: No Impact

<u>Construction Impacts</u>

The Project would be constructed across lands zoned for agricultural use and lands under Williamson Act contracts.

Within Santa Barbara County, much of the Project would be routed within existing ROWs across lands zoned for agricultural use. Section 2-9, Gas, Electric, Water, and Communication Facilities, of the Santa Barbara County's Uniform Rules for Agricultural Preserves and Farmland Security Zones states that "[t]he erection, construction, alteration or maintenance of gas, electric, water or communication utility facilities are compatible uses." In Santa Barbara County, electrical transmission lines are a permitted use on non-coastal agricultural lands per Section 35.21.030 of the Land Use and Development Code. Section 35-146, Applicability, of the Santa Barbara County Coastal Zoning Ordinance notes that electric transmission lines

> "shall be permitted in all zone districts… .. Facilities which require only a Coastal Development Permit for approval shall be considered principal permitted uses."

Therefore, the Project would not conflict with existing zoning for agricultural use within Santa Barbara County.

In Ventura County, much of the Project would be routed in existing ROWs across lands zoned for agricultural use (and a short section would be routed in a new ROW across lands zoned for agricultural use). The Ventura County Land Conservation Act Guidelines state:

> "In accordance with Government Code Sections 51231, 51238, and 51238.1, 'compatible uses' are those which are permitted, or conditionally permitted by the Ventura County Zoning Ordinance in the AE-40 ac or CA zones."

The Project would traverse lands zoned 'AE-40 ac.' Section 8105-4, Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones, of the Ventura County Non-Coastal Zoning Ordinance states that overhead transmission lines are a permitted use subject to receipt of a "Planning Director-approved Conditional Use Permit." However, pursuant to G.O. 131-D, Section XIV.B, the Project would not require a conditional use permit. Therefore, the Project would not conflict with existing zoning for agricultural use within Ventura County.

The Project would not cross parcels zoned as 'AG – Agriculture' in the City of Carpinteria (City of Carpinteria 2003).

Electrical transmission facilities are recognized in the California Government Code as a compatible use on Williamson Act lands. California Government Code 51238 (a) (1) states:

> "Notwithstanding any determination of compatible uses by the county or city pursuant to this article, unless the board or council after notice and hearing makes a finding to the contrary, the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are hereby determined to be compatible uses within any agricultural preserve."

For these reasons, construction of the Project would not conflict with applicable zoning regulations regarding agricultural use, and would not conflict with any applicable Williamson Act contract, and thus would have no impacts under this criterion.

<u>Operation Impacts</u>

The Project would be operated and maintained on lands zoned for agricultural use and lands under Williamson Act contracts. Operation of the Project would not conflict with applicable zoning regulations regarding agricultural use, and would not conflict with any applicable Williamson Act contract, and thus would have no impacts under this criterion.

Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Assessment Summary: No Impact

<u>Construction Impacts</u>

Forest lands are identified by CalFire on the scale of 100-meter squared grids (CalFire 2002). Because all forest lands where surface disturbances would occur have tree densities between 40 and 100 percent, Project construction activities described in Chapter 3 would not cause tree densities within any grids to fall below 10 percent, and thus no forest lands would be reclassified as non-forest lands under Public Resources Code 12220(g). No timberland or lands zoned Timberland Production as defined above are crossed by the Project. Therefore, no impacts would occur under this criterion.

<u>Operation Impacts</u>

No additional impacts would occur to forest lands beyond those anticipated during construction. Operation of the Project would not conflict with zoning of forest land, timberland, or Timberland Production zones. Therefore, there would be no impacts under this criterion.

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

Assessment Summary: No Impact

<u>Construction Impacts</u>

Forest lands which have a native tree density of 10 percent or greater as defined in Public Resources Code section 12220(g) are present across a majority of the Project. Although most of these lands are not managed for timber, they provide for management of other forest resources such as aesthetics, fish and wildlife, biodiversity, and water quality.

As discussed above for Important Farmlands, a total of 31.7 acres would be temporarily disturbed for construction of crane pads and pulling/stringing sites. All temporary construction-related disturbances would persist until vegetation is naturally reestablished. However, these disturbances would not result in the cover of the forest lands falling below the 10 percent density threshold, and thus there would be no loss of forest land as defined in Public Resources Code section 12220(g). In addition, no such lands would be converted to non-forest use as a result of construction of the Project. Therefore, there would be no impacts under this criterion.

Operation Impacts

No additional impacts would occur to forest lands beyond those anticipated during construction. Operation of the Project generally entails only periodic inspections of subtransmission and telecommunications infrastructure by personnel in light-duty vehicles using existing access and spur roads. These activities would not result in the loss or conversion of forest land as defined above to non-forest use. Therefore, there would be no impacts under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

The rehabilitation of existing agricultural roads and access roads, and the construction of new access or spur roads, may require the temporary removal of irrigation equipment (e.g., pumps, piping) to allow the safe passage of construction equipment. This equipment would be either temporarily re-established during construction or would be reestablished following construction. As a result, farmland would continue to be irrigated, and thus would not be converted.

Staging yards would be sited to avoid conversion of farmland or forest land to other uses. Construction vehicle traffic along private roads, agricultural roads, and access and spur roads would result in a temporary increase in traffic that may result in short-duration disruptions of farming and grazing activities. Although agricultural activities may be temporarily impacted, no farmland would be converted to non-agricultural use. Construction of the Project would not involve other changes in the existing environment that could result in the conversion of forest land to non-forest use. Therefore, no impacts would occur under this criterion.

Operation Impacts

It is not anticipated that operation of the Project would result in other changes to the environment that would result in the conversion of farmland to non-agricultural use, or conversion of forest land to non-forest use. As noted in Section 4.13, the Project would not be growth-inducing and therefore would not be expected to induce conversion of agricultural or forest land. Therefore, no impacts would occur under this criterion.

4.2.5 Applicant Proposed Measures

Because the Project would not result in significant impacts to agricultural and forestry resources, no Applicant Proposed Measures are proposed.

4.3 Air Quality

This section describes the air quality in the area of the Project. The potential impacts and alternatives are also discussed.

4.3.1 Environmental Setting

The Project is located within the South Central Coast Air Basin (SCCAB), which is located next to the Pacific Ocean and covers San Luis Obispo County, Santa Barbara County, and Ventura County. The portions of the SCCAB in which the Project is located are regulated by the Ventura County Air Pollution Control District (VCAPCD) and Santa Barbara County Air Pollution Control District (SBCAPCD).

The climate of the SCCAB is dominated by the strength and position of the semi-permanent high-pressure center over the Pacific Ocean near Hawaii. It creates cool summers, mild winters, and infrequent rainfall. It drives the cool daytime sea breeze, and it maintains comfortable humidities and ample sunshine after the frequent morning clouds dissipate. Average temperatures near the Project recorded in the City of Santa Barbara range from a low of 40 degrees Fahrenheit (^{o}F) in January to a high of 77^{o} F in August (Weather Underground 2012). Daily and seasonal oscillations of mean temperature are small because of the moderating effects of the nearby oceanic thermal reservoir. In contrast to the steady temperature regime, rainfall is highly variable. Measurable precipitation occurs mainly from early November to mid-April, but total amounts are generally small. The City of Santa Barbara averages 18 inches of rain annually; January is typically the wettest month of the year.

It is the responsibility of the VCAPCD and SBCAPCD to ensure that State and Federal ambient air quality standards are achieved and maintained in their geographical jurisdictions. Health-based air quality standards have been established by California (California Ambient Air Quality Standards – CAAQS) and by the Federal government (National Ambient Air Quality Standards – NAAQS) for the following criteria air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter with a mean diameter of less than 10 microns (PM_{10}), particulate matter with a mean diameter of less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), and lead. Furthermore, California has established additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility. Attainment of the State and Federal ambient air quality standards protects sensitive receptors and the public from criteria pollutants that are known to have adverse human health effects.

Ozone

Ground-level O_3 is an oxidant and the major component of smog. Ozone is generated by a complex series of chemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_x) in the presence of ultraviolet radiation. The presence of both ROG and NO_x in the lower atmosphere is typically the result of incomplete combustion. The rate of ground-level ozone formation is dependent on the concentrations of ROG and NO_x, daytime wind flow patterns, mountain barriers, persistence of temperature inversions, and the intensity of sunlight. For this reason, ROG and NO_x are considered precursors to ozone, and emissions of ROG and NO_x are regulated in place of O_3.

Nitrogen Dioxide

NO_x emissions are primarily generated from the combustion of fuels. NO_x includes nitric oxide (NO) and nitrogen dioxide (NO_2). Because NO converts to NO_2 in the atmosphere over time, NO_2 is the listed criteria pollutant.

Carbon Monoxide

CO is a product of incomplete combustion, principally from automobiles and other mobile sources of pollution. CO emissions from wood-burning stoves and fireplaces can also be measurable contributors. Typically, peak CO levels occur during winter months, due to a combination of higher emission rates and stagnant weather conditions such as ground-level radiation inversions.

Sulfur Dioxide

SO_2 is produced when any sulfur-containing fuel is combusted. Processed natural gas contains trace amounts of sulfur, while fuel oils contain much larger amounts. SO_2 reacts in the atmosphere to form acid rain, which is destructive to lakes and streams, crops and vegetation, as well as to buildings, materials, and cultural resources.

Particulate Matter

PM emissions are caused by a combination of windblown fugitive or road dust, particles emitted from combustion sources (usually carbon particles), and organic sulfate and nitrate aerosols formed in the air from emitted hydrocarbons, sulfur oxides, and NO_x. Respirable particulate matter is referred to as PM_{10}, because it has a diameter size of equal to or less than 10 microns. Concentrations of fine particulates ($PM_{2.5}$) are separately measured and reported.

Lead

Lead gasoline additives, non-ferrous smelters, and battery plants were historically significant contributors to atmospheric lead emissions. Legislation in the early 1970s required the gradual reduction of lead content in gasoline. This required reduction has dramatically reduced lead emissions from mobile and other combustion sources. In addition, unleaded gasoline was introduced in 1975. These controls have essentially eliminated violations of the lead standard for ambient air in most urban areas.

Ambient Air Quality Standards

The United States Environmental Protection Agency (USEPA) compares ambient air criteria pollutant measurements with NAAQS to assess the status of air quality of regions within the States. Similarly, the California Air Resources Board (CARB) compares air pollutant measurements in California to CAAQS. Based on these comparisons, regions within California are designated as one of the following categories:

- **Attainment.** A region is designated as attainment if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, areas that have been re-designated from nonattainment to attainment are classified as “maintenance areas” for a 10-year period to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS is exceeded for a pollutant, then the region is designated as nonattainment for that pollutant.
- **Unclassifiable.** An area is designated as unclassifiable if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Air quality standards and VCAPCD and SBCAPCD attainment status are summarized in Tables 4.3-1 and 4.3-2. Currently, the ambient air quality within the VCAPCD jurisdiction is classified as nonattainment for O_3 and either attainment or unclassified for all other federally regulated criteria pollutants (VCAPCD 2012). With regard to CAAQS, the VCAPCD jurisdiction is classified as nonattainment for O_3, PM_{10}, and $PM_{2.5}$ and either attainment or unclassified for all other State pollutants (VCAPCD 2012). The air quality within the SBCAPCD jurisdiction is currently classified as nonattainment for O_3 and either classified as attainment or unclassified for all other federally regulated criteria pollutants (SBCAPCD 2012). With regard to CAAQS, the SBCAPCD jurisdiction is classified as nonattainment for O_3 and PM_{10}, and either attainment or unclassified for all other State pollutants (SBCAPCD 2012).

4.3.2 Regulatory Setting

4.3.2.1 Federal Regulatory Setting

The Federal Clean Air Act

The Clean Air Act of 1970 (Federal CAA), 42 U.S.C. § 7401 et seq. as amended in 1977 and 1990, is the basic federal statute governing air quality. The USEPA is the principal agency responsible for overseeing enforcement of Federal CAA statutes and regulations. The USEPA also oversees implementation of federal programs for permitting new and modified stationary sources, controlling toxic air contaminants, and reducing emissions from motor vehicles and other mobile sources. The sections of the Federal CAA that are most applicable to the Project include Title I (Air Pollution Prevention and Control) and Title II (Emission Standards for Mobile Sources).

Table 4.3-1: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 hour	0.09 ppm ($180\ \mu g/m^3$)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8 hour	0.070 ppm ($137\ \mu g/m^3$)		0.075 ppm ($147\ \mu g/m^3$)		
Respirable Particulate Matter (PM_{10})	24 hour	$50\ \mu g/m^3$	Gravimetric or Beta Attenuation	$150\ \mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	$20\ \mu g/m^3$		--		
Respirable Particulate Matter ($PM_{2.5}$)	24 hour	No Separate State Standard		$35\ \mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	$12\ \mu g/m^3$	Gravimetric or Beta Attenuation	$15\ \mu g/m^3$		
Carbon Monoxide (CO)	8 hour	9 ppm ($10\ mg/m^3$)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm ($10\ mg/m^3$)	--	Non-Dispersive Infrared Photometry (NDIR)
	1 hour	20 ppm ($23\ mg/m^3$)		35 ppm ($40\ mg/m^3$)		
	8 hour (Lake Tahoe)	6 ppm ($7\ mg/m^3$)		--	--	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm ($57\ \mu g/m^3$)	Gas Phase Chemiluminescence	53 ppb ($100\ \mu g/m^3$) (see footnote 8)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 hour	0.18 ppm ($339\ \mu g/m^3$)		100 ppb ($188\ \mu g/m^3$) (see footnote 8)	None	
Sulfur Dioxide (SO_2)	24 hour	0.04 ppm ($105\ \mu g/m^3$)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)[9]
	3 hour	--		--	0.5 ppm ($1300\ \mu g/m^3$)	
	1 hour	0.25 ppm ($655\ \mu g/m^3$)		75 ppb ($196\ \mu g/m^3$) (see footnote 9)	--	

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--		0.030 ppm (for certain areas) (see footnote 9)	--	
Lead[10]	30 Day Average	1.5 µg/m^3	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m^3 (for certain areas) (see footnote 11)	Same as Primary Standard	
	Rolling 3-Moth Average[11]	--		0.15 µg/m^3		
Visibility Reducing Particles	8 hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Notes:

1. California standards for O_3; CO (except 8-hour Lake Tahoe); SO_2 (1 and 24 hour); NO_2; and PM10, PM2.5, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the USEPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.
8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
9. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

   Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
10. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Table 4.3-2: Attainment Status for Air Pollution Control Districts

Pollutant	California Status		Federal Status	
	VCAPCD	SBCAPCD	VCAPCD	SBCAPCD
O_3 (1-hr)	Nonattainment	Attainment	Attainment	Attainment
O_3 (8-hr)	Nonattainment	Nonattainment	Nonattainment	Nonattainment*
PM_{10}**	Nonattainment	Nonattainment	Nonattainment	Attainment
$PM_{2.5}$**	Nonattainment	Nonattainment	Unclassified	Attainment
CO**	Attainment	Attainment	Attainment	Attainment
NO_2**	Attainment	Attainment	Attainment	Attainment
SO_2**	Attainment	Attainment	Attainment	Attainment
Lead**	Attainment	Attainment	Attainment	Attainment
Visibility Reducing Particles	Attainment	Attainment	No Federal Standard	No Federal Standard
Sulfates	Attainment	Attainment	No Federal Standard	No Federal Standard
Hydrogen Sulfide	Attainment	Attainment	No Federal Standard	No Federal Standard
Vinyl Chloride	Attainment	Attainment	No Federal Standard	No Federal Standard

Notes:
*The 8-hour O_3 nonattainment status for SBCAPCD is preliminary. USEPA strengthened the 8-hour ozone standard from the 1997 level of 0.08 ppm to 0.075 ppm on May 27, 2008, but delayed implementation of the standard. In September 2011, USEPA made initial designations for this standard, and plans to finalize those designations by mid-2012.

**The attainment designations for all averaging times for PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2, and Lead are the same.

4.3.2.2 State Regulatory Setting

The California Clean Air Act

The California Clean Air Act (California CAA, Stats. 1988, Ch. 1568) outlines a statewide air pollution control program in California. CARB is the primary administrator of the California CAA, while local air quality districts administer air rules and regulations at the regional level. CARB is responsible for establishing CAAQS, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and preparing the State Implementation Plan.

4.3.2.3 Local Regulatory Setting

Local air districts in California are responsible for issuing stationary source air permits, developing emissions inventories, maintaining air quality monitoring stations, and reviewing air quality environmental documents required by CEQA. The California CAA also designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The VCAPCD is the administrator of air pollution rules and regulations in Ventura County, and the SBCAPCD is the administrator of air pollution rules and regulations for the areas within Santa Barbara County where the Project would be located.

Santa Barbara County Air Pollution Control District

Clean Air Plan

The 2010 Santa Barbara County Clear Air Plan (CAP), adopted by the SBCAPCD Board in January 2010 addresses California and Federal CAA mandates and examines the emission reductions achieved from existing and proposed regulations and identifies measures for further study. It also examines the change in emissions related to changes in population, industrial activity, and vehicle use, and provides updated emission inventories out to 2030.

Rules and Regulations

The SBCAPCD is required by State and Federal clean air laws to adopt rules to reduce air pollution from certain activities. Some of the activities associated with the Project may be subject to SBCAPCD rules and regulations. A description of several of the rules that may apply to the Project is provided below:

- **Rule 302 (Visible Emissions):** This rule sets visibility standards on the discharge from sources of air contaminants.
- **Rule 303 (Nuisance):** This rule prohibits the discharge of air contaminants or any other material from a source that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public or which endangers

the comfort, health, safety, or repose to any considerable number of persons or the public.

- **Rule 305 (Particulate Matter):** This rule limits particulate matter discharge into the atmosphere from any source.
- **Rule 329 (Cutback and Emulsified Asphalt Paving Materials):** This rule sets limits on the type of application and volatile organic compound (VOC) content of cutback and emulsified asphalt materials for the paving, construction and maintenance of streets, highways, parking lots and driveways.
- **Rule 345 (Control of Fugitive Dust from Construction and Demolition Activities**): This rule establishes regulations for construction and demolition activities including property line opacity, truck hauling, and track-out.

Ventura County Air Pollution Control District

Air Quality Management Plan

To comply with the Federal and California CAAs, the VCAPCD has prepared a series of Air Quality Management Plans (AQMPs), the most recent of which is the 2007 AQMP, approved by the VCAPCD Board on May 13, 2008. The 2007 AQMP aims to achieve the federal 8-hour ozone standard by June 15, 2013. Control programs to achieve the federal 8-hour ozone standard described in the 2007 AQMP focus on mobile sources, consumer products, and pesticides. Ventura County continues to achieve the federal 1-hour ozone standard.[13]

Rules and Regulations

The VCAPCD is responsible for limiting the amount of emissions that can be generated throughout Ventura County by various stationary and mobile sources. Specific rules and regulations have been adopted by the VCAPCD that limit the emissions that can be generated by various uses and activities, and that identify specific pollution-reduction measures that must be implemented for various uses and activities. Stationary emission sources subject to these rules are generally regulated through VCAPCD's permitting process. Some of the activities associated with the Project may be subject to VCAPCD rules and regulations. A description of several of the rules that may apply to the Project is provided below:

- **Rule 50 (Opacity):** This rule sets opacity standards on the discharge from sources of air contaminants.
- **Rule 51 (Nuisance):** This rule prohibits any person from discharging air contaminants or any other material from a source that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public or which

[13] The California CAA does not expressly require air quality plans for the state particulate matter standards. However, many of the control measures in the AQMP will reduce ambient PM levels by reducing reactive organic gasses (ROG) and NO_X emissions. ROG and NO_X can transform in the atmosphere into aerosols, which are a constituent of particulate matter.

endangers the comfort, health, safety, or repose to any considerable number of persons or the public.

- **Rule 55 (Fugitive Dust):** This rule requires fugitive dust generators to implement control measures to limit the amount of dust from vehicle track-out, earth moving, bulk material handling, and truck hauling activities.
- **Rule 55.1 (Paved Roads and Public Unpaved Roads):** This rule requires fugitive dust generators to begin the removal of visible roadway accumulation within 72 hours of any written notification from the VCAPCD. The use of blowers is expressly prohibited under any circumstances. This rule also requires controls to limit the amount of dust from any construction activity or any earthmoving activity on a public unpaved road.
- **Rule 55.2 (Street Sweeping Equipment):** This rule requires the use of PM_{10} efficient street sweepers for routine street sweeping and for removing vehicle track-out pursuant to Rule 55.
- **Rule 74.4 (Cutback Asphalt):** This rule sets limits on the type of application and VOC content of cutback and emulsified asphalt. The proposed project is required to comply with the type of application and VOC content standards set forth in this rule for cutback and emulsified asphalt.

4.3.3 Significance Criteria

The significance criteria for assessing the impacts to air quality come from the CEQA Environmental Checklist. The *State CEQA Guidelines* (Section 15064.7) provide that, when available, the significance criteria established by the applicable air pollution control district may be relied upon to make determinations of significance. The potential air quality impacts of the Project are, therefore, evaluated according to criteria developed by VCAPCD in the *Ventura County Air Quality Assessment Guidelines* (VCAPCD 2003) and SBCAPCD in the *Scope and Content of Air Quality Sections in Environmental Documents* (SBCAPCD 2011). These criteria generally incorporate the checklist questions contained in Appendix G of the *State CEQA Guidelines*.

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation. Specifically, implementation of the Project would have a significant impact on air quality if the Project would exceed any of the following thresholds:

  <u>Construction</u>
  Neither the SBCAPCD nor the VCAPCD have adopted quantitative significance thresholds for temporary construction emissions. Instead, the SBCAPCD recommends construction emissions be offset if emissions exceed the following:

- o ROG – 25 tons per year [14]
- o NO_x – 25 tons per year
- o PM_{10} – 25 tons per year
- o $PM_{2.5}$ – 25 tons per year

Because the County is a nonattainment area for the State PM_{10} standard, construction emissions control measures are required for all projects involving earthmoving activities regardless of size or duration. According to the SBCAPCD, implementation of required dust control measures, as discussed in APM AQ-1, reduces fugitive dust emissions to a less than significant level (SBCAPCD, 2011).

Additionally, the VCAPCD recommends construction-related emissions be offset if estimates exceed the following:

- o ROG – 5 pounds per day (VCAPCD, Ojai Planning Area)
  25 pounds per day (VCAPCD, remainder of Ventura County)
- o NO_x – 5 pounds per day (VCAPCD, Ojai Planning Area)
  25 pounds per day (VCAPCD, remainder of Ventura County).

<u>Operations</u>

- o ROG – 5 pounds per day (VCAPCD, Ojai Planning Area[15])
  25 pounds per day (VCAPCD, remainder of Ventura County)
  240 pounds per day (SBCAPCD, all sources)
  25 pounds per day (SBCAPCD, motor vehicle trips only)
- o NO_x – 5 pounds per day (VCAPCD, Ojai Planning Area)
  25 pounds per day (VCAPCD, remainder of Ventura County)
  240 pounds per day (SBCAPCD, all sources)
  25 pounds per day (SBCAPCD, motor vehicle trips only)
- o PM_{10} – 80 lbs/day (SBCAPCD)

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Specifically, the Project would have cumulatively considerable impacts if:

  - o For SBCAPCD, the Project's air pollutant emissions of either of the O_3 precursors (NO_x or ROG) exceed the long-term thresholds established in the AQMP.

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[14] Both the SBCAPCD and VCAPCD use the term "Reactive Organic Compounds (ROC)" to represent an ozone precursor (along with NO_x). However, for consistency with CARB terminology, the term, "Reactive Organic Gases (ROG)" is used in this document to describe such compounds.

[15] The Ojai Planning Area is the area defined as the "Ojai Valley" in Ventura County Non-Coastal Zoning Ordinance, Article 12, Section 8112-2, plus the Ventura (Ojai) Non-growth Area (NGA). A portion of the Project will be within the Ojai Planning Area while other portions will be outside the Ojai Planning Area (i.e., the remainder of Ventura County).

- For VCAPCD, the Project emits 2 pounds per day of ROG or 2 pounds per day of NO_x during operation and is inconsistent with the AQMP.

- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

4.3.4 Impact Analysis

As presented earlier in this PEA, SCE has applied to Santa Barbara County for a Coastal Development Permit to cover construction of portions of the Project located within the Coastal Zone in Santa Barbara County; this includes a portion of Segment 4 and the entirety of Segment 3A. Between 1999 and 2004, some wood subtransmission structures in Segment 3A were replaced with LWS subtransmission poles, new conductor was installed, and the wood subtransmission structures that were identified for replacement with LWS poles were removed or topped before work was stopped.

Two air quality impact analyses have been conducted for the Project: one analysis assesses the impacts from construction and operation of Segment 3A to date, and the other assesses the potential impacts that could result from construction and operation of the balance of the Project (including work remaining to be done in Segment 3A; work in Segments 3B and 4; work at Carpinteria Substation, Casitas Substation, and Santa Clara Substation; the work related to the installation of telecommunications infrastructure along Segments 1, 2, and 4; and the removal of 13 subtransmission structures between Segments 3B and 4). These two analyses are presented separately in this section of the PEA.

4.3.4.1 Impact Analysis, Segment 3A, Work Previously Conducted

Methodology

Construction of the completed portion of Segment 3A generated emissions from operation of heavy equipment and support vehicles. Annual air pollutant emissions were estimated for past construction along Segment 3A using the CalEEMod model for both on-road and off-road sources. CalEEMod is a program that calculates air pollutant emissions from land use sources and incorporates CARB's EMFAC2007 model for on-road vehicle emissions and CARB's OFFROAD2007 model for off-road vehicle emissions. The model also incorporates factors specific to the project region, such as ROG content in architectural coating and vehicle fleet mixes. The emission estimates reflect a conservative calculation based on estimated total use of each type of equipment anticipated for construction. A summary of estimated emissions for the construction of Segment 3A is presented in Table 4.3-3. A complete listing of the calculations and assumptions for the estimated emissions are included in Appendix F. Operation of the Project would result in emissions from vehicles used during periodic inspection, maintenance, and repair activities. No stationary emissions sources would be associated with the Project, and therefore emissions during the operations phase would not be significant.

Table 4.3-3: Summary of Estimated Project Construction Emissions, Segment 3A

Year	Source	Estimated Project Emissions (tons/yr)			
		ROG	NO_x	PM_{10}	$PM_{2.5}$
1999	Subtransmission Line Construction	1.74	14.34	0.95	0.95

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

Assessment Summary: No Impact

Construction Impacts

The SBCAPCD's primary means of implementing air quality plans is by adopting rules and regulations. The emissions associated with construction performed in Segment 3A were temporary and represented a very small fraction of the regional emission inventory. Construction equipment was operated in compliance with all then-applicable SBCAPCD requirements. As a result, construction emissions did not substantially contribute to the regional emissions, and construction activities performed in Segment 3A did not conflict with or obstruct implementation of the air quality plan.

Operation Impacts

Operation of infrastructure in Segment 3A has not differed in scope or scale from operations-related activities conducted along the 66 kV subtransmission line prior to construction in 1999. This is because the construction work in Segment 3A involved the reconductoring of an existing 66 kV subtransmission line and thus did not generate the need for additional operations-related trips or activities. Operations equipment such as pick-up trucks have been and are currently operated in compliance with all applicable SBCAPCD requirements; current operations are conducted in compliance with SBCAPCD Rule 345. The emissions associated with operation of infrastructure in Segment 3A have and continue to represent a very small fraction of the regional emission inventory included in the 2010 Santa Barbara County Clean Air Plan. Thus, operation-related emissions has not substantially contributed to the regional emissions and the operation of Segment 3A has not conflicted with or obstructed implementation of the air quality plan. Therefore, no impacts have occurred under this criterion as a result of the Project.

Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Assessment Summary: No Impact

Construction Impacts

The SBCAPCD has not adopted air quality standards for construction impacts; therefore, construction of Segment 3A did not violate any current air quality standard or contribute substantially to an existing or projected air quality violation, and thus there was no impact under this criterion.

The SBCAPCD currently recommends construction emissions be offset if emissions exceed 25 tons per year for ROG, NO_x, PM_{10}, or $PM_{2.5}$. As shown in Table 4.3-3, construction emissions estimated for the past work in Segment 3A would not have exceeded annual emissions of 25 tons per year for any criteria pollutant. In addition, the past work in Segment 3A incorporated the SBCAPCD required construction emissions control measures to reduce impacts of fugitive dust discussed in APM AQ-1.

Operation Impacts

Operation of infrastructure in Segment 3A has not differed in scope or scale from operations-related activities conducted along the 66 kV subtransmission line prior to construction. This is because the construction work in Segment 3A involved the reconductoring of an existing 66 kV subtransmission line and thus did not generate the need for additional operations-related trips or activities. The emissions associated with past and current operation of Segment 3A continue to represent a very small fraction of the regional emission inventory and have not substantially contributed to a violation of any air quality standard or to an existing or projected air quality violation.

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Assessment Summary: Less than Significant Impact

Construction Impacts

The area around Segment 3A is in nonattainment for ozone and particulate matter. Construction of Segment 3A resulted in the emission of NO_x and ROG (O_3 precursors) associated with fuel combustion from the operation of construction equipment. As presented in Table 4.3-3, emission of these pollutants was less than the levels that would have triggered emission control measures pursuant to SBCAPCD regulations (as presented in the Significance Criteria section above), and therefore emissions associated with Segment 3A construction did not result in a cumulatively considerable net increase in the nonattainment pollutants.

Fugitive PM_{10} emissions generated by construction activities were minimized by the incorporation of SCE best management practices in effect at the time. Therefore, construction of Segment 3A did not result in a cumulatively considerable net increase of any criteria pollutant, and impacts were less than significant.

Operation Impacts

Operation of infrastructure in Segment 3A has not differed in scope or scale from operations-related activities conducted along the 66 kV subtransmission line prior to construction. This is because the construction work in Segment 3A involved the reconductoring of an existing 66 kV subtransmission line and thus did not generate the need for additional operations-related trips or activities. The emissions associated with past and current operations in Segment 3A represent a very small fraction of the regional emission inventories and do not result in a cumulatively considerable net increase of any criteria pollutant, and impacts would be less than significant.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Assessment Summary: Less than Significant Impacts

<u>Construction Impacts</u>

Sensitive receptors include residences located along the 66 kV subtransmission line in Segment 3A. For the purposes of this analysis, sensitive receptors are persons who may be particularly sensitive to air pollution because they are ill, elderly, or have lungs that are not fully developed. Locations where such persons reside, spend considerable amounts of time, or engage in strenuous activities are also referred to as "sensitive receptors." Typical sensitive receptors include inhabitants of long-term healthcare facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities.

Pollutant emissions were distributed over the duration of construction in Segment 3A, and were not concentrated in any one area. Therefore, the Project did not expose sensitive receptors to substantial pollutant concentrations. Less than significant impacts occurred under this criterion as a result of construction activities in Segment 3A.

<u>Operation Impacts</u>

Operation of infrastructure in Segment 3A has not differed in scope or scale from operations-related activities conducted along the 66 kV subtransmission line prior to construction in 1999. This is because the construction work in Segment 3A involved the reconductoring of an existing 66 kV subtransmission line and thus did not generate the need for additional operations-related trips or activities. The emissions associated with past and current operations in Segment 3A represent a very small fraction of the regional emission inventories and have not exposed sensitive receptors to substantial pollutant concentrations; therefore, impacts have been and are less than significant.

Would the project create objectionable odors affecting a substantial number of people?

Assessment Summary: Less than Significant Impacts

<u>Construction Impacts</u>

Odors associated with construction in Segment 3A primarily consisted of vehicle exhaust. These odors, if perceptible, were common in the environment, dissipated rapidly as they mixed with the surrounding air, and were localized and of very limited duration.

Therefore, less than significant impacts occurred under this criterion as a result of construction in Segment 3A.

<u>Operation Impacts</u>

Potential odors associated with the Project have resulted and could result from the operation of vehicles to access sites for inspection and maintenance activities. Operation activities in Segment 3A have not differed in scope or scale from O&M-related activities conducted along the 66 kV subtransmission line prior to construction in 1999. This is because the construction work in Segment 3A involved the reconductoring of an existing 66 kV subtransmission line and thus did not generate the need for additional operations-related trips or activities. As with temporary construction odors, these odors dissipate quickly and therefore less than significant impacts occur as a result of operations within Segment 3A.

4.3.4.2 Impact Analysis, Balance of Project

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

Assessment Summary: No Impact

<u>Construction Impacts</u>

The VCAPCD's and SBCAPCD's primary means of implementing air quality plans is by adopting rules and regulations. The emissions associated with Project construction would be temporary and would represent a very small fraction of the regional emission inventories included in the 2007 Ventura County AQMP and the 2010 Santa Barbara County Clean Air Plan. Construction equipment would be operated in compliance with all applicable VCAPCD and SBCAPCD requirements, including fugitive dust control measures as set forth in VCAPCD Rule 55 and SBCAPCD Rule 345. Thus, construction emissions are not expected to substantially contribute to the regional emissions and the Project would not conflict with or obstruct implementation of the air quality plans.

<u>Operation Impacts</u>

O&M would not differ in scope or scale from operations-related activities currently conducted along the 66 kV subtransmission line. The emissions associated with Project operation would represent a very small fraction of the regional emission inventories included in the 2007 Ventura County AQMP and the 2010 Santa Barbara County Clean Air Plan. Operations equipment such as pick-up trucks would be operated in compliance with all applicable VCAPCD and SBCAPCD requirements, including fugitive dust control measures set forth in VCAPCD Rule 55 and SBCAPCD Rule 345. Thus, operation-related emissions are not expected to substantially contribute to the regional emissions and the Project would not conflict with or obstruct implementation of the air quality plans. Therefore, no impacts would occur under this criterion as a result of the Project.

Table 4.3-4: Summary of Estimated Project Construction Emissions, Balance of Project

Year	Source	Estimated Project Emissions (tons/yr)				Estimated Project Emissions (lbs/day)			
		ROG	NO_x	PM_{10}	$PM_{2.5}$	ROG	NO_x	PM_{10}	$PM_{2.5}$
2014	Subtransmission Line and Telecommunication System Construction	2.44	19.26	0.91	0.74	65.81	521.74	24.05	19.51
	Substation Construction	0.44	3.51	0.19	0.16	7.79	61.84	3.15	2.81
	Total	2.88	22.77	1.1	0.9	**73.6***	**583.58****	27.2	22.32
2015	Subtransmission Line and Telecommunication System Construction	0.79	5.8	0.28	0.22	22.95	172.22	7.07	6.09
	Substation Construction	0.01	0.09	0	0	0.61	4.57	0.22	0.15
	Total	0.8	5.89	0.28	0.22	**23.56***	**176.79****	7.29	6.24

Notes:
Bolded figures indicate those instances where a constituent emission would require emissions offsets pursuant to regulations established by SBCAPCD or VCAPCD, as applicable. Comparisons are conservative because they compare emissions generated in both Santa Barbara County and Ventura County to the thresholds established for each county. No SBCAPCD significance thresholds are exceeded.
* Exceeds the Ojai Planning Area 5 lbs/day threshold for ROG established in VCAPCD AQMP.
** Exceeds 25 lbs/day threshold for NO_x established in VCAPCD AQMP.

Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Assessment Summary: No Impact

Construction Impacts

The VCAPCD and SBCAPCD has not adopted air quality standards for construction impacts; therefore, construction of the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and there would be no impact under this criterion.

Nevertheless, the VCAPCD recommends construction projects that emit more than 5 pounds per day of ROG or NO_x in the Ojai Planning Area or 25 pounds per day of ROG or NO_x elsewhere in Ventura County implement standard emissions control measures to reduce construction-related emissions associated with individual developments. As shown in Table 4.3-4, construction emissions could potentially exceed these levels for ROG and NO_x. Therefore, the Project would incorporate as APM AQ-1 and APM AQ-2 the VCAPCD-recommended construction emissions control measures to reduce impacts to ROG and NO_x (incorporation of these APMs would also reduce PM_{10} emissions).

Similarly, the SBCAPCD recommends construction emissions be offset if emissions exceed 25 tons per year for ROG, NO_x, PM_{10}, or $PM_{2.5}$. However, as shown in Table 4.3-4, construction emissions would not exceed annual emissions of 25 tons per year for any criteria pollutant. In addition, the Project would incorporate in APM AQ-1 the SBCAPCD required construction emissions control measures to reduce impacts of fugitive dust.

Operation Impacts

Operations would not differ in scope or scale from O&M-related activities currently conducted along the 66 kV subtransmission line. The emissions associated with current and future Project operation would represent a very small fraction of the regional emission inventories and would not be expected to substantially contribute to a violation of any air quality standard or contribute substantially to an existing or projected air quality violation.

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction of the Project would result in the emission of NO_x and ROG (ozone precursors) as a result of fuel combustion from the operation of construction equipment.

As presented in Table 4.3-4, emission of these pollutants would be less than the levels that would trigger emission control measures pursuant to SBCAPCD or VCAPCD regulations (as presented in the Significance Criteria section above), and therefore emissions associated with Project construction would not result in a cumulatively considerable net increase in the nonattainment criteria pollutants.

Fugitive PM_{10} emissions would be minimized further with the incorporation of APM AQ-1. Therefore, the Project would not result in a cumulatively considerable net increase of the nonattainment criteria pollutants, and impacts would be less than significant.

Operation Impacts

Operations would not differ in scope or scale from operations-related activities currently conducted along the 66 kV subtransmission line. The emissions associated with Project operation would represent a very small fraction of the regional emission inventories and would not be expected to result in a cumulatively considerable net increase of any criteria pollutant, and impacts would be less than significant.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Assessment Summary: Less than Significant Impact

Construction Impacts

Pollutant emissions would be distributed over the construction period, and not concentrated in any one area. In addition, pollutant emissions during construction would be reduced by APMs. Therefore, the Project would not expose sensitive receptors (as defined above) to substantial pollutant concentrations. Less than significant impacts would occur under this criterion as a result of the Project.

Operation Impacts

O&M would not differ in scope or scale from operations-related activities currently conducted along the 66 kV subtransmission line. The emissions associated with current and future Project operation would represent a very small fraction of the regional emission inventories and would not be expected to expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Would the project create objectionable odors affecting a substantial number of people?

Assessment Summary: Less than Significant Impact

Construction Impacts

Potential odors associated with construction of the Project would result from diesel exhaust. These odors, if perceptible, are common in the environment, would dissipate rapidly as they mix with the surrounding air, and would be localized and of very limited duration. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Operation Impacts

Potential odors associated with the Project could result from the operation of vehicles to access sites for inspection and maintenance activities. Operations would not differ in scope or scale from operations-related activities currently conducted along the 66 kV subtransmission line. As with temporary construction odors, these odors would quickly dissipate and therefore less than significant impacts would occur as a result of the Project.

4.3.5 Applicant Proposed Measures

The Applicant Proposed Measures presented here for the Project are taken from the VCAPCD's *Ventura County Air Quality Assessment Guidelines.* The *Guidelines* state, in part:

> "Construction-related emissions…of [ROG] and NOx are not counted towards the two significance thresholds, since these emissions are temporary. However, construction-related emissions should be mitigated if estimates of [ROG] and NOx emissions from the heavy-duty construction equipment anticipated to be used for a particular project exceed the 5 pounds per day threshold in the Ojai Planning Area, or the 25 pounds per day threshold in the remainder of the county."
>
> …
>
> "The Ventura County Air Pollution Control District (APCD or District) recommends minimizing fugitive dust, especially during grading and excavation operations, rather than quantifying fugitive dust emissions. Therefore, the mitigation measures described in Section 7.4.1, 'Fugitive Dust Mitigation Measures,' should be applied to all project related dust-generating operations and activities."

APM AQ-1 The following control measures stated in the VCAPCD *Ventura County Air Quality Assessment Guidelines* to minimize the generation of fugitive dust (PM_{10} and $PM_{2.5}$) would be implemented during construction of the Project as feasible:

"1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
2. 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.
3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
    a) All trucks shall be required to cover their loads as required by California Vehicle Code §23114.

b) 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.

4. Graded and/or excavated inactive areas of the construction site shall be monitored by (indicate by whom) 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.
5. Signs shall be posted on-site limiting traffic to 15 miles per hour or less.
6. 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 APCD in determining when winds are excessive.
7. Adjacent 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.
8. 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."[16]

APM AQ-2. The following control measures stated in the VCAPCD *Ventura County Air Quality Assessment Guidelines* would be implemented during construction of the Project as feasible:[17]

"1. Minimize equipment idling time.
2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.
4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible."

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[16] Speed limit signs are generally located at SCE facilities such as substations. For all other project locations, speed limits would be covered under WEAP training and by Traffic Control Plan(s).

[17] The measures contained in APM AQ-2 would be implemented if and when the VCAPCD Air Pollution Control Officer declares a Stage 1, Stage 2, or Stage 3 Episode as defined in Regulation VIII – Emergency Action.

4.4 Biological Resources

This section describes the existing conditions and the potential impacts to biological resources that may result from implementation and construction of the Project. Potential impacts and APMs are discussed in Sections 4.4.5 and 4.4.6.

4.4.1 Methodology for Developing the Environmental Setting

A multi-step process was performed to develop the environmental setting presented in Section 4.4.2. Prior to conducting surveys, standard database searches were conducted and previous surveys in the area were reviewed to obtain a list of Federal and State listed resources, including sensitive plants and animals in the region. The results of these preliminary database searches provided a basis for addressing the appropriate sensitive resources in the footprint of existing infrastructure (i.e., substations, access roads, and crane pad/turnaround areas), proposed additional workspace (spur roads, temporary and permanent drill and crane pad/turnaround areas, pulling and stringing sites), and immediate surroundings (hereafter referred to in this section as the Project Area). The biological resources assessment included general biological surveys, raptor surveys, and habitat suitability assessments for special-status plant and wildlife species within the Project Area and a 500-foot buffer on either side of the alignment (hereafter referred to in this section as the Survey Area). Focused biological surveys for special-status plant and wildlife species were conducted in spring of 2012.

4.4.1.1 Literature and Database Review

Information about documented sensitive plant and animal species, and sensitive habitats known to occur within the vicinity of the Project, was obtained from the California Natural Diversity Database (CNDDB; CDFG 2003). The CNDDB search included U.S. Geological Survey (USGS) 7.5-minute quadrangles Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak as well as the 11 surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs.

Additional literature and databases referenced include: California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2010); The Jepson Manual: Higher Plants of California (Baldwin 2012); A Manual of California Vegetation (Sawyer et al. 2009); The CalFlora Database (CalFlora 2000); The Sibley Field Guide to Birds of Western North America (Sibley 2003); the eBird website (Cornell Lab of Ornithology and National Audubon Society, Inc. 2002); the California Fish Species website (University of California 2012); the California Herps: A Guide to the Amphibians and Reptiles of California website (California Herps 2012); the United States Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS 2012); Fish Species of Special Concern (Moyle et al. 1995); and California Wildlife Habitat Relationships software (CDFG 2005).

Based on the results of searches of the CNDDB and the USFWS Critical Habitat Portal website, the following species recovery plans, 5-year reviews, and other pertinent recovery status sources were reviewed to better understand the current species population trends within the Project vicinity:

- Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California (NMFS 2005)
- Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Least Bell's Vireo (USFWS 1994)
- Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (USFWS 2007)
- Coastal California gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation (USFWS 2010)

In addition, SCE previously conducted a preliminary survey of Segments 1, 2, 3A, and 4 in May and June 1999 to identify vegetation types and to determine the potential for special-status plant and wildlife species. A follow-up survey of Segment 3A occurred in October 2005 to document any changes to the general habitat since the 1999 survey. Additional surveys of Segments 1 and 4 were conducted in September 2007 to document changes since previous surveys, and to survey additional sites not included in initial surveys. A survey of three structure sites on U.S. Forest Service land in Segment 4 occurred in December 2008 and January 2009, and a survey of the access route and western portions of Segment 4 occurred during a survey of an adjacent line in May and June 2009. These survey reports provided a baseline of information specific to the Project Area and guidance for the field surveys.

4.4.1.2 Survey Methods

Biological reconnaissance surveys in the Survey Area were conducted in February and March 2012 to identify and map the vegetation present in the Project Area and to evaluate the potential existence of habitat to support special-status plant and wildlife species.

Vegetation was mapped in the field using aerial photographs to delineate the extent of each vegetation type within the Survey Area. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993). Nomenclature generally follows Sawyer et al. (2009) for vegetation types and communities, and CalFlora (2012), Baldwin (2012), and current scientific data (e.g., scientific journals) for individual plant species.

Survey activities for wildlife species included searching for and identifying species' diagnostic signs including audible calls, prints, scat, nests, skeletal remains, and burrows, and habitat features (rock or debris piles, cavities, and rock outcrops) that may attract and/or support special-status species. Additionally, surveys included searching for raptors and identifying their nests. All species observed were recorded in field notes. Taxonomy and nomenclature for wildlife generally follows Collins and Taggert (2009) for amphibians and reptiles, American Ornithologists Union (AOU 1998) for birds, and Baker et al. (2003) for mammals.

Focused biological surveys for special-status plant species within the Project Area were completed in the spring of 2012. These surveys were conducted during the appropriate blooming season for target special-status plant species with a known presence, or "Moderate" or "High" potential to be present in the Project Area, and they included an area within 100 feet (a 200-foot wide corridor) of the alignment in locations that may provide suitable habitat. Individuals or populations of special-status plant species were photographed and recorded using a GPS unit. Results of the focused plant surveys are included in Appendix H to this PEA.

Focused biological surveys for burrowing owl in areas with suitable habitat were conducted in spring of 2012 and followed the recommended survey protocol in the updated California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CDFG 2012b). Additionally, raptor surveys were expanded to include an area within 1 mile of the Project Area. These surveys were conducted during the appropriate nesting season for target species. Individuals or nests of special-status bird species were photographed and their locations were recorded using GPS. Results of the burrowing owl surveys are included in Appendix H to this PEA.

4.4.2 Environmental Setting

Work associated with the Project would be performed at locations within six geographically-defined Segments (Segments 1, 2, 3A, 3B, and 4, and the Getty Tap) and at three substations (Carpinteria Substation, Casitas Substation, and Santa Clara Substation). In addition, the Project includes other work as described in Section 3.1.4.[18]

Segment 1 begins at Santa Clara Substation off Foothill Road in unincorporated Ventura County. From that origin, it heads north along western Long Canyon; turns northwest at Harmon Canyon in the Ventura Hills; traverses Lake, Sexton, and Hall Canyons; then runs west along northern Cañada Seca and crosses Cañada Larga to Casitas Substation, which lies between SR-33 and the Ventura River. Segment 2 extends west from Casitas Substation along the south side of Lake Casitas, to the 'Y' near East Casitas Pass. Segment 3B heads west from the 'Y' through Casitas Valley along the south side of SR-150, crossing over Madranio Canyon, along Rincon Mountain, and through Rincon Valley. At the Santa Barbara/Ventura County line near the intersection of SR-150 and SR-192, Segment 3B becomes Segment 3A and continues to the west into the Shepard Mesa and Gobernador rural residential areas, then west along SR-192 to Carpinteria Substation. Segment 4 heads west from the 'Y' along the north side of SR-150, runs northwest along the ridgetop of Sutton Canyon, and then turns south to Carpinteria Substation.

The Project lies north and west of US-101, between 1 and 6 miles from the coastline. Elevations vary through the Project Area from approximately 30 feet above mean sea

[18] The Project also includes work at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; this work would be conducted exclusively on substation property, and thus would have no impact to biological resources. Therefore, this work is not addressed further in this Section.

level (amsl) near the Carpinteria Substation, which lies in the coastal plain, to 1,500 feet amsl along Segment 4 in the foothills of the western Transverse Ranges, and to more than 1,800 feet amsl along portions of Segment 3B near Rincon Peak.

Temperatures in the area average 50 to 71° F, with an average annual temperature of 60° F. Average rainfall ranges from 15.4 to 17.7 inches. The east-west orientation of the mountains, combined with the distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominantly north- or south-facing slopes are dominated by alternating bands of grasslands and chaparral that follow bands of sedimentary rock formations, with oak woodlands at lower elevations. Conifers exist in small patches along ridgetops and on north-facing slopes. Noxious weed infestations, including black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Cape ivy (*Delairea odorata*), and ruderal species and escaped cultivars occur throughout the vicinity of the Project, especially along road and trail corridors.

The Project crosses the headwaters of multiple small streams and creeks that flow through agricultural and urban areas before reaching the ocean, and is located in lower gradient reaches of the Santa Clara River and Ventura River watersheds, including Cañada Larga, which is tributary to the Ventura River. While groundwater and surface water sources have been extensively developed for domestic and agricultural uses throughout the area, these riparian corridors contrast sharply with an otherwise dry landscape. Landslides are prone to occur in areas of steep, unstable terrain, and the area has a history of large and sometimes devastating wildland fire events, with “Sundowner” and “Santa Ana” winds contributing to fast-moving and destructive fires (U.S. Forest Service 2005a).

The majority of the Project is located on private lands, while three tower sites and associated access and spur roads in Segment 4 are located within the Santa Barbara Front, a geographical unit of lands under the jurisdiction of the Los Padres National Forest owned by the U.S. Forest Service. Land uses in the immediate vicinity of the Project Area are dominated by agriculture (cattle grazing and orchards) and “open-space” areas covered by native vegetation communities, with low-density residential development and commercial areas (nurseries and row crops) scattered through Segments 3A, 3B, and 4.

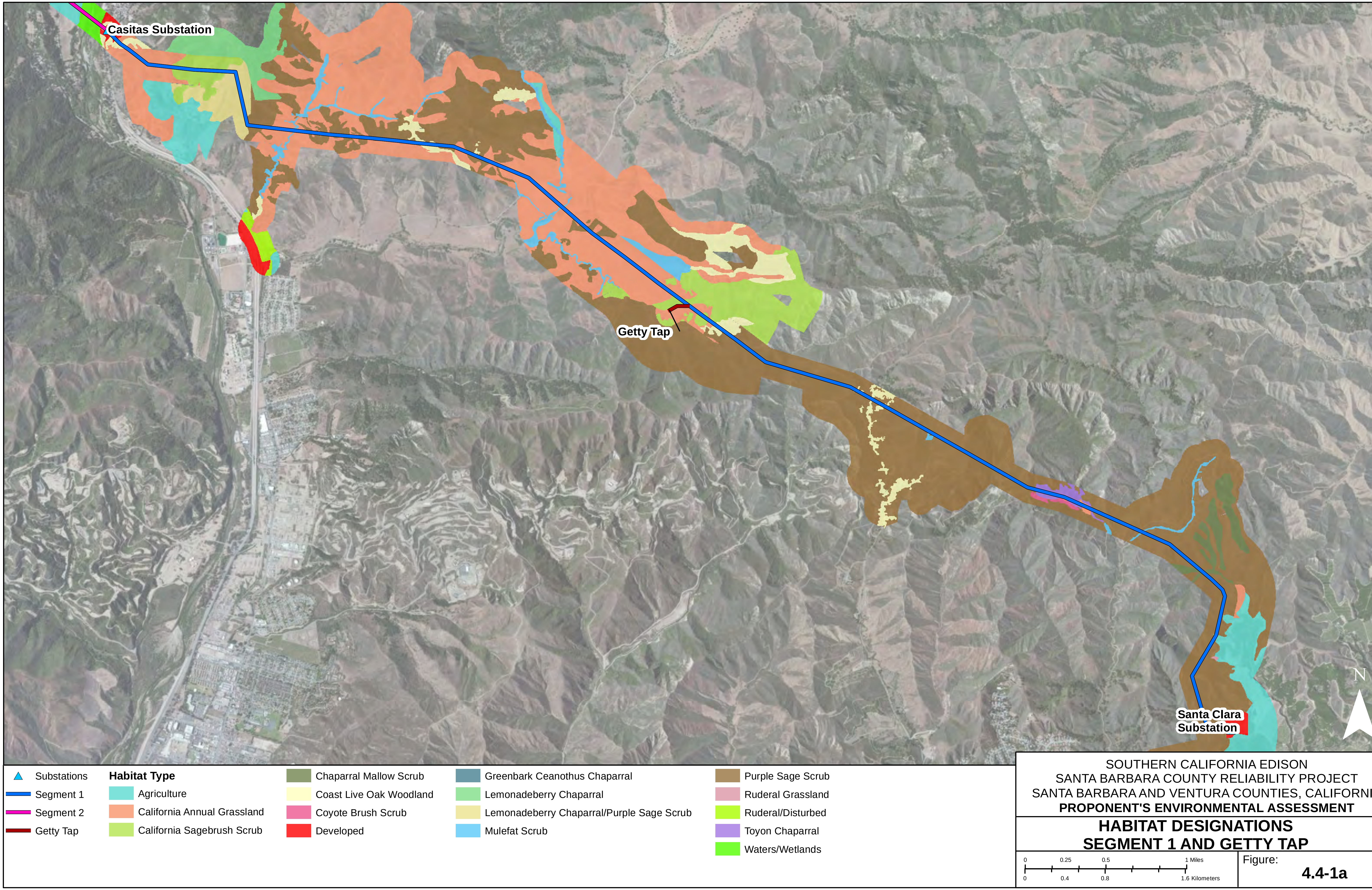
4.4.2.1 Vegetation Type Descriptions

Nineteen vegetation communities were identified within the Chaparral, Grassland, Coastal Sage Scrub, Woodland, and Non-Native vegetation types (Table 4.4-1, Figures 4.4-1a through c). Descriptions of the characteristics and composition of dominant species within each vegetation type and community, and a full list of plant species observed in the Project Area are provided in Appendix H to this PEA.

Chaparral is a type of shrubland dominated by evergreen shrubs. Many shrubs typical of Coastal Sage Scrub also grow intermixed as associates with chaparral species. Chaparral typically occurs on moderate to steep south-facing slopes with dry, rocky, shallow soils. It is more abundant at higher elevations where temperatures are lower and moisture supplies are more ample. Chaparral within the Project Area consists of four different plant communities: Greenbark Ceanothus Chaparral, Mixed Ceanothus Chaparral, Toyon Chaparral, and Lemonadeberry Chaparral. These communities are differentiated by the dominance of greenbark ceanothus (*Ceanothus spinosus*), bigpod ceanothus (*C. megacarpus var. megacarpus*), hoary-leaved ceanothus (*Ceanothus crassifolius*), toyon (*Heteromeles arbutifolia*), and lemonadeberry (*Rhus integrifolia*).

Grassland types consist predominantly of low herbaceous and grassy vegetation that forms a continuous ground cover on open hillsides, or as understory patches below emergent shrubs, shrublands, and woodlands. Many native flowering herb/bulb species (wildflowers), as well as naturalized annual forbs and invasive exotics, are important contributors to grassland. Grasslands typically grow in well-developed, deeper, fine-textured soils on gentle slopes and flats, coastal terraces, and in disturbed sandy sites. Areas dominated by grasses are often in early succession, and over time tend to revert to shrublands or even woodlands if burning and disturbance frequencies are minimal. Grasslands within the Project Area consist of two different plant communities: California Annual Grassland and Ruderal Grassland. These communities are differentiated by dominance of native and non-native annual grasses (genera including Avena, Bromus, Hordeum, Lolium, and Vulpia) and herbs; successional stability; and the presence of invasive, highly competitive non-native propagules including black mustard, poison hemlock (*Conium maculatum*), tocalote, wild radish (*Raphinus sativus*), fennel (*Foeniculum vulgare*), and milk thistle (*Silybum marianum*).

Coastal Sage Scrub is a type of shrubland that is dominated by drought-deciduous, low-growing shrubs and sub-shrubs that are often soft-leaved and grayish-green in color. Scrub plant size varies relative to the water supply present and available on site; however, these semi-woody plants are generally low-growing because high temperatures and drying winds can cause severe moisture stress. Coastal Sage Scrub is common in California generally along the coastward slopes of the Transverse, Central Coast, and Peninsular Ranges, and is adapted to the Mediterranean climate. Coastal Sage Scrub forms a continuous to open canopy; it occupies dry, gentle to steep, more or less rocky slopes with shallow or heavy soils; and it generally occurs at lower elevations. Coastal Sage Scrub within the Project Area consists of five different plant communities: California Sagebrush Scrub, Chaparral Mallow Scrub, Coyote Brush Scrub, Purple Sage Scrub, and Mulefat Scrub. These communities are differentiated by dominance of California sagebrush (*Artemisia californica*), purple sage (*Salvia leucophylla*), black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), and chaparral mallow (*Malacothamnus fasciculatus*). Mulefat Scrub is associated with ephemeral and intermittent stream channels that support pockets of mulefat (*Baccharis salicifolia*).



Casitas Substation
Getty Tap
Santa Clara Substation
N
Substations
Segment 1
Segment 2
Getty Tap
Habitat Type
Agriculture
California Annual Grassland
California Sagebrush Scrub
Chaparral Mallow Scrub
Coast Live Oak Woodland
Coyote Brush Scrub
Developed
Greenbark Ceanothus Chaparral
Lemonadeberry Chaparral
Lemonadeberry Chaparral/Purple Sage Scrub
Mulefat Scrub
Purple Sage Scrub
Ruderal Grassland
Ruderal/Disturbed
Toyon Chaparral
Waters/Wetlands
SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT
HABITAT DESIGNATIONS
SEGMENT 1 AND GETTY TAP
0 0.25 0.5 1 Miles
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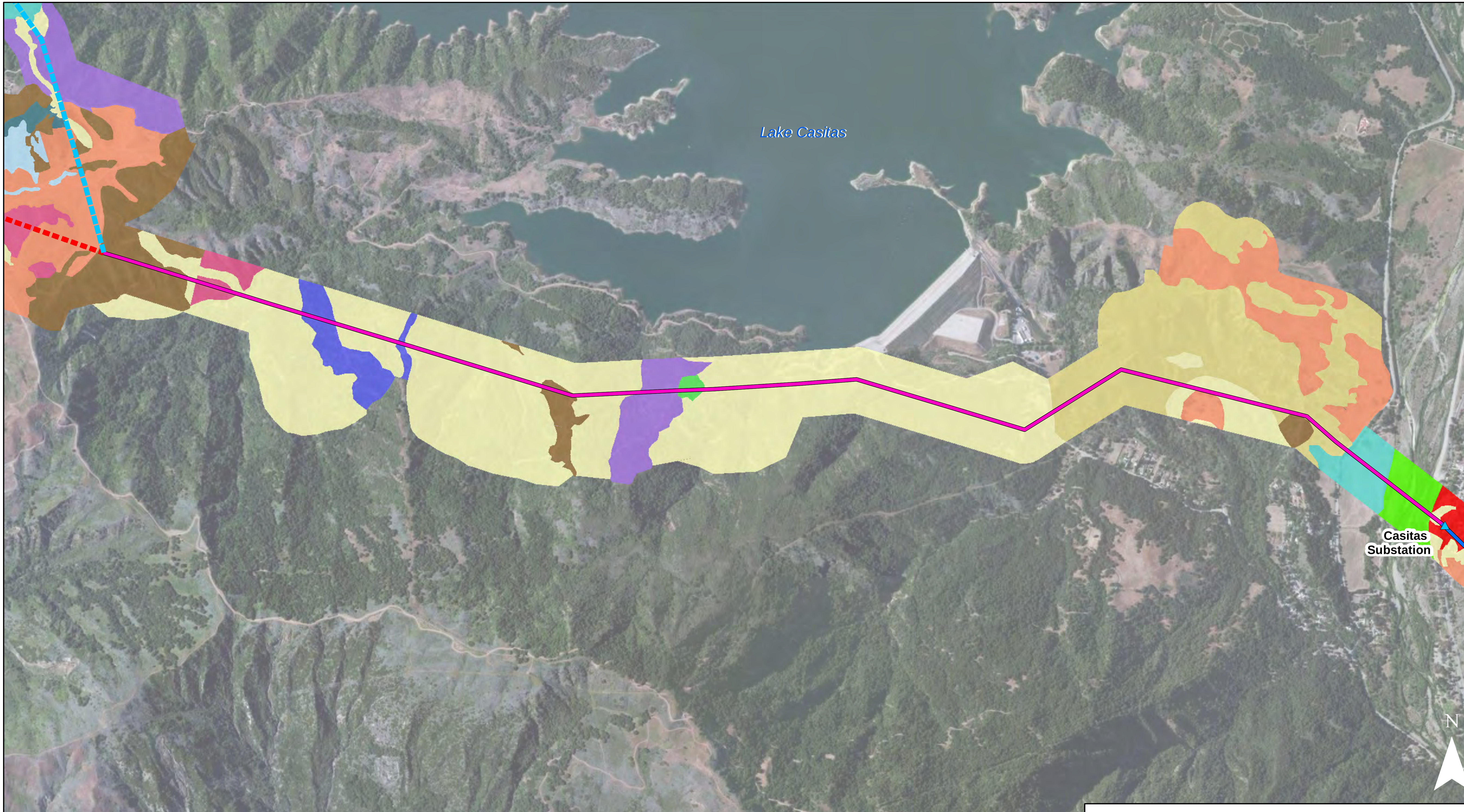

Substations
Segment 1
Segment 2
Segment 3B
Segment 4

Habitat Type

Agriculture
Arroyo Willow Woodland
California Annual Grassland
Coast Live Oak Woodland
Coyote Brush Scrub
Developed
Greenbark Ceanothus Chaparral
Lemonadeberry Chaparral/Purple Sage Scrub
Mixed Ceanothus Chaparral/California Sagebrush Scrub
Purple Sage Scrub
Southern California Black Walnut Woodland
Toyon Chaparral
Waters/Wetlands

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

HABITAT DESIGNATIONS
SEGMENT 2

0 0.125 0.25 0.5 Miles
0 0.2 0.4 0.8 Kilometers

Figure: **4.4-1b**

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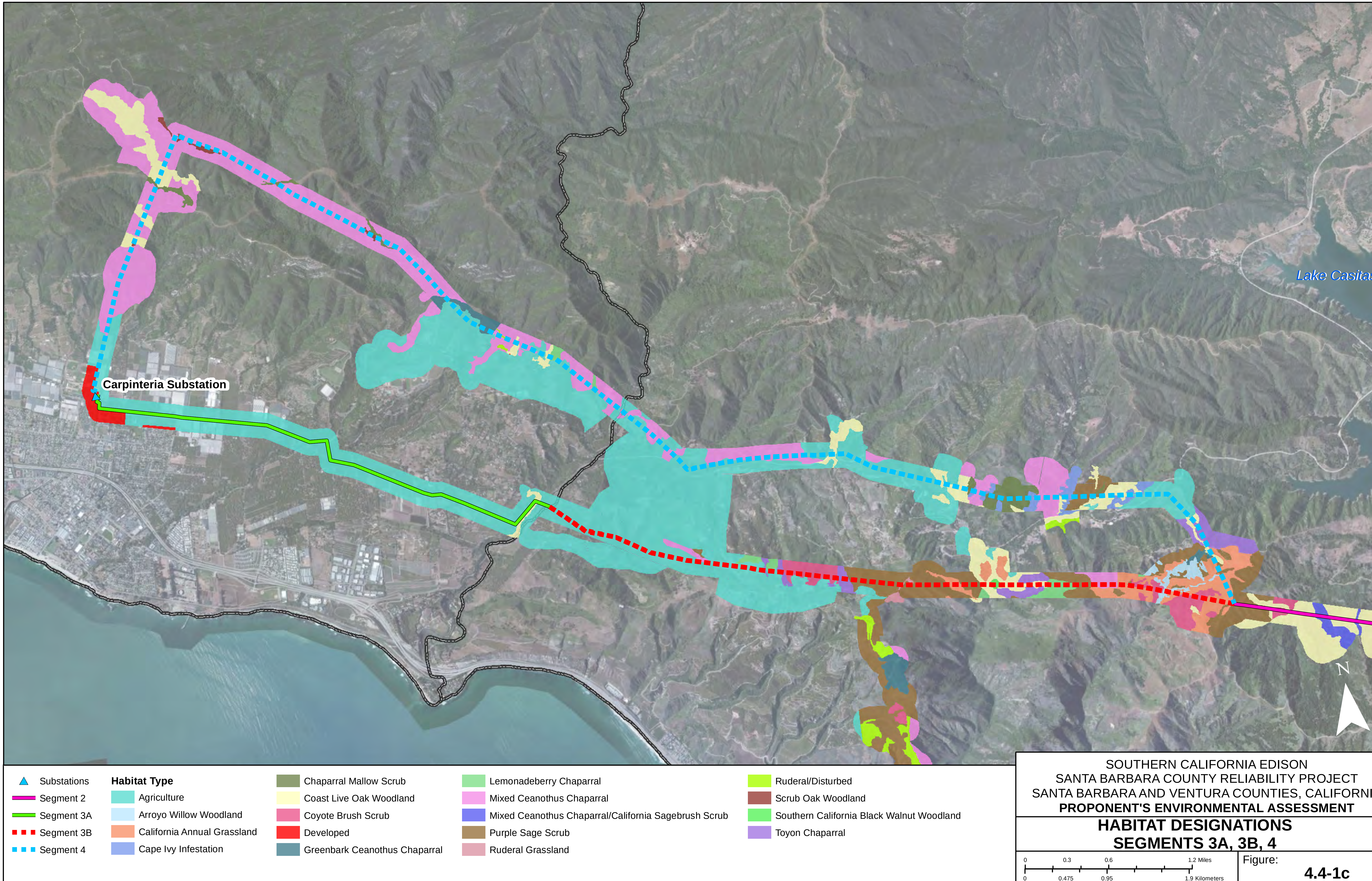

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

HABITAT DESIGNATIONS SEGMENTS 3A, 3B, 4

Figure: **4.4-1c**

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Woodlands are vegetation types dominated by woody trees and tall tree-like shrubs, forming an open to closed canopy growing over a scattered variety of low-growing shrubs and a grassy ground layer. Some woodland communities may not contain a shrub stratum, and may only form a tall canopy over annual or perennial grasslands. The understory of woodland is directly related to the density of the woodland canopy and its percent canopy cover. Permanent shade created by dense woodlands typically inhibits the growth of stratified canopy layers. Woodland within the Project Area consists of four different plant communities: The Coast Live Oak Woodland, Scrub Oak Woodland, Arroyo Willow Woodland, and Southern California Black Walnut Woodland. Scrub oak (*Quercus dumosa*) trees are found on hillslopes and ridges, while coast live oak (*Quercus agrifolia*) extends from ridges and hillslopes into more shaded canyons. Arroyo willow (*Salix lasiolepis*) and Southern California black walnut (*Juglans californica californica*) trees are typically found along wetlands and riparian corridors and associated uplands and hillslopes.

Non-native type assemblages are areas that have been planted with orchards or crops, areas that are extensively grazed by cattle, communities dominated by non-native or ruderal species, and developed areas with ornamental and landscaped vegetation. These areas are often monocultures, or assemblages dominated with escaped cultivars and ruderal non-native species.

Non-native communities within the Project Area include: Agricultural, Ruderal/Disturbed, Cape Ivy Infestation, and Developed. Agricultural lands are generally areas that have been planted with orchard crops, including avocado (*Persea americana*), orange (*Citrus x sinensis*), lemon (*Citrus x limon*), walnut (*Juglans sp.*), and cherimoya (*Annona cherimola*). Ruderal/Disturbed communities are dominated by non-native weedy and invasive species, primarily along road edges, around structures, edges of agriculture fields, and cleared areas around existing SCE subtransmission structures. Cape Ivy Infestation includes large patches of Woodland, Coastal Sage Scrub, and Chaparral that are being overtaken by a blanket of Cape Ivy. Developed areas are areas lacking native plant assemblages and have been developed with manmade structures or paved or graded surfaces, often with ornamental or landscaped vegetation.

Table 4.4-1: Vegetation Types and Communities Found within the Project Area

Plant Community Name	Class Code	Segment (s) of Occurrence	Acreage within Survey Area
Chaparral Types	**C**		**1,305**
Greenbark Ceanothus Chaparral	CGC	3B	50
Toyon Chaparral	CT	2, 3A, 3B, 4	123
Lemonadeberry Chaparral	CL	2, 4	236
Mixed Ceanothus Chaparral	CMC	3B, 4	896
Grassland Types	**G**		**1,235**
California Annual Grassland	GCA	3A, 3B, 4	1,229
Ruderal Grassland	GR	All	6
Coastal Sage Scrub Types	**S**		**2,790**
California Sagebrush Scrub	SCS	2, 3A, 4	221
Chaparral Mallow Scrub	SCM	4	110
Coyote Brush Scrub	SCB	3A, 3B, 4	97
Purple Sage Scrub	SPS	2, 3A, 3B, 4	2,284
Mulefat Scrub	SMF	2, 3A	78
Woodland Types	**W**		**849**
Coast Live Oak Woodland	WLO	2, 3B, 3A, 4	808
Arroyo Willow Woodland	WAW	2, 3A, 3B, 4	27
Southern California Black Walnut Woodland	WCBW	3B, 4	5
Scrub Oak Woodland	WSO	4	9
Non-Native Types	**N**		**2,450**
Agriculture	NAG	All	2,211
Ruderal/Disturbed	NRD	All	103
Cape Ivy Infestation	NCI	4	40

4.4.2.2 Common Wildlife

The Project Area provides suitable habitat for several wildlife species. A full list of species observed in the Project Area is provided in Appendix H. Limited aquatic habitat is present in the Project Area for fish species, although arroyo chub was observed in a deeper pool within Cañada Larga.

Reptile and amphibian species observed include: coastal whiptail (*Aspidoscelis tigris stejnegeri*), gopher snake (*Pituophis catenifer*), California treefrog (*Pseudacris cadaverina*), Baja California treefrog (*Pseudacris hypochondriaca hypochondriaca*), western fence lizard (*Sceloporus occidentalis occidentalis*), and side-blotched lizard (*Uta stansburiana elegans*).

Common bird species observed include: Cooper's hawk (*Accipiter cooperii*), oak titmouse (*Baeolophus inornatus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*B. lineatus*), California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Carduelis tristis*), house finch (*Carpodacus mexicanus*), turkey vulture (*Cathartes aura*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), American kestrel (*Falco sparverius*), acorn woodpecker (*Melanerpes formicivorus*), California towhee (*Melozone crissalis*), northern mockingbird (*Mimus polyglottos*), brown-headed cowbird (*Molothrus ater*), house sparrow (*Passer domesticus*), bushtit (*Psaltriparus minimus*), black phoebe (*Sayornis nigricans*), western meadowlark (*Sturnella neglecta*), European starling (*Sturnus vulgaris*), California thrasher (*Toxostoma redivivum*), western kingbird (*Tyrannus vertic*alis), and mourning dove (*Zenaida macroura*).

Common mammals, or their sign, observed within the Project Area include: coyote (*Canis latrans*), dusky-footed woodrat (*Neotoma fuscipes*), mule deer (*Odocoileus hemionus*), California ground squirrel (*Otospermophilus beecheyi*), raccoon (*Procyon lotor*), western gray squirrel (*Sciurus griseus*), wild pig (*Sus scrofa*), desert cottontail (*Sylvilagus audubonii*), brush rabbit (*Sylvilagus bachmani*), black bear (*Ursus americanus*), and various domestic animals.

4.4.2.3 Wildlife Movement and Urban/Wildland Interface

The Ventura County General Plan, Santa Barbara Coastal Land Use Plan, California Coastal Act, and the U.S. Forest Service 2005 Los Padres National Forest Land Management Plan specifically identify wildlife migration corridors as significant biological resources. Protecting habitat connectivity is critical to the success of special-status species and other biological resource protections.

The Project is located in the Pacific Flyway, a major north-south avian migratory corridor that extends along the west coast from Alaska to Patagonia, and provides suitable foraging habitat for many resident and migratory avian species. The Pacific Flyway links breeding grounds in the north to more southerly wintering areas and is therefore used by many bird species during migration. As part of the Pacific Flyway, the coastal beaches, Carpinteria Salt Marsh, estuaries, and Coast Range Mountains provide high-quality resting and foraging areas for numerous bird species during the migratory seasons.

More locally, the Ventura River system (located in the vicinity of Segments 1 and 2) and the Carpinteria Creek system (located in the vicinity of Segments 3A and 4) are known migratory corridors and spawning areas for the southern California steelhead Distinct Population Segment (DPS). Because the segments of these drainages directly crossed by the Project are seasonal, these reaches would only potentially be used by this species in the winter and spring when water is flowing. These river systems and associated riparian corridors also function as wildlife movement corridors and habitat for a range of bird, reptile, and mammal species.

The majority of the Project occurs within a land use matrix of primarily agricultural, open-space, and commercial/residential areas. Open-space areas dominated by native vegetation associations may serve as corridors around areas cleared for agriculture and residential uses, connecting larger contiguous areas of habitat.

4.4.2.4 Special-status Biological Resources

Special-status Vegetation Types

Resource agencies generally consider vegetation types to be special-status if they support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or offer particular value to wildlife. While some special-status vegetation types are not afforded protection by a Federal or State resource agency unless they support protected species, other vegetation types are protected by an ordinance, code, or regulation under which conformance often requires a permit or other discretionary action prior to impacting the vegetation.

The California Department of Fish and Game (CDFG) considers Southern California Black Walnut Woodland to be a special-status plant community. The woodland is ranked G2 and S2, implying these communities are “Imperiled” and are “at high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors,” meaning they are vulnerable to extirpation on a global and local scale (NatureServe 2010). Southern California Black Walnut Woodlands are found only in isolated areas of Segments 3B and 4 (Table 1, Figure 4.4-1c).

The Project Area spans and crosses Rincon Creek, Carpinteria Creek, and several tributaries in Segments 3A and 4 within the Coastal Zone. These creeks are located within “environmentally sensitive habitat areas” (ESHAs), which also include adjacent wetlands and riparian areas.

Protected Trees

Ventura County tree protection regulations protect oaks, sycamores, ash, elderberry, and walnut trees within Ventura County. Oak trees in Santa Barbara County are protected by various ordinances that cover the Coastal Zone, non-coastal rural areas, and U.S. Forest Service lands. These tree species are found throughout the Project Area.

Potential Jurisdictional Areas

The Project would use multiple existing crossings of reaches of the Ventura River (Segments 1 and 2), Rincon Creek (Segments 3B and 4), and Carpinteria Creek (Segments 3A and 3B) that may fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the CDFG, or a Regional Water Quality Control Board (RWQCB). The Project may affect potentially jurisdictional waters in Segments 1 and 4 including Cañada Larga, Carpinteria Creek near its confluence with Sutton Canyon Creek, and three small dry drainages that are tributaries to Carpinteria Creek (Table 4.4-2).

Table 4.4-2: Potential Jurisdictional Areas in the Project Area

Water and Location	USACE	CDFG	RWQCB
Cañada Larga, Segment 1	X	X	X
Carpinteria Creek, Segment 4, near the Confluence of Sutton Canyon Creek	X	X	X
Three small, dry, unnamed drainages in Segment 4		X	X

Critical Habitat

Portions of the Cañada Larga and Carpinteria Creek drainages crossed by the Project are within Southern California steelhead (*Oncorhynchus mykiss irideus*) Critical Habitat. These include Cañada Larga (Ventura River Hydrologic Unit 4402, Subunit 440210) and Carpinteria Creek (South Coast Hydrologic Unit 3315, Subunit 331534) (Figure 4.4-2).

Special-status Plants and Wildlife

Using information presented in the Biological Technical Report (Appendix H), and plant and wildlife surveys of the area, the potential for special-status species to occur within the Project Area was assessed as present, high, moderate, and low based on the following criteria:

- **Present:** The species was observed in the Survey Area during field surveys, or documented during previous surveys.
- **High:** CNDDB or other documented occurrences have been recorded within 1 mile of the Project and suitable habitat is present (suitable nesting or roosting habitat for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the Project.

- **Moderate:** CNDDB or other documented occurrences have been recorded within 5 miles of the Project Area and suitable habitat is present (suitable nesting or roosting habitat or high quality foraging areas for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the Project.
- **Low:** Suitable or marginal habitat may occur in the Project Area. However, no CNDDB records of the species have been recorded within recent years; any recorded sightings of the species within 5 miles of the Project are now considered obsolete because the species is believed to be now extirpated; the sighting may have potentially misidentified the species; or individuals were not observed during field surveys and are not anticipated to be present. For bird and bat species, this category may be used for species that are documented but likely to be only transient through the area during foraging or migratory movements, and no suitable nesting or roosting habitat is present.

A number of plant and wildlife species identified in the literature review were determined to have no potential to occur within the Project Area because the Project Area does not contain suitable habitat, is located outside of the species' known geographic range, or is located outside of the species' known elevational range. Species with no potential to occur were not included in this PEA. A complete list and analysis of all species identified in literature review and searches as having the potential to occur in the Project Area is provided in Appendix H to this PEA.

Special-status Plants

Special-status plant species documented in the Project vicinity are listed in Table 4.4-3, along with their habitat suitability and an indication of their known presence or assessment of their potential to occur within the Project Area.

No federal or State listed threatened or endangered plant species are documented in the Project Area, or are likely to be found in the Project Area. Two listed plant species (CNPS Rare Plant Ranks [RPRs] 1 and 2) are documented to occur in the Project Area: Santa Barbara honeysuckle (*Lonicera subspicata var. subspicata*) and Nuttall's scrub oak (*Quercus dumosa*). Based on geographic ranges and the presence of suitable habitat within the Project Area, eight additional RPR 1 and 2 species have a "High" or "Moderate" potential to occur in the Project Area: Davidson's saltscale (*Atriplex serenana var. davidsonii*), late-flowered mariposa lily (*Calochortus fimbriatus*), Plummer's mariposa-lily (*Calochortus plummerae*), Santa Barbara morning glory (*Calystegia sepium binghamiae*), mesa horkelia (*Horkelia cuneata puberula*), Carmel Valley malacothrix (*Malacothrix saxatilis var. arachnoidea*), Ojai navarretia (*Navarretia ojaiensis*), and Santa Ynez false lupine (*Thermopsis macrophylla*). Additional discussion of the special-status plant species potentially occurring in the Project Area, including their natural history and habitat suitability within the Project Area, are provided in the Biological Technical Report (see Appendix H).

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CRITICAL HABITAT, STEELHEAD

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Figure
4.4-2

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Special-status Wildlife

Special-status animal species with the potential to occur in the Project Area are listed in Table 4.4-4, along with their habitat suitability and an indication of their known presence or assessment of their potential to occur within the Project Area. Additional wildlife surveys for burrowing owl and nesting raptors in Segments 3B and 4 were conducted in the spring of 2012.

No federal or State listed threatened or endangered wildlife species are documented in the Project Area, or are likely to be found in the Project Area. Six special-status wildlife species are documented to occur in the Project Area: Arroyo chub (*Gila orcuttii*), Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus ludovicianus*).

Based on geographic ranges and the presence of suitable habitat within the Project Area, 12 additional special-status wildlife species have a "High" or "Moderate" potential to occur in the Project Area: American badger (*Taxidea taxus*), ringtail (*Bassariscus astutus*), California legless lizard (*Aniella pulchra pulchra*), coast horned lizard (*Phrynosoma blainvillii*), two-striped garter snake (*Thamnophis hammondii*), south coast garter snake (*Thamnophis sirtalis ssp.*), sharp-shinned hawk (*Accipiter striatus*), burrowing owl (*Athene cunicularia*), peregrine falcon (*Falco perigrinus*), song sparrow (*Melospiza melodia*), pallid bat (*Antrozus pallidus*), and San Diego desert woodrat (*Neotoma lepida intermedia*).

Monarch butterfly (*Danaus plexippus*) was observed throughout the Project Area. Monarch butterflies are not listed by the USFWS or CDFG, and individual monarch butterflies are not considered a sensitive resource; however, CDFG does consider monarch butterfly winter roosting sites to be a sensitive resource. No protected roosting areas are documented within the Project Area, and no roosting was observed within trees during surveys of the Survey Area.

Table 4.4-3: Special-status Plant Species Known to Occur or with the Potential to Occur in the Project Area

Common Name	Scientific Name	Habitat Preference	Blooming Period	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
Hoover's bent grass	*Agrostis hooveri*	Found in sandy soils in chaparral, cismontane woodland, and valley and foothill grassland communities from 200 to 1,970 feet.	June	FSS, 1B.2	Low	Outside of known geographic range. Potential suitable habitat in Project Area.
Braunton's milkvetch	*Astragalus brauntonii*	Found in chaparral, coastal sage scrub, and valley and foothill grassland communities from 15 to 2,100 feet.	March-July	FE, 1B.1	Low	Outside of known geographic range. Potential suitable habitat in Project Area.
Miles' milk-vetch	*Astragalus didymocarpus var. milesianus*	Found in clay soils in coastal scrub from 65 to 300 feet.	March-June	FSS, 1B.2	Low	Outside of known geographic range. Potential suitable habitat in Project Area.
Coulter's saltbush	*Atriplex coulteri*	Found on ocean bluffs, ridgetops, as well as alkaline low places within coastal bluff scrub, coastal dune, coastal scrub, and valley and foothill grassland communities from 35 to 1,450 feet.	March-October	1B.2	Low	Potential suitable habitat in Project Area. No known occurrences within 10 miles of Project Area.
Davidson's saltscale	*Atriplex serenana var. davidsonii*	Found in alkaline soils in coastal bluff scrub, coastal scrub, and wetland and riparian communities from 20 to 820 feet.	April-October	1B.2	Moderate	Within known species range. Potential suitable habitat in coastal scrub communities of Project Area.
late-flowered mariposa lily	*Calochortus fimbriatus*	Found in dry, open coastal woodlands, and chaparral on serpentine soils from 885 to 6,275 feet.	June-August	FSS, 1B.2	High	Recorded in Segment 4 (CNDDB Occ# 8), exact location unknown. Suitable habitat in woodland and chaparral communities
Palmer's mariposa lily	*Calochortus palmeri var. palmeri*	Found in vernally moist places, meadows and seeps in chaparral, and coniferous and yellow-pine forest from 1,975 to 7,365 feet.	May-July	1B.2	Low	On edge of elevational and geographic range, but some potentially suitable habit exists in Segments 3B and 4.

Table 4.4-3: Special-status Plant Species Known to Occur or with the Potential to Occur in the Project Area (continued)

Plummer's mariposa lily	*Calochortus plummerae*	Occurs on rocky and sandy sites, usually of granitic or alluvial material in coastal scrub, chaparral, valley and foothill grassland; cismontane woodland; and lower montane coniferous forest communities from 300 to 5,300 feet. Can be very common after fire.	May-August	FSS, 1B.2	Moderate	On edge of geographical range. Suitable habitat exists in coastal scrub, chaparral, and grassland communities of the Project Area.
Santa Barbara morning glory	*Calystegia sepium binghamiae*	Found in chaparral and cismontane woodland communities from 200 to 1,650 feet.	April-June	1B.1	Moderate	Within species range, suitable habitat in chaparral communities of the Project Area.
southern tarplant	*Centromadia parryi australis*	Found in disturbed sites near the coast at marsh edges, or alkaline soils of valley and foothill grassland.	June-November	1B.1	Low	Suitable habitat exists within grasslands of the Project Area. No occurrences are known from the Project vicinity.
dune larkspur	*Delphinium parryi blochmaniae*	Found on rocky areas or dunes within chaparral or coastal dunes from 100 to 1,250 feet.	April-May	1B.2	Low	Potentially suitable habitat in chaparral communities. Not known from the Project vicinity.
umbrella larkspur	*Delphinium umbraculorum*	Found in mesic sites of cismontane woodlands from 1,300 to 5,250 feet.	May-June	FSS, 1B.3	Low	Potential habitat in woodland communities. Not known from the Project vicinity.
Ojai fritillary	*Fritillaria ojaiensis*	Found on rocky sites or shale talus in broadleaved upland forest (mesic), chaparral, and lower montane coniferous forest communities from 1,000 to 2,200 feet.	March-May	FSS, 1B.2	Low	Little potential habitat in Project Area. Documented ~2.2 miles north of Segment 4.
mesa horkelia	*Horkelia cuneata puberula*	Found on sandy or gravelly sites in chaparral, cismontane woodland, and coastal scrub communities from 230 to 2,650 feet.	February-September	FSS, 1B.1	Moderate	Suitable habitat in chaparral and scrub communities.

Table 4.4-3: Special-status Plant Species Known to Occur or with the Potential to Occur in the Project Area (continued)

California satintail	*Imperata brevifolia*	Found on mesic sites, alkali seeps and riparian areas in coastal scrub, chaparral, riparian scrub, and Mojavean scrub communities from sea level to 1,650 feet.	September-May	2.1	Low	Little potential suitable habitat present in Project Area. Not documented in Project vicinity.
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	Found on alkaline soils in playas, sinks in coastal salt marshes, valley and foothill grassland, and vernal pools communities from sea level to 4,600 feet.	February-June	1B.1	Low	Known from project vicinity, but little potential suitable habitat present in Project Area.
pale-yellow layia	*Layia heterotricha*	Found in alkaline or clay soils in open areas of cismontane woodland, pinyon-juniper woodland, and valley and foothill grassland communities from 890 to 4,500 feet.	March-June	FSS, 1B.1	Low	Outside of known geographic range, suitable habitat may be present in woodland or grassland communities.
Santa Barbara honeysuckle	*Lonicera subspicata* var. *subspicata*	Found in chaparral, cismontane woodland, and coastal scrub communities from 115 to 3,300 feet.	May-February	1B.2, FSS	Present	Documented along the access road in Sutton Canyon and near subtransmission structures. May be found elsewhere in Segment 4.
Carmel Valley malacothrix	*Malacothrix saxatilis* var. *arachnoidea*	Found on rock outcrops or steep rocky road cuts in chaparral and coastal scrub communities from 80 to 4,000 feet.	March-December	1B.2	Moderate	Suitable habitat in chaparral communities. Documented in Project vicinity.
Ojai navarretia	*Navarretia ojaiensis*	Found in openings in chaparral, coastal scrub, and valley and foothill grassland communities from 900 to 2,050 feet.	May-July	1B.1	Moderate	Suitable habitat in chaparral, scrub, and grassland communities. Documented in Project vicinity.
chaparral nolina	*Nolina cismontana*	Found primarily on sandstone and shale substrates, also known from gabbro, in chaparral and coastal scrub communities from 450 to 4,200 feet.	May-July	FSS, 1B.2	Low	Little suitable habitat within Project Area. Documented in Project vicinity.

Table 4.4-3: Special-status Plant Species Known to Occur or with the Potential to Occur in the Project Area (continued)

Nuttall's scrub oak	*Quercus dumosa*	Generally found on sandy soils or clay loam in closed-cone coniferous forest, chaparral, and coastal scrub, in coastal areas from 50 to 1,300 feet.	February-August	FSS, 1B.1	Present	Documented in Segment 4.
chaparral ragwort	*Senecio aphanactis*	Found on drying alkaline flats in cismontane woodland and coastal scrub communities from 65 to 1,900 feet.	January-April	2.2	Low	Little suitable habitat within Project Area. No occurrences documented in Project vicinity.
Sonoran maiden fern	*Thelypteris puberula* var. *sonorensis*	Found along streams, meadows, and seepage areas from 150 to 1,800 feet.	January-September	FSS, 2.2	Low	Little suitable habitat. Documented from Project vicinity.
Santa Ynez false lupine	*Thermopsis macrophylla*	Found in open areas such as fuel breaks, after burns, and on sandstone within chaparral communities from 1,370 to 6,890 feet.	April-June	FSS, SR, 1B.3	Moderate	Potential habitat in chaparral communities, known from Project vicinity.

Key:
FE = Federally listed as Endangered
FSS = Forest Service Sensitive
SE = State-listed as Endangered
ST = State-listed as Threatened
SR-= State Rare

California Native Plant Society System:
1A = Presumed extinct in California
1B = Rare or Endangered in California and elsewhere
2 = Rare or Endangered in California, more common elsewhere
.1 = Seriously endangered in California (over 80% of occurrences threatened)
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

Table 4.4-4: Special-status Wildlife Species Known to Occur or with the Potential to Occur in the Project Area

Common Name	Scientific Name	Habitat Preference	Status	Likelihood to Occur Within Project Area	Known or Potential Occurrence Determination
INVERTEBRATES					
monarch butterfly	*Danaus plexippus*	Winter roosts found in wind-protected groves of eucalyptus, Monterrey pine, and cypress with sources of water and nectar nearby. Winter roosts are protected by CDFG.	CDFG	*Species* Present *Roosts* Low Potential	Found throughout the project site, no winter roost sites were observed or documented from the Project Area.
FISH					
arroyo chub	*Gila orcuttii*	Slow-water stream sections with mud or sand bottoms. They feed heavily on aquatic vegetation and associated invertebrates.	FSS, CSC	Present	Documented within Cañada Larga. Suitable habitat within Los Sauces Creek.
Southern California steelhead DPS	*Oncorhynchus mykiss irideus*	Streams with cool, clear running water, often with a developed canopy, bank vegetation, or undercut banks. Spawning gravels and low levels of siltation are essential for reproduction.	FE, CSC	Low	Within range and Critical Habitat, poor quality habitat in Cañada Larga.
AMPHIBIANS					
California red-legged frog	*Rana draytonii*	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	FT, FSS, CSC	Low	No suitable habitat. CNDDB Occurrence #811 ~1 mile to the northwest.
Coast Range newt	*Taricha torosa*	Lives in terrestrial habitats and riparian woodlands, and will migrate to breed in ponds, reservoirs, vernal pools, and slow-moving streams.	CSC	Low	Minimal suitable habitat in Project Area. Documented ~3 miles northeast of Project.

Table 4.4-4: Special-status Wildlife Species Known to Occur or with the Potential to Occur in the Project Area (continued)

REPTILES					
California legless lizard	*Aniella pulchra pulchra*	Sandy or loose loamy soils with moisture content under sparse vegetation in live oak woodland.	FSS, CSC	Moderate	Suitable habitat in woodland areas.
western pond turtle	*Emys marmorata*	A thoroughly aquatic turtle of ponds marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. Suitable upland habitat and basking areas are needed.	FSS, CSC	Low	Low quality habitat in Cañada Larga and Los Sauces Creek, but documented in Ventura River.
coast horned lizard	*Phrynosoma blainvillii*	Uses a wide variety of habitats, including coastal sage scrub. Most common along sandy washes with friable soils and scattered low bushes.	FSS, CSC	Moderate	Suitable habitat throughout Project Area.
coastal patch-nosed snake	*Salvadora hexalepis virgultea*	Brushy or shrubby vegetation in coastal southern California. Require small mammal burrows for refuge and overwintering sites.	CSC	Low	Low quality habitat. Not documented in Project vicinity.
two-striped garter snake	*Thamnophis hammondii*	Highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growth.	FSS, CSC	Moderate	Potential habitat in Cañada Larga and Los Sauces Creek.
south coast garter snake	*Thamnophis sirtalis ssp.*	Marsh and upland habitats near permanent water with good strips of riparian vegetation in the southern California coastal plain, from sea level to about 2,800 feet.	CSC	Moderate	Potential habitat in Cañada Larga and Los Sauces Creek.

Table 4.4-4: Special-status Wildlife Species Known to Occur or with the Potential to Occur in the Project Area

BIRDS					
Cooper's hawk	*Accipiter cooperii*	Nest sites mainly in riparian growths of deciduous trees in oak woodlands and riparian communities, in canyon bottoms, and on river floodplains.	MBTA, CWL	Present	Observed in Cañada Larga and along SR-150 in Project Area.
sharp-shinned hawk	*Accipiter striatus*	Ponderosa pine, black oak, riparian deciduous, Mixed Conifer Forest, and Jeffrey pine habitats. Prefers riparian areas.	MBTA, CWL	Moderate	Suitable habitat in riparian woodlands. Documented winter visitor in Project vicinity.
tri-colored blackbird	*Agelaius tricolor*	Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	MBTA, CSC	Low	No suitable nesting habitat, potential presence during foraging. Documented in Cañada Larga.
golden eagle	*Aquila chrysaetos*	Uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops.	BGEPA, MBTA, CFP, CWL	Present	Observed in Segment 4, documented in Cañada Larga. No nesting habitat in Project Area.
burrowing owl	*Athene cunicularia*	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	MBTA, CSC	Moderate	Suitable breeding and foraging habitat in Cañada Larga and near Segment 3B/4 split. Documented winter visitor in Cañada Larga.
Swainson's hawk	*Buteo swainsoni*	Breeds in grasslands with scattered trees, Juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with fields that support suitable rodent populations.	FT, FSS, MBTA	Low	Potential habitat. Not documented in Project vicinity.

Table 4.4-4: Special-status Wildlife Species Known to Occur or with the Potential to Occur in the Project Area

coastal cactus wren	*Campylorhynchus brunneicapillus*	Southern California coastal sage scrub with large *Opuntia sp.* cactus for nesting.	MBTA, CSC	Low	Low quality habitat, on edge of documented range.
northern harrier	*Circus cyaneus*	Coastal salt and fresh-water marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienegas.	MBTA, CSC	Present	Observed in Cañada Larga. Suitable foraging habitat in open grasslands.
white-tailed kite	*Elanus leucurus*	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	MBTA, CSC	Present	Observed south of Shepard Mesa, and is documented in Cañada Larga and the Project vicinity.
peregrine falcon	*Falco perigrinus anatum*	Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	FSS, MBTA, CFP,	Moderate	Suitable foraging habitat in Project Area. Documented in Cañada Larga and the Project vicinity.
yellow-breasted chat	*Icteria virens*	Inhabits low, dense riparian thickets of willow, blackberry, and wild grape, and nests within 10 feet of the ground.	MBTA, CSC	Low	No suitable nesting habitat in Project Area. Documented from Cañada Larga.
loggerhead shrike	*Lanius ludovicianus ludovicianus*	Broken woodlands, savannah, Pinyon Juniper, Joshua tree, and riparian woodlands; desert oases; scrub; and washes.	MBTA, CSC	Present	Observed on Segment 1.
song sparrow	*Melospiza melodia*	Require a source of water, moderately dense vegetation, plenty of light, and exposed ground or leaf litter for foraging.	MIS, MBTA	Moderate	Suitable habitat and documented in Cañada Larga and Rincon Creek.
California gnatcatcher	*Polioptila californica californica*	Obligate, permanent resident of coastal sage scrub in arid washes, on mesas and slopes below 2,500 feet in Southern California.	FT, MBTA, CSC	Low	Potentially suitable habitat in sage scrub. Outside of current species range.
yellow warbler	*Setophaga petechia*	Riparian forests with riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging.	MBTA, CSC	Low	Low quality nesting habitat. Potential foraging habitat in riparian areas. Documented from Project vicinity.

Table 4.4-4: Special-status Wildlife Species Known to Occur or with the Potential to Occur in the Project Area (continued)

least Bell's vireo	*Vireo belli pusillus*	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms below 2,000 feet.	FE, SE, MBTA	Low	No quality breeding habitat, poor quality foraging habitat in Project Area. Documented in Cañada Larga.
MAMMALS					
pallid bat	*Antrozous pallidus*	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Breeds in caves, crevices, and structures.	FSS, CSC	Moderate	Foraging habitat in Project Area.
ringtail	*Bassariscus astutus*	Rocky desert and riparian areas.	CFP	High	Known from Project vicinity. Suitable habitat in riparian areas.
Townsend's big-eared bat	*Corynorhinus townsendii*	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Breeds in caves, crevices, and man-made structures.	FSS, CSC	Low	Foraging habitat in Project Area.
Western mastiff bat	*Eumops perotis californicus*	Many open, semi-arid to arid habitats, including mixed conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and others. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	CSC	Low	Foraging habitat in Project Area.
western red bat	*Lasiurus blossevillii*	Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	FSS, CSC	Low	Foraging habitat in Project Area.
San Diego desert woodrat	*Neotoma lepida intermedia*	Cactus patches in coastal sage scrub and chaparral. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	CSC	Moderate	Suitable habitat present. Known from Project vicinity.

Table 4.4-4: Special-status Wildlife Species Known to Occur or with the Potential to Occur in the Project Area (continued)

mule deer	*Odocoileus hemionus*	Various shrubs in summer and winter. Prefer tender new growth. Forbs and grasses are important in spring, brushy areas and tree thickets. Moderately dense shrublands and forests, dense herbaceous stands.	MIS	Present	Found throughout the Project Area.
mountain lion	*Puma concolor*	Dense thickets in brush or trees. Caves and other natural cavities within thickets are used for denning. Male home ranges are generally at least 15 square miles, with females using smaller areas about 3 to12 square miles.	MIS	Present	Documented from Segment 1.
American badger	*Taxidea taxus*	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food and open, uncultivated ground. Grasslands and scrub habitats.	CSC	High	Documented from Segment 1 vicinity. Suitable habitat in Cañada Larga and near the Y.

Key:
BGEPA = Protected under the Bald and Golden Eagle Protection Act
CDFG = Special protection by CDFG
CFP = CDFG Fully Protected
CSC = CDFG Species of Special Concern
CWL = CDFG Watch List
FC = Federal Candidate for listing
FE = Federal Endangered
FSS = Forest Service Sensitive Species
FT = Federal Threatened
MBTA = Protected under the Migratory Bird Treaty Act
MIS = USFS Management Indicator Species
SE = State of California Endangered

Mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and song sparrow (*Melospiza melodia*) are designated by the U.S. Forest Service as Management Indicator Species (MIS) when on U.S. Forest Service lands. Deer were observed throughout the Project Area; a dead mountain lion was found in the area of Segment 1 in 2011; and song sparrow is documented throughout the Project Area. All three species could be present on U.S. Forest Service lands within the Project Area.

Additional discussion of the special-status wildlife species potentially occurring in the Project Area including their natural history and habitat suitability are provided in the Biological Technical Report (Appendix H).

4.4.3 Regulatory Setting

4.4.3.1 Federal Regulations

Endangered Species Act (16 U.S.C. § 1531 et seq.)

The Endangered Species Act of 1973 (ESA) provides for the protection of plant and animal species listed by the federal government as “Endangered” or “Threatened”, and “the ecosystems upon which they depend.” An “Endangered” species is one that is “in danger of extinction” throughout all or a significant portion of its range. A “Threatened” species is one that is “likely to become endangered” within the foreseeable future. Pursuant to Section 9 of the ESA, it is unlawful for any person to “take” a federally listed species. “Take,” as defined by the ESA, “means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” This can also include the modification of a species’ habitat. For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of State law (16 U.S.C. § 1538(c)).

When non-federal entities, such as States, counties, local governments, and private landowners, wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, “take” a listed species, an incidental take permit (ESA § 10(a)(1)(B)) must first be obtained following formal consultation with the USFWS, through the development of a habitat conservation plan (HCP).

Migratory Bird Act (16 U.S.C. §§ 703 – 712)

The Migratory Bird Treaty Act of 1918 (MBTA) protects species of native, non-game, migratory birds. Specific provisions in the statute include a federal prohibition, except as allowed under specific conditions, to:

> “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or

> carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention ... for the protection of migratory birds ... or any part, nest, or egg of any such bird." (16 U.S.C. § 703)

Bald and Golden Eagle Protection Act (16 U.S.C § 668)

The Bald and Golden Eagle Protection Act of 1940 (BGEPA) provides for the protection of bald and golden eagles. The BGEPA establishes criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

National Forest Management Act (16 U.S.C. § 1600)

The National Forest Management Act of 1976 requires National Forests to maintain viable populations of "native and desired non-native vertebrate species ... well distributed in the planning area."

U.S. Department of Agriculture Environmental Compliance Fish and Wildlife Policy (Departmental Regulation 9500-4)

The Secretary of Agriculture's Policy on Fish and Wildlife directs the U.S. Forest Service to "manage habitats for all native and desired nonnative plants, fish and wildlife species to maintain viable populations of each species; identify and recover threatened and endangered plant and animal species" and to avoid actions "which may cause species to become threatened or endangered."

U.S. Forest Service Manual

The Forest Service Manual (FSM) contains legal authorities, objectives, policies, responsibilities, instructions, and guidance for the planning and execution of programs and activities within and related to National Forests. FSM Chapter 2670 directs the U.S. Forest Service to "develop/implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions," and to "avoid or minimize impacts to species whose viability has been identified as a concern." If impacts cannot be avoided, the U.S. Forest Service "can allow or disallow the impact, but the decision must not result in loss of species viability or create a significant trend towards federal listing." FSM Chapter 2672.4 specifies that a Biological Evaluation (BE) be prepared to determine if a project may affect any U.S. Forest Service or USFWS listed species. In addition to protections to federally listed species, FSM Chapter 2672.11 delegates to each Regional Forester the authority to designate "Sensitive" species, which are defined as:

> "Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by: a. Significant current or

> predicted downward trends in population numbers or density, or b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution."

Land Management Plan: Southern California National Forests

The Land and Resource Management Plans (Plans) established by U.S. Forest Service for the southern California national forests describe the strategic direction at the broad program level for managing the land and its resources over the next 10 to 15 years.

As stated in the Los Padres National Forest Strategy, the objective of U.S. Forest Service threatened, endangered, proposed, candidate, and sensitive species management is to "manage habitat to move listed species toward recovery and de-listing" and to "prevent listing of proposed and sensitive species." For management of species of concern, the primary objective is to "maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, management indicator species and watch list species."

The Los Padres National Forest Strategy includes specific measures to meet the six goals of the U.S. Forest Service National Strategic Plan. These goals include: Goal 1- Reduce the risk from catastrophic wildland fire, Goal 2 - Reduce the impacts from invasive species, Goal 3 - Provide outdoor recreation opportunities, Goal 4 - Help meet energy resource needs, Goal 5 - Improve watershed conditions, and Goal 6 – Mission-related work in addition to that which supports the agency's goals.

Clean Water Act of 1972

Enacted in 1972, the federal Clean Water Act of 1972 (CWA; 33 U.S.C. § 1251 et seq.) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary federal law applicable to water quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Enforced by the USEPA, it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes States to adopt water quality standards and includes programs addressing both point and non-point pollution sources. The CWA also established the established the National Pollutant Discharge Elimination System (NPDES), and provides the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

In California, programs and regulatory authority under the CWA have been delegated by USEPA to the State Water Resources Control Board (SWRCB) and its nine RWQCBs. Under Section 402 of the CWA, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit.

The SWRCB and RWQCBs have also developed numeric and narrative water quality criteria to protect beneficial uses of State waters and waterways. Beneficial uses in the Project Area include water supply, groundwater recharge, aquatic habitat, wildlife habitat, and recreation.

Section 401 – Water Quality Certification

Section 401 of the CWA specifies that, for any activity that may result in a discharge into waters of the U.S., the SWRCB or applicable RWQCB must certify that the discharge will comply with State water quality standards, including beneficial uses (23 CCR § 3830, et seq). Under California's policy of no net loss of wetlands, the SWRCB and RWQCBs require mitigation for dredge and fill impacts to wetlands and waterways. Dredge and fill activities in wetlands and waterways that impact waters of the U.S. will require a federal Section 404 permit from the USACE. These permits trigger the requirement to obtain a Section 401 certification, which must be obtained prior to issuance of a Section 404 permit.

Section 404 – Permitting for Dredge and Fill Activities in Wetlands and Waters of the U.S.

The USACE is responsible for issuing permits under CWA Section 404 for placement of fill or dredged material in waters of the U.S. and jurisdictional wetlands. Waters of the U.S. refers to oceans, bays, rivers, streams (including non-perennial streams with a defined bed and bank), lakes, ponds, and seasonal and perennial wetlands.

Project proponents must obtain a permit from the USACE for all discharges of fill or dredged material before proceeding with a proposed activity. The USACE may issue either an individual permit or a general permit. General permits are preauthorized at the regional or national level and are issued to cover activities expected to result in only minimal adverse environmental effects (e.g., LA District Regional General Permit No. 63 for Repair and Protection Activities in Emergency Situations). Nationwide Permits (NWPs) are a type of general permit issued to cover activities that the USACE has determined to have minimal adverse effects, such as routine maintenance (e.g., Nationwide Permit 3) or utility line activities (e.g., Nationwide Permit 12). Each NWP specifies particular conditions that must implemented by the permittee.

4.4.3.2 State Regulations

California Coastal Act of 1976 (California Public Resources Code § 30000 et seq.)

The California Coastal Act establishes public access requirements and development restrictions within the Coastal Zone, an area that extends off the California coast to the State's outer limit of jurisdiction, and inland generally 1,000 yards from the mean high tide or to the first major ridgeline paralleling the sea, whichever is less (with certain exceptions). In Ventura and Santa Barbara counties, the Coastal Zone generally follows the 1,000-yard limit with several exceptions. Most of the Carpinteria Valley is included within the Coastal Zone due to “important habitat, recreational, and agricultural resources” (Santa Barbara County 2009b). All of Segment 3A and portions of Segment 4 are located within the expanded Coastal Zone of the Carpinteria Valley.

Sections 30231, 30233, and 30236 of the Act limit impacts to streams, wetlands, and their biological resources by providing for minimization of wastewater discharges and runoff, minimization of alteration of natural streams, and maintaining the actual vegetation buffer areas, among other things. Upland habitats in the Coastal Zone are protected under Section 30240, which limits impacts to designated ESHAs. The California Coastal Act specifically calls for protection of ESHAs, which includes wetlands and riparian areas.

California Fish and Game Code §§ 1600-1616, Lake and Streambed Alteration Program

If a project includes alteration of the bed, banks, or channel of a stream, or the adjacent riparian vegetation, then a Streambed Alteration Agreement (SAA) may be required from CDFG. California Fish and Game Code Sections 1600-1616 regulate activities that could alter the flow, bed, banks, channel, or associated riparian areas of a river, stream, or lake—all considered “waters of the State.” The law requires any person, State, or local governmental agency or public utility to notify CDFG before beginning an activity that will substantially modify a river, stream, or lake.

California Endangered Species Act (CFG Code § 2050, et seq.)

The California Endangered Species Act (CESA) generally parallels the provisions of the Federal ESA, and states that “all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved.” The CDFG administers the CESA, and has committed itself to work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, “Endangered” is defined as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range;” and “Threatened” is defined as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts.” “Take” is defined as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” an individual of a species, but the definition does not include “harm” or “harass,” as the ESA does. As a result, the threshold for a take under the CESA is higher than that under the federal ESA.

Consistent with the CESA, CDFG has established lists of endangered, threatened, and candidate species that may or may not also be included on a federal ESA list. Pursuant to

CFG Section 2081, CESA allows for incidental take permits to otherwise lawful development projects that could result in the take of a State-listed Threatened or Endangered species. The application for an incidental take permit under Section 2081(b) has a number of requirements including the preparation of a conservation plan, generally referred to as a Habitat Conservation Plan. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species.

Native Plant Protection Act (CFG Code §§ 1900-1913, 2062 and 2067)

The Native Plant Protection Act (NPPA) identifies the types of plant species eligible for State listing. Eligible species include those identified on CNPS RPRs 1A, 1B, and 2 meet the definitions of Sections 1901, Chapter 10 (NPPA) or Sections 2062 and 2067 (CESA) of the CFG Code. RPR definitions are as follows:

> 1A: Plants presumed to be extinct because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct in California and those that are presumed extirpated in California. A plant is extinct in California if it no longer occurs in or outside of California. A plant that is extirpated from California has been eliminated from California, but may still occur elsewhere in its range.
>
> 1B: Plants that are rare throughout their range, with the majority of them endemic to California. Most of the plants of RPR 1B have declined significantly over the last century.
>
> 2: Plants that are rare throughout their range in California, but are common beyond the boundaries of California. RPR 2 recognizes the importance of protecting the geographic range of widespread species (CNPS 2010).

California Fish and Game Code §§ 3500-3516, and 3800

CFG Code Section 3513 furthers the intent of the MBTA by prohibiting any take or possession of birds in California designated by the MBTA as migratory nongame birds, except as allowed by federal rules and regulations promulgated pursuant to the MBTA. In addition, CFG Code Sections 3503, 3503.5, 3511, and 3800 further protect nesting birds and their parts, including passerine birds, raptors, and State "fully protected" birds. These regulations protect almost all native nesting birds, not just sensitive status birds.

California Fish and Game Code §§ 3511, 4700, 5050, and 5515

CFG Code Sections 3511, 4700, 5050, and 5515 govern the protection of bird, mammal, reptile, amphibian, and fish species identified as "fully protected." Fully protected animals may not be harmed, taken, or possessed. The classification of "Fully Protected" was the state's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under the State and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal, and ring-tailed cat are the exceptions. The white-tailed kite and the golden eagle are tracked in the CNDDB; the trumpeter swan, northern elephant seal, and ring-tailed cat are not.

California Public Resources Code §§ 4292 and 4293

Section 4292 directs the owner, controller, operator, or maintainer of electrical transmission lines in mountainous land, forest-covered land, brush-covered land, or grass-covered land to maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole; a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower; and Section 4293 requires the same to maintain a clearance of 4 feet from any line which is operating at 2,400 or more volts, but less than 72,000 volts.

California Public Utilities Commission, General Order 95, Rule 35, Vegetation Management

Rule 35 mandates that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, and establishes minimum clearances between line conductors and vegetation that under normal conditions shall be maintained. These requirements apply to all overhead electrical supply and communication facilities covered by this General Order, including facilities on lands owned and maintained by California State and local agencies.

4.4.3.3 Local Regulations

CPUC G.O. 131-D, Section XIV. B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction. However in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Santa Barbara County Coastal Land Use Plan

The purposes of the Santa Barbara County Coastal Land Use Plan (CLUP) include protection of coastal resources and providing greater access and recreational opportunities for the public's enjoyment while allowing for orderly and well-planned urban development and the siting of coastal-dependent and coastal-related industry. The CLUP incorporates, to the maximum possible extent, local plans and policies that are consistent with the California Coastal Act. All electric transmission lines proposed for the Coastal Zone are "developments" under the California Coastal Act, thus the County of Santa Barbara has permit review over them.

The CLUP additionally identifies Native Plants as one of 13 Environmentally Sensitive Habitat Areas. Policies 9-35 and 9-36 encourage native oak preservation and require developments to preserve areas of significant amounts of native vegetation, respectively. The CLUP also identifies Streams and identifies Policies 9-37 to 9-43 to preserve riparian vegetation and habitat for dependent species, as well as water quality considerations.

County of Santa Barbara Deciduous Oak Tree Protection and Regeneration Ordinance (Santa Barbara County Code, Chapter 35, § 35-910 et seq.)

The County of Santa Barbara Deciduous Oak Tree Protection and Regeneration Ordinance protects deciduous oak trees 4 inches or greater in diameter at breast height outside of the Coastal Zone and urban boundaries. The ordinance generally provides that a public utility may remove protected oak trees within a utility or other public easement if it obtains a permit, and such removal shall not count against thresholds set forth in the ordinance regarding protected oak tree removals. The ordinance also establishes standards for mitigation that may accompany the issuance of a permit.[19]

County of Santa Barbara Coastal Zoning Ordinance (Santa Barbara County Code, Chapter 35, §140 et seq.)

This ordinance requires a CDP for the removal of any tree within the Coastal Zone that is 6 inches or more in diameter measured 4 feet above the ground and 6 feet or more in height that meet the following criteria:

- trees located in a county street right-of-way
- trees located within 50 feet of any major or minor stream except when such trees are removed for agricultural purposes
- oak trees
- trees used as a habitat by monarch butterflies

Ventura County Tree Protection Regulations (Ventura County Non-Coastal Zoning Ordinance §§ 8107-25)

Under Ventura County regulations, protected trees include all oaks and sycamores 9.5 inches in circumference or larger (measured 4.5 feet above ground), trees of any species with a historical designation, trees of any species 90 inches in circumference or larger, and most native trees in the Scenic Resources Protection Zone with a circumference greater than 9.5 inches. If pruning (beyond specified limits), removal, trenching, excavation, or other encroachment into the protected zone (5 feet outside the canopy's edge and a minimum of 15 feet from the trunk), tree alteration, felling, or removal is part of a project that is not exempt per the regulations, the Project would obtain the applicable permit and must adhere to the detailed mitigation measures contained therein.

[19] This Ordinance protects only blue oaks and valley oaks. Although neither of these types of oaks has been identified in the Project Area, this ordinance has been included here for informational purposes.

4.4.4 Significance Criteria

The significance criteria for assessing the impacts to biological resources come from the CEQA Environmental Checklist. According to the checklist, a project causes a potentially significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan

4.4.5 Impact Analysis

Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those caused by a project and occur at the same time and place, including the initial loss of habitats due to grading, construction, and displacement due to construction-related activities. Indirect impacts are effects that are reasonably foreseeable and caused by a project, but occur at a different time or place. Indirect effects may induce changes in the pattern of land use; population density or growth rate; and related effects on air, water, and other natural systems, including ecosystems. Generally, indirect impacts are those that would be related to impacts on the adjacent remaining habitat due to construction activities (e.g., noise, vibration, fugitive dust) or operation of the Project (e.g., human activity, indirect lighting).

The actual and potential occurrence of biological resources in the Project vicinity was correlated with the significance criteria described in Section 4.4.4 to determine whether impacts from the Project on these resources would be significant.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts, Plant Species

Two listed plant species are documented to occur in the Project Area: Santa Barbara honeysuckle and Nuttall's scrub oak. Eight additional listed plant species have a "High" or "Moderate" potential to occur in the Project Area. Impacts to these special-status plant species would be avoided by direct grading and construction impacts where possible; the potential of these impacts would be reduced to less than significant by incorporating APMs BIO-1, BIO-2, and BIO-3.

One special-status plant community was found in the Project Area: the Southern California Black Walnut Woodland community. Small areas of this community are found in Segments 3B and 4. Impacts are not expected at a population level for this type of community. However, some individuals in this community may be adversely impacted during rehabilitation of access roads or construction of temporary or permanent drilling pads or crane pad/turnaround areas; these impacts could be realized from trimming of branches, grading of adjacent soils, and other activities necessary to gain access to subtransmission structure sites. As described further below, SCE would obtain applicable permits for tree trimming and removal activities; work approved by issued permits would be conducted to minimize impacts to both individual trees and the community. Compliance with permit conditions and incorporation of APMs BIO-1, BIO-2, and BIO-3 would reduce potential impacts to this special-status plant community to less than significant levels.

Construction Impacts, Wildlife Species

Six special-status wildlife species are documented to occur in the Project Area: Arroyo chub, Cooper's hawk, golden eagle, northern harrier, white-tailed kite, and loggerhead shrike. Thirteen additional special-status wildlife species have a "High" or "Moderate" potential to occur in the Project Area.

The Project would not have a substantial adverse effect either directly or through habitat modifications on any of the six special-status animal species documented to occur in the Project Area. The Project Area contains suitable habitat for arroyo chub, Cooper's hawk, and loggerhead shrike, and suitable foraging habitat (but not suitable nesting or maternity colony habitat) for golden eagle, northern harrier, and white-tailed kite.

Direct and indirect impacts to arroyo chub may be realized from the use of the wet-crossing on Cañada Larga. Direct impacts are projected to be negligible because it can be reasonably assumed that arroyo chub individuals will move upstream and downstream across the cement crossing. However, it is not expected that individuals would choose to remain in the crossing area, but would rather choose natural substrates and deeper waters in adjacent areas. Therefore, although there is potential for individual chub to be directly impacted by vehicles using the crossing, this potential is expected to be negligible.

Use of the wet-crossing could result in indirect impacts to arroyo chub as a result of habitat changes, particularly increases in turbidity or sediment discharge as crossing vehicles disturb sediments that may settle on the cement crossing. These potential sediment releases are expected to be extremely localized and temporary, and are not expected to be greater than those caused by storm flows, cattle crossing, and the vehicular use of wet-crossings of the channel at other locations. In addition, these sediment releases are not expected to create conditions that would exceed the physiological threshold of the species or eggs that are adapted to survive highly turbid and hypoxic conditions. Because impacts to habitat as a function of increased turbidity or sediment discharge resulting from the crossing are expected to be temporary, minimal, localized, and less than similar impacts from natural events, impacts to arroyo chub would be considered adverse but less than significant.

Habitat used by Cooper's hawk, loggerhead shrike, golden eagle, northern harrier, and white-tailed kite may be temporarily impacted due to vegetation trimming or removal for the construction and use of crane pad/turnaround areas, and some habitat may be lost across the approximately 19.7-mile length of Segments 3A, 3B, and 4 as a function of access road rehabilitation or the construction of new spur roads. Construction activities across the Project may discourage foraging within the immediate vicinity of an active work site; this disruption in foraging is expected to be extremely localized and temporary. The limited amount of habitat loss relative to the availability of habitat in the region, and the large area of potentially suitable foraging habitat in the immediate vicinity, indicates that impacts on these species would be considered adverse but less than significant.

The Project Area contains suitable habitat for American badger, ringtail, California legless lizard, coast horned lizard, two-striped garter snake, sharp-shinned hawk, song sparrow, mule deer, and mountain lion. Small areas of habitat used by these species may be temporarily impacted due to vegetation trimming or removal, or the construction and use of a temporary construction pad, and small areas of habitat may be lost as a function of access road rehabilitation or the construction of new spur roads or permanent crane pads. Due to the limited amount of habitat loss relative to the availability of habitat for these species in the region, impacts on these species would be considered adverse but less than significant.

The Project Area provides suitable foraging habitat for peregrine falcon and pallid bat, but not suitable nesting or maternity colony habitat. The construction of the Project may temporarily impact foraging opportunities for these species. Although construction activities may discourage use of the area within the immediate vicinity of an active work site, this disruption in foraging is expected to be extremely localized and temporary in nature. Impacts on foraging habitat for these species would be considered adverse, but would not be expected to appreciably affect individuals or the overall populations of these species given the large area of potentially suitable foraging habitat in the immediate vicinity. Therefore, impacts on these species would be considered less than significant.

The Project Area provides suitable habitat for San Diego desert woodrat. This species may be directly impacted by removal of middens during grading activities, and from temporary degradation of habitat due to vegetation trimming or removal. Though direct impacts to individual San Diego desert woodrat may be considered adverse, the Project would result in only a limited amount of habitat loss relative to the availability of habitat for this species in the region. With implementation of best management practices (BMPs) and incorporation of species-specific measures detailed in APM BIO-5, potential impacts to San Diego desert woodrat would be reduced to less than significant levels.

The Project Area provides suitable habitat for nesting birds/raptors. Activities such as grading, vegetation trimming or removal, general Project-related noise, or vibration could result in construction-related impacts to nesting birds/raptors, including potential disruption of nesting activity or destruction of active nests. In addition, it is anticipated that there may be some indirect noise-related impacts to wildlife during construction of the Project. Noise levels at each construction location are expected to increase over present levels during construction of the Project. These temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and/or denning activities for wildlife species. Wildlife species stressed by noise may disperse from the habitat located in the vicinity of the selected site. This impact is considered adverse but less than significant; therefore, no APMs are proposed.

Construction disturbance during the breeding season (February 1 through August 31) that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment, would be considered a “take” by USFWS under the MBTA, as well as by CDFG under CFG Codes 3500-3516, and 3800 (see Regulatory Setting). With implementation of BMPs and incorporation of APMs BIO-1, BIO-3, and BIO-4, potential impacts to nesting birds would be reduced to less than significant levels.

Portions of Segments 1, 3B, and 4 provide suitable foraging and nesting habitat for burrowing owl, and this species has been documented as a migrant or winter visitor in the vicinity of the Project. Impacts to foraging or nesting burrowing owls would be considered adverse according to the MBTA and CFG Code Sections 3500-3516, and 3800. With implementation of BMPs and incorporation of APMs BIO-1, BIO-3, and BIO-6, potential impacts to burrowing owl populations would be reduced to less than significant levels.

<u>Operation Impacts, Plant and Animal Species</u>

Operation of the Project would involve periodic inspection of the subtransmission structures, conductor, telecommunications cable, and substation infrastructure, and maintenance of access and spur roads and areas around subtransmission structures (e.g., grading, vegetation removal) to enable safe access. Inspection and maintenance activities would be infrequent and confined to previously disturbed areas, and would be of much lower intensity than construction-related activities described above. Accordingly, these activities are not projected to have any substantial adverse effect on any candidate, sensitive, or special-status species.

The Project Area is located in the Pacific Flyway, a major north-south avian migratory corridor that extends along the coast of the Pacific Ocean from Alaska to Patagonia, and provides suitable foraging habitat for many resident and migratory avian species. The installation of marker balls on conductor and lighting of towers per Federal Aviation Administration (FAA) regulations could result in disruption of nocturnal migration patterns. If marking of conductors and/or lighting of towers is recommended by the FAA, USFWS recommendations in Service Interim Guidelines for Recommendations on Communications Tower Siting, Construction, Operation, and Decommissioning would be considered (USFWS 2000).

The infrequent nature of operations-related activities and the consideration of USFWS recommendations in the design of structure lighting and/or conductor marking would result in less than significant impacts from operation of the Project under this criterion.

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

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Riparian habitats identified by, and that may come under the jurisdiction of, USFWS or CDFG are found in Segments 1, 2, 3A, 3B, and 4. As presented above in Section 4.4.2, multiple existing crossings of waterbodies are currently used to access the subtransmission infrastructure. Of these, construction activities related to the Project may potentially affect jurisdictional waters in Segment 4.The riparian habitats associated with these waters may be affected by trimming of riparian vegetation and grading/alteration of streambanks and streambeds to facilitate the movement of heavy construction. Impacts from grading, trimming, or removal of plants within these communities may be adverse. However, many of these impacts are expected to be temporary as plants grow and become reestablished in disturbed areas. Implementation of the BMPs and incorporation of APMs BIO-1, BIO-2, and BIO-3 would reduce potential impacts to less than significant levels. In addition, compliance with terms of any required SAA with CDFG would serve to further mitigate impacts.

Small areas of Southern California Black Walnut Woodland, considered a sensitive community by CDFG, are found in Segments 3B and 4. No new spur roads or pads would be constructed within the walnut woodlands; individual walnut trees may be impacted by trimming or removal of branches along existing access roads or pads, grading of adjacent soils, and other activities necessary to gain access to subtransmission structure sites. SCE would obtain applicable permits for tree trimming and removal activities; work approved by issued permits would be conducted to minimize impacts to both individual trees and the community. Compliance with permit conditions, implementation of BMPs, and incorporation of APMs BIO-1, BIO-2, and BIO-3 would reduce potential impacts to this sensitive community to less than significant levels.

Operation Impacts

Operation of the Project would involve periodic inspection of the subtransmission structures, conductor, telecommunications cables, and substation infrastructure, and maintenance of access and spur roads and areas around subtransmission structures (e.g., grading, vegetation removal) to enable safe access. Normal inspection activities include the use of light-duty vehicles (pickup trucks) travelling along access and spur roads; these inspection activities would not have a substantial adverse impact on riparian habitat or other sensitive natural community. Operation of the Project would also likely require periodic maintenance of access and spur roads and areas around subtransmission structures. This periodic maintenance may require trimming of trees to ensure safe operation of the subtransmission lines and to ensure access for routine and emergency maintenance. As discussed below, this maintenance work would be conducted in accordance with applicable Ventura County and Santa Barbara County ordinances, and applicable permits would be obtained for any tree trimming. Compliance with the terms of such permits would ensure that substantial adverse affects are avoided.

Long-term access and spur road maintenance may affect riparian habitat in Segment 4, and Southern California Black Walnut Woodland communities in Segments 3B and 4. As presented above, impacts to riparian habitats are expected to be temporary as plants grow and become reestablished in disturbed areas after maintenance. Implementation of then-current BMPs, and compliance with applicable regulations then in effect, would ensure that substantial adverse affects are avoided.

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?

Assessment Summary: Less than Significant Impact

Construction Impacts

While additional surveys remain to be completed, this analysis conservatively assumes that some impacts could occur to features that fall under the jurisdiction of the USACE and/or CDFG (Table 4.4-2). Adverse impacts could result from the placement of fill in wetlands during road rehabilitation activities, while beneficial impacts would be realized from the replacement/upgrading of existing degraded culverts in these areas, thus reducing hydrological interruption. Impacts to federally protected wetlands would be less than significant with the implementation of BMPs, compliance with conditions of applicable State and federal permits covering activities in wetlands, and incorporation of APM BIO-1, BIO-2, and BIO-3.

Operation Impacts

Operation of the Project would involve periodic inspection of the subtransmission structures, conductor, telecommunications cables, and substation infrastructure, and maintenance of access and spur roads and areas around subtransmission structures (e.g., grading, vegetation removal) to enable safe access. Normal inspection activities would have no impact on wetlands. Long-term access and spur road maintenance may require the replacement of culverts or other features that could affect federally protected wetlands. Any such work would be permitted by the appropriate regulatory agency(ies) (i.e., the USACE, CDFG, and/or the appropriate RWQCB). The magnitude of adverse impacts to federally protected wetlands during operations would be reduced to less than significant by implementing then-current BMPs and complying with conditions of applicable State and federal permits covering activities in wetlands.

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction activities may cause native resident or migratory wildlife species to temporarily displace from active construction sites due to noise or human activities. This may affect wildlife movements in known migratory corridors and may affect the movement of native resident wildlife species. These impacts are expected to be isolated and temporary, and therefore locally adverse, but minor. Therefore, less than significant impacts would occur under this criterion.

Operation Impacts

Operations-related activities may cause native resident or migratory wildlife species to temporarily displace due to noise or human activities. This may affect wildlife movements in known migratory corridors, and may affect the movement of native resident wildlife species. These impacts are expected to be isolated and temporary, and therefore locally adverse, but minor. Therefore, less than significant impacts would occur under this criterion.

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

Assessment Summary: Less than Significant Impact

Construction Impacts

Santa Barbara County's Deciduous Oak Tree Protection and Regeneration Ordinance is designed to certain deciduous protect oak trees located outside the Coastal Zone; the county’s CLUP contains provisions to protect certain deciduous oak trees within the Coastal Zone. Section 35.910 of the ordinance states that

> “Where a public utility or other public entity has an easement over a portion of a lot, and if a public utility or other public entity removes protected oak trees within a utility or other public easement located over a portion of a lot, those protected oak tree removals shall not be counted toward the thresholds set out in Section 35-908 or in Section 35-909 for the remainder of the lot.”

Consequently, the Project would not exceed the thresholds in Section 35-909 applicable to non-agricultural removal of oaks, and thus would not be subject to the permit requirements in Section 35-909.2. Therefore, the Project would not conflict with this ordinance.

The Santa Barbara County CLUP’s Policy 9-35 calls for the protection of oak trees and states that “[a]ll land use activities…should be carried out in such a manner as to avoid damage to native oak trees.” The Project would carry out tree trimming and/or tree removal activities in accordance with applicable State and local regulations and the terms of any applicable permits. Therefore, the Project would avoid unnecessary damage to native oak trees, and thus would not conflict with this Plan.

Ventura County’s Tree Protection Regulations (Section 8107-25) “encourage the responsible management of [trees] by employing … recognized conservation techniques to achieve an optimal cover of healthy trees of diverse ages and species while practically reconciling conflicting demands for alternative uses.” Section 8107.25-5 states that the following activities may occur without the need for a permit:

> c. “Pruning and trimming of living limbs and roots, each of which is less than 20% of the tree trunk’s girth, provided such trimming does not endanger the life of the tree, result in an imbalance in structure, or remove more than 20% of its canopy or the root system.”
>
> …
>
> e. “Pruning and trimming living limbs and roots each of which exceeds the size set forth in ‘c’ above by a Public Utility Company or its contractors for the purpose of protecting the public and maintaining adequate clearance from public utility conduits and facilities.”

Any activities not covered under (c) or (e) above would be subject to a ministerial tree permit per Section 8107-25.6.

Work to be conducted in Segments 1 and 2 in Ventura County would not involve any tree trimming because of the absence of trees in these areas and because this work would use existing access and spur roads and previously established pads.

Construction activities conducted in Segment 3A required the trimming of trees along existing access and spur roads and previously established pads, and the trimming and/or removal of trees to develop a new access road and crane pad/turnaround area. Similar impacts would be realized due to construction activities that would be conducted in Segments 3B and 4. It is anticipated that trees would be potentially impacted at approximately 15 individual structure installation sites and along portions of the existing access roads. Several species found along existing access or spur roads may require trimming, much of which is not expected to be greater than what normally occurs during routine maintenance of these roads consistent with CPUC G.O. 95, Rule 35 and California Public Resources Code Sections 4292 and 4293. Any tree trimming not covered under (c) or (e) above, and any tree removal activities, would be conducted in compliance with a ministerial permit obtained by SCE for this work.

For tree trimming activities in Segments 3B and 4, SCE would obtain any applicable permit(s) from either Santa Barbara County or Ventura County, and would comply with the terms of those permit(s). In addition, SCE would implement APMs BIO-1, BIO-2, and BIO-3 to reduce impacts to individual trees, and to local tree species populations. Through the avoidance and mitigation of adverse effects to individual trees and tree species populations, impacts would be less than significant with implementation of APMs, and the Project would not conflict with local policies or ordinances protecting biological resources, including tree preservation policies or ordinances.

<u>Operation Impacts</u>

Operation of the Project would require periodic maintenance of access and spur roads and areas around subtransmission structures. This periodic maintenance may require trimming of trees to ensure safe operation of the subtransmission lines and to ensure access for routine and emergency maintenance. This maintenance work would be conducted consistent with CPUC G.O. 95, Rule 35 and California Public Resources Code Sections 4292 and 4293, and as presented above would not conflict with ordinances in either county.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Assessment Summary: No Impact

<u>Construction Impacts</u>

No Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans exist for the Project Area. Therefore, there would be no impact as a result of construction of the Project.

Operation Impacts

No Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans exist for the Project Area. Therefore, there would be no impact as a result of operation of the Project.

4.4.6 Applicant Proposed Measures

Incorporation of the following APMs will reduce any potential impacts to biological resources to a less than significant level or further reduce already less than significant impacts. APMs have been designed to minimize or eliminate potential impacts to special-status plant and wildlife species present in the surrounding area, as well as to more common native wildlife species.

BIO-1: Pre-construction biological surveys for special-status plants and wildlife would be conducted 0 to 45 days before the start of construction by a qualified biologist in all laydown/work areas. If a special-status species is encountered, biologists would record the location, take a photograph, and delineate a buffer area, as appropriate, where activities should be restricted for the protection of the resource. If impacts to the special-status plant(s) or wildlife cannot be avoided, SCE would consult with the appropriate resource agency or agencies.

BIO-2: To the extent feasible, SCE would minimize impacts and permanent loss to native vegetation types, vegetation that may support special-status species, and known populations of special-status plants at construction sites by avoiding construction activities in areas flagged to be avoided. If unable to avoid impacts to native vegetation, a project revegetation plan may be prepared in consultation with the appropriate agencies for areas of native habitat temporarily impacted during construction.

BIO-3: Biological monitors would monitor construction activities in wildlife habitat areas that may contain special-status species, critical habitat for those species, or unique resources to ensure such species, habitat, or resources are avoided.

BIO-4: SCE would conduct Project-wide nesting bird surveys. SCE would, if feasible, remove trees, vegetation, subtransmission structures, and poles outside of the nesting season. If a tree, subtransmission structure, or pole containing a raptor nest must be removed during nesting season, SCE biologists would consult with the appropriate resource agencies. If work is scheduled to take place in close proximity to an active nest, appropriate nesting buffers or other measures would be established based on consultation with the appropriate resource agencies or an adaptive management plan to address nesting birds which would be subject to the approval of the CDFG. This Project-specific Nesting Bird Management Plan would allow for implementation of species-specific buffer modification guidelines provided by a qualified utility avian biologist; nest buffers would be determined by species sensitivity to disturbance, the nature of the construction activity, and the environmental conditions surrounding the nest.

BIO-5: During the pre-construction surveys, a qualified biologist would identify any potential San Diego desert woodrat middens within 50 feet of Project activities. At the discretion of a qualified biologist, an exclusion buffer would be established around any woodrat middens that can be avoided, and these exclusion zones would be flagged or fenced to protect the nest during the breeding season (October through June). If a woodrat midden cannot be avoided by the Project's activities, an appropriate resource agency would be consulted regarding a potential buffer reduction.

BIO-6: A pre-construction, focused burrowing owl protocol survey shall be conducted no more than 30 days prior to commencement of ground-disturbing activities within suitable habitat to determine if any occupied burrows are present. If occupied burrows are found, adequate buffers shall be established around burrows based on a Project-specific nesting bird management plan or consultation with the appropriate agencies. If occupied burrows cannot be avoided, an appropriate relocation strategy would be developed in conjunction with the CDFG and may include collapsing burrows outside of nesting season and using exclusionary devices to reduce impacts to the burrowing owl. Biological monitors would monitor all construction activities that have the potential to impact active burrows.

4.5 Cultural Resources

This section describes the cultural resources in the Project Area based on the technical reports by Conkling 2012 and Switalski and Bardsley 2012. Potential impacts to cultural resources (i.e., archeological and historical resources) are discussed first, followed by a discussion of paleontological resources.

For the purposes of this section, the Project Area is defined as the area encompassing all of the following: 1) a 100-foot (approximately 30-meter) wide buffer on either side of the centerline of the subtransmission line corridor; 2) a 100-foot (approximately 30-meter) radius around each structure; and 3) a 33-foot (approximately 10-meter) buffer on either side of the proposed and existing access roads.

4.5.1 Environmental Setting

The Project Area is located in Santa Barbara County and Ventura County, between the City of San Buenaventura (Ventura) to the east and the City of Carpinteria to the west. The elevation of the Project Area ranges from 180 feet (55 meters) above mean sea level (amsl) near Carpinteria to approximately 2,100 feet (640 meters) amsl near Rincon Mountain in Ventura County. The prominent mountain ranges visible from the Project Area are the Santa Monica and San Gabriel Mountains. Also visible are the Channel Islands, geologic extensions of the Santa Monica Mountains, which lie on an east-west axis directly south-southwest of the Project Area and are separated from mainland California by the Santa Barbara Channel. The dominant range in the Project Area consists of the Santa Ynez Mountains, which roughly parallel the coastline from Ventura County to Santa Barbara County (Schoenherr 1992).

The Santa Ynez Mountains are relatively young, and were uplifted in the late Miocene Epoch about 5 million years ago along the Santa Ynez fault. Being relatively young, the slopes are steep and the topography is extremely rugged. The northern side of the mountains is generally steeper above the trace of the fault, while the gradient of the southern side and the Project Area is markedly gentler. The climate of the mountain range is Mediterranean. Summers are warm and almost entirely rainless, except for occasional monsoonal showers in August and September, though in most years there is no rain between May and October. Winters are mild and can be rainy, with more than 40 inches of rain sometimes falling in the mountains, and approximately 15 inches typically falling at lower elevations and on the coastal plain below (Schoenherr 1992). Normally, this would produce a relatively wet environment, but because the slopes also receive direct sunlight, the amount of evaporation is relatively high. As a result, only drought-tolerant plants can survive despite considerable rainfall. For this reason, Coastal Sage Scrub habitat thrives to extreme elevations along the south slope of the Santa Ynez Mountains (i.e., up to 4,000 to 5,000 feet or 1,220 to 1,525 meters).

The oldest exposed rock formations within the Santa Ynez Mountains belong to the Franciscan Formation (Norris and Webb 1990). This particular formation includes a number of marine sedimentary rocks, including deep water Franciscan cherts, basalt, serpentines, and some ultrabasic crystalline variants. Some of the sandstone and conglomerate materials are part of the Casitas or Sespe Formations that can be found at higher elevations.

4.5.1.1 Cultural Setting

Prehistoric Setting

The local prehistoric chronology is divided into four major periods: Paleo-Indian, Early Period, Middle Period, and Late Period. It is generally accepted that humans entered the Americas during the latter part of the Wisconsin glaciation between 40,000 and 20,000 years before present (B.P.). The earliest unquestioned evidence of human occupation in southern Santa Barbara County is dated to between 10,000 to 8,000 B.P. (Erlandson and Colten 1991). Paleo-Indian groups during this time may have focused on hunting Pleistocene megafauna, including mammoth and bison. Plants and smaller animals were undoubtedly part of the Paleo-Indian diet as well, and when the availability of large game was reduced by climatic shifts near the end of the Pleistocene, the subsistence strategy changed to a greater reliance on these resources.

Post-Pleistocene changes in climate and environment are reflected in the local archaeological record by approximately 8,000 B.P., the beginning of the Early Period, as defined by Chester King (1981, 1990). The Early Period of the Santa Barbara Channel mainland was originally defined by Rogers (1929), who called it the “Oak Grove” Period. The diagnostic features of this period are the mano and metate milling stones, which were used to grind hard seeds. Toward the end of the Early Period, sea mammal hunting appears to have supplemented subsistence strategies (Glassow et al. 1988).

The Middle Period (3,350 to 800 B.P.) is characterized by larger and more permanent settlements, related to a generally wetter environment. Materials from Middle Period sites reflect a greater reliance on marine resources and include marine shells, fish remains, and fishhooks. A major shift in vegetable food exploitation occurred, as the mano and metate milling stones were replaced by stone mortars and pestles. This indicates a transition from seed gathering to oak tree acorn gathering and processing, a result of cooler temperatures and more expansive oak woodland habitats. Toward the end of this period, the plank canoe was developed, making ocean fishing and trade with the Channel Islands safer and more efficient (Arnold 1987). Terrestrial resources continued to be exploited as evidenced by the presence of contracting-stemmed and corner-notched projectile points from Middle Period sites (Bamforth 1984).

The Late Period (800 to 150 B.P.) was a time of increased social and economic complexity. The Santa Barbara coastal areas, along with the western areas of Ventura County and the Los Angeles Basin, were occupied during this time by the early Chumash culture. During this period, a highly advanced fishing and hunting strategy developed that included the exploitation of a wider variety of fish and shellfish. These new subsistence strategies, coupled with the appearance of the bow and arrow, enabled a substantial increase in local populations, the development of permanent settlements, and a “money” economy based on the shell trade. The Chumash were highly sea-oriented at this time, and both deep-sea fishing and marine mammal hunting became prominent subsistence strategies which required the production of capable blue-water vessels. Small projectile points, frequently side-notched, are typical in the bow and arrow-based toolkit. Specialty items, such as basketry, ollas or large water vessels, shell and stone beads, and shell and bone fishhooks appear, as does elaborate rock painting (Grant 1965). However, Chumash culture changed dramatically with the establishment of Mission la Purísima Concepcíon and the Missions of San Buenaventura, Santa Barbara, and Santa Ynez.

Ethnographic Setting

Europeans first encountered the Chumash in 1542, when Cabrillo landed on the shores of Ventura. The Spanish later contacted the Chumash in 1602, when Vizcaíno entered the Santa Barbara Channel (Grant 1978a). The pre-European-contact Chumash probably numbered between 10,000 and 15,000 individuals. Anthropologists and linguists note that the Hokan language stock of the Chumash appears to be one of the oldest language groups in California, suggesting that Chumash ancestors must have been present in the area for at least several thousand years prior to European contact. At the time of contact, the Chumash ranged from San Luis Obispo to Malibu Canyon along the coast, inland as far as the southwestern margin of the southern San Joaquin Valley, and out to the Channel Islands. There were at least six Chumash languages. The Project Area is located within the ethnographic boundaries of the coastal Ventureño Chumash. The Chumash were incorporated rather quickly into the Spanish mission system, which precipitated the rapid demise of their native culture and language. By the time anthropologists were interviewing Chumash individuals, most of their culture had long since disappeared. By the early 1800s, nearly the entire Chumash population, except for individuals who had escaped to the interior, was incorporated into the mission system (Grant 1978a). The early Spanish travelers provided valuable details concerning Chumash dwellings and to some extent their subsistence patterns.

The Chumash lived in huts described as hemispherical in shape, with many containing internal subdivisions, possibly for privacy. Some of the larger dwelling structures could house up to 70 people, and the Spanish noted that many villages also contained sweathouses. The Chumash were composed of patrilineal descent groups, with most villages having one "chief" and three or four "captains" (Grant 1978b). Most Chumash marriages were monogamous, except for village chiefs. Puberty rites are not well known, although girls entering puberty were not allowed to eat meat and could not look into a burning fire, and boys were taken out at night and given a psychotropic concoction made from Datura root to induce visions (Grant 1978b; Harrington 1942).

The Chumash had a high level of material culture and craftsmanship, including intricate basketry, woodcarving, fine stone objects, well-developed rock art, and excellent oceangoing plank canoes (tomol) that highly impressed Spanish explorers. The Coastal Chumash had an extensive trading network that reached well beyond the Santa Barbara Channel region. The dietary staple for all Chumash groups was the acorn, though the addition of pine nuts, soap root, berries, mushrooms, seeds, mollusks, fish, and game varied the diet. Coastal Chumash village sites were often located at the mouths of creeks and rivers, usually on higher ground just above the shoreline (Grant 1978b). Smaller hunting camps and resource exploitation sites were located in smaller perennial creek areas, in the upper elevations, and in the immediate interior (Landberg 1965).

In 1775, Spaniard Pedro Fages commented that the Chumash were very inclined to trade, barter, and engage in general commerce (Erlandson 1994). Johnson also notes that the Spanish observed persistent Chumash intervillage warfare (McLendon and Johnson 1999), possibly due to raids of neighboring groups' stored resources (Landberg 1965).

Historic Setting

The historic occupation of the project vicinity can be divided into several settlement periods: the Mission Period (A.D. 1769 to 1830), the Rancho Period (ca. A.D. 1830 to1865), and the American Period (ca. A.D. 1865 to present).

An expedition led by Juan Bautista de Anza passed through the Santa Barbara and Ventura area in the spring of 1776. A presidio was established at Santa Barbara in 1782 to fill the gap between the previously established presidios in Monterey and San Diego. This established a permanent European presence in the area, and was followed shortly by the establishment of the Mission San Buenaventura in Ventura by Father Junipero Serra that same year. Personally dedicated by Father Serra, the Mission San Buenaventura had a strong effect on the region. Subsequent construction of Mission Santa Barbara in 1786, Mission la Purísima Concepcíon in 1787, and Mission Santa Ynez in 1804 altered both the physical and cultural landscape of the region, and the neighboring Chumash area began to adopt many phases of mission life (Schaefer 2004). The economies of the Santa

Barbara and San Buenaventura Missions were similar to other California missions: the Chumash practiced agriculture (cultivating corn, wheat, and vineyards) and raised cattle and sheep. A 7-mile long aqueduct was constructed to provide Mission San Buenaventura with water from the local mountains. Both missions soon were renowned for their crops, ranging from exotic fruits to figs and coconuts. Over time, the introduction of the Spanish in the area proved to be detrimental to the health of the Chumash populations, as they were exposed to European diseases to which they had no immunity. Chumash populations went into a steep decline throughout this period.

When Mexico gained its independence from Spain in 1821, Alta California became part of the new country. Approaches to church control changed as government control devolved to Mexico City and to the Mexican territorial and state governors. With independence, the Mexican government began secularizing mission properties until 1833. Missions were turned into parish churches, and regional commissions were established to dispose of the properties and resettle the Native Americans affiliated with the missions. Mexican government policy was to give mission properties and other unclaimed land to prominent citizens who would be required to build homes and facilities and develop the properties. The period of California history known as the Rancho Period began as a class of wealthy landowners known as "rancheros" controlled the state. They built large ranches based on cattle hide and tallow production.

By 1850, California had become part of the United States, and the American Period of influence in the Santa Barbara and Ventura regions began by 1865. After the Civil War, Santa Barbara began to change. Victorian houses soon outnumbered Spanish Colonials. Agriculture became an important economic factor in the area, with a variety of produce grown because of the favorable climate for almost any crop. Orchards were prevalent, with the first avocado trees planted in the region in the 1870s. Commercialization of the avocado in the United States is historically credited to the Santa Barbara area. In 1871, Judge R. B. Ord carried three saplings back from Mexico and planted them in his garden near the corner of De La Vina and Canon Perdido Streets. Kinton Stevens planted 120 trees in Montecito in 1895, thus creating the first commercial avocado orchard in the United States (Whiteman and Smith 2007). Around 1896, oil was discovered at the Summerland Oil Field, and the region along the beach east of Santa Barbara sprouted numerous oil derricks and piers for drilling offshore (Baker 2003). This was the first offshore oil development in the world, and production continues in the region to the present day. Intensive land-based oil development also occurred in both Santa Barbara and Ventura counties, and oil development and production continues through the present day.

4.5.2 Summary of Findings from Research Conducted for the Project

4.5.2.1 Cultural Resources Records Search

Methods

Cultural resources record searches were conducted at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton on February 27, 2012, and at the Central Coast Information Center (CCIC) located at the University of California, Santa Barbara on March 1, 2012. The purpose of the records search was to determine the extent of previous investigations within 0.5 miles of the subtransmission corridor, and to determine whether previously documented prehistoric or historic archaeological sites, isolated findings, architectural resources, cultural landscapes, or ethnic resources exist within the Project Area. The reviewed documentation included survey and evaluation reports, archaeological site records, historic maps, the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), and the California State Historic Resources Inventory listings (HRI).

Results

The results of the records search indicated that 13 cultural resource studies have been previously conducted within portions of the Project Area (Table 4.5-1), including one study conducted for the Project that occurred directly within the alignment of Segments 3A, 3B, and 4 (Schmidt 2006). An additional 54 studies have been conducted within 0.5 miles of the Project Area.

Five previously documented cultural resources were believed to be within the Project Area: CA-VEN-979, 56-100200, CA-VEN-1109H, CA-SBA-107, and CA-SBA-3814. These resources are described under Section 4.5.2.3, Cultural Resources Pedestrian Survey. In addition, 33 previously documented cultural resources have been identified within 0.5 miles of the Project Area. One of these resources contained human remains. The site was initially documented by Biermann in 1949, and subsequently excavated by Greenwood and Browne in 1963.

Table 4.5-1: Cultural Resources Studies Previously Conducted within the Project Area

Author	Year	Results	Report Number	Segment
Chambers Group	1982	Positive	VN-00421	1
Foster et al.	1989	Positive	VN-00731	1
NCPA	1989	Positive	VN-00773	1
Singer, C.	1986	Negative	VN-00494	1
Fleagle, D.	1998	Positive	VN-01675	1, 2
Santoro, L., and G. Toren	1992	Negative	SR-1288	3A
Schmidt, J.	2005	Negative	-	3A
Wilcoxon, L.	1976	Positive	SR-0850	3A
Waldron, W.	1986	Positive	SR-1154	3A, 3B
Maki, M.	2000	Positive	SR-2573	3A, 4

Author	Year	Results	Report Number	Segment
Maki, M.	2002	Positive	SR-2848	3A, 4
Schmidt, J.	2006	Negative	-	3B, 4
Wlodarski, R.	2008	Positive	VN-02791	3B, 4

4.5.2.2 Native American Notification

At the request of SCE, the Native American Heritage Commission (NAHC) conducted a search in early 2012 of the Sacred Lands File to identify cultural resources or areas of concern to Native Americans within the vicinity of the Project Area. The NAHC's search did not indicate the presence of any known cultural resources within the vicinity of the Project Area, and provided a list of 21 Native American individuals/organizations that may have knowledge of cultural resources in the Project Area.

SCE sent letters to all recommended contacts on February 27, 2012. To date, responses noting interest have been received from two individuals. Mr. Freddy Romero (Santa Ynez Band of Mission Indians) requested a copy of the cultural resources technical report after the document is finalized and prior to the circulation of CPUC's CEQA document for the Project. Ms. Beverley Salazar-Folkes (Chumash, Tataviam, Fernandeño) requested via phone that a monitor be present during ground-disturbing activities (see Appendix C). SCE attempted follow-up phone calls to the remaining individuals between April 11 and April 16, 2012. Of the individuals contacted via phone, Suzy Ruiz-Parra (Chumash) requested that an archaeological monitor be present if earth-disturbing activities occurred near archaeological sites, and two additional individuals (Randy Guzman Folkes [Chumash, Tataviam, Fernandeño Shoshone Paiute, Yaqui] and Melissa Parra-Hernandez [Chumash]) requested that the Project information be resent to them; this information was resent in early 2012. To date, no other responses have been received.

4.5.2.3 Cultural Resources Pedestrian Survey

Methods

A pedestrian survey of the Project Area was conducted between March 12 and April 5, 2012. Due to the mountainous terrain, dense vegetation, and limited access throughout much of the Project Area, a survey of the entire alignment was not possible. Each tower surveyed was approached by foot from the nearest point of access, generally SCE access roads, ranch roads, or private access roads. Due to the varying degree of slope, terrain, access constraints, and the different nature of existing roads (paved, dirt, gravel), survey crews employed distinct methods for surveying different road segments (Table 4.5-2).

Table 4.5-2: Survey Methodology Used for Access Roads within Project Area

Survey Category	Description	Potential Impact	Survey Methodology	Length
I	Existing paved or gravel roads. Roads located on steep (>30°) slope, and existing private roadways, such as driveways near private residences.	No or very little impact	As determined using the surveyors' professional judgment, spot checks were conducted at locations along routes and areas that could potentially yield archaeological resources, or areas where resources were previously identified/recorded. Very limited survey coverage.	10.8 miles (130 ac.)
II	Ranch/orchard roads within citrus/avocado orchards or ranches. Moderately disturbed.	Moderate impact within an already disturbed context	As determined using the surveyors' professional judgment, more frequent spot checks (20 to 25 m. transects) along routes that could yield resources associated with ranching/farming or previously identified/recorded resources. Moderate survey coverage.	36.7 miles (437 ac.)
III	Roads proposed for construction, roads near existing waterways, and roads that appear to intersect areas with no or very little previous disturbance.	Potentially high impact to areas with little or no previous disturbance	Complete 100% pedestrian survey with 10 to15 m. transects.	23.9 miles (285 ac.)

Each accessible structure location, 60.6 linear miles of access roads, and approximately 9 miles of the subtransmission corridor were inventoried for cultural resources. Survey crews conducted a limited inventory of an additional 10.8 miles of access roads that were either paved or located on very steep slopes (Survey Category I). Twenty-one structure locations, 9.1 miles of access roads, and approximately 24 miles of the subtransmission corridor were not inventoried due to inaccessible terrain, washed out access roads, or access restrictions from private landowners. [20]

During the survey, all five previously recorded resources were addressed, and an attempt was made to find them in the field. In addition, three new resources were recorded. Table 4.5-3 lists the new resources and those originally recorded within the Project Area. CA-VEN-979 is located entirely within the Project Area; this site was determined to have been destroyed prior to this survey, and therefore was not evaluated for eligibility for

[20] Three structure locations and 0.3 miles of access roads on land within the Los Padres National Forest will be surveyed pending coordination with the Forest Service. The findings of this survey would be captured in a subsequent technical report.

listing in the CRHR. The section of CA-VEN-1109H within the Project Area had also been destroyed, and therefore is not eligible for inclusion in the CRHR. Two sites (CA-SBA-107 and CA-SBA-3814) were determined to be located outside of the Project Area. Three new historic resources were also documented; two of the resources (SBCRP-1, SBCRP-2) were determined to be ineligible for the CRHR and one resource (SBCRP-3) requires a formal evaluation of its eligibility to the CRHR.

Table 4.5-3: Cultural Resources within the Project Area

Trinomial/ Temporary	Primary	Component	Description	Segment	Comments
CA-VEN-979	56-000979	Prehistoric	Lithic Deposit	1	Site is currently destroyed
N/A	56-100200	Prehistoric	Pestle (Isolate)	1	Isolate was not relocated
CA-VEN-1109H	56-001109	Historic	Railroad	2	Resource has been destroyed
SBCRP-1*	N/A	Historic	Culvert	4	Ineligible to CRHR
SBCRP-2*	N/A	Historic	Retaining Wall	4	Ineligible to CRHR
SBCRP-3*	N/A	Historic	Santa Clara-Ojai-Santa Barbara 66 kV Subtransmission Line structures	4	Requires formal evaluation for eligibility to CRHR
CA-SBA-107	42-000107	Prehistoric	Rock Shelters	4	Determined to be located outside of Project Area
CA-SBA-3814	42-003814	Prehistoric	Lithic Scatter	4	Determined to be located outside of Project Area

Note:
*Newly Recorded Resource

Segment 1

Survey crews inventoried the area around each tower location in Segment 1. The topography along the alignment was dominated by steep hillsides intersected by ravines and gullies, and each structure was generally situated in an area that was mechanically disturbed and leveled with vegetation cleared for maintenance access.

<u>CA-VEN-979</u>. Site CA-VEN-979 was originally documented as a small lithic scatter with two unidentified bone fragments located on top of a ridge approximately 66 feet (20 meters) from a subtransmission structure location. The current survey did not identify any artifacts that were reported on the original site record, despite the fact that the survey crews were able to match existing features in the vicinity of the mapped location (such as fencelines, gates, and transmission towers) with features depicted on the original site map. Several dirt roads were observed within and adjacent to the site, and the original

recorders noted heavy impacts by road maintenance, cattle trails, and barbed wire (Schmidt and Wishner 1988).Given the site's location and the presence of at least four dirt roads in the area, it appears that the site may have been altered due to grading and/or ranching activities. As the resource appears to be destroyed, it is not eligible for listing in the CRHR.

P-56-100200. Site P-56-100200 was originally recorded as an isolated pestle. The isolate was not relocated during the survey, and no other cultural material was identified within the vicinity of its plotted location. Isolates are not considered significant under CEQA because their context and integrity are limited and because their research potential is exhausted through detailed recording. Therefore, isolates (including P-56-100200) are not considered further in this CEQA review and are not included in the impact analysis.

Segment 2

Four tower locations were inventoried between Santa Ana Road and Casitas Vista Road, and two additional tower locations were examined just west of Casitas Vista Road. Three tower locations were also approached from the western end of Segment 2. Each tower examined is located in a mechanically altered terrain, with leveled ridgetops and vegetation cleared to facilitate easy access. Overall, nine tower locations situated directly south of Lake Casitas were not inventoried due to difficult terrain and dense vegetation. No new cultural resources were identified within the surveyed portion of Segment 2. One previously recorded historic resource was identified west of Casitas Substation.

CA-VEN-1109H. Site CA-VEN-1109H is a historic railroad spur initially constructed by the Ventura River and Ojai Valley Railroad in 1898 and acquired by Southern Pacific in 1899. This railroad spur was previously documented approximately 200 feet (60 meters) west of the Casitas Substation, on the eastern bank of the Ventura River. However, the recent survey revealed that the resource is no longer in existence and a narrow bike path (Ventura River/Ojai Valley Trail) was constructed within its alignment. No evidence of railroad ties, rails, or any other features associated with CA-VEN-1109H was observed within the Project Area.

Segment 3A

Segment 3A was characterized by mostly commercial land use with citrus orchards and farms located along Highway 192. This segment was heavily disturbed from previous construction as approximately 90 percent of Segment 3A is located adjacent to Highway 192. Approximately 0.7 miles of Segment 3A, located between Shepard Mesa Road and Casitas Pass Road (SR-150)/County line, traverses private parcels impacted by residential construction and private orchards. No cultural resources were identified during the survey of Segment 3A.

Segment 3B

In the eastern end of Segment 3B, the terrain consists of a relatively flat area with rolling hills and gently sloping ridgelines currently used for cattle grazing and dominated by open pastures with oak groves located along several intermittent drainages. In the western end of Segment 3B, steep hills with slopes between 40 and 45° and citrus and avocado orchards were encountered, with narrow access roads running between rows of avocado and lemon trees. Overall, 16 tower locations were inventoried along Segment 3B. The remaining 12 towers and associated access roads have not yet been inventoried. No cultural resources were identified within the surveyed portion of Segment 3B.

Segment 4

Survey crews encountered a wide variety of terrain and land uses throughout Segment 4, including residential, commercial, private equestrian facilities, orchards, deep valleys, ridgetops, and densely overgrown ridges and hills. Overall, 62 of 65 structures were inventoried during the survey. Survey crews attempted to locate two previously recorded archaeological resources and identified three new historic resources within Segment 4.

<u>CA-SBA-107</u>. Site CA-SBA-107 was originally recorded as several small rock shelters located near the top of an almost vertical stone cliff. The site was documented in 1927 by D.B. Rogers, who noted "smoke discoloration on all of the caves." Additionally, an asphalt-lined basket was reportedly recovered from one of the rock shelters. Maps on file at the CCIC indicate that the site is located along an existing Segment 4 access road; however, the current survey failed to identify any large outcrops within 0.25 miles of its plotted location. Therefore, the site is believed to be plotted incorrectly, and in actuality it is located outside of the Project Area.

<u>CA-SBA-3814</u>. Site CA-SBA-3814 was documented as a small lithic scatter with fire-affected rock. During the current survey, no cultural material was observed. Based on components in the site description (i.e., a gate and a fence), the site appears to be plotted incorrectly and in actuality it is located outside of the Project Area at least 0.5 miles away.

<u>SBCRP-1</u>. Site SBCRP-1 is a historic period culvert which appears to have been constructed more than 50 years ago. The culvert is composed of a 4-foot wide corrugated pipe with a 6-foot retaining wall located on each side of a north-south trending access road. The feature measures approximately 8 feet (2.4 meters) wide, with a rock wall on each side of the pipe. The culvert appears to be constructed of numerous "sand bags" joined together with poured cement or concrete, forming a slightly curved retaining wall on each side of the road. No artifacts or other features were identified in the vicinity of SBCRP-1. Site SBCRP-1 is located in Santa Barbara County along an existing access road of Segment 4. The resource appears to be part of a road improvement project, which may have been used to access the subtransmission structures that are part of SBCRP-3 located in Segment 4.

SBCRP-2. Site SBCRP-2 is a retaining wall that appears to have been constructed more than 50 years ago. It is located in Santa Barbara County, northwest of the north-south trending access road and approximately 0.25 miles north/northeast of SBCRP-1. The wall is constructed of shaped limestone rocks and measures approximately 6 feet high by 10 feet long (1.8 meters high by 3.0 meters long). Several large (4-foot, 1.2-meter) corrugated pipes are located on the east side of the road, approximately 100 feet (30 meters) from the wall. Similar to SBCRP-1, SBCRP-2 appears to be part of the road improvement used to access the subtransmission structures that are part of SBCRP-3 located in Segment 4.

SBCRP-3. Site SBCRP-3 consists of the subtransmission structures that currently carry a portion of the Santa Clara-Ojai-Santa Barbara 66 kV Subtransmission Line. This historic subtransmission line is located within a 4.1-mile portion of Segment 4 in Santa Barbara County. The documented portion of the subtransmission line is composed of 26 lattice steel towers, each measuring approximately 30 feet (9.1 meters) high, with a base measuring 3 feet by 3 feet (0.9 meter by 0.9 meter). The line appears to have been constructed in the 1930s and is visible on the Ventura, CA (1941) 30-minute series topographic quadrangle. The uniform composition of the towers suggests that relatively few improvements have taken place along the documented portion of the line; however, it is unknown if these are the original towers constructed in the 1930s or their subsequent replacements. Although four subtransmission lines connected to and located within the vicinity of the alignment have been determined not eligible to the CRHR under any criteria (Becker 2012), further evaluation is required to determine the potential eligibility of SBCRP-3.

Other Historical Infrastructure

The proposed project involves work at five substations of historic age: Casitas (1924-1929), Santa Barbara (1925), Carpinteria (1950), Santa Clara (1958/1973) and Goleta (1963).

Carpinteria Substation. The Carpinteria Substation was built in 1950 in a Modernistic style. The substation complex includes a single Control House building that is small in scale and rectilinear in plan with a flat roof and void of windows, and multiple equipment area including Transformers and Switchracks. The substation complex is one of hundreds constructed or put-in-service by SCE in the post-World War II period, and it is not eligible for inclusion on the California Register of Historical Resources or the National Register of Historic Places.

Casitas Substation. Originally constructed between 1924 and 1929 at Casitas Springs to provide service to the unincorporated communities of Ventura, California, the Casitas Substation was initially put in-service in approximately 1924 with 15kV and 60kV Transformer Racks. The complex was expanded through 1929 to include a Craftsman style cottage and garage (1924) for the property caretaker(s), and through the addition of a Classical Revival Substation Building (1929). The Casitas Substation Building appears to be eligible for listing to the California Register of Historical Resources under CRHR criterion 1 (events) and 3 (architecture). The existing Transformer Racks and Switchracks at the property do not appear to contribute to the eligibility of the Casitas Substation Building.

Goleta Substation. The Goleta Substation was built in 1963 in a Modernistic style and was modified in locations in 1964, 1966, and 1967. The substation complex includes a Control House/Switching Station/Office, a Shop/Garage structure, and a large bank of Transformers and associated electrical equipment. The substation complex is one of hundreds constructed or put-in-service by SCE in the post-World War II period, and it is not eligible for inclusion on the California Register of Historical Resources or the National Register of Historic Places.

Santa Barbara Substation. Originally constructed in 1925, the SCE Santa Barbara Substation was designed and constructed as a substation complex featuring a Classical Revival style Substation Building which may have also featured a caretakers cottage. Today the property includes the 1925 Substation Building, a circa 1920s garage built in the Craftsman style, and a utilitarian shop/garage/control room structure that appears to date to the circa 1960s or 1970s. The Santa Barbara Substation Building appears to be individually eligible for listing to the California Register of Historical Resources under CRHR 3 (architecture). The existing auto garage, and shop/garage/control room as well as Transformer Racks and Switchracks at the property, do not appear to contribute to the individual eligibility of the Santa Barbara Substation Building.

Santa Clara Substation. The Santa Clara Substation was built in 1958 in a Modernistic style and was modified in locations in 1973. The substation complex includes a Control House/Switching Station, a Shop/Crew Office, a Fire Equipment Storage structure, and several banks of Transformers and associated electrical equipment. The substation complex is one of hundreds constructed or put-in-service by SCE in the post-World War II period, and it is not eligible for inclusion on the California Register of Historical Resources or the National Register of Historic Places.

4.5.3 Regulatory Setting

4.5.3.1 Federal Regulatory Setting

A section of the Project in Segment 4 would traverse a portion of the Los Padres National Forest. Of the approximately 63 TSPs that would be installed in Segment 4, only three are located within the Forest. The National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. § 470 et seq.), and the requirements set forth in *Protection of Historic Properties* (36 C.F.R. § 800), implementing regulations of the NHPA and the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. § 4321 and 4331-4335) require assessment of the importance and value of cultural resources. Under the NHPA Section 106 process, resources must be assessed and evaluated in light of their potential to be eligible for nomination to the NRHP. All cultural resources work conducted on federally owned land is inventoried in a separate document from that work on private lands.

4.5.3.2 State Regulatory Setting

When evaluating projects under its jurisdiction, the CPUC is required to comply with, among other things, all provisions in the California Environmental Quality Act (Pub. Resources Code § 21000 et seq., CEQA) and the State CEQA Guidelines (Cal. Code Regs., tit. 14, 15000 et seq.) that concern cultural resources (including CEQA Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5), as explained below.

Cultural resources, as defined in CEQA, include prehistoric and historic-era archaeological sites, districts, and objects; historic buildings, structures, objects, and districts; and traditional/cultural sites or the locations of important historic events. CEQA Guidelines Section 15064.5 states that a project may have a significant environmental effect if it causes a substantial adverse change in the significance of a historical resource. Additionally, the Lead Agency must consider properties eligible for listing on the CRHR or that are defined as a unique archaeological resource in Public Resources Code Section 21083.2.

Impacts to "unique archaeological resources" also must be evaluated under CEQA, as described under Public Resources Code Section 21083.2. As defined by this Section, a unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that in addition to 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

A non-unique resource is one that does not fit any of the above criteria.

California Register of Historical Resources

Cultural resources that meet the criteria of eligibility to the CRHR are termed "historic resources." Archaeological resources that do not meet CRHR criteria also may be evaluated as "unique;" impacts to such resources could be considered significant, as described below.

A site meets the criteria for inclusion on the CRHR if:

A. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
B. It is associated with the life or lives of a person or people important to California's past
C. It 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
D. It has yielded, or may be likely to yield, information important to prehistory or history

A resource eligible for the CRHR 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 NRHP, but it may still be eligible for listing in the CRHR.

The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally Determined Eligible for the NRHP
- California Registered Historical Landmarks from No. 770 onward
- Those CPHIs that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Commission for inclusion on the CRHR

Other resources that may be nominated to the CRHR include:

- Historical resources identified under State Historic Resource Codes 3 through 5.
- 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 Native American Graves Protection and Repatriation Act (2001)

California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010-8030) sets forth broad provisions for the protection of Native American cultural resources and implements the State's policy of ensuring that all California Native American human remains and cultural items are treated with due respect and dignity. These sections also provide a mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, these sections also outline the mechanism with which California Native American tribes not recognized by the federal government may file claims to human remains and cultural items held in agencies or museums.

California Public Resources Code § 5020

Legislation enacting Public Resources Code Section 5020 resulted in the creation of the California Historic Landmarks Committee in 1939, and authorized the Department of Parks and Recreation to designate Registered Historical Landmarks and Registered Points of Historical Interest.

California Public Resources Code § 5097.9

California Public Resources Code Section 5097.9 sets forth the actions to be taken whenever Native American remains are discovered. Under that section, no public agency and no private party using or occupying public property, or operating on public property, under a public license, permit, grant, lease, or contract made on or after July 1, 1977, may in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the United States Constitution and the California Constitution; nor may any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

California Public Resources Code § 5097.98

Section 5097.98 sets forth the procedures to be followed upon discovery of Native American human remains. These procedures include notification of those persons most likely descended from the deceased; inspection of the discovery site by the descendants; recommendations for treatment or disposition of the remains; and the measures to prevent further damage or disturbance to the discovery site.

California Public Resources Code § 7050.5

Section 7050.5 states, in part, that every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. The Section also notes that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined. If the coroner determines that the remains are not subject to his or her authority, and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

California Public Resources Code § 7051

Section 7051 notes, in part, that every person who removes any part of any human remains from any place where it has been interred, or from any place where it is deposited while awaiting interment or cremation, with intent to sell it or to dissect it, without authority of law, or written permission of the person or persons having the right to control the remains under Section 7100, or with malice or wantonness, has committed a public offense that is punishable by imprisonment in the State prison.

Title 14 California Code of Regulations § 4307

Under this State preservation regulation, no person shall remove, injure, deface, or destroy any object of paleontological, archaeological, or historical interest or value.

4.5.3.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." G.O. 131-D, Section XV states that "A coastal development permit shall be obtained from the California Coastal Commission for development of facilities subject to this order in the Coastal Zone." As part of its environmental review process, SCE considered local plans and policies, and local land use priorities and concerns. These are discussed below.

Santa Barbara County Coastal Land Use Plan, Archaeological and Historical Policies

The Coastal Land Use Plan contains a number of policies related to historical and archaeological resources, including:

<u>Policy 10-1.</u> All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.

<u>Policy 10-2.</u> When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.

<u>Policy 10-3.</u> When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.

Policy 10-4. Off-road vehicle use, unauthorized collecting of artifacts, and other activities other than development which could destroy or damage archaeological or cultural sites shall be prohibited.

Policy 10-5. Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.

Santa Barbara County Comprehensive Plan, Land Use Element, Historical and Archaeological Sites Policies

The Land Use Element contains a number of policies related to historical and archaeological resources, including:

Policy 1. All available measures, including purchase, tax relief, purchase of development rights, and others, shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.

Policy 2. When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.

Policy 3. When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.

Policy 4. Off-road vehicle use, unauthorized collection of artifacts, and other activities other than development which could destroy or damage archaeological or cultural sites shall be prohibited.

Policy 5. Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.

Ventura County Cultural Heritage Board

The Ventura County Cultural Heritage Board researches and records County history and designates historical landmarks. The Board is composed of appointed members from the five supervisorial districts and two members at large. Upon recommendation of the Cultural Heritage Board, the Board of Supervisors declares landmark status. Landmark status is granted to cultural resources, structures, natural features, and sites or areas of historic merit.

Ventura County General Plan

The Ventura County General Plan contains a number of goals and policies related to paleontological and cultural resources. The goals contained in the General Plan are as follows:

Goal 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 2. Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.

The policies contained in the Ventura County General Plan which may apply to non-discretionary developments are as follows:

Policy 3. Mitigation of significant impacts on cultural or paleontological resources shall follow the Guidelines of the State Office of Historic Preservation, the State NAHC, and shall be performed in consultation with professionals in their respective areas of expertise

Policy 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 6. The Building and Safety Division shall employ the State Historic Building Code for preserving historic sites in the county.

4.5.4 Significance Criteria

4.5.4.1 Federal Significance Criteria

According to federal law, pursuant to NHPA and NEPA, archaeological resources are significant if they are eligible for nomination to the NRHP. To determine site significance through application of NRHP criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in 36 C.F.R. § 60.0:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That 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. That have yielded, or may be likely to yield, information important in prehistory or history.

4.5.4.2 State Significance Criteria

The significance criteria for assessing the impacts to cultural resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5
- Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5
- Disturb any human remains, including those interred outside of formal cemeteries

4.5.5 Impact Analysis

Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Assessment Summary: Less Than Significant Impact

<u>Construction Impacts</u>

Site CA-VEN-1109H was previously documented as a historic railroad spur that intersects Segment 2, west of Casitas Substation. The recent study revealed that the resource has been destroyed and therefore is not eligible for inclusion in the CRHR. Construction of the Project would not result in a substantial adverse change in the significance of this resource as defined in Section 15064.5.

Two new historic resources, SBCRP-1 and SBCRP-2, were documented within the Project Area. Based on the data obtained during the survey, both resources represent common road improvements along an existing road embankment to prevent erosion, which was part of a general land development near the City of Carpinteria. Both appear to have been constructed more than 50 years ago. However, the resources were not associated with events that have made a significant contribution to the patterns of California's history. They are therefore not eligible for inclusion in the CRHR under Criterion A (as outlined previously). There is no known evidence to suggest that either resource is associated with the lives of a person or people important to California's past, and they are therefore not eligible for inclusion in the CRHR under Criterion B. Both resources represent basic road improvements comprised of stacked stone and cement sandbags and depict a method of construction that has been widely used throughout the area. Therefore, the resources are not eligible for inclusion in the CRHR under Criterion C. Finally, there are no indications of subsurface elements that would have the potential to contribute new information important to history. Therefore, they are not eligible for the CRHR under Criterion D, as their recordation exhausts their research potential. For these reasons, they are not historical resources under CEQA and would not be impacted by the Project.

SBCRP-3, the Santa Clara-Ojai-Santa Barbara 66kV Transmission Line does not appear to be eligible for listing to the California Register of Historical Resources or the National Register of Historic Places. Portions of the line, from Casitas Substation to Santa Barbara Substation, were initially constructed in 1932 at a 60kV capacity approximately 20 years after SCE implemented a 60/66kV capacity system wide, and the remaining portions of the line, from Casitas Substation to Santa Clara and to Ojai Substation date from 1956 forward with known modifications occurring throughout the 1960s and 1970s including the removal of original wood poles and towers, installation of new tubular steel poles, reconfiguration at substations, and extension to the Ojai Substation that was built in 1967. The line does not meet the definition of an historical resource pursuant to Section 15064.5 of the CEQA Guidelines and would not be impacted by the project.

Five substations of historic age were identified within the project area. Carpinteria, Santa Clara and Goleta substations do not meet the definition of an historical resource pursuant to Section 15064.5 of the CEQA Guidelines and would not be impacted by the project. Casitas substation is eligible for the CRHR under criterion 1 and 3 and Santa Barbara substation is eligible for the CRHR under Criterion 3. Based on the project description as stated in Chapter 3, the project would not cause a substantial adverse change to the historically and architecturally significant substation buildings because no material intervention, including but not limited to full or partial demolition, exterior wall removal, fenestration changes, or other architectural or aesthetic modification would occur.

The Worker Environmental Awareness Plan (WEAP), as described in Chapter 3, would provide training for SCE and Contractor crews regarding historic preservation laws, SCE policies, the identification of historical resources, and procedures to be followed in the event of an unanticipated discovery. In the event of a historical resources discovery, implementation of SCE's Unanticipated Discovery Plan, further described in Chapter 3, would guide the protection of potentially eligible historical resources during construction. Less than significant impacts to historical resources would be ensured through the use of the WEAP and the Unanticipated Discovery Plan.

Operation Impacts

There are two known historical resources as defined in Section 15064.5 in the Project Area. Given the small scope of work associated with operations and maintenance, these activities would have no impact on these resources. Given the fact that work would be conducted on previously disturbed areas, there is little likelihood of encountering any unanticipated historical resources. Therefore, impacts to historical resources from operation of the Project would be less than significant.

Would the project cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5?

Assessment Summary: Less Than Significant Impact

Construction Impacts

No CRHR-eligible archaeological resources have been identified within the Project Area. Any construction-related impacts to unanticipated CRHR-eligible archaeological resources would be reduced to a less than significant level through the implementation of the WEAP, which would provide training for SCE and Contractor crews regarding historic preservation laws, SCE policies, the identification of cultural resources, and procedures to be followed in the event of an unanticipated discovery. In the event of a cultural resources discovery, implementation of SCE's Unanticipated Discovery Plan, further described in Chapter 3, would guide the protection of potentially eligible archaeological resources during construction. With implementation of these measures, impacts to archaeological resources would be less than significant.

Operation Impacts

No CRHR-eligible archaeological resources have been identified within the Project Area. Given the small scope of work associated with operations and maintenance, and given the fact that work would be conducted on previously disturbed areas, there is little likelihood of encountering any unanticipated archaeological resources. Therefore, impacts to archaeological resources from operation of the Project would be less than significant.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Project Area does not contain any known cemeteries or burial features. One prehistoric site containing human remains was identified in the vicinity of the Project Area. The potential for encountering Native American human remains exists throughout California, and it is not always possible to predict where Native American human remains might occur outside of formal cemeteries. Therefore, ground-disturbing activities could disturb human remains, including those interred outside of formal cemeteries. APM CUL-01 would require avoidance of significant historical resources where feasible, and other minimizing actions where avoidance is not feasible. Any unanticipated impacts to human remains during construction along any portions of the Project not previously identified as having evidence of human remains would be less than significant given WEAP training of all workers. Further, implementation of the WEAP and procedures outlined in Chapter 3 would ensure that the remains would be treated in accordance with CEQA Guidelines 15064.5(d) and (e). Therefore, any impacts to human remains resulting from construction of the Project would be less than significant.

Operation Impacts

As would be described in the WEAP, if human remains are discovered during Project operations, work would stop, and the procedures outlined in the WEAP and in Chapter 3 would be implemented. The remains would be treated in accordance with CEQA Guidelines 15064.5(d) and (e). Therefore, any impacts would be less than significant.

4.5.6 Paleontological Resources Environmental Setting

A locality search was conducted through the online database of the University of California Museum of Paleontology (UCMP). This locality search included a review of the area geology and any known paleontological resources recovered from the surrounding area, as well as the geologic units that will likely be encountered during excavation activities associated with the Project. A field survey was also conducted. Surveys included viewing proposed new spur road locations and examining proposed subtransmission structure locations. Throughout the survey, exposures of native rock were examined to verify the local geology and look for fossil resources.

According to the locality and archival research conducted for this study, all of the mapped formations have produced fossils and have a low to high paleontological sensitivity (Table 4.5-4). Although no fossils were identified within the Project Area during the field survey, sediments consistent with the descriptions of the formations were observed in areas correspondingly mapped within those units.

Table 4.5-4: Geologic Units and Paleontological Sensitivity within Project Area

Geologic Unit	Age	Typical Fossil Types	Paleontological Resource Potential	Segment
Quaternary Alluvium	Quaternary	Vertebrates; Invertebrates	Low to High (Increases with Depth)	3A, 3B, 4
Las Posas Formation	Pleistocene	Marine Invertebrates, Rare Vertebrates	High	1
Santa Barbara, Pico, Sisquoc, Monterey Formations	Pliocene	Marine Invertebrates	High	1
Rincon and Monterey Formations	Miocene	Terrestrial Vertebrates	High	1, 2, 3B, 4
Sespe and Vaqueros Formations	Eocene-Oligocene	Terrestrial Vertebrates	High	2, 3B, 4
Coldwater Sandstone	Eocene	Marine Invertebrates, Rare Vertebrates	High	4

Geologic mapping by Lian (1952) and Minor et al. (2009) indicates that the Project Area contains exposures of the Coldwater Sandstone, Sespe Formation, Rincon Formation, Monterey Formation, Sisquoc Formation, Pico Formation, Santa Barbara Formation, Las Posas Formation, Quaternary alluvium, and Quaternary landslides from the Holocene.

Quaternary Alluvium

Holocene and Upper Pleistocene alluvium and colluvium are present within the Coastal Plain areas of Carpinteria. This unit is encountered in a small portion of the western end of Segment 4, all of Segment 3A, and the western end of Segment 3B. These poorly consolidated silt, sand, and gravel deposits were deposited along modern drainages and piedmont alluvial fans and floodplains. Exposed thickness of the unit is generally less than 33 feet (10 meters). Because this unit spans both the Holocene and Pleistocene Epochs, the paleontological sensitivity of the unit varies by depth. Where Quaternary alluvium was deposited during the Holocene (from 10,000 years ago to the present), there is no sensitivity for fossils because fossils, by definition, are more than 10,000 years old. By contrast, fossils from Pleistocene alluvial sediments are well represented throughout the Transverse Ranges.

Las Posas Formation

The Las Posas Formation is Pleistocene in age (approximately 250,000 years old). It is composed of weakly consolidated sandstones with some gravelly sand units, and is highly susceptible to landslides. According to Bramlette et al. (1946), this formation contains a shallow water invertebrate fauna, and a ray tooth has been found in these sediments. Within the Project Area, this formation is present at the eastern terminus of Segment 1.

Santa Barbara Formation

The Santa Barbara Formation is an Early to Middle Pleistocene (2.5 million to 750,000 years old) marine formation primarily composed of poorly consolidated claystone and shale with some areas of sandstone. The formation is only present along Segment 1. According to Minor et al. (2009), this formation contains diverse marine invertebrate assemblages of mollusks, bryozoans, and foraminifera, although none of these have been found in the vicinity of the Project Area. The nearest locality is approximately 4 miles west-southwest of the Project Area.

Pico Formation

The Pliocene to Pleistocene (approximately 3.5 to 1.0 million years old) Pico Formation was deposited in a marine environment, and is composed of both coarse-grained sand and conglomerate units, with more silt and clay dominated units in some areas. Depending on the area, the lower member may be up to 9,300 feet (2,835 meters) thick and the upper member 3,000 feet (915 meters) thick (Cartwright 1928). This formation contains sporadic fossil deposits consisting primarily of invertebrates such as gastropods, bivalves, arthropods, and foraminifera. Invertebrates from the Pico Formation have been found approximately 2 miles south of Segment 1.

Sisquoc Formation

The Sisquoc Formation is of Upper Miocene and Lower Pliocene age (approximately 6 to 4 million years old) and is only found in an isolated area in Segment 1, east of the Ventura River. The formation consists of claystone, mudstone, siltstone, shale, diatomite, and conglomerates, with considerable regional variation, and was deposited in a moderately deep marine environment at a depth of approximately 500 to 5,000 feet (152 to 1,524 meters). Fossils have been found in this formation, primarily in the area of Lompoc approximately 50 miles to the northwest of the Project. In addition to the abundant diatoms that make up the diatomite, fossils of vertebrates such as sea lions and walruses, bony and cartilaginous fishes, and birds have been found in the Sisquoc Formation. All known localities have been in areas along the coast where the Sisquoc Formation is exposed due to erosion.

Monterey Formation

The Monterey Formation is an extensive Miocene (16 to 6 million years old) oil-rich sedimentary deposit. The Monterey Formation is only present within a small section of the central portion of Segment 3B. Fossils of marine vertebrates (whales, seals, sea lions, dolphins, porpoises), fish, and birds are relatively common from the formation; however, no localities have been identified within 10 miles of the Project Area.

Rincon Formation

The Rincon Formation is Lower Miocene in age (24 to 17.5 million years old) and is exposed along the coastal portions of southern Santa Barbara County eastward into Ventura County. Consisting of massive to poorly bedded shale, mudstone, and siltstone, it weathers readily to a rounded hilly topography with clayey, loamy soils in which landslides and slumps are frequent. It is recognizable on the south slopes of the Santa Ynez Mountains as the band at the base of the mountains which supports grasses rather than chaparral. Within the Project Area, the formation is present beneath the western terminus of Segment 1 as well as beneath the area where Segments 2, 3B, and 4 converge.

Shales of the Rincon Formation were deposited on the deep sea floor during the time at which the Miocene sea reached its greatest depth. Microfossils are common in the Rincon Formation, and have been helpful in dating the unit. The faunal assemblage indicates that the sea was tropical to subtropical at this time. Formaniferal remains in particular are abundant, and have allowed identification of the Upper Zemorrian and Lower and Upper Saucesian biostratigraphic units within the Rincon Formation. Within Santa Barbara County, two vertebrate fossil discoveries have been made in the Rincon Formation. In Ventura County, the exposure of the formation along Los Sauces Creek has yielded ten different species of ostracod; a detailed study suggests that the sea bottom they inhabited was approximately 6,600 feet (2,000 meters) deep. These localities are approximately 5 miles south of Segment 3B.

Vaqueros Formation

The Vaqueros Formation was initially deposited during the Upper Oligocene (28 to 24 million years old). This formation varies in thickness from 656 feet to 131 feet (200 meters to 40 meters). The Vaqueros overlies conformably and interfingers with the Sespe Formation. Within the Project Area, the Vaqueros has only minimal exposures in Segment 2, south of Lake Casitas. Sediments characteristic of this formation include structureless very fine to medium grained sandstone with some large cross-bedding and parallel lamination in some areas. Fossils present in the formation include invertebrates and terrestrial vertebrate specimens.

Sespe Formation

The Sespe Formation is an Oligocene and Upper Eocene (40 to 24 million years old), nonmarine, fluvial, maroon, reddish-brown, and greenish- to pinkish-gray sandstone, mudstone, and conglomerate. The formation underlies portions of Segments 1, 2, 3B, and the majority of Segment 4.

In the Project Area, the formation is divided into three informal subunits: upper sandstone and mudstone unit, middle conglomerate and sandstone unit, and the lower conglomerate and sandstone unit. These units are distinguished from each other mainly by differences in lithology, provenance, and age.

Numerous vertebrate fossils have been found in the Sespe Formation, with the principal locations of the finds north of Simi Valley in Ventura County. A few of the many species associated with the Sespe Formation include *Amynodontopsis* (an Eocene rhinoceros), *Simimys*, a rodent, and the oreodont *Sespia*. The nearest known locality within the Sespe Formation is approximately 8 miles from the Project Area.

<u>Upper sandstone and mudstone unit</u>. The upper sandstone and mudstone unit is Upper Oligocene in age and is composed of interbedded sandstone, siltstone, and mudstone. Proportions of different sedimentary rock types vary both laterally and vertically through the section. Sandstones within the unit are commonly broadly lenticular, laminated, and thin to thick bedded. The upper unit thickens eastward across the study area from about 1,640 to more than 3,300 feet (500 meters to more than 1,000 meters).

<u>Middle conglomerate and sandstone unit</u>. The middle conglomerate and sandstone unit of the Sespe Formation is Oligocene in age and is an interbedded conglomerate, sandstone, and mudstone. Proportions of different sedimentary rock types within the unit vary both laterally and vertically through the section. Polymict conglomerate clasts, including abundant chert and lithic sandstone, are present and, together with color, distinguish the unit from the lower conglomeratic unit. The middle unit generally increases in thickness eastward from where it pinches out in Tecolote Canyon to almost 1,500 feet (450 meters) north of Carpinteria.

<u>Lower conglomerate and sandstone unit</u>. The lower conglomerate and sandstone unit is Lower Oligocene to Upper Eocene in age. It is an interbedded conglomerate, conglomeratic sandstone, sandstone, mudstone, and minor shale that mostly weathers to various distinctive shades of salmon gray, reddish-gray, pale-pinkish-gray, and tan. Sandstones and conglomerates are resistant and form hogbacks. The unit is distinguished by common arkosic compositions and pinkish to reddish hues of sandstones and abundant rounded quartzitic, granitoid, metamorphic, and volcanic clasts in the polymict conglomerates. The lower unit generally increases in thickness eastward from where it pinches out in Glen Annie Canyon to more than 820 feet (250 meters) north of Carpinteria.

Coldwater Sandstone Formation

The Coldwater Sandstone Formation is an Upper and Middle Eocene sandstone of shallow marine origin (42.5 to 39.5 million years old). Within the Project Area, the formation is located along Segment 4. Sandstone beds are resistant and form hogbacks where steeply dipping. The upper part of the unit is locally conglomeratic, rich in fossil oyster shells, and recently produced a limited marine vertebrate fauna. The base of Coldwater Sandstone Formation is not exposed in the Project Area; however, the unit is approximately 2,500 to 3,300 feet (750 to 1,000 meters) thick regionally.

Fossils of numerous mollusks, including many species of the genus *Turritella*, can be found in the Coldwater Sandstone Formation, particularly near the top of the formation where the water at time of deposition was shallowest. Outcrops along Old San Marcos Pass Road near the contact with the Sespe Formation are rich locations for finding remnants of these gastropods. The remnants of oyster beds can be found elsewhere near the top contact with the Sespe Formation.

4.5.7 Paleontological Resources Regulatory Setting

4.5.7.1 Federal Regulatory Setting

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act (PRPA) (Public Law 111-011, Title VI, Subtitle D on Paleontological Resources Preservation) requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land using scientific principles and expertise. PRPA affirms the authority of federal land management agencies to manage paleontological resources, including through the issuance of permits for collection of paleontological resources, curation of paleontological resources, and protection of the confidentiality of locality data. The PRPA also provides authority for the protection of significant paleontological resources on federal lands, including criminal and civil penalties for fossil theft and vandalism.

Federal Antiquities Act

Paleontological resources are also protected from vandalism and unauthorized collection on federal land by the Federal Antiquities Act of 1906 (16 U.S.C. §431 et seq.).

4.5.7.2 State Regulatory Setting

Public Resources Code § 5097.5

Public Resources Code Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

4.5.8 Paleontological Resources Significance Criterion

The significance criteria for assessing the impacts to paleontological resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

4.5.9 Paleontological Resources Impact Analysis

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

The paleontological assessment indicates that portions of the Project Area are underlain by geological formations that have a high sensitivity for paleontological resources. Potential impacts to unique paleontological resources or unique geologic features resulting from construction of the Project would be less than significant with incorporation of APM CUL-02, which provides for the development and implementation of a Paleontological Resources Management Plan (PRMP). Any unanticipated impacts to paleontological resources during construction would be less than significant given WEAP training of all workers.

Operation Impacts

Operation of the Project would involve periodic inspection of the subtransmission structures, conductor and telecommunications cables, and maintenance of access and spur roads and areas around subtransmission structures (grading, vegetation removal, and other activities) to enable safe access. These activities have a low potential to impact paleontological resources. Existing access roads will typically be graded within the weathered surface sediments of an area. While blading of a dirt access road has the potential to encounter shallowly buried fossils, these resources would typically already be disturbed by weathering, ground fracturing, and agricultural disturbances.

4.5.10 Applicant Proposed Measures

APM CUL-01: Avoidance, Minimization, and Mitigation. Potential Project effects to historical resources may be mitigated or reduced to a less than significant level by implementing SCE's cultural resources Unanticipated Discovery Plan (see Section 3.11) and employing one or more standard practice mitigation scenarios including, but not limited to:

- Prehistoric Resources
  - avoid where feasible (avoidance by design, preserve in place, capping)
  - minimize (reduction of Area of Direct Impact/Effect)
  - mitigate (historic context statement, data recovery)
- Historic Resources
  - avoid where feasible (avoidance by design, preserve in place, capping)
  - minimize (reduction of Area of Direct Impact/Effect)
  - mitigate (historic context statement, data recovery)
- Historic Architecture/Utility Infrastructure
  - avoid where feasible (avoidance by design, preserve in place)
  - minimize (reduction of Area of Direct Impact/Effect)
  - mitigate (historic context statement, Historic American Engineering Record, Historic American Building Survey, advanced California Department of Parks and Recreation recordation)

APM CUL-02: Paleontological Resources Management Plan. SCE shall prepare and implement a PRMP that would include, but not be limited to: preconstruction coordination; recommended monitoring methods; emergency discovery procedures; sampling and data recovery methods, if needed; museum storage coordination for any specimens and data recovered; and reporting requirements. The PRMP would also provide for sediment screening, fossil preparation, curation, and preparation of a report detailing the results of the work. In addition, the PRMP would specify monitoring requirements such as the presence of a paleontological monitor when work is being done at formations with high paleontological sensitivity. If very few or no fossil remains are found during ground-disturbing activities, monitoring time can be reduced or suspended entirely, per recommendations of the paleontological field supervisor.

4.6 Geology and Soils

This section describes the geology and soils in the vicinity of the Project. The potential impacts from construction and operation of the Project are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.6.1 Environmental Setting

4.6.1.1 Topography

The Project would be located within the foothills of the Santa Ynez Mountains, a sub-range of the Transverse Ranges. The Transverse Ranges are characterized by west-east trending mountain ranges and ridges (i.e., Santa Ynez Mountains, Laguna Ridge, Sulphur Mountain) separated by intervening valleys. Numerous smaller, steep-sided canyons are aligned perpendicular to the major ridges and would be crossed by the Project. Elevations across the Project range from approximately 50 feet above mean sea level (amsl) near the Carpinteria Substation, to approximately 1,735 feet amsl east of Rincon Mountain.

4.6.1.2 Regional Geologic Setting

The Project would be located within the Santa Barbara Fold Belt of the Transverse Ranges Geomorphic Province of southwestern California (CGS 2002). The area is characterized by northwest-trending folds and faults that record a considerable amount of Neogene (23 to 1.6 million years before present) and Quaternary (1.6 million years to present) deformation, including transpressional faulting, folding, and crustal block rotation (Minor et al. 2009). Basement rocks in the Transverse Ranges typically consist of metamorphosed Jurassic (200 to 146 million years before present [B.P.]) and Cretaceous (144 to 65 million years B.P.) sedimentary and igneous rocks; these geologic units are not exposed within the Project Area. Eocene (56 to 34 million years B.P.) and younger sedimentary rocks are variously exposed throughout the Project Area as described below. In general, the thickness and abundance of coastal and alluvial Quaternary deposits decrease upslope and away from the coast.

4.6.1.3 Local Geologic Setting

Because TSP and LWS pole locations for existing subtransmission lines in Segments 1, 2, and 3A would not be modified, no new impacts to soils or other geologic resources would occur at these locations. Similarly, no additional geologic hazards would be encountered at these locations; therefore, a discussion of bedrock geology is not included in this PEA. Bedrock geology of Project components yet to be constructed is discussed, as these features may have implications for factors applicable to this PEA such as soil conditions, slope stability, and paleontological resources.

The “Y” connection point of Segments 2, 3B, and 4 would be located south-southwest of Lake Casitas. Bedrock at this location is composed of north-dipping shales of the Miocene Rincon Formation. Northward from the “Y,” Segment 4 would cross the axis of a syncline (u-shaped fold) and Miocene Vaqueros Sandstone before turning west along the lower southern flank of Laguna Ridge. Laguna Ridge is dominated by the south-dipping Sespe Formation. After crossing Rincon Creek, Segment 4 would continue west-northwest through Sespe Formation and Coldwater Formation, then cross the Arroyo Parida fault and an anticline before turning south and descending to the foothills immediately north of Carpinteria. Before reaching Carpinteria Substation, it would cross Pleistocene alluvial deposits. Surficial deposits within the Carpinteria Valley are dominated by unconsolidated stream channel, floodplain, and gravelly alluvial fan deposits.

From the eastern end of Carpinteria Valley, Segment 3B would extend east-southeast towards the “Y.” The lower portion of the west ridge of Rincon Mountain is composed of sandstones and conglomerates of the Casitas Formation and Pleistocene Santa Barbara Formation. Further east along the north flank of Rincon Mountain, these younger deposits give way to older deposits of the Rincon Formation, Vaqueros Sandstone, and the Miocene Monterey Formation. Unconsolidated alluvial deposits are present in Casitas Valley (Tan et al. 2003a; Tan and Clahan 2004; Tan and Jones 2006; Gutierrez et al. 2008; Bedrossian et al. 2010).

The Getty Tap would be located in an area underlain by north-dipping bedrock of the Santa Barbara Formation. Numerous landslides have been mapped in the vicinity of the proposed Getty Tap (Tan et al. 2003b). A more detailed description of landslides as they pertain to the Project is provided below.

4.6.1.4 Soils

Soils data in the Project Area have been compiled from three United States Department of Agriculture (USDA) soil surveys: Soil Survey of Santa Barbara County, California – Southern Part; Soil Survey of the Ventura Area, California; and Soil Survey of Los Padres National Forest Area, California. Tabular and spatial data from the soil surveys were downloaded from the USDA Natural Resources Conservation Service (NRCS) Soil Data Mart. NRCS also compiles soils data from multiple soil surveys into an online application and provides interpretations of soil management suitabilities and limitations based on soil properties (SSS 2012).

Soil map units within the Project Area and soil properties relevant to impact analysis of the Project are summarized in Table 4.6-1. Upland soils within the Project Area are generally shallow and well to somewhat excessively drained. Bottomland soils are also well drained, but are considerably deeper. Project Area soils have formed on residuum (bedrock material that has weathered in-place) composed of sandstone and shale. Some soils in drainages and the Carpinteria Valley have formed on alluvium (SSS 2012).

Table 4.6-1: Project Area Soils

Soil Map Unit ID	Soil Map Unit Name	Shrink-Swell Potential(a)	Erosion Hazard(b)	Wind Erodibility Group(c)
42	Rincon-Modesto-Los Osos families association, 30 to 60 percent slopes	Moderate	Severe	8
AcC	Anacapa sandy loam, 2 to 9 percent slopes	Low	Moderate	3
AsF	Arnold sand, 9 to 50 percent slopes	Low	Severe	1
BdG	Badland	NA	Severe	NA
BkC2	Botella variant clay loam, 2 to 9 percent slopes, eroded	Moderate	Moderate	7
BkD2	Botella variant clay loam, 9 to 15 percent slopes, eroded	Moderate	Moderate	7
CaF	Calleguas shaly loam, 30 to 50 percent slopes	Low	Severe	7
Cb	Camarillo, variant, fine sandy loam	Moderate	Slight	3
CfF2	Castaic-Balcom complex, 30 to 50 percent slopes, eroded	Moderate	Severe	7
CyC	Cropley clay, 2 to 9 percent slopes	High	Moderate	7
DbD	Diablo clay, 9 to 15 percent slopes	High	Severe	7
DbE	Diablo clay, 15 to 30 percent slopes	High	Severe	7
DbF	Diablo clay, 30 to 50 percent slopes	High	Severe	7
EaB	Elder sandy loam, 2 to 9 percent slopes	Low	Moderate	3
GbG	Gaviota-Rock Outcrop Complex, 50 to 75 percent slopes	Low	Severe	NA
GdA	Goleta loam, 0 to 2 percent slopes	Low	Slight	5
LaF	Landslides	NA	Severe	NA

Table 4.6-1: Project Area Soils (continued)

Soil Map Unit ID	Soil Map Unit Name	Shrink-Swell Potential(a)	Erosion Hazard(b)	Wind Erodibility Group(c)
LbG	Lodo-Rock Outcrop Complex, 50 to 75 percent slopes	Moderate	Severe	5
LcG	Lodo-Sespe Complex, 50 to 75 percent slopes	Moderate	Severe	5
LeE2	Linne silty clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	4L
LeF2	Linne silty clay loam, 30 to 50 percent slopes, eroded	Moderate	Severe	4L
LkF	Lodo rocky loam, 30 to 50 percent slopes	Low	Severe	6
LoD2	Los Osos clay loam, 9 to 15 percent slopes, eroded	High	Moderate	6
LoE2	Los Osos clay loam, 15 to 30 percent slopes, eroded	High	Severe	6
LoF	Los Osos clay loam, 30 to 50 percent slopes	High	Severe	6
MaF	Malibu loam, 30 to 50 percent slopes	Moderate	Severe	6
Mc	Metz loamy sand	Low	Slight	2
MdE	Milpitas stony fine sandy loam, 15 to 30 percent slopes	Moderate	Moderate	5
MdF	Milpitas stony fine sandy loam, 30 to 50 percent slopes	Moderate	Severe	5
MeC	Milpitas-Positas fine sandy loams, 2 to 9 percent slopes	Moderate	Moderate	3
MeD2	Milpitas-Positas fine sandy loams, 9 to 15 percent slopes, eroded	Moderate	Severe	3
MeE2	Milpitas-Positas fine sandy loams, 15 to 30 percent slopes, eroded	Moderate	Severe	3
MeF2	Milpitas-Positas fine sandy loams, 30 to 50 percent slopes, eroded	Moderate	Severe	3

Table 4.6-1: Project Area Soils (continued)

Soil Map Unit ID	Soil Map Unit Name	Shrink-Swell Potential(a)	Erosion Hazard(b)	Wind Erodibility Group(c)
MhF	Millsholm loam, 15 to 50 percent slopes	Low	Severe	6
MmF2	Millsholm-Malibu complex, 30 to 50 percent slopes, eroded	Moderate	Severe	6
MoC	Mocho loam, 2 to 9 percent slopes	Moderate	Moderate	6
NaD2	Nacimiento silty clay loam, 9 to 15 percent slopes, eroded	Moderate	Severe	7
NaE2	Nacimiento silty clay loam, 15 to30 percent slopes, eroded	Moderate	Severe	7
NaF	Nacimiento silty clay loam, 30 to 50 percent slopes	Moderate	Severe	7
NaG	Nacimiento silty clay loam, 50 to 75 percent slopes	Moderate	Severe	7
OAG	Orthents, 50 to 75 percent slopes	NA	Severe	NA
OsD2	Ojai stony fine sandy loam, 2 to 15 percent slopes, eroded	Moderate	Moderate	5
Rw	Riverwash	Low	Slight	1
ScE2	San Benito clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	6
ScF2	San Benito clay loam, 30 to 50 percent slopes, eroded	Moderate	Severe	6
ScG	San Benito clay loam, 50 to 75 percent slopes	Moderate	Severe	6
SeF	Santa Lucia shaly silty clay loam, 30 to 50 percent slopes	Low	Severe	8
SoE2	Sespe clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	6
SoF	Sespe clay loam, 30 to 50 percent slopes	Moderate	Severe	6
SoG	Sespe clay loam, 50 to 75 percent slopes	Moderate	Severe	6

Table 4.6-1: Project Area Soils (continued)

Soil Map Unit ID	Soil Map Unit Name	Shrink-Swell Potential(a)	Erosion Hazard(b)	Wind Erodibility Group(c)
SvF2	Soper gravelly loam, 30 to 50 percent slopes, eroded	Moderate	Severe	7
SwA	Sorrento loam, 0 to 2 percent slopes	Moderate	Slight	6
SzC	Sorrento clay loam, heavy variant, 2 to 9 percent slopes	Low	Moderate	6
SzD	Sorrento clay loam, heavy variant, 9 to 15 percent slopes	High	Moderate	6
TbE2	Todos clay loam, 15 to 30 percent slopes, eroded	High	Severe	4
TdF2	Todos-Lodo Complex, 30 to 50 percent slopes, eroded	High	Severe	4

Notes:
NA = Not Assessed
(a) Linear extensibility of less than 3 percent = low shrink-swell potential; 3 to 6 percent = moderate potential; 6 to 9 percent = high potential; greater than 9 percent = very high potential.
(b) Erosion hazard interpreted by NRCS for unsurfaced roads and trails.
(c) Soils are assigned to wind erodibility groups based on their susceptibility to wind erosion. Soils assigned to Group 1 are the most susceptible; soils assigned to Group 8 are the least susceptible.
Sources: NRCS 2008a; NRCS 2008b; NRCS 2008c; SSS 2012.

Erosion by water and wind is the greatest potential impact to soil resources within the Project Area. Erosion rates would be affected at locations where active surface disturbing operations are proposed (e.g., spur road or pad construction) and would be managed by Storm Water Pollution Prevention Plan (SWPPP) implementation. Erosion hazard ratings developed by USDA assume that vegetative cover has been removed, but soil horizons remain intact. The erosion hazard rating is influenced by slope, infiltration rate, and other factors. Increasing bare ground distribution at the expense of canopy, microbiotic, and litter covers decreases the effective saturated conductivity of soil, which, in turn, decreases infiltration and increases runoff and soil loss (Jadczyszyn and Niedzwiecki 2005). Wind erosion is similarly most prevalent in silty and fine sandy soils with disturbed vegetation. Wind erosion susceptibility is summarized in Table 4.6-1.

The presence of certain clay minerals may cause some soils to swell when moist and shrink as the soil dries. Soils subject to shrink-swell processes are termed “expansive soils.” Expansive soils can disturb building foundations, walls, and roads and are found intermittently throughout the Project Area, but primarily within the Carpinteria Valley (City of Carpinteria 2003; SSS 2012). Linear extensibility is a measurement of the shrink-swell process and can be used to classify the expansive hazard of soils. Due to the potential for damage, roads and other Project components may require special design features in areas of soils with moderate to high shrink-swell potential (Table 4.6-1).

4.6.1.5 Seismic Sources in the Vicinity of the Project Area

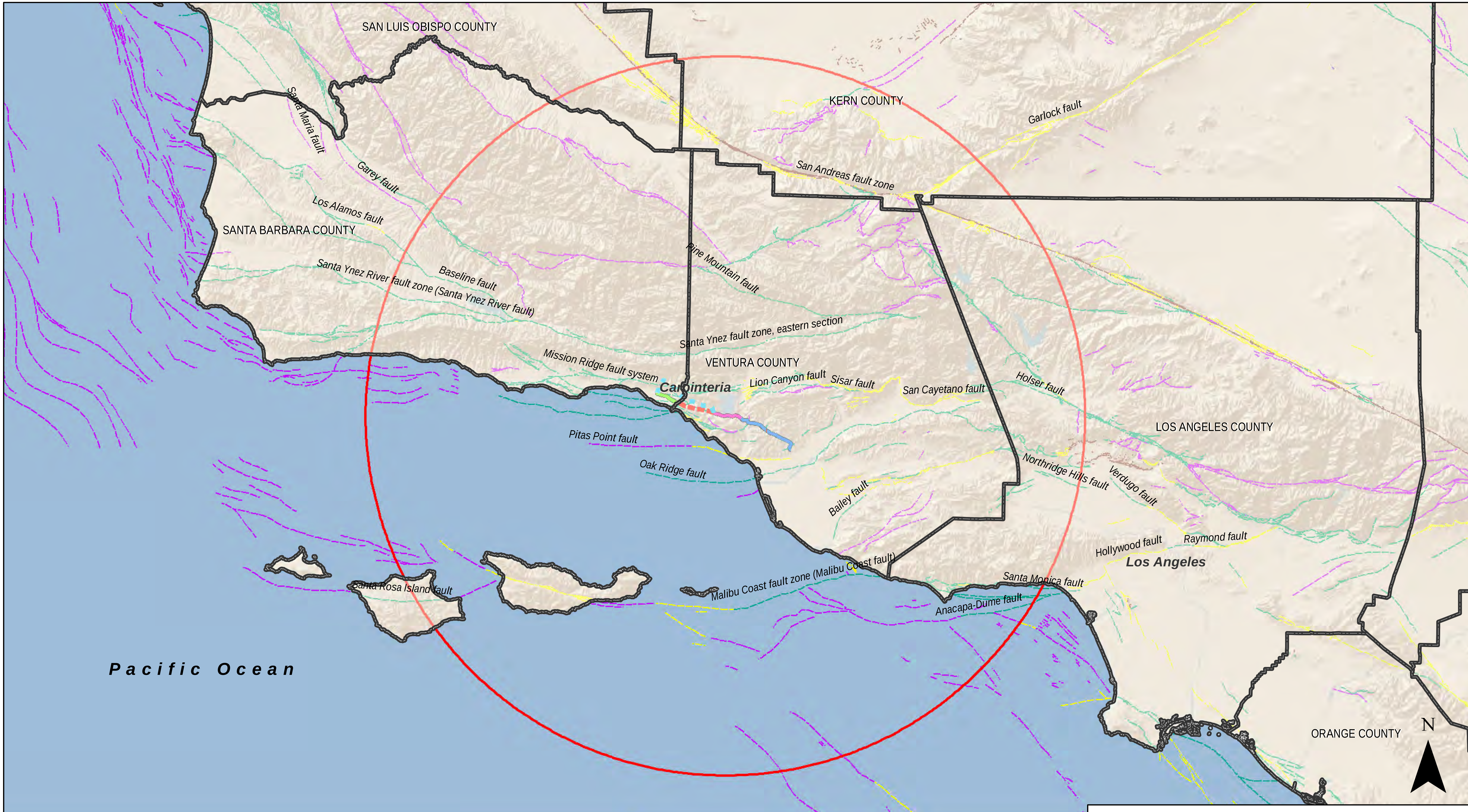
Numerous active and potentially active faults in the region have the potential to cause ground shaking within the Project Area. The State of California considers a fault to be "active" if evidence exists of fault movement within the past 11,700 years (Holocene Epoch). "Potentially active" faults have shown activity within the past 1.6 million years (Quaternary Period). Figure 4.6-1 illustrates the locations of active and potentially active faults within 50 miles of the Project. Potentially active faults that cross Project transmission line alignments are summarized in Table 4.6-2. Seismic sources most likely to affect the Project vary according to the time scale considered. Over the long term, smaller earthquakes caused by movement of relatively small, local faults are expected to contribute a significant proportion of overall seismicity. Over the short term, earthquakes on regional faults with shorter expected return periods are anticipated to contribute a higher proportion of seismic activity (USGS 2012a).

Most faults in the immediate vicinity of the Project (Figure 4.6-2) exhibit evidence of surface deformation in the past 130,000 years (USGS and CGS 2006). Probabilistic seismic hazard assessments indicate that during the anticipated life of the Project, the faults with the largest anticipated contribution to peak ground accelerations in the Project Area are the San Cayetano, Red Mountain, and Pitas Point-Ventura faults (USGS 2012a). However, the USGS probabilistic seismic hazard assessments do not incorporate all faults known in the immediate vicinity of the Project as seismic sources (e.g., Carpinteria, Rincon Creek, and Shepard Mesa faults). The Arroyo Parida fault is part of the Mission Ridge fault system (Peterson et al. 2008). Evidence suggests that the Rincon Creek fault may have been active within the past 11,000 years and may have a greater contribution to local seismicity (Keller and Gurrola 2000). Estimated moment magnitudes for local faults that are not included in the USGS National Seismic Hazard Maps but have the potential to affect the Project are summarized in Table 4.6-2.

4.6.1.6 Geologic Hazards in the Vicinity of the Project Area

Geologic conditions that present potential hazards to people and structures are identified on a county-wide basis in the Ventura County General Plan Hazards Appendix (Ventura County 2011b) and Santa Barbara County Comprehensive Plan Seismic Safety & Safety Element (Santa Barbara County 2010), and on a more local level in the City of Carpinteria General Plan Safety Element (City of Carpinteria 2003). Seismic Hazard Zones (areas of seismically induced liquefaction or landslides) have been mapped by the California Geological Survey (CGS) for portions of Ventura County, but not for Santa Barbara County. The Getty Tap, Casitas Substation, and Segments 1 and 2 are the only Project components covered by official Seismic Hazard Zone mapping (CGS 2003a).

Surface rupture along a fault occurs when surficial earth materials on opposite sides of a fault are displaced during fault movement. Alquist-Priolo Earthquake Fault Zones (A-P Zones) are designated areas within 500 feet of a known active fault trace. The Red Mountain and Pitas Point-Ventura faults are the closest mapped A-P Zones to the Project.



Faults

- Historically Active - displacement within the past 150 years
- Active - displacement within the past 15,000 years
- Potentially Active - displacement within the past 750,000 years
- Potentially Active - displacement within the past 1.6 million years

- Segment 1
- Segment 2
- Segment 3A
- Getty Tap
- Segment 3B
- Segment 4

- 50 mile project radius
- Counties

Note: Only named faults considered relative to seismic hazard analysis of the Proposed Project are labeled on this map.

Source: USGS 2004

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

REGIONAL FAULT MAP

0 5 10 20 Miles
0 10 20 40 Kilometers

Figure: **4.6-1**

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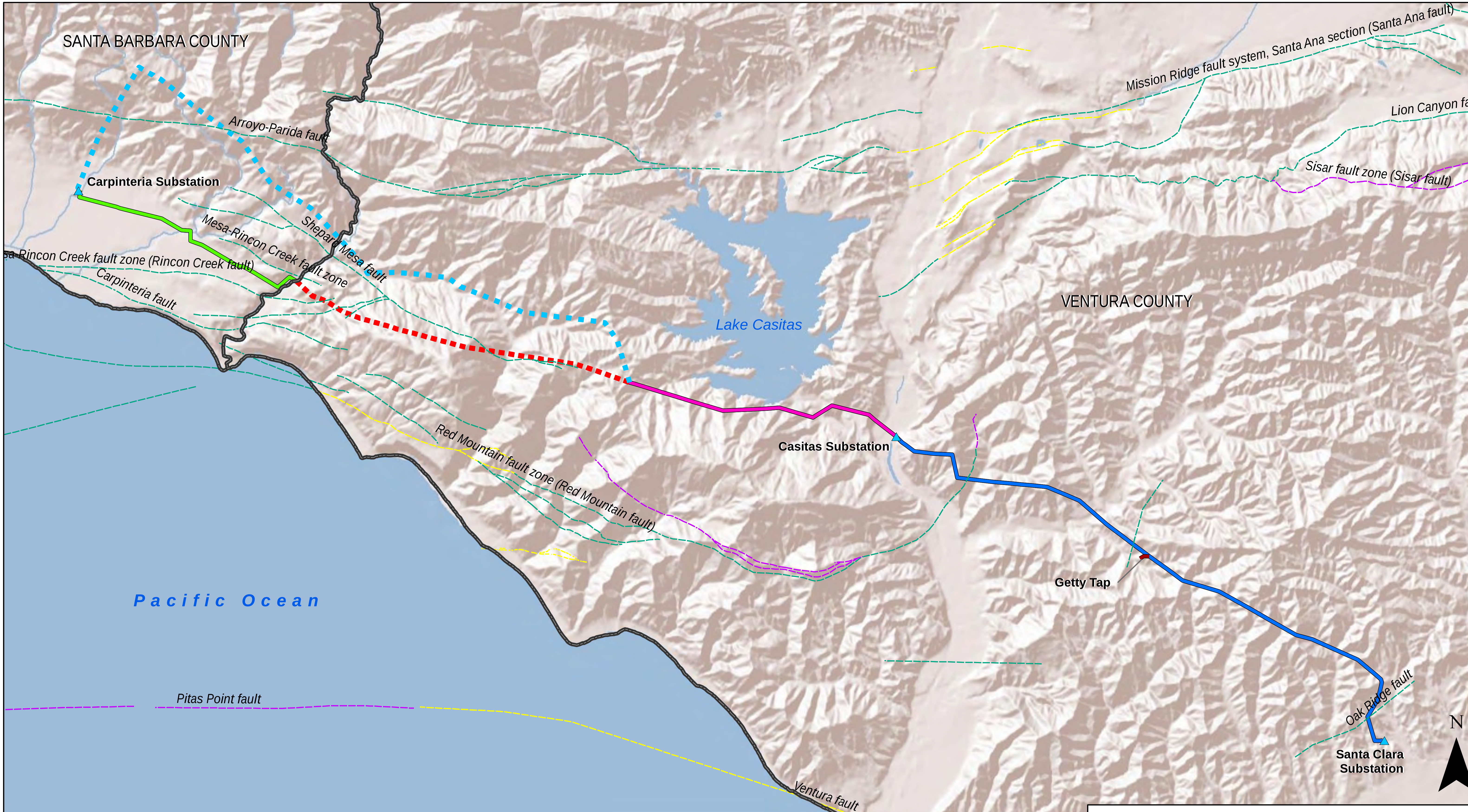

Quaterrnary Faults

- Historically Active - displacement within the past 150 years
- Active - displacement within the past 15,000 years
- Potentially Active - displacement within the past 750,000 years
- Potentially Active - displacement within the past 1.6 million years

Segment 1
Segment 2
Segment 3A
Getty Tap
Segment 3B
Segment 4
Substations

Note: Unnamed faults are not labeled on this map.

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOCAL FAULT MAP

0 0.5 1 2 Miles
0 1 2 4 Kilometers

Figure: **4.6-2**

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The eastern terminus of Segment 1 is located approximately 1.2 miles north of the Ventura A-P Zone. Segments 2, 3A, and 3B are aligned approximately parallel to and less than 2 miles northeast of the Red Mountain A-P Zone. Numerous A-P Zones are mapped in Oak View, the nearest of which is approximately 2.6 miles north of the Casitas Substation. Two A-P Zones (portions of the Red Mountain fault and Javon Canyon fault) are located near Pitas Point, approximately 1.4 and 2.6 miles south of Segment 3B. No A-P Zones or other active faults cross existing or proposed Project components (CDMG 1978a, 1978b, 1986, 1991).

Table 4.6-2: Potentially Active Faults in the Project Vicinity

Fault Name	Segment Crossed	Project Component/ Location	Potential Earthquake Magnitude
Oak Ridge fault	None	Santa Clara Substation	7.0[a]
Unnamed	1	Getty Tap	NA
Red Mountain fault	1	Casitas Substation	7.0[a]
Rincon Creek fault	3B	Western end of Segment 3B near SR-150	6.0 – 7.0[b]
Mesa-Rincon Creek fault zone	3A, 3B	Shepard Mesa area; eastern half of Segment 3A and western end of Segment 3B	6.0 – 7.0[b]
Shepard Mesa fault	3B	Middle portion of Segment 3B	6.0 – 7.0[b]
Arroyo Parida fault	4	Western portion of Segment 4 above City of Carpinteria	7.2[a]
Carpinteria	NA – Does not Cross		4.5+[c]

Notes:
(a) Maximum moment magnitude (Cao et al. 2003).
(b) Probable magnitudes (SCEDC 2012).
(c) Maximum Credible Earthquake (Santa Barbara County 2010).
NA = not applicable.

Other active and potentially active faults (see Table 4.6-2 and 4.6-2) crossed by the Project could produce surface rupture at lower levels of likelihood.

Earthquake-generated ground shaking is typically the greatest cause of damage during an earthquake. Probabilistic approaches to assessing seismic hazards use the statistics of earthquake occurrence in a region to estimate the level of ground motion for which the exceedance probability is acceptably low. The estimate can be made in terms of a variety of ground motion parameters, most commonly the peak ground acceleration (PGA), the peak ground velocity, or a spectral parameter such as peak spectral acceleration.

In 2008, USGS produced updated seismic hazard maps for the conterminous United States, including PGA and spectral accelerations for a range of return periods and exceedance probabilities (Peterson et al. 2008). Multiple seismogenic source zones and ground motion prediction equations were used to develop the maps and hazard values.

PGA values for lands in the Project Area are based on the USGS deaggregation files are provided in Table 4.6-3 (USGS 2012a). All values presented in Table 4.6-3 were calculated for the location of the "Y" intersection due to its location near the center of the Project. The highest predicted PGA value in the Project Area for a seismic event with a return period of 144 years or less would be 0.27g. PGA values will vary across the Project and will be assessed as part of site-specific geotechnical analyses. Values presented for the "Y" intersection are intended to give a general approximation for expected ground shaking for the entirety of the Project.

Liquefaction is a term used to describe a condition that occurs when saturated sandy soil loses strength and cohesion due to ground shaking during an earthquake. Areas at risk of lateral spreading are generally considered to be coincident with potential liquefaction areas. Previously constructed portions of the Project within the Ventura River Valley and along Coyote Creek (short portions of Segment 1 and Segment 2 in the vicinity of Casitas Substation) are located in a State of California Liquefaction Seismic Hazard Zone (CGS 2003b). No other portions of the Project within Ventura County are within Liquefaction Areas as identified in the Ventura County General Plan (Ventura County 2011b). Approximately 0.4 miles of the westernmost portion of Segment 4 and approximately 2.8 miles of the western most portion of Segment 3A within the Carpinteria Valley would be within an area with a moderate risk of liquefaction (City of Carpinteria 2003; Santa Barbara County 2010).

Table 4.6-3: Project Peak Ground Acceleration Values

Return Period (Years)	PGA (%g)	Mean Magnitude	Mean Distance (km)
30	0.08937	6.75	36.5
72	0.1733	6.82	24.6
144	0.2673	6.85	17.8
475	0.4956	6.89	10.1
1485	0.8144	6.96	6.7
2475	0.9836	6.99	5.9
4950	1.2394	7.04	5.3
9900	1.5077	7.09	4.9

Notes:

PGA values calculated for latitude 34.372317°N, longitude 119.376457°W.

Values calculated using USGS 2008 Interactive Deaggregations (Beta) Tool (USGS 2012a).

Average shear wave velocity in the upper 30 meters (V_{S30}) value of 489 meters per second used to calculate PGA values based on Kalkan et al. (2010).

Landslides, including those caused by earthquake-caused ground shaking, are a hazard throughout the Project Area. The Getty Tap would be, and the majority of Segments 1 and 2 are, within a State of California Earthquake-Induced Landslide Hazard Zone (CGS 2003a, 2003b). Although the Project Area within Santa Barbara County does not have published CGS Seismic Hazards Maps, similar geologic, topographic, and seismic conditions as in Ventura County suggest that similar hazards of landslides exist throughout the Project Area. The only portion of the Project that would not be at risk of seismically induced landslides is the portion of Segment 4 within the flat bottomlands of the Carpinteria Valley. Segment 4, along the north slopes of the Carpinteria Valley and south of the Los Padres National Forest, has been rated as having moderate risk of landsliding (Santa Barbara County 2010). Santa Barbara County landslide assessments were not developed to reflect risk of landslides due to earthquake-induced ground shaking.

Ground subsidence has been observed within the Oxnard Plain of Ventura County, east of the Project Area. No other areas of subsidence are known in the vicinity or within the Project Area (Santa Barbara County 2010; Ventura County 2011b; City of Carpinteria 2003).

4.6.2 Regulatory Setting

4.6.2.1 Federal Regulatory Setting

Clean Water Act

The Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) is the primary Federal law in the United States governing the protection of water quality through the goals of eliminating water pollution and providing for standards of water quality necessary for human sports and recreation. As discussed in Section 3.4.1, because Project construction would disturb a surface area greater than 1 acre during construction, SCE would be required to obtain an NPDES permit (General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ). The NPDES permitting process includes submittal of a construction SWPPP. The regulatory framework of the Clean Water Act is further described in Section 4.9, Hydrology and Water Quality.

Los Padres National Forest Land Management Plan

The 2005 Los Padres National Forest Land Management Plan (U.S. Forest Service 2005a) identifies management goals and standards for soil and geologic resources. Goals and standards applicable to the Project include the following:

- Goal 5.1 – Improve watershed conditions through cooperative management. Geologic resources and geologic hazards constitute the physical foundation materials, characteristics, and primary earth processes that influence watershed condition and ecosystem health.
- Standard 58 – Evaluate geologic hazards and develop mitigations where risks to life, property, or resources are identified when planning and implementing management activities.

4.6.2.2 State Regulatory Setting

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 et seq.) was enacted by the State of California in 1971 to mitigate the hazard of surface faulting to structures planned for human occupancy and to other critical structures. These other critical structures include those intended for human occupancy associated with industrial and commercial uses. Regulatory zones established by the State (known as Earthquake Fault Zones) are used by government agencies during planning and review processes for new construction. Although Earthquake Fault Zones are located near to the Project, no zones occur in the Project Area.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (Public Resources Code, Section 2690 et seq.) was enacted by the State of California in 1990 to protect public safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. Discussion of potential hazards required under this Act is presented in Section 4.6.4.

4.6.2.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Santa Barbara County

Santa Barbara County goals, policies, and implementation measures designed to demonstrate compliance with geologic and seismic protection standards outlined in State law are included in the Seismic Safety & Safety Element (Santa Barbara County 2010). County-wide measures intended to protect the community from geologic and seismic hazards include Geologic and Seismic Goal 1, Geologic and Seismic Protection Policies 1 through 6, and Geologic and Seismic Protection Implementation Measures 1 through 11.

Santa Barbara County (Santa Barbara County 2008a) considers impacts related to geology to have the potential to be significant if the Project involves any of the following characteristics that may require mitigation to reduce impacts to a less than significant level:

1. The Project site or any part of the Project is located on land having substantial geologic constraints, as determined by the Planning and Development Department or the Public Works Department. Areas constrained by geology include parcels located near active or potentially active faults and property underlain by rock types associated with compressible/collapsible soils or susceptible to landslides or severe erosion. Special Problem Areas designated by the Board of Supervisors have been established based on geologic constraints, flood hazards, and other physical limitations to development.

2. The Project results in potentially hazardous geologic conditions such as the construction of cut slopes exceeding a grade of 1.5 horizontal to 1 vertical.

3. The Project proposes construction of a cut slope over 15 feet in height as measured from the lowest finished grade.

4. The Project is located on slopes exceeding 20 percent grade.

Ventura County

Ventura County goals and policies regarding geologic and soil hazards and the methodologies required to determine significance levels of impacts are summarized in the Initial Study Assessment Guidelines (Ventura County 2011e). County-wide goals and policies applicable to assessment of geology and soils include: fault rupture (Goal 2.2.1, Policies 2.2.2-1 through -6), ground shaking (Goal 2.3.1, Policy 2.3.2), liquefaction (Goal 2.4.1, Policy 2.4.2), landslides and mudflows (Goal 2.7.1, Policies 2.7.2-1 through -3), expansive soils (Goal 2.8.1, Policies 2.8.2-1 through -3), and subsidence (Goal 2.9.1, Policies 2.9.2-1 through -3).

City of Carpinteria

Carpinteria objectives, policies, and implementation measures designed to reduce death, injuries, property damage, and the economic and social dislocation resulting from natural hazards are included in the General Plan and Local Coastal Plan Safety Element (City of Carpinteria 2003). City-wide objectives intended to protect the community from geologic and seismic hazards include Objectives S-1 through S-3 and their respective subordinate Policies and Implementation Policies.

4.6.3 Significance Criteria

The significance criteria for assessing the impacts to geology and soils come from the CEQA Environmental Checklist. According to the CEQA Checklist, a Project causes a potentially significant impact if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42.); strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides
- Result in substantial soil erosion or the loss of topsoil
- 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
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water

4.6.4 Impact Analysis

Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42.); strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

The Project would not cross, and would not be directly impacted by surface rupture of any Alquist-Priolo Earthquake Fault Zones. There is a risk of strong seismic ground shaking due to the Project's proximity to active fault zones. As a result, the Project could experience moderate to high levels of earthquake-induced ground shaking. Even though the Project is located in an area susceptible to earthquake forces, the structures involved would not be used for human occupancy and would be designed consistent with CPUC General Order 95—Rules for Overhead Line Construction to withstand wind, temperature, and wire tension loads. Accounting for these factors would result in a design that would be adequate to withstand expected seismic loading, and therefore impacts due to strong seismic ground shaking would be less than significant.

Liquefaction hazards are considered to be low in all areas of the Project except the following: Segment 2 along Coyote Creek and within the Ventura River Valley and Segments 3A and 4 within Carpinteria Valley. With incorporation of APM GEO-1 (please refer to section 4.6.5) for Project components within the mapped liquefaction hazard zone (CGS 2003b) and areas of moderate liquefaction risk (City of Carpinteria 2003; Santa Barbara County 2010), impacts associated with liquefaction would be less than significant.

Seismically induced landslides are a potential hazard throughout the majority of the Project Area due to steep slopes and geologic structures. With completion of geotechnical analyses for all Project components and implementation of APM GEO-1, impacts due to landslides would be less than significant.

<u>Operation Impacts</u>

As presented above, no Project facilities would be located within any Alquist-Priolo Earthquake Fault Zones. Ground shaking due to earthquakes would likely occur during the operational life of the Project; however, as described above, all Project components would be designed consistent with CPUC General Order 95—Rules for Overhead Line Construction to withstand wind, temperature, and wire tension loads. Accounting for these factors would result in a design that would be adequate to withstand expected seismic loading. Operational impacts under this criterion would be less than significant.

During operation, liquefaction hazards are expected to be similar to those described above. With incorporation of APM GEO-1, operational impacts due to liquefaction would be less than significant.

Incorporation of APM GEO-1 would also reduce the risk of impacts resulting from seismically induced landslides during operation of the Project. However, the highly unstable bedrock present throughout a majority of the Project Area would be prone to landslides (seismically induced or otherwise) during operation of the Project. Landslides could block access roads and reduce access to Project facilities. Periodic maintenance patrols would be conducted during operation of the Project and would identify areas of active slope instability. Any areas of slope instability that would potentially affect Project facilities (e.g., access roads and TSPs) would be addressed on a case-by-case basis in order to minimize on-site and off-site impacts. Operational impacts under the landslide criterion would be less than significant.

Would the Project result in substantial soil erosion or the loss of topsoil?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction of the Project would result in direct disturbance of approximately 214 acres of soils. Approximately 8.61 acres of disturbance would be to soils with severe erosion hazard ratings as interpreted by NRCS (SSS 2012). An additional 2.72 acres of disturbance would be to soils with moderate erosion hazards. Erosion control measures included in the Project construction SWPPP would minimize the off-site transport of soil; therefore, impacts under this criterion would be less than significant.

Operation Impacts

Long-term use of access roads may lead to rutting, which concentrates runoff and increases rill erosion. However, regular maintenance of existing features such as water bars (i.e., low soil berms constructed across the road that redirect flow) that control the velocity and pattern of road runoff would minimize erosion on roads. As a result, impacts under this criterion would be less than significant.

Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Assessment Summary: Less than Significant Impact

Construction Impacts

The majority of the Project would be constructed in areas subject to seismically induced slope instability. Site-specific geotechnical investigations would be conducted prior to construction. Portions of Segment 2 within the Ventura River Valley and along Coyote Creek are mapped as liquefaction hazard zones (CGS 2003b). Approximately 0.4 miles of the westernmost portion of Segment 4 and 2.8 miles of the western portion of Segment 3A would be constructed in areas within Carpinteria Valley considered to have moderate risk of liquefaction and lateral spreading. However, there are no known historic occurrences of liquefaction within Santa Barbara County (Santa Barbara County 2010).

With incorporation of APM GEO-1 (including site-specific components that would be incorporated based on the findings of geotechnical analyses), impacts associated with the risk of landslides, liquefaction, and lateral spreading would be reduced to less than significant. No areas of subsidence or soil collapse are known within the Project Area, nor are any expected to occur based on review of published soil data; therefore, impacts under the subsidence and collapse criteria would be less than significant.

Operation Impacts

Implementation of APM GEO-1 would reduce the risk of impacts resulting from seismically induced landslides during construction of the Project. However, the highly unstable bedrock present throughout a majority of the Project Area would be prone to landslides (seismically induced or otherwise) during Project operations. Landslides could block access and spur roads and reduce access to Project facilities. Periodic maintenance patrols would be conducted over the operational life of the Project and would identify areas of active slope instability. Any areas of slope instability that would potentially affect Project facilities (e.g., access roads, TSPs) would be addressed on a case-by-case basis in order to minimize on-site and off-site impacts. Operational impacts under the landslide criterion would be less than significant.

Liquefaction hazards are expected to be similar throughout the operational life of the Project and would be the same as presented above for construction of the Project. With implementation of APM GEO-1 during construction, operational impacts due to liquefaction would be less than significant.

As presented above, because no areas of subsidence or soil collapse are known or expected to occur within the Project Area, operational impacts associated with the risk of subsidence and collapse would be less than significant.

Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Assessment Summary: Less than Significant Impact

Construction Impacts

Proposed TSP locations on soils with moderate to high shrink-swell potential (expansive soils) as identified by NRCS soil surveys (SSS 2012) are summarized in Table 4.6-1. Site-specific components would be incorporated based on the findings of geotechnical analyses and described in APM GEO-1 to reduce potential impacts due to expansive soils during construction of the Project to less than significant levels.

Operation Impacts

Implementation of APM GEO-1 would reduce the risk of impacts to Project facilities during construction and during operations. Minor impacts to access roads could occur due to soil expansion and formation of moderate swales and/or mounds in the roads which could reduce accessibility to portions of the Project Area. Periodic road grading would ensure that Project facility accessibility is maintained and that impacts under the expansive soil criterion are less than significant.

Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Assessment Summary: No Impact

Construction Impacts

No septic tanks would be constructed as part of the Project; therefore, no impacts would occur under this criterion.

Operation Impacts

No septic tanks would be used once the Project is operational; therefore, no impacts would occur under this criterion.

4.6.5 Applicant Proposed Measures

APM GEO-1: Based on the findings of the geotechnical analysis, SCE would design Project components to minimize the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Measures that may be used to minimize impacts could include, but are not limited to: stabilization fills, retaining walls, slope coverings, removal of unstable materials, avoidance of highly unstable areas, construction of pile foundations, ground improvements of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables.

4.7 Greenhouse Gas Emissions

This section describes the greenhouse gas emissions in the area of the Project. The potential impacts and alternatives are also discussed.

4.7.1 Environmental Setting

Greenhouse gases (GHGs) refer to gases that trap heat in the atmosphere, causing a greenhouse effect. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). Atmospheric concentrations of the two most important directly emitted, long-lived GHGs, CO_2 and CH_4, are currently well above the range of atmospheric concentrations that occurred over the last 650,000 years (Pew Center 2008). According to the Intergovernmental Panel on Climate Change (IPCC), increased atmospheric levels of CO_2 are correlated with rising temperatures; concentrations of CO_2 have increased by 31 percent above pre-industrial levels since the year 1750. Climate models show that temperatures will probably increase by 1.4 degrees Celsius (°C) to 5.8 °C by the year 2100 (IPCC 2007).

Global warming potential (GWP) estimates how much a given mass of a GHG contributes to climate change. The term enables comparison of the warming effects of different gases. GWP uses a relative scale that compares the warming effect of the gas in question with that of the same mass of CO_2. The CO_2 equivalent (CO_2e) is a measure used to compare the effect of emissions of various GHGs based on their GWP, when projected over a specified time period (generally 100 years). CO_2e is commonly expressed as million metric tons (MMT) of CO_2 equivalents ($MMTCO_2e$). The CO_2e for a gas is obtained by multiplying the mass of the gas (in tons) by its GWP.

4.7.2 Regulatory Setting

4.7.2.1 Federal Regulatory Setting

Federal Mandatory Reporting of Greenhouse Gases (40 CFR Parts 86, 87, 89 et. al)

The USEPA promulgated this rule in 2009 to require mandatory reporting of GHG from large GHG emissions sources within 31 source categories in the United States. In general, the threshold for reporting is 25,000 metric tons CO_2e ($MTCO_2e$). Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers report at the corporate level. Facilities and suppliers began collecting data on January 1, 2010. GHG data is accessible to the public through USEPA's GHG Reporting Program. SCE complies with federal mandatory reporting requirements to the USEPA per 40 CFR 98, Subpart DD.

4.7.2.2 State Regulatory Setting

Global Warming Solutions Act (AB 32)

The California Global Warming Solutions Act of 2006 (AB 32) charges the CARB with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. CARB established a scoping plan in December 2008 for achieving reductions in GHG emissions and established and implemented regulations for reducing those emissions by the year 2020. AB 32 also directed CARB to recommend a *de minimis* threshold of GHG emissions below which emission reduction requirements will not apply.

CARB presented a Preliminary Draft Staff Proposal with an example threshold of 7,000 $MTCO_2e$ per year for operational emissions (excluding transportation-related emissions) from industrial projects (CARB 2008). To date, CARB has not adopted this threshold or proposed alternative thresholds.

The South Coast Air Quality Management District (SCAQMD) adopted an interim threshold of 10,000 $MTCO_2e$ per year (operational emissions plus construction emissions amortized over 30 years) for "industrial" projects for which the SCAQMD is the lead agency, and it is developing guidelines for projects for which other agencies are the lead. SCAQMD established a numerical threshold of 10,000 $MTCO_2e$ per year for stationary source GHG emissions.

Pursuant to AB 32, CARB adopted the Mandatory Greenhouse Gas Reporting Regulation (Tit. 17, Cal. Code Regs. § 95100-95157). The facilities required to annually report their GHG emissions include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 $MTCO_2e$ from stationary source combustion. In particular, retail providers of electricity are required to report fugitive emissions of SF_6 related to transmission and distribution systems, substations, and circuit breakers located inside California that the retail provider or marketer is responsible to maintain in proper working order.

4.7.2.3 Local Regulatory Setting

The SBCAPCD has not established significance criteria for GHG emissions. District staff is in the process of developing a proposal to adopt greenhouse gas thresholds of significance for stationary source projects of 10,000 $MTCO_2e$ per year (SBCAPCD 2011).

In September 2011, the Ventura County Air Pollution Control Board requested that VCAPCD staff report back on possible GHG significance thresholds for evaluating GHG impacts of land use projects in Ventura County under CEQA. At the November 8, 2011 Board meeting, VCAPCD staff submitted a report to the board entitled Greenhouse Gas Thresholds of Significance Options for Land Use Development Projects in Ventura County, which summarizes the most prominent approaches and options either adopted or being considered by local air agencies (VCAPCD 2011).

The VCAPCD Report states that:

> "…it is not possible to define how micro-scale GHG emissions from any single land use development project regardless of size, or even sets of such projects, will affect global warming or global climate change. This inability to characterize the global effects of micro-scale GHG emissions makes it impossible to establish with any degree of certainty a level at which localized human-caused GHG emissions will significantly affect the global warming or global climate change." (VCAPCD 2011)

In order to assess a project's GHG emissions pursuant to CEQA, the VCAPCD is considering a tiered approach with the main components involving consistency with a locally adopted GHG reduction plan followed by a bright-line threshold for some projects (VCAPCD 2011).

The SCAQMD is also considering this as its primary approach for land use projects. VCAPCD is also exploring an efficiency-based metric (e.g., GHG emissions per capita) for land use projects and plans (VCAPCD 2011).

Given that Ventura County is adjacent to the SCAQMD jurisdiction and is a part of the Southern California Association of Governments (SCAG) region, VCAPCD has set local GHG emission thresholds of significance for land use development projects at levels consistent with those set by the SCAQMD (VCAPCD 2011). Therefore, for the purposes of this analysis, GHG emissions were compared to the SCAQMD interim thresholds of 10,000 $MTCO_2e$ in order to determine significance.

4.7.3 Significance Criteria

The significance criteria for assessing the impacts to GHG come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

4.7.4 Impact Analysis

As presented earlier in this PEA, SCE has applied to Santa Barbara County for a CDP to cover construction of portions of the Project located within the Coastal Zone in Santa Barbara County. This includes a portion of Segment 4 and the entirety of Segment 3A. Between 1999 and 2004, some wood subtransmission structures in Segment 3A were replaced with LWS subtransmission poles, new conductor was installed, and the wood subtransmission structures identified for replacement with LWS poles were topped before work was stopped.

Two GHG impact analyses have been conducted for the Project: one analysis assesses the impacts from construction and operation of Segment 3A to date, and the other assesses the potential impacts that could result from construction and operation of the balance of the Project. These two analyses are presented separately in this section of the PEA.

4.7.4.1 Impact Analysis, Segment 3A, Work Previously Conducted

Methodology

During the construction phase of the Project, GHG emissions were generated from operation of heavy equipment and support vehicles. The most common GHGs associated with fuel combustion are CO_2, CH_4, and N_2O. Annual GHG emissions were estimated for past construction along Segment 3A using the CalEEMod model for both on-road and off-road sources. As explained above in Section 4.3, O&M-related emissions would be equivalent to emissions associated with current O&M activities.

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

Assessment Summary: Less than Significant Impact

Construction and Operation Impacts

Over the entire construction period for Segment 3A, SCE estimates that approximately 514 $MTCO_2e$ were emitted. GHG construction emissions from the Project amortized over 30 years would be approximately 17 $MTCO_2e$, and added to negligible operation emissions from maintenance trips, GHG emissions would fall well below the 10,000 $MTCO_2e$ threshold of significance currently recommended by VCAPCD. Therefore, the construction and operation of Segment 3A has not generated, either directly or indirectly, GHG emissions that have a significant impact on the environment.

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

Assessment Summary: Less than Significant Impact

Construction and Operation Impacts

As discussed above, GHG construction emissions from the construction of Segment 3A amortized over 30 years would be approximately 17 $MTCO_2e$, and added to negligible operation emissions from maintenance trips, GHG emissions would fall well below the interim numerical thresholds of significance. Therefore, the construction and operation of Segment 3A have not conflicted with any applicable plan, policy, or regulation, and impacts are less than significant.

4.7.4.2 Impact Analysis, Balance of Project

Methodology

Project construction would result in emissions of GHGs from on-site construction equipment and off-site worker trips. Anticipated GHG emissions were calculated for all construction activities. The most common GHGs associated with fuel combustion are CO_2, CH_4, and N_2O.

Construction GHG emissions were estimated using CalEEMod. The emission estimates reflect a conservative calculation based on estimated total use of each type of equipment anticipated for construction. The estimated annual emissions of GHGs from Project equipment are primarily from SF_6 emissions (see Appendix F, Air Quality Calculations, for details). As explained above in Section 4.3, O&M-related emissions would be equivalent to emissions associated with current O&M activities.

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

Assessment Summary: Less than Significant Impact

Construction and Operation

Over the entire construction period of the Project, approximately 4,324 $MTCO_2e$ would be emitted. GHG construction emissions from the Project amortized over 30 years is approximately 141 $MTCO_2e$. The estimated annual emission of GHGs from Project equipment is 8 $MTCO_2e$, primarily from SF_6 emissions (see Appendix F, Air Quality Calculations, for details). As explained above in Section 4.3, O&M-related emissions would be equivalent to emissions associated with current O&M activities. As a result, the 149 $MTCO_2e$ emissions associated with Project construction and SF_6 emissions would be well below the 10,000 $MTCO_2e$ threshold of significance recommended by VCAPCD. Therefore, the Project would not generate, either directly or indirectly, GHG emissions that would have a significant impact on the environment, and impacts would be less than significant.

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

Assessment Summary: Less than Significant Impact

Construction Impacts

As discussed above, GHG construction emissions from the Project amortized over 30 years would be approximately 141 $MTCO_2e$. GHG emissions would fall well below the interim numerical thresholds of significance. Therefore, the Project would not conflict with any applicable plan, policy, or regulation, and less than significant impacts would occur from construction emissions.

Operation Impacts

As part of the Project, five existing SF_6–containing circuit breakers would be removed, and five new SF_6–containing circuit breakers would be installed at Carpinteria Substation. At Santa Clara Substation, two existing SF_6–containing circuit breakers would be removed.

CARB has developed regulations (Tit. 17 Cal. Code Regs. §§ 95350-95359) for reducing SF_6 emissions from gas-insulated switchgears, including circuit breakers. These regulations contain, among others, the maximum annual SF_6 emission rate from equipment, inventory measurement procedures, and recordkeeping requirements. SCE would apply its Gas Management Guidelines to ensure compliance with these regulations.

With implementation of SCE's existing SF_6 Gas Management Guidelines, SF_6 emissions from the Project would be expected to meet the regulatory requirements. In addition, when combined with the negligible emissions associated with O&M activities, the Project would not cause emissions that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

4.7.5 Applicant Proposed Measures

None required.

4.8 Hazards and Hazardous Materials

This section describes the potential hazards associated with construction and operation of the Project, excluding the geological hazards discussed in Section 4.6, Geology and Soils. This section addresses the use of hazardous materials during construction and operations, the likelihood of encountering historical contamination during grading, and fire hazards. The regulatory setting and potential impacts are also discussed.

The information contained in the Hazards and Hazardous Materials section was developed by identifying and reviewing general and comprehensive plans and county and city websites, querying the Envirostor database, and evaluating aerial imagery.

For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.8.1 Environmental Setting

4.8.1.1 Hazardous Waste

State and federal databases were reviewed to identify hazardous waste facilities that include Federal Superfund sites, State Response sites, Voluntary Cleanup sites, School Cleanup sites, Permitted Operating sites, Post-closure permitted sites, Historical non-operating sites, Corrective Action sites, and Tiered Permit sites. The review encompassed all components of the Project and a 2-mile radius around all components.

All work at substations would be conducted on property owned by SCE, and the telecommunications- and subtransmissions-related work to be conducted in Segments 1, 2, 3A, 3B, and 4, and the Getty Tap would be performed primarily within existing ROWs. Based on a query of the Envirostor database reflecting historical and current use of these lands, there are no indications that hazardous waste has been generated or stored at or along any component of the Project.

A review of State databases did not identify any Department of Toxic Substances Control (DTSC)-permitted facilities for generation of hazardous waste within 2 miles of any component of the Project.

The review of State databases and an assessment of historical land use did not indicate hazardous material or waste at the location of any component of the Project. No recognized environmental concerns (RECs) or historical RECs were identified at this location.

Substation-related work completed as part of the Project would necessitate the removal of equipment including relays and capacitors that contain hazardous materials. All hazardous materials would be stored, handled, and used in accordance with applicable regulations. Material Safety Data Sheets (MSDS) would be made available to all workers during construction and operations.

4.8.1.2 Airports, Airstrips, and Heliports

There are no airports or airstrips within 2 miles of any component of the Project. However, there are numerous airports or airstrips in the vicinity of the Project, including the Oxnard and Camarillo Airports (approximately 7 and 7.25 miles, respectively, from Santa Clara Substation).

The nearest heliport is the SCE Ventura Service Center heliport, located approximately 1.25 miles from Santa Clara Substation. There are numerous other heliports in the vicinity of the Project, including Platform Henry (located out at sea, approximately 5 miles from the nearest component of the Project), the Texaco Platform (located on an oil platform out at sea, approximately 9 miles from the nearest component of the Project), and Community Memorial Hospital heliport (approximately 6.2 miles away).

4.8.1.3 Emergency Response

The City of Carpinteria, Santa Barbara County, and Ventura County have developed and implemented emergency response plans to prepare for and organize the response to a disaster.

Santa Barbara County

The Office of Emergency Services (OES) in Santa Barbara County is responsible for county-wide disaster planning and emergency management coordination (Santa Barbara County 2011b). The intent of the OES is to help prepare the communities and residents of Santa Barbara County for the impacts of emergencies and disasters. This is accomplished by coordinating actions; communicating essential information to the public; providing proactive customer service; and implementing effective planning measures for disaster preparedness, response recovery, and mitigation.

The Santa Barbara County Fire Department is responsible for the day-to-day administration of the County's disaster preparedness and response program, as well as submittal of an Annual Report to DTSC and the State of California OES (Santa Barbara County Fire Department 2012a).

The Santa Barbara County Hazardous Materials Emergency Response Area Plan (Area Plan) is divided into two sections: emergency response information and supplemental information. The emergency response information serves as a guide for emergency operations and includes incident response checklists for responding agencies and an information directory (Santa Barbara County Fire Department 2003).

Ventura County

The Ventura County Office of Emergency Services is responsible for the development and execution of the County Emergency Operations Plans (EOP) (Ventura County Sheriff's Office 2012a). The EOP provides for the integration and coordination of planning efforts with cities, special districts, and the State. The intent of the EOP is to facilitate emergency response and short-term recovery by providing a framework for response to all significant emergencies, regardless of the nature of the event (Ventura County Sheriff's Office 2012a).

The Ventura County Sheriff's OES is responsible for the day-to-day administration of the County's disaster preparedness and response program, as well as development of the Ventura County Multi Hazard Functional Plan, which serves as the County's Emergency Response Plan (Ventura County Sheriff's Office 2012a).

The OES in Ventura County is responsible for county-wide disaster planning and emergency management coordination (Ventura County Sheriff's Office 2012a). The intent of the OES is to help prepare the communities and residents of Ventura County for the impacts of emergencies and disasters. This is accomplished by coordinating actions; communicating essential information to the public; providing proactive customer service; and implementing effective planning measures for disaster preparedness, response recovery, and mitigation.

City of Carpinteria

The City's emergency response priorities are mirrored in the goals of the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan, which call for the integration and coordination of activities to maintain or improve fire response times and effectiveness; maintain or improve public safety services; and ensure that emergency response facilities (e.g., hospitals, fire and police stations) are appropriately sited (City of Carpinteria 2010). The City of Carpinteria Police Department facilitates the development and implementation of the City's emergency response plan (City of Carpinteria 2010).

4.8.1.4 Wildland Fires

Fire protection in the vicinity of the Project is provided by the Ventura County and Santa Barbara County fire departments and by the Carpinteria-Summerland Fire Protection District. The discussions below are divided by county.

The adopted fire hazard map for Ventura County shows that components of the Project are located in areas defined as "Moderate" Fire Hazard Severity Zone (FHSZ) "High" FHSZ and "Very High" FHSZ as presented below:

- Segment 1. The majority of Segment 1 is located within "Very High," "High," and "Moderate" FHSZ areas.

- Getty Tap. The Getty Tap would be located entirely within the “Very High” FHSZ area.
- Segment 2. Segment 2 is located within “Very High,” “High,” and “Moderate” FHSZ areas.
- Segment 3B. Segment 3B is located wholly within Ventura County. Segment 3B is located within “Very High,” “High,” and “Moderate” FHSZ areas.
- Segment 4. Segment 4 is split between Ventura County and Santa Barbara County. In Ventura County, Segment 4 would fall within both “Moderate,” “High,” and “Very High” FHSZ areas.
- The Casitas Substation is located in a “Very High” FHSZ.
- The Getty Substation is located in a “Very High” FHSZ.
- Santa Clara Substation is located in a “Moderate” FHSZ.

The recommended (but not yet adopted) fire hazard map for Santa Barbara County shows that components of the Project are located in areas defined as “Moderate” FHSZ, “High” FHSZ, and “Very High” FHSZ, as presented below:

- Segment 3A. The majority of Segment 3A is located inside the “Moderate” FHSZ area, with a small portion located inside the “Very High” FHSZ area. The remainder of Segment 3A is outside of any fire hazard area.
- Segment 4. Segment 4 would be split between Ventura County and Santa Barbara County. In Santa Barbara County, Segment 4 would be located in both the “Moderate” and “Very High” FHSZ areas. The remainder of Segment 4 within Santa Barbara County would fall outside of any fire hazard area.
- The Carpinteria Substation is located outside of demarcated fire hazard zones. However, it is on the border of the “Moderate” FHSZ area.

The County-designated High Fire Hazard Area as defined in Section 10-3.1.2 of the Code of Ordinances encompasses much of Segment 3A and all of the length of Segment 4 located in Santa Barbara County.

Updates to FHSZ maps for State responsibility areas (SRAs) are authorized under State law, Public Resources Code (PRC) sections 4202 to 4204. These broad statutes are made specific by regulation. The proposed regulation for this map update is an amendment to Title 14 of the California Code of Regulations, Section 1280, Fire Hazard Severity Zones. The procedures for adoption of this regulation are stated in the Administrative Procedures Act (Government Code § 11340 et seq.) and the above listed code sections. After the SRA maps are approved, the CalFire director will send updated maps to all local jurisdictions that have lands that meet the criteria of very high FHSZs. The local government will then begin discussing the acceptance of the recommendations (CalFire 2012). Further, on January 12, 2012, the CPUC established new rules to reduce fire hazards associated with overhead power lines and aerial communication facilities located in close proximity to power lines. The new rules bring several changes that increase utility safety practices associated with power lines while improving safety conditions for residents living near these facilities. As described therein, the CPUC will continue to evaluate additional safety measures, including the creation of a fire threat map, in the next phase of the proceeding (Rulemaking 08-11-005).

Per the Ventura County Fire Protection District Ordinance Number 27, M103, fire officials may restrict entry to public lands during wildfires. The fire code official is authorized to determine and publicly announce when Wildland Urban Interface (WUI) zone (Figure 4.8-2) or FHSZ (Figure 4.8-1) areas shall be closed to entry and when the areas should be reopened. Entry on and occupation of WUI or FHSZ areas is prohibited, except for public roadways, inhabited areas, or established trails and campsites that have not been closed when the WUI or FHSZ area is closed to entry.

4.8.1.5 Schools

There are three school campuses located within 0.25 miles of the Project (see Figure 4.14-1 in Section 4.14). Carpinteria High School is located immediately adjacent to the Carpinteria Substation, and Canalino Elementary and the Howard Carden Schools are located within 0.25 miles of Segment 3A. Carpinteria High School and Canalino Elementary are part of the Carpinteria Unified School District. The Howard Carden School is a private school.

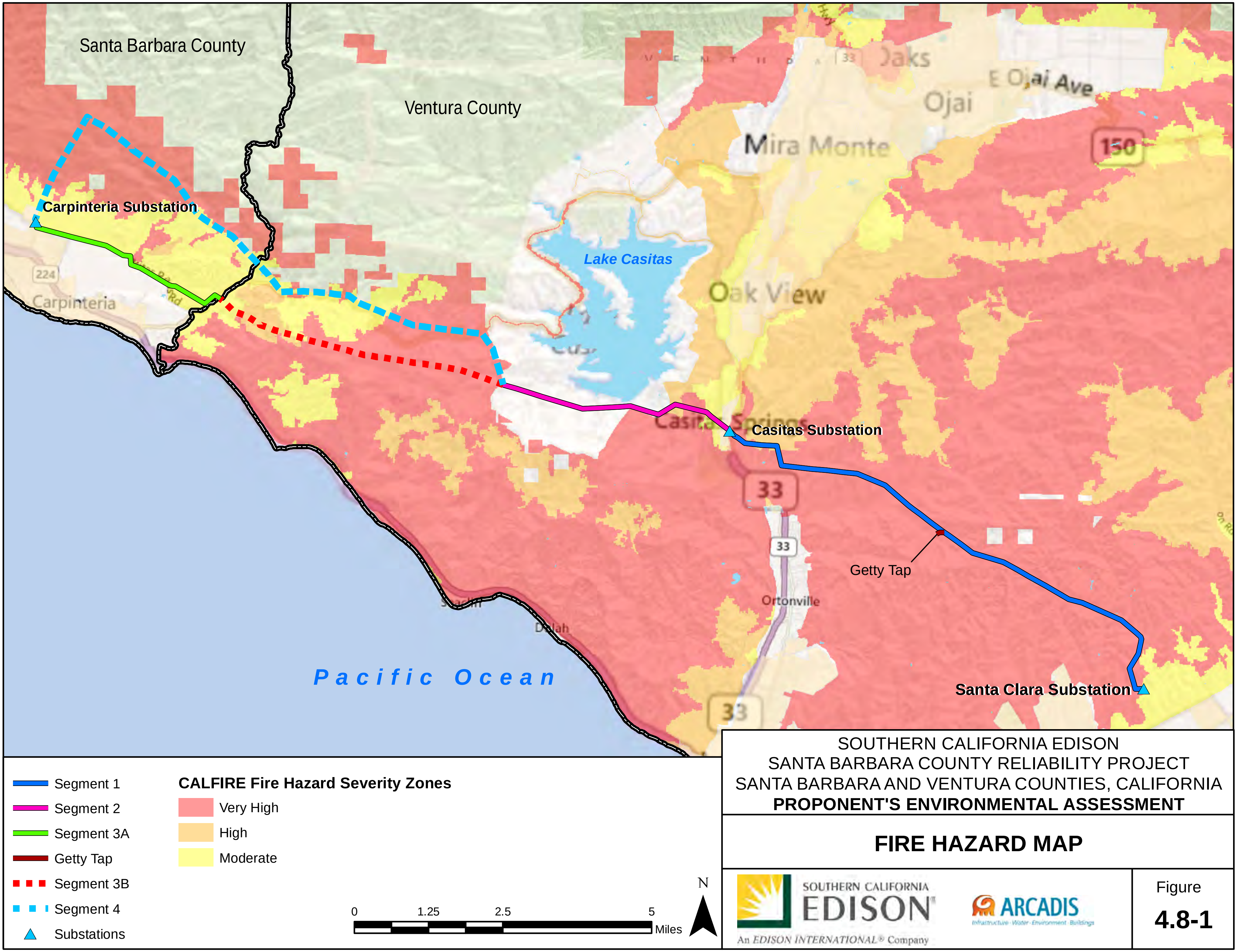
4.8.2 Regulatory Setting

The Project would comply with all applicable laws, ordinances, regulations, and standards related to hazards and hazardous materials during and following construction. The current regulatory setting that applies to the Project is outlined below.

4.8.2.1 Federal Regulatory Setting

Clean Water Act

The Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) is the primary federal law in the United States governing the protection of water quality through the goals of eliminating water pollution and providing for standards of water quality. Requirements of SPCCs are provided in Title 40 CFR Part 112. SPCCs are intended to reduce the threat of spills of hydrocarbons to navigable waters of the United States.



SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FIRE HAZARD MAP

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Figure
4.8-1

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California Wildland Urban Interface

- High Density Interface
- High Density Intermix
- High Density No Vegetation
- Low Density Interface
- Low Density Intermix
- Low Density No Vegetation
- Medium Density Interface
- Medium Density Intermix
- Medium Density No Vegetation
- Uninhabited No Vegetation
- Uninhabited Vegetation
- Very Low Density No Vegetation
- Very Low Density Vegetation

- Segment 1
- Segment 2
- Segment 3A
- Getty Tap
- Segment 3B
- Segment 4
- Substations
- County Lines

SOUTHERN CALIFORNIA EDISON
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WILDLAND URBAN INTERFACE

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Figure
4.8-2

ARCADIS: SCE_052, 6/18/12, R03

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Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act (RCRA), which amended the Solid Waste Disposal Act (42 U.S.C. § 6901 et seq.), establishes a framework for the proper management of hazardous and non-hazardous solid waste. This act, along with the Toxic Substances Control Act of 1976 (TSCA), enacted a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes from their creation to disposal. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the HSWA. RCRA focuses on active and future facilities; it does not address abandoned or historical sites, which are managed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; 42 U.S.C. § 9601 et seq.).

Superfund Amendments and Reauthorization Act of 1986

The Superfund Amendments and Reauthorization Act (SARA) established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. SARA requires the States to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. Additionally, SARA identifies requirements for planning, reporting, and notification concerning hazardous materials.

Toxic Substances Control Act of 1976

TSCA (15 U.S.C. § 2601 et seq.) was enacted by Congress to give the USEPA the ability to track the thousands of industrial chemicals being produced in or imported to the United States. According to the USEPA, industrial chemicals are routinely screened by the USEPA, and those found to pose a potential health hazard to the environment and/or to human health are reported and tested. Through TSCA, the USEPA has the ability to ban the manufacture and import of those chemicals that pose an immediate risk. The USEPA also has the ability to track and control new industry-developed chemicals in order to protect the environment and human health from potential risks.

4.8.2.2 State Regulatory Setting

Health and Safety Code § 25500 et seq. (Waters Bill)

The Waters Bill and the regulations implementing it (Title 19 of the California Code of Regulations [CCR], Section 2620, et seq.), provide that local governments are responsible for regulating local facilities that store, handle, or use hazardous materials in amounts above threshold quantities (TQs). The TQs for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure. Additionally, the legislation and regulations mandate that facilities that store these hazardous materials prepare a Hazardous Materials Business Plan (HMBP). The HMBP is required to identify the facility's internal response to emergencies and the associated employee training necessary for that response. The law also requires that the HMBP be submitted to the local administering agency.

Health and Safety Code § 25531 et seq. (La Follette Bill)

The La Follette Bill requires the registration of, and regulates the handling of, acutely hazardous materials. With some exceptions, California's identified acutely hazardous materials are listed by the USEPA as extremely hazardous substances. A listing of the federal extremely hazardous substances is provided in Title III of SARA. Therefore, this State law overlaps or duplicates some of the requirements of SARA and the CWA. The California law requires that facilities which handle, store, or use acutely hazardous materials above total planning quantities (TPQs) register the material with their local administrating agency.

Safe Drinking Water and Toxics Enforcement Act (Proposition 65)

Proposition 65, or the Safe Drinking Water and Toxics Enforcement Act, regulates chemicals that cause cancer and/or affect reproduction. Users of regulated chemicals identified under this law are responsible for informing the public that could be exposed to releases of these materials from their facility. Additionally, the law is intended to prevent discharges of specified hazardous materials into drinking water sources. The law provides a listing of chemicals of concern, which is updated periodically. Proposition 65 is administered through California's Office of Environmental Health Hazard Assessment.

4.8.2.3 Local Regulatory Setting

Certified Unified Program Agency

A Certified Unified Program Agency (CUPA) is an agency certified by DTSC to conduct the Unified Program. The program consists of hazardous waste generators and on-site treatment programs, aboveground and underground storage tank programs, Hazardous Materials Management, Business Plans, and Inventory Statements, and the Risk Management and Prevention Program (Tit. 27 Cal. Code Regs. §§ 15100 et seq.).

The CUPAs with jurisdiction in the area of the Project include the Santa Barbara County Fire Department Hazardous Materials Unit (SBCFD HMU), Ventura City Fire Department, and Ventura County Environmental Health Division.

The Uniform Fire Code, Article 80

This article addresses hazardous materials, and identifies local fire departments' responsibility to require the development of HMBPs and submittal of a Hazardous Material Inventory Statement. The County of Santa Barbara and the County of Ventura adhere to Uniform Fire Code (UFC) Article 80 as discussed below.

A hazardous materials management plan (HMMP) may be required of any business storing or using hazardous materials or waste above the thresholds defined by UFC Article 80. In California, UFC Article 80 is included in the Hazardous Materials Unified Program. However, businesses with a HMBP are usually not required to have a HMMP. Businesses with hazardous materials at thresholds below those defined in the Business Plan Program and facilities with "special district" exemptions are usually required to have an HMMP.

In Santa Barbara County, HMMPs are required at the request of the local fire agency. In the unincorporated areas, the HMMP program is managed by the Santa Barbara County Fire Department Enforcement Section (Santa Barbara County Fire Department 2012b).

The Ventura County CUPA / Hazardous Materials Program provides regulatory oversight for hazardous waste, HMBPs, California Accidental Release Program (Cal ARP), Hazardous Materials Underground Storage Tanks (USTs), Aboveground Petroleum Storage Tanks / SPCCs, and Onsite Hazardous Waste Treatment / Tiered Permit (County of Ventura Environmental Health Division 2012). For the above programs, the CUPA implements State and federal laws and regulations, county ordinance codes, and local policies (County of Ventura Environmental Health Division 2012). Compliance is achieved through routine and follow-up inspections, educational guidance, and enforcement actions. The CUPA also is involved with hazardous materials emergency response, investigation of illegal disposal of hazardous waste, and public complaints (County of Ventura Environmental Health Division 2012). The CUPA has Participating Agencies (PAs) that implement some of the above programs within their jurisdiction. In the City of San Buenaventura (Ventura), the Ventura City Fire Department implements the HMBP, Cal ARP, UST, and APSA/SPCC programs.

County of Santa Barbara

The County of Santa Barbara Code of Ordinances Section 10-3.1.2(C) amends Section 702A of the California Buidling Code (otherwise adopted by the County) to add a High Fire Hazard Area definition.

4.8.3 Significance Criteria

The significance criteria for assessing the impacts to hazards and hazardous materials come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school;
- 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;
- 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;
- 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;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 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.

4.8.4 Impact Analysis

Construction and operation of the Project would require the limited use of materials such as fuels, lubricants, and cleaning solvents. Substation upgrades would necessitate the removal of equipment including relays and capacitors that contain hazardous materials. All hazardous materials would be stored, handled, and used in accordance with applicable regulations. MSDSs would be made available to all workers during construction and operations.

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

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) would be used or stored on location during construction of any component of the Project.

Hazardous materials that would be used during the construction of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and other vehicles and construction activities. These materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public.

In the event that contaminated soil is encountered during excavation or other ground disturbing activities, the soil would be segregated, sampled, and tested to determine appropriate treatment and disposal options. If the soil is classified as hazardous, it would be properly managed on location and transported in accordance with U.S. Department of Transportation regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility. All hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Operation Impacts

No acutely hazardous materials would be used or stored on location during operation of the Project. Hazardous materials to be used during the operation of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with vehicles and operation activities. Mineral oil is currently used and is expected to continue to be used during the operation of the substations. All hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Assessment Summary: Less than Significant Impact

Construction Impacts

Hazardous materials that would be used during construction of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and vehicles and construction activities.

Reasonably foreseeable upset and accident conditions during the construction phase could include minor spills or drips. BMPs would be implemented during construction to reduce the potential for or exposure to accidental spills or fires involving the use of hazardous materials. Environmental impacts from such incidents would be minimized by thoroughly cleaning up minor spills as soon as they occur. One or more location-specific construction SWPPP(s) would be developed (see Section 4.9, Hydrology and Water

Quality for more detail) and implemented to ensure quick response to minor spills and to ensure less than significant hazards to the public or the environment. Prior to construction, the SWPPP(s) that would be prepared for the Project would identify the locations for storage of hazardous materials during construction, as well as protective measures, notifications, and cleanup requirements for an accidental spill or other potential release of hazardous materials. Further, the SWPPP(s) would include good housekeeping BMPs and waste management BMPs that would be implemented and inspected on a regular basis, as required by the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ, to ensure BMP effectiveness at the Project during construction.

<u>Operation Impacts</u>

Hazardous materials that would be used during operation of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and vehicles and construction activities. Reasonably foreseeable upset and accident conditions during the operation phase could include minor spills or drips. BMPs would be implemented during operations to reduce the potential for or exposure to accidental spills or fires involving the use of hazardous materials. Environmental impacts from such incidents would be minimized by thoroughly cleaning up minor spills as soon as they occur.

Mineral oil (a low-toxicity material) is used during the operation of the substations. The existing transformer banks at the substations would continue to contain mineral oil that could leak or spill if the transformers were damaged from a seismic event, fire, or other unforeseen incident. To minimize potential impacts from spills, the design of the substations would provide containment and/or diversionary structures or equipment to prevent discharge of an oil spill as described in the SPCC requirements (40 CFR Part 112.1-Part 112.7). The SPCC Plans for the existing substations would be updated by SCE before any new oil-containing equipment would be brought to the substation locations. The SPCC Plans for the substations would be updated to describe how hazardous materials released from electrical equipment would be diverted and directed toward containment structures, and how containerized hazardous materials would be stored within a temporary containment area with sufficient containment capacity. Any mineral oil-impacted soils would be excavated, and liquids in containment structures retrieved by vacuum trucks; liquids and soils would be transported off location to a regulated facility.

As required by the Occupational Safety and Health Administration (OSHA), personnel handling any hazardous materials would be trained to understand the hazards associated with these materials and would be instructed in the proper methods for storing, handling, and using these hazardous materials. The on-site foreman would ensure that all on-site health and safety guidelines and regulations involving hazardous materials handling are followed during the construction and operations phases of the Project.

Due to the low volume and proper management of the hazardous materials that would be used during operation of the Project, the potential for creating a significant hazard to the public or environment from hazardous material incidents is low. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

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

Assessment Summary: Less than Significant Impact

Construction Impacts

There are three school campuses located within 0.25 miles of the Project in the City of Carpinteria, including a school located adjacent to an existing substation.

Hazardous materials to be used during the construction and operation of the Project would consist of low-toxicity materials including gasoline, diesel fuel, oil, solvents, and lubricants associated with the construction equipment and vehicles and construction activities. The low-toxicity materials would be used at all Project construction sites. Although there is a school located within 0.25 miles of the Project, the low toxicity of materials associated with the Project would result in a less than significant impact. Implementation of site-specific SWPPP(s) would require good housekeeping, spill containment and response measures, and waste management BMPs, and would ensure less than significant impacts.

Operation Impacts

No acutely hazardous materials would be used. Materials to be used would include gasoline, diesel fuel, oil, solvents, and lubricants associated with vehicles and low-toxicity mineral oil.

There are three school campuses located within 0.25 miles of the Project in the City of Carpinteria including a school located adjacent to an existing substation. Those existing substation operations use only low-toxicity materials, such as mineral oil.

Implementation of SCE standard operating procedures at existing operational substations already require good housekeeping and proper waste management methods. These practices and procedures would also be implemented during operation of the Project to further minimize any potential impacts associated with hazardous materials. As a result, no significant impacts associated with hazardous emissions or the handling of acutely hazardous materials would occur.

Would the project be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Assessment Summary: No Impact

Construction Impacts

Based on a query of the Envirostor database reflecting historical and current use of these lands, there are no indications that hazardous waste has been generated or stored at or along any component of the Project. Further, no component of the Project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would occur under this criterion as a result of the Project.

Operation Impacts

Based on a query of the Envirostor database reflecting historical and current use of these lands, there are no indications that hazardous waste has been generated or stored at or along any component of the Project. Further, no component of the Project is located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would occur under this criterion as a result of the Project.

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?

Assessment Summary: No Impact

Construction Impacts

No component of the Project would be located within an airport land use plan. There are no public airports or public use airports within 2 miles of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project.

Operation Impacts

No component of the Project is located within an airport land use plan. There are no public airports or public use airports within 2 miles of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project.

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?

Assessment Summary: No Impact

Construction Impacts

There are no private airstrips within the vicinity of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project.

Operation Impacts

There are no private airstrips within the vicinity of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project.

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

Assessment Summary: Less than Significant Impact

Construction Impacts

As discussed in Section 4.16, Transportation, the Project would not be expected to significantly impact traffic circulation or increase demands on existing emergency response services during temporary construction activities, and would not significantly impact emergency access in the area or increase the demand for existing emergency response services. Although it is not anticipated that construction activities would result in the blockage of any roadways that could be used in the case of an emergency, in the event that any construction-related activity may result in such a blockage or closure, SCE would coordinate with local authorities including emergency responders regarding appropriate procedures. In the event that any lane closure would be necessary, the Project would employ a traffic control service, and such lane closures would be conducted consistent with local ordinances. Therefore, the impacts associated with construction activities would be less than significant under this criterion.

Operation Impacts

The Project would not be expected to significantly impact traffic circulation or increase demands on existing emergency response services. During operations, the subtransmission lines, telecommunications cable, and substations would be patrolled and inspected. These activities would be accomplished by personnel in a single light-duty vehicle, which would not significantly impact emergency response in the area. Although it is not anticipated that operation activities would result in the blockage of any roadways that could be used in the case of an emergency, in the event that any activity may result in such a blockage or closure, SCE would coordinate with local authorities including emergency responders regarding appropriate procedures. In the event that any lane closure would be necessary, the Project would employ a traffic control service, and such lane closure would be conducted consistent with local ordinances. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

In addition, it should also be noted that SCE initiated the Project to increase reliability by reinforcing its existing 66 kV subtransmission system in northwestern Ventura County and southeastern Santa Barbara County to meet the electrical demands of the South Coast of Santa Barbara County (SB South Coast area) during emergency conditions while also enhancing operational flexibility. As a result, operation of the Project would be expected to improve the provision of electrical service during emergency situations, which could facilitate the implementation of emergency response plans.

Would the project 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?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Vegetation (both natural and ornamental) at the substations and at construction areas along access roads for the subtransmission lines would be maintained to eliminate contact with equipment, and thus avoid potential for ignition. In addition, SCE has standard fire prevention protocols that include the development of a project-specific fire plan. Additional standard protocols would be implemented when the National Weather Service issues a Red Flag Warning, such as measures to address 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. As a result of these measures, construction of the Project would have a less than significant impact to risk of loss, injury, or death involving wildland fires.

<u>Operation Impacts</u>

Vegetation (both natural and ornamental) at the substations and along subtransmission lines would be maintained to eliminate contact with equipment and thus avoid potential for ignition. In addition, SCE has standard fire prevention protocols that would be implemented when the National Weather Service issues a Red Flag Warning. These protocols include measures to address 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. As a result of these measures, operation of the Project would have a less than significant impact to risk of loss, injury, or death involving wildland fires.

4.8.5 Applicant Proposed Measures

Because the Project would not result in significant impacts due to hazards or the use of hazardous materials, no APMs are offered.

4.9 Hydrology and Water Quality

This section describes the hydrology and water quality in the area of the Project. The potential impacts are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.9.1 Environmental Setting

The Project would cross a variety of terrain, including rugged mountain ridges, residential areas, and agricultural lands including fruit orchards and grazing pastures. All components of the Project are located outside a Tsunami Hazard Zone as identified by the California Emergency Management Agency. Surface waters in the vicinity of the Project include coastal streams, the Ventura River and tributaries, Carpinteria Creek, and Lake Casitas. Groundwater resources include the Carpinteria groundwater basin at the southern border of the Central Coast Basin, and the Lower Ventura River Sub-basin and portions of coastal watersheds in the Los Angeles Basin.

The methodology for analyzing impacts consists of the following:

- Identify surface water and groundwater features (e.g., watersheds, basins, waterbodies, floodplains) traversed by the Project.
- Identify existing hydrologic or water quality restrictions or impairments to the surface water and groundwater features traversed by the Project.
- Evaluate proposed construction and operation activities in relation to the CEQA water resources significance criteria and determine potentially significant impacts.
- Describe measures to avoid or reduce potentially significant impacts.

4.9.1.1 Surface Water Resources

Surface waters are delineated by the United States Geological Service (USGS), which divides surface waters into successively smaller hydrologic units classified into four levels: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.

The first level of classification divides the Nation into 21 major geographic areas, or regions. The second level of classification divides the 21 regions into 221 sub-regions. A sub-region includes the area drained by a river system, a reach of a river and its tributaries in that reach, a closed basin(s), or a group of streams forming a coastal drainage area. The third level of classification subdivides many of the sub-regions into accounting units. The fourth level of classification is the cataloging unit, the smallest element in the hierarchy of hydrologic units. A cataloging unit is a geographic area representing part of all of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature (sometimes referred to as watersheds).

Surface Water Hydrology

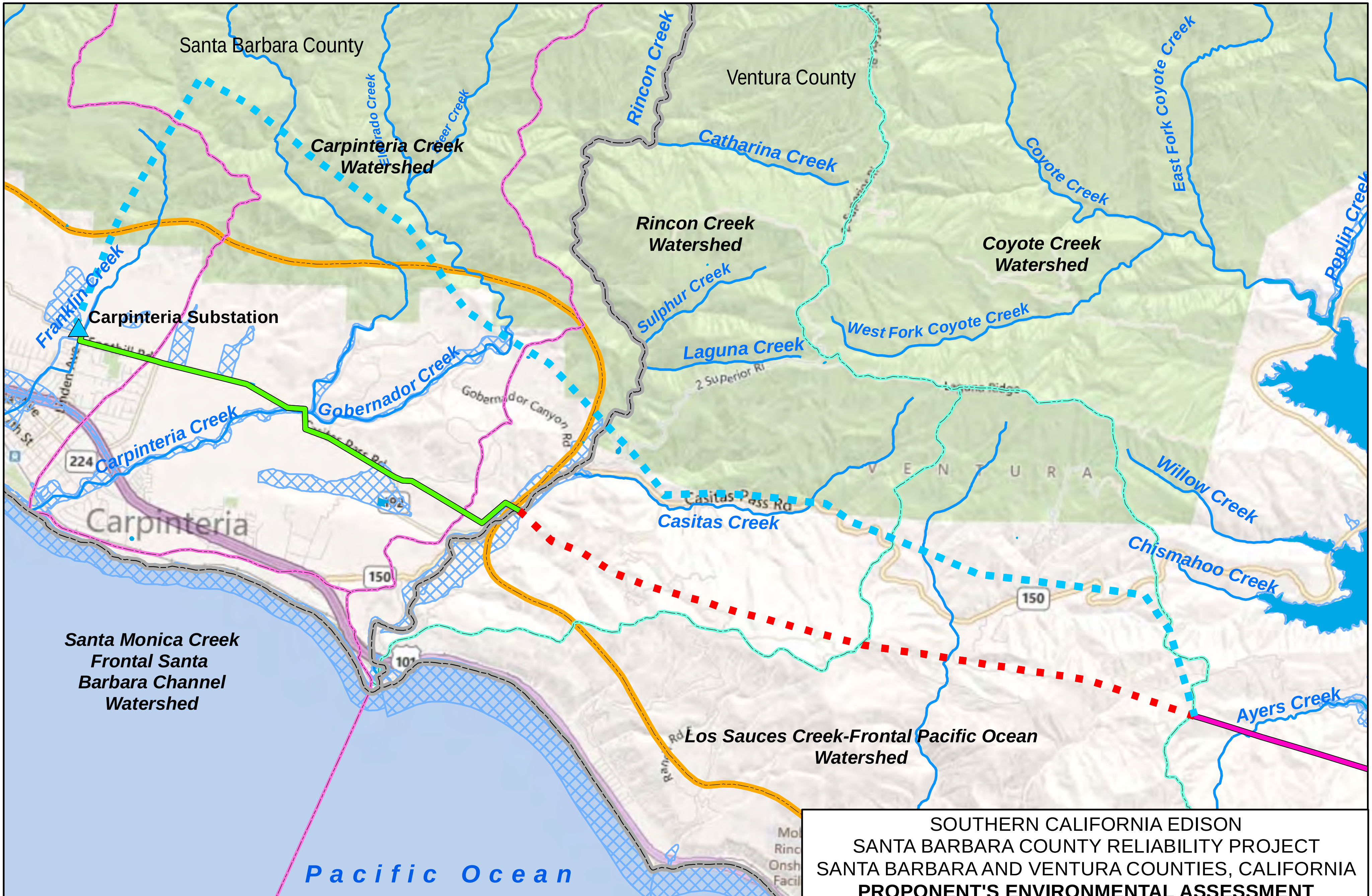
Surface waters in the northern portion of the Project Area (Segment 3A, portions of Segments 3B and 4, and work that would be conducted at Carpinteria Substation) are included in the Central Coast Basin, while surface waters in the southern portion (including the entirety of Segments 1 and 2; portions of Segments 3A, 3B, and 4; and the Casitas and Santa Clara Substations) are included in the Los Angeles Basin. The major waterways, watersheds, and sub-watersheds, and the associated portions of the Project alignment are presented in Table 4.9-1 and described below.

Surface waters in the northern portion of the Project Area include several coastal streams with headwaters in the southern slopes of the Santa Ynez Mountains, which form the westernmost portion of the Transverse Ranges. Figure 4.9-1a depicts the coastal streams in the northern portion of the Project Area and their watersheds. Franklin Creek drains the northern portion of the proposed route, including part of the Carpinteria Valley. Franklin Creek flows into the Carpinteria Salt Marsh immediately west of the City of Carpinteria. This salt marsh contains natural and artificial channels and emergent wetlands at the outlets of Santa Monica and Franklin Creeks (University of California Natural Reserve System [UCNRS] 2012).

All of the streams in the Santa Barbara Coastal Hydrologic Unit, including the Carpinteria Valley, have perennial flows in the headwater areas, but rarely have natural perennial surface flows across the coastal plain. Streams in the southern portion of the Carpinteria Valley include Carpinteria Creek (including its tributary, Gobernador Creek) and Rincon Creek, with its tributary Casitas Creek (see Figure 4.9-1a). Rincon Creek has its headwaters in the Los Padres National Forest.

Surface waters in the Los Angeles Basin in the southern portion of the Project (including Segments 1 and 2, and Casitas and Santa Clara substations) include Lake Casitas, the Ventura River and its tributaries, Los Sauces Creek, the Arundell Barranca-Frontal Pacific Ocean Watershed, a small portion of the Harmon Canyon Santa Clara River Watershed, and coastal beaches. Figure 4.9-1b depicts the coastal streams in the southern portion of the Project Area and their watersheds. The Ventura River drains 223 square miles, including part of the Los Padres National Forest. Cañada Larga is a major tributary of the Ventura River.

Ventura County is highly vulnerable to flood damage due to its geographic location and conditions. Flooding occurs when the volume of runoff water exceeds the capacity of existing storm drainage systems. The coastline and Project Area are also subject to coastal flooding from tidal influences and storms. The largest flood recorded in the Ventura River watershed occurred in 1969 and resulted in loss of life and extensive property damage including loss of agricultural land, roads, and bridges (URS 2005).



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WATERSHEDS AND FLOODPLAINS IN PROJECT AREA

Substations
Segment 1
Segment 2
Segment 3A
Segment 3B
Segment 4
County Lines
Inland Waterbody
Santa Barbara Coastal Hydrological Unit HUC: 18060013
Ventura Hydrological Unit HUC: 18070101
Coastal Zone Boundary
100 year Annual Flood Areas

0 0.5 1 2 Miles

N

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Figure
4.9-1a

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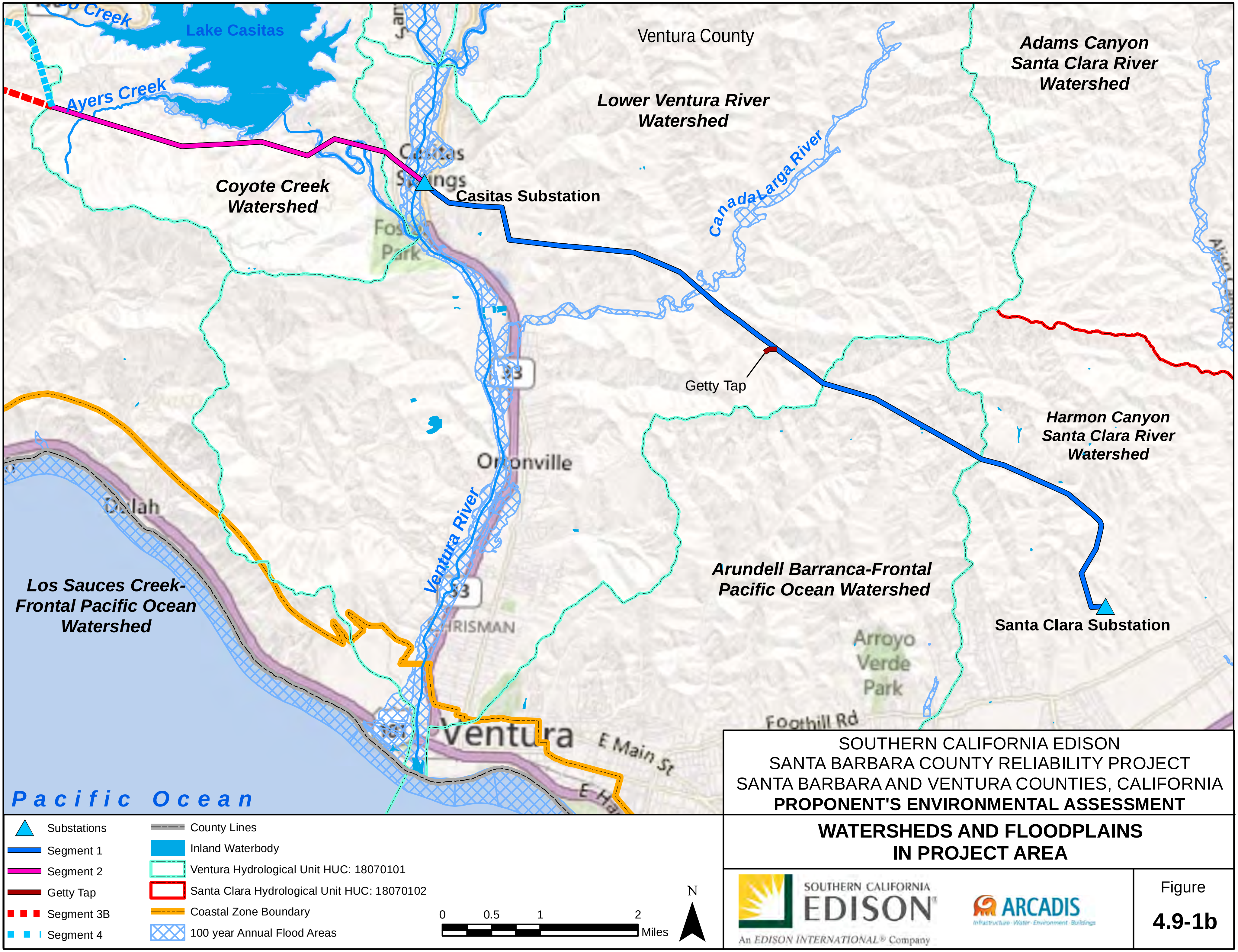

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WATERSHEDS AND FLOODPLAINS IN PROJECT AREA

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Figure **4.9-1b**

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Mountainous areas along the Project route are subject to floods of short duration following intense rainfall, carrying large sediment and debris loads. In addition to the flood control afforded by large dams and reservoirs, debris basins have been constructed on many streams in the vicinity of the Project. These basins are designed to capture material (e.g., fallen trees) that would reduce hydraulic capacity of the stream and thus contribute to flooding of adjacent areas. Coastal floodplains in the Project Area may flood during a series of winter storms (URS 2005). Flooding of coastal floodplain streams may be exacerbated by deposition of sediments and resulting reduction of hydraulic capacity. Floodplain mapping shows that the only component of the Project potentially subject to flooding is the northwest corner of the existing Carpinteria Substation, which is subject to flooding when Franklin Creek exceeds its capacity during winter storms (Figures 4.9-2a and b).

Lake Casitas is located north of Segment 2 and is managed by the Casitas Municipal Water District, which supplies drinking and irrigation water to western Ventura County. Casitas Dam was constructed in 1958 to form Lake Casitas Reservoir as part of the Ventura River Project (authorized by Congress in 1956). Lake Casitas holds 254,000 acre-feet of water when full; as of April 2012, the reservoir was at 81 percent of capacity (Casitas Valley Municipal Water District 2012). Other dams in the Ventura River watershed include the Matilija Reservoir Dam (located more than 9 miles upriver from Casitas Substation), and the Los Robles diversion dam (approximately 7 miles upriver from Casitas Substation).

Precipitation

The Project would be located in an area with a Mediterranean climate characterized by mild, moist winters and moderately warm, generally dry summers. Precipitation occurs primarily in winter, with nearly 90 percent of rainfall between November and April (UCNRS 2012).

Average annual rainfall in the Ventura River watershed ranges from 23.9 inches in the upper watershed to 16.9 inches near the river’s mouth on the Pacific Ocean. The peak historic rainfall intensity is approximately 4.04 inches per hour measured during a 15-minute period in February 1992 at the Wheeler Gorge gauge on the Ventura River in the mountains adjacent to Ojai; this gauge is located north of all components of the Project (Ventura County 2012a).

Surface Water Quality

Surface water quality in the Carpinteria Valley is affected by adjacent land uses, including agriculture and development (Regional Water Quality Control Board [RWQCB]-Central Coast Region 2011). As required by Section 303(d) of the Federal CWA, the RWQCB compiles a list of water bodies that do not achieve water quality standards established by EPA (Strauss 2011). Table 4.9-2 lists the water bodies of the Central Coast Basin and Los Angeles Basin in the Project Area that do not meet water quality standards and the adjacent project components.

Table 4.9-1: Surface Water Bodies in the Project Area

Watershed	Sub-watershed	Stream length (miles)	Project Components
Central Coast Basin Waterways and Watersheds (HUC# 180600 - Central California Coastal) Santa Barbara Coastal Hydrologic Unit (HUC #18060013)			
Carpinteria Marsh (El Estero Marsh)	Franklin Creek	3	3A, 4, Carpinteria Substation
Carpinteria Creek	Gobernador Creek	6	3A, 4
Rincon Creek	Casitas Creek	10	3A, 3B, 4
Los Angeles Basin Waterways and Watersheds (HUC# 180701 - Ventura-San Gabriel Coastal) Ventura Hydrologic Unit HUC# 18070101			
Los Sauces Creek-Frontal Pacific Ocean HUC # 180701010202	None	10	3B, 4
Ventura River HUC# 18070101	Reach 1 and 2 (Estuary to Weldon Canyon)	4.5	1, 2, Casitas Substation
Ventura River	Reach 3 (Weldon Canyon to Coyote Creek	2.8	1, 2, Casitas Substation
Ventura River	Ventura River Reach 4 (Coyote Creek to Camino Cielo Rd)	19	1, 2, Casitas Substation
Ventura River	Cañada Larga (HUC# 180701010106)	8	1
Arundell Barranca-Frontal Pacific Ocean HUC# 180701010203	None - Coastal	None	1
Santa Clara Hydrologic Unit (HUC# 18070102)			
Harmon Canyon Santa Clara River Watershed HUC# 180701020904	None - Coastal	None	1, Santa Clara Substation

Note:

Hydrologic Unit Codes (HUCs) obtained from USGS 2012c.

- Substations
- Segment 3A
- Segment 4
- 100 year Annual Flood Areas
- Substation Boundary

0 0.025 0.05 0.1 Miles

N

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Figure
4.9-2a

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Segment 1
Segment 2
Substations
Substation Boundary
100 year Annual Flood Area

0 0.0125 0.025 0.05 Miles

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Figure **4.9-2b**

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Table 4.9-2: Surface Water Quality Standard Attainment Status

Water Body	Water Quality Standards Not Met	Project Components
Central Coast Basin		
Franklin Creek	Nitrate, chlorpyrifos, Escherichia coli (*E. coli*), fecal coliform, pH, and sodium	3A, 4, Carpinteria Substation
Carpinteria Creek	Dissolved oxygen	3A, 4
Rincon Creek	Boron, chloride, *E. coli*, fecal coliform, sodium, and turbidity	3A, 3B, 4
Los Angeles Basin		
Ventura River (Reaches 1 and 2 – Estuary to Weldon Canyon)	Algal blooms, indicator bacteria, total dissolved solids	1, 2, Casitas Substation
Ventura River (Reach 3 - Weldon Canyon to Coyote Creek)	Indicator bacteria, total dissolved solids, pumping, diversion	1, 2, Casitas Substation
Cañada Larga	Fecal coliform, dissolved oxygen, and total dissolved solids	1
Ventura River Estuary	Trash	1
Lake Casitas	Mercury*	1
Coastal beaches in Pierpont Bay (e.g., San Buenaventura Beach, Ventura Keys)	Indicator bacteria	1

Notes:
* Lake Casitas does not meet water quality standards for mercury (Hg) based on residues found in lake fish tissue and the potential for bioaccumulation in the food chain from fish consumption (RWQCB – Los Angeles Region 1994; SWRCB 2006).
Source: SWRCB 2010

4.9.1.2 Groundwater

Groundwater resources (basins) are delineated by the California Department of Water Resources. A basin is defined as an alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom. Groundwater basins are numbered in the format x-xxx.xx. The first number in the sequence assigns the basin to one of the nine RWQCB boundaries. The second number is the groundwater basin number. Any number following the decimal identifies that the groundwater basin has been further divided into sub-basins.

Groundwater in the region is used for agricultural and urban supply, particularly in drought years. Aquifers range from large extensive alluvial valleys with thick multilayered aquifers and aquitards to small inland valleys and coastal terraces (DWR 2003).

Groundwater Hydrology

Within the Central Coast Basin, the Project (Segments 3A and 4) crosses the Carpinteria Groundwater Basin (No. 3-18). This Basin extends south to Rincon Creek. Groundwater occurs in the alluvium and the Carpinteria, Casitas, and Santa Barbara Formations (DWR 2003). The base of the adjacent Santa Ynez Mountains is underlain by unconsolidated deposits that absorb surface water from rain and streams and contain substantial water volumes. The lower portion (i.e., adjacent to the Pacific Ocean) of the groundwater basin is also underlain by unconsolidated deposits; however, impermeable surficial layers prevent infiltration of rain, irrigation water, and stream flow. This water is discharged to the Carpinteria Salt Marsh (UCNRS 2012).

Within the Los Angeles Basin, components of the Project cross the Ventura River Valley Groundwater Basin (No. 4-3), which is bounded by the Pacific Ocean and Santa Clara River Valley Sub-basin to the south as well as impervious rock formations of the Santa Ynez Mountains. Segments 1 and 2 cross the Lower Ventura River Sub-basin (No. 4-3.02) and Upper Ventura River Sub-basin (No. 4-3.01). Groundwater is found within the Holocene and Pleistocene age alluvium and the San Pedro Formation consisting of gravel, sand, silt, and clay. The groundwater in this basin is recharged by the Ventura River, rainfall, and irrigation flows and occurs in unconfined, 60 to 100-foot thick Holocene and Pleistocene age alluvium (DWR 2003).

Santa Clara Substation and portions of Segment 1 are within the western part of the Santa Clara River Valley Basin (No. 4-4.03). The primary water-bearing units are alluvium (unconfined) and the San Pedro Formation (confined). The alluvium has a maximum thickness of approximately 500 feet. The San Pedro Formation is up to 4,000 feet deep (DWR 2003). Much of the Project Area is characterized by steep slopes and underlain by a shallow aquitard, both of which limit the groundwater recharge potential of the area.

Groundwater Quality

Groundwater quality issues in the Central Coast Basin include excessive hardness and saltwater intrusion. Much of the groundwater contains high mineral concentrations because of the marine sedimentary rock in the watersheds. Groundwater basins with total dissolved solids concentrations exceeding 1,000 mg/l occur throughout the basin (DWR 2003).

Groundwater quality issues in the Lower Ventura River Sub-basin include the presence of hydrogen sulfide as well as sulfate and nitrate mineral content in the shallow alluvium where most water wells are found (DWR 2003).

In the Santa Clara River Valley Basin, total dissolved solids concentrations in groundwater range from 90 to 2,088 mg/l.

4.9.2 Regulatory Setting

4.9.2.1 Federal

Clean Water Act

Enacted in 1972, the Federal Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary federal law applicable to water quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Enforced by the USEPA, it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes States to adopt water quality standards and includes programs addressing both point and non-point pollution sources. The CWA also established the NPDES, and provides the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

In California, programs and regulatory authority under the CWA have been delegated by USEPA to the SWRCB and its nine RWQCBs. Under Section 402 of the CWA as delegated to the State of California, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit. The SWRCB and RWQCBs have developed numeric and narrative water quality criteria to protect beneficial uses of State waters and waterways. Beneficial uses in the Project Area include water supply, groundwater recharge, aquatic habitat, wildlife habitat, and recreation.

Section 303(d) – Impaired Water Bodies and Total Maximum Daily Loads

Section 303(d) of the CWA requires States to identify waters where adopted water quality standards and beneficial uses are still unattained. These lists of prioritized impaired water bodies, known as the "303(d) lists," are submitted to the USEPA every 2 years.

The law requires the development of Total Maximum Daily Loads (TMDL) to improve water quality of impaired water bodies. TMDLs are the quantities of pollutants that can be assimilated by a water body without violating water quality standards. A TMDL must account for point and nonpoint sources as well as background (natural) sources and are implemented by allocating the total allowable pollutant loading among dischargers. States are developing TMDLs for impaired water bodies to maintain beneficial uses, achieve water quality objectives, and reduce the potential for future water quality degradation.

Section 401 – Water Quality Certification

Section 401 of the CWA specifies that the SWRCB or applicable RWQCB must certify that any discharge into waters of the U.S. complies with State water quality standards, including beneficial uses (23 CCR § 3830, et seq.). Under California's policy of no net loss of wetlands, the SWRCB and RWQCBs require mitigation for dredge and fill impacts to wetlands and waterways (see Section 4.4, Biological Resources). Dredge and fill activities in wetlands and waterways that impact waters of the U.S. will require a Federal Section 404 permit from the USACE. These permits trigger the requirement to obtain a Section 401 certification, which must be obtained prior to issuance of a Section 404 permit.

Section 402 – National Pollutant Discharge Elimination System

The SWRCB and the RWQCBs implement and enforce the NPDES program in California. Issued in 1972, the NPDES regulations initially focused on municipal and industrial wastewater discharges, followed by stormwater discharge regulations, which became effective in November 1990. NPDES permits provide two levels of control: technology-based limits and water quality-based limits. Technology-based limits are based on the ability of dischargers to treat wastewater, while water quality-based limits are required if technology-based limits are not sufficient to protect the water body. Additionally, stormwater permitting for construction site discharges is described below under State Regulations.

Dischargers with water quality-based effluent limitations must achieve water quality standards in the receiving water. Published by the USEPA on May 18, 2000, the California Toxics Rule (CTR) largely reflects the water quality criteria contained in the USEPA's Section 304(a) Gold Book (USEPA 1986) and the later National Recommended Water Quality Criteria (USEPA 2006). With promulgation of the CTR, these federal criteria are legally applicable in California to inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. NPDES permits must also incorporate TMDL waste load allocations when they are developed.

Section 404 – Permitting for Dredge and Fill Activities in Wetlands and Water of the U.S.

The USACE is responsible for issuing permits under CWA Section 404 for placement of fill or dredged material in waters of the U.S. and jurisdictional wetlands. Waters of the U.S. refers to oceans, bays, rivers, streams (including non-perennial streams with a defined bed and bank), lakes, ponds, and seasonal and perennial wetlands.

Project proponents must obtain a permit from the USACE for all discharges of fill or dredged material before proceeding with a proposed activity. The USACE may issue either an individual permit or a general permit. General permits are preauthorized at the regional or national level and are issued to cover activities expected to result in only minimal adverse environmental effects (i.e., LA District Regional General Permit No. 63

for Repair and Protection Activities in Emergency Situations). NWPs are a type of general permit issued to cover activities that the USACE has determined to have minimal adverse effects, such as routine maintenance (i.e., Nationwide Permit 3) or utility line activities (i.e., Nationwide Permit 12). Each NWP specifies particular conditions that must implemented by the permittee.

National Flood Insurance Act

The National Flood Insurance Act of 1968 and the National Flood Insurance Program make federally subsidized flood insurance available for flood-prone property in participating communities. The Program is administered by the Federal Insurance Administration of the Federal Emergency Management Agency (FEMA) and requires that participating communities adopt certain minimum floodplain management standards, including restrictions on floodplain development requirements to minimize exposure to flood hazards. To identify areas prone to flooding and insurance rates, FEMA develops Flood Insurance Rate Maps.

4.9.2.2 State Regulatory Setting

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) requires protection of water quality by appropriate designing, sizing, and construction of erosion and sediment controls. The Porter-Cologne Act established the SWRCB and divided California into nine regions, each overseen by a RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies and has delegated primary implementation authority to the nine RWQCBs. The Porter-Cologne Act assigns responsibility to the SWRCB and the nine RWQCBs for implementing CWA, including Sections 401 through 402 (see above).

The nine RWQCBs also implement CWA Section 303(d). Under Section 303(d), the RWQCBs identify streams and waters that have "Water Quality Limited Segments," or portions that do not meet water quality standards even after point sources of pollution have installed the minimum required levels of pollution control technology. Pursuant to the CWA, the SWRCB establishes priority rankings for water on the lists and develops total maximum daily load criteria (i.e., the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects) to improve water quality.

Under the Porter-Cologne Act and the NPDES, the SWRCB administers California's stormwater permitting program. This program requires all projects that will disturb more than one acre of land to implement stormwater BMPs to prevent discharge of sediments and stormwater. The permit (General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ) requires preparation of a SWPPP and implementation of BMPs, stormwater sampling, and reporting.

The SWRCB and the RWQCBs are responsible for addressing dredge and fill impacts to wetlands and waterways in California to support the State goal of no net loss of wetlands. The SWRCB and the RWQCBs are responsible for the issuance of Section 401 water quality certifications for federal actions that result in dredge and fill activities in federally jurisdictional wetlands and waterways. Dredge and fill activities in non-federally jurisdictional wetlands and waterways must be covered under a waste discharge requirement (WDR) issued by the SWRCB or applicable RWQCB.

The Porter-Cologne Act requires the development and periodic review of water quality control plans (Basin Plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters, provide the technical basis for determining waste discharge requirements, identify enforcement actions, and evaluate clean water grant proposals. The Basin Plans are updated every 3 years.

Central Coast Basin Plan

The majority of the Project is located in the mountainous Central Coast, which is particularly susceptible to erosion. Therefore, the Central Coast Basin Plan focuses on controlling water quality degradation from land disturbing activities (Section VIII.E). The Central Coast Basin Plan assesses the impact of erosion and sedimentation on water quality and beneficial uses in non-designated planning areas of the Central Coast, including Santa Barbara County, and contains erosion and sedimentation control policies. It identifies examples of accelerated erosion, including from construction, and the adverse effects of soil loss and sedimentation on streams and reservoirs, water supplies, groundwater recharge, fish and wildlife habitat, recreation, transport of pathogens and toxic substances, and increased flooding. The Central Coast Basin Plan also includes procedures to identify critical watersheds, assess soil-disturbing activities, and identify BMPs.

Section VIII.E.1 of the Central Coast Basin Plan contains land disturbance prohibitions, including discharge of soil into any stream during construction. Construction soil disturbance (unless exempted [see Basin Plan Ch. 5]) is prohibited in geologically unstable areas, on slopes in excess of 30 percent, and on soils with a severe erosion hazard unless an erosion and sediment control plan or its equivalent is prepared, certified, and enforced. Section VIII.D.2 specifically addresses construction activities, with an emphasis on road construction near streams, to minimize impacts through timing of construction, bank and channel protection, and use of BMPs, including measures proscribed by the California Department of Transportation (Caltrans). Section VIII.5.a addresses U.S. Forest Service activity in the Central Coast Basin, including road construction and related BMPs.

Los Angeles Basin Plan

The southern portion of the Project is located in the Los Angeles Basin, which shares a border with the Central Coast Basin at Rincon Point and includes the 300-square-mile drainage basin of the Ventura River. The Project facilities within the Los Angeles Basin would be located in open space areas near the basin's northern border. The Los Angeles Basin Plan establishes water quality objectives and strategies to maintain water quality and beneficial uses including stormwater permitting and other nonpoint source controls, Section 401 certification, and TMDLs.

The Los Angeles Basin has adopted TMDLs for the Ventura River Estuary for trash and for coastal and harbor beaches in Ventura County (RWQCB – Los Angeles Region 2012).

California Coastal Act

The California Coastal Act established the California Coastal Commission, an independent quasi-judicial State agency. The Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the Coastal Zone. In general, and subject to certain exemptions, a Coastal Development Permit must be obtained from either the Commission or the local government prior to construction in the Coastal Zone.

California Fish and Game Code § 1602

CFG Code Section 1600 et seq. sets forth guidelines for the protection and conservation of fish and wildlife, including habitat. The law requires any person, State or local governmental agency, or public utility to notify the CDFG before beginning an activity that would substantially modify the bank or bed of a river, stream, or lake (i.e., prior to causing any potential hydrological impacts). If the CDFG determines that the activity could substantially adversely affect a fish and wildlife resource, a Lake or Streambed Alteration Agreement is required. Refer to Section 4.4, Biological Resources, for additional information.

4.9.2.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Santa Barbara County Floodplain Management Ordinance

Santa Barbara County's flood hazard areas are subject to periodic inundation. The County's Floodplain Management Ordinance (Ordinance No. 3898) has been adopted to protect human life and minimize expenditures of public money for flood control, needs for rescue and relief, business interruptions, and damage to public facilities. Protection methods include restricting uses, requiring flood damage protection, controlling alteration of floodplains, installing stream channels and protective barriers, controlling placement of fill, and preventing floodwater diversion (Santa Barbara County 2012a). This ordinance is implemented by the Santa Barbara County Flood Control and Water Conservation District.

Santa Barbara County Grading Ordinance

The Santa Barbara County grading ordinance (County Code Chapter 14) contains standards and requirements for grading. All developers performing grading must conform to the recommendations of a soils engineer and engineering geologist, prepare and comply with an erosion and sediment control plan, comply with BMPs, employ dust control measures, use approved haul routes, prevent deposition of soil on county roads, provide drainage, protect remaining trees, and follow prescribed procedures for clearing and filling the site.

Ventura County Flood Control Ordinance

The Ventura County Watershed Protection District is responsible for the protection of life, property, waterways, watersheds, and public highways from damage or destruction caused by flooding or stormwater. The District regulates channels with peak runoff flows of more than 500 cubic feet per second (cfs) during a 100-year storm. The District requires a permit for any encroachment into regulated channels or their ROWs. The District also implements the Ventura County Flood Plain Management Ordinance (Ventura County Ordinance No. 3841, as amended), which requires permit review of structures built in the floodplain. The ordinance requires construction of utilities, such as electrical, sewer, water, and gas systems in a manner designed to minimize flood damage.

Ventura County Grading Ordinance

The Ventura County grading ordinance is found in Appendix J to the Ventura County Building Code (Ordinance No. 4369). The provisions of this appendix set forth the rules and regulations to control excavation, grading and earthwork construction, including fills and embankments, and the control of grading site runoff, including erosion sediments and construction-related pollutants; establishes the administrative procedure for the issuance of permits related to grading; and provides for approval of plans and inspection of grading construction.

City of Carpinteria General Plan and Local Coastal Plan

The City of Carpinteria General Plan's Open Space, Recreation, and Conservation Element contains objectives to preserve creekways and water quality, and to effect restoration. The General Plan allows creek bank and bed alterations only where no practical alternatives are available, and seeks to minimize water quality impacts and changes in runoff patterns. Required controls include stormwater BMPs, including setbacks from creek banks (Objective OSC-6) (City of Carpinteria 2003).

City of Carpinteria Grading Ordinance

The City of Carpinteria grading ordinance is found in Chapter 8.36, Excavation and Grading of the municipal code. The grading application contains standard conditions for grading, including engineering supervision, providing drainage, complying with municipal code, protecting public safety, protecting archaeological resources, protecting City infrastructure, minimizing fugitive dust, limiting import/export of material to off-peak hours, and complying with County Engineering Design Standards.

4.9.3 Significance Criteria

The potential environmental impacts of the Project on hydrology and water quality were evaluated using the criteria from the CEQA Appendix G Environmental Checklist. A Project causes a potentially significant impact if it would:

- Violate any water quality standards or waste discharge requirements
- 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
- Substantially alter the existing drainage pattern of the 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 siltation on or off site
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on or off site
- Create or contribute to runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality
- Place housing within a 100-year floodplain, as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows
- 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
- Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow

4.9.4 Impact Analysis

Would the project violate any water quality standards or waste discharge requirements?

Assessment Summary: Less than Significant Impact

Construction Impacts

Implementation of the Project would require ground-disturbing activities that could increase soil erosion rates, potentially resulting in violating water quality standards and impacts to beneficial uses in adjacent water bodies. The Project would cross mountainous and erosion-prone areas. Nearly 45 percent of the Ventura River watershed is classified as mountainous, with an additional 40 percent characterized as foothills (Ventura County 2012a). Soil disturbance adjacent to streams crossed by the Project could have adverse effects on water quality, including in Rincon Creek, which does not currently meet water quality standards for turbidity. Rehabilitation of access roads and the development of spur roads and crane pad/turnaround areas in steep, erosion-prone areas could result in soil loss and sedimentation.

The Project would cross lands with severe erosion hazards (NRCS 2008a, 2008b). To minimize soil erosion and resulting impacts on water quality, SCE would comply with State stormwater regulations and local and county grading ordinances, where applicable. Because the Project would disturb more than 1 acre of soils, SCE would apply for coverage under a General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ. This permit requires preparation of a SWPPP and implementation of BMPs to address sediment discharge and erosion control to meet water quality standards.

The Project may be required to obtain a Section 404 permit for dredge and fill activities in federally jurisdictional waterways. In addition, the Project may be required to obtain a Section 401 water quality certification from the SWRCB or applicable RWQCB if a Section 404 permit is required. Permitting for dredge and fill activities would ensure that these activities will not violate any water quality standards or waste discharge requirements.

Construction of the Project is not likely to involve the alteration of the course of any stream or river. Where permits are required for activities in State or federal jurisdictional waterways, all activities shall be conducted in accordance with applicable State and/or federal permits, including CWA Sections 404 and 401, the Porter-Cologne Water Quality Control Act, and Section 1602 of the California Fish and Game Code, including obtaining a Lake or Streambed Alteration Agreement if required.

The Project would not involve discharge of domestic sewage. SCE or its Contractor would install temporary sanitary facilities during construction. These facilities would be disposed of according to applicable regulations.

With the implementation of BMPs from the SWPPPs required under the State construction stormwater permit program, and compliance with terms and conditions of other required permits (including grading permits), the Project would not violate water quality standards or applicable waste discharge requirements associated with construction activities. Therefore, no impacts would occur under this criterion.

Operation Impacts

Project operations typically would involve patrol of the ROW and inspection of the subtransmission lines and structures and telecommunications cable. However, access, spur road, and crane pad/turnaround area maintenance may involve periodic light grading and/or vegetation removal. If necessary for this work, SCE would acquire any applicable grading permits. Compliance with the conditions of any necessary or applicable grading permit would ensure that water quality standards or WDRs are met, and thus impacts would be less than significant.

During operation, effluent from the site would largely be limited to stormwater discharge. As noted above, the Project would incorporate design features, BMPs, and other related measures or practices during operation of the Project. Water quality would be further protected by the implementation of the Stormwater Management Plan (SWMP) and the SPCC Plan described in Chapter 3 of this PEA, which would further reduce the potential for the Project to result in polluted discharge.

Project maintenance would not generate sanitary wastewater or dewatering discharges. Maintenance activities during operations would not typically involve dredge and fill activities and would not require Section 404 or 401 permitting. Emergency protection and repair activities for facilities, slopes or access roads would be covered by the USACE, LA District Regional General Permit No. 63 for Repair and Protection Activities in Emergency Situations; this permit authorizes discharges of dredged or fill material into Waters of the United States, including wetlands, to conduct necessary repairs and protection measures associated with an emergency situation (USACE 2008).

Following compliance with terms and conditions of any necessary permits (including grading permits), the Project would not violate water quality standards or applicable waste discharge requirements associated with construction activities. Therefore, less than significant impacts would occur under this criterion.

Would the project 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)?

Assessment Summary: No Impact

Construction Impacts

The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

The Project would not involve direct extraction of groundwater for use during construction. As described in Chapter 3 and Section 4.17, SCE would use water during construction for dust mitigation and other purposes; this water would be obtained from providers who use both surface and groundwater. Given the small volumes of water to be used during construction, the Project would not substantially deplete groundwater supplies in the area.

Construction of the Project also would not substantially interfere with groundwater recharge. For example, as shown below, the Project would not alter the course of a stream or river in a manner that would substantially alter the existing drainage pattern of the area resulting in an effect on groundwater recharge. In addition, construction of the Project would not introduce substantial new areas of impervious surfaces in a manner that would alter groundwater recharge. Construction of TSPs would require the pouring of concrete footings, which are impervious. Each footing would be approximately 6 feet in diameter. Approximately 90 structure footings would be dispersed along the length of the Project, and as such, the presence of these footings would not affect groundwater recharge in any significant way. New spur roads would be constructed from pervious local soils, and would not result in the addition of impervious surfaces that would substantially interfere with groundwater recharge. Therefore, the Project would not cause a net deficit in aquifer volume or a lowering of the local groundwater table level, and thus no impacts would occur under this criterion.

Operation Impacts

The Project would not directly extract groundwater for use during operations. During operations, water would only be used at Carpinteria Substation, Casitas Substation, and Santa Clara Substation for landscaping and for sanitary purposes; this volume of water would be equivalent to the small volumes currently used at the three substations for the same purposes. Given the small volume of water to be used during operations, the Project would not substantially deplete groundwater supplies in the area.

Operation of the Project would not introduce new areas of impervious surface and would have no impact on groundwater recharge. The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The volumes of water to be used during operation are insufficient to result in a substantial depletion of groundwater supplies. Therefore, the Project would not cause a net deficit in aquifer volume or a lowering of the local groundwater table level, and thus no impacts would occur under this criterion.

Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Assessment Summary: Less than Significant Impact

Construction Impacts

The Project would employ existing drainage facilities, would upgrade or replace deteriorated drainage facilities during the rehabilitation of access roads, and would design new spur roads so that they do not alter existing drainage patterns. Construction pads would result in minor localized changes in runoff volumes and velocities. However, in compliance with State and local stormwater regulations as described above, SCE would develop and implement a SWPPP and erosion and sediment control plans with BMPs to minimize soil erosion during construction. Therefore, the Project would have less than significant impacts on drainage patterns and resulting erosion sedimentation.

As noted above, the Project would not alter the course of a stream or river in a manner that would substantially alter the existing drainage pattern of the area. Because construction of the Project may require some civil engineering work in the vicinity of a stream, SCE would obtain any and all permits required for activities in State or federal jurisdictional waterways. The terms and conditions of permits issued under these laws likely will include measures and practices that would minimize erosion and siltation and ensure that these activities would be conducted in accordance with applicable State and/or federal laws, including CWA Sections 404 and 401, the Porter-Cologne Water Quality Control Act, and Section 1602 of the California Fish and Game Code, including obtaining a Lake or Streambed Alteration Agreement if required. As a result, impacts to the existing drainage pattern resulting from erosion or siltation would be less than significant.

Operation Impacts

Project operations typically would involve patrol of the ROW and inspection of the subtransmission lines, structures, and telecommunications cable. However, access, spur road, and crane pad/turnaround area maintenance may involve periodic light grading and/or vegetation removal. If necessary for this work, SCE would acquire any applicable grading permits. Compliance with the conditions of any necessary or applicable grading permit would ensure that siltation on and off site is minimized.

The Project's operations would not alter drainage patterns, including the course of any stream or river. Stormwater runoff would use existing drainage facilities. Where permits are required for maintenance or repair activities in State or federal jurisdictional waterways, all activities would be conducted in accordance with applicable State and/or federal permits, as described above, including permits for emergency protection and repairs.

At substations, SCE would implement its existing operational SWMP and BMPs to minimize soil erosion and associated siltation on or off site during operations.

Emergency operations may result in alterations to the amount of erosion or siltation associated with runoff due to grading/construction actions, vehicle movements, and other activities. These activities would be short-term and localized to the area in which emergency operations were being conducted. Emergency protection and repair activities for facilities, slopes, or access roads would be covered by the USACE, LA District Regional General Permit No. 63 for Repair and Protection Activities in Emergency Situations and other applicable permits and certifications. The protections provided by these permits would result in the reduction of erosion and associated on and off site siltation.

As presented above, the Project's operations would not alter the existing drainage pattern of a stream, river, site or area, and would not result in substantial erosion or siltation on- or off-site; therefore, impacts would be less than significant under this criterion.

Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Assessment Summary: Less than Significant Impact

Construction Impacts

As discussed above, the Project would employ existing drainage facilities, would upgrade or replace deteriorated drainage facilities during the rehabilitation of access roads, and would design new spur roads so that they do not alter existing drainage patterns. Construction pads would result in minor localized changes in runoff volumes and velocities. The SWPPP would be developed to include measures designed to prevent stormwater and floodwater from coming into contact with potential construction-related sources of sediments or other pollutants. In addition, if needed, SCE would obtain permits and comply with Ventura County flood control requirements for any encroachments on ROWs of any channels regulated by the Ventura County Watershed Protection District and any new structures in floodplains.

The Project would incorporate design features to control runoff rates, which would minimize the chances of flooding receiving waters or causing sedimentation that would reduce their capacity. Any dredge and fill activities would be conducted in a manner so as not to impact the hydraulic capacity of the existing channel. Any dredge and fill activities, if needed, would be conducted in compliance with permits obtained per the CWA Sections 404 and 401, the Porter-Cologne Water Quality Control Act, and Section 1602 of the California Fish and Game Code.

Through drainage design and implementation of stormwater BMPs during and after construction as required by existing regulatory programs, the Project would minimize the potential for flooding area streams and rivers. Therefore, the Project would have less than significant impacts related to the alteration of drainage patterns that would result in flooding on or off site, and no impacts that may result from altering a stream or river.

Operation Impacts

The Project's operation would not alter drainage patterns and would not introduce new impervious surfaces. Stormwater runoff would follow existing drainage patterns, and the Project would incorporate design features to control runoff rates, which would minimize the chances of flooding. In compliance with State and local stormwater and flood control regulations as described above, SCE would implement its existing operational SWMP and BMPs to minimize contact with floodwaters, such as at the northwest corner of Carpinteria Substation, and to minimize runoff velocities.

Emergency operations may result in alterations to existing drainage patterns and increases in the rate or amount of surface runoff due to grading/construction actions, vehicle movements, and other activities. These activities would be short-term and localized to the area in which emergency operations were being conducted. Emergency protection and repair activities for facilities, slopes, or access roads would be covered by the USACE, LA District Regional General Permit No. 63 for Repair and Protection Activities in Emergency Situations and other applicable permits and certifications. The protections provided by these permits would result in the minimization of flooding on or off site, and thus impacts would be less than significant.

Normal operations would typically have no impacts from altering a stream or river and would not require grading or alteration of drainage patterns. Where permits are required for maintenance or repair activities in State or federal jurisdictional waterways, all activities would be conducted in accordance with applicable State and/or federal permits, as described above, including permits for emergency protection and repairs. Therefore, Project operations would have minimal incremental impacts related to drainage alterations resulting in flooding.

Would the Project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction of the Project would generate stormwater discharges, and runoff from dust suppression activities. Site runoff would be addressed through stormwater BMPs as required by a State stormwater permit and local grading permits to ensure that potential sources of polluted runoff create less than significant impacts under this criterion during construction.

Operation Impacts

Project operations would generate only stormwater runoff, which would use existing and upgraded drainage systems that have the capacity to accept this runoff. Therefore, no impacts would occur under this criterion.

Would the Project otherwise substantially degrade water quality?

Assessment Summary: No Impact

Construction Impacts

No additional sources of potential water degradation for Project construction have been identified beyond those previously discussed under other Hydrology and Water Quality Significance Criteria. As discussed above, substantial degradation of water quality is not anticipated; therefore, no impacts would occur under this criterion as a result of Project construction.

Operation Impacts

Project operation would not result in additional sources of potential water degradation beyond those identified above. Substantial degradation of water quality during operations is not anticipated; therefore, no impacts would occur.

Would the Project 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?

Assessment Summary: No Impact

Construction Impacts

No housing construction is proposed as part of the Project. As a result, construction of the Project would not place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Map or Federal Flood Insurance Map. Therefore, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

Project operations would not involve placement of housing within a 100-year flood hazard area. Therefore, no impacts would result.

Would the Project place within a 100 year flood hazard area structures which would impede or redirect flood flows?

Assessment Summary: No Impact

Construction Impacts

In the immediate vicinity of Carpinteria Substation, one or more TSPs may be installed within a 100-year potential flood zone as mapped by FEMA. The circular, above-ground concrete footing that supports each TSP could be subject to flood waters. Because the footings are circular and only approximately 6 feet in diameter, they would neither impede nor redirect flood flows. Therefore, no impact would occur under this criterion from placing these structures in a 100 year flood hazard area.

Operation Impacts

In the immediate vicinity of Carpinteria Substation, one or more TSPs may be installed and operated within a 100-year potential flood zone as mapped by FEMA. The circular, above-ground concrete footing that supports the TSP could be subject to flood waters. Because the footings are circular and only approximately 6 feet in diameter, they would neither impede nor redirect flood flows. Therefore, no impact would occur under this criterion from operating these structures in a 100 year flood hazard area.

Would the Project 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?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Only two sites along the Project (the Carpinteria Substation and Casitas Substation) are located in areas where flooding could be a concern. Casitas Substation is located downstream of the Lake Casitas Reservoir Dam, the Matilija Reservoir Dam, and the Los Robles Diversion Dam; however, the substation is located outside of, and at an elevation approximately 20 feet higher than, the adjacent Ventura River floodplain; therefore, construction work at the substation would not expose workers to a significant risk of loss, injury, or death involving flooding. Construction work in Segment 4 in the immediate vicinity of Carpinteria Substation would be conducted in an identified flood zone; construction activities in this area would be conducted during the dry season to the extent feasible, and thus would not expose people or structures to a significant risk of loss, injury, or death involving flooding. Therefore, the risk of loss, injury, or death as a result of flooding or failure of a levee or dam would be less than significant.

<u>Operation Impacts</u>

Only two sites along the Project (the Carpinteria Substation and Casitas Substation) are located in areas where flooding could be a concern. The subtransmission infrastructure and Casitas Substation and Carpinteria Substation are currently unmanned, and would continue to be unmanned during operation of the Project. Therefore, Project operations would have no incremental risk of loss, injury, or death as a result of flooding or failure of a levee or dam.

Would the Project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche (seismic-induced lake waves), tsunami, or mudflow?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Tsunamis are waves typically generated offshore during a subaqueous fault rupture or a subaqueous landslide event. Seiches are waves generated within an enclosed large body of water (such as a lake) caused by horizontal movement of an earthquake. Areas that are highly susceptible to tsunami inundation tend to be located in low-lying coastal areas, such as marshlands and tidal flats. According to the California Emergency Management Agency (Cal EMA 2009), all components of the Project are located outside of a mapped tsunami hazard zone. Because the Project would generally be constructed in mountainous areas well above sea level and the water elevation of Lake Casitas, and would not involve construction of residences or other land uses involving human occupancy, the Project would have no impacts from risk of loss, injury, or death from tsunamis or seiches.

The Project is routed through areas that may be susceptible to mudflows; however, the Project would not involve the development of residences or other structures or facilities designed for human occupation. In addition, construction activities would be conducted during the dry season to the extent feasible, thereby minimizing the likelihood that any persons or structures would be affected by mudflows during construction. Therefore, there would be a less than significant impact from loss, injury, or death involving mudflows.

Operation Impacts

Because the Project would be located well above Lake Casitas and well above sea level and not within a mapped tsunami hazard zone (Cal EMA 2009), Project operations would have no impacts from risk of loss, injury, or death from tsunamis or seiches. Project facilities are designed for unmanned operation, with only periodic visitation for maintenance and inspection. Therefore, Project operations would have a less than significant impact from loss, injury, or death involving mudflows.

4.9.5 Applicant Proposed Measures

Because the Project would not result in significant impacts to hydrology or water quality, no APMs are offered.

4.10 Land Use and Planning

This section discusses the existing land use within the vicinity of the Project and the potential impacts to existing land use as a result of construction and operation of the Project. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

The Project would not cross any State Lands (Public Lands Information Center 2012). The physical infrastructure of the Project, including subtransmission structures, conductor, telecommunications cable, and substation modifications, would be located in existing SCE ROWs located on private lands, SCE-owned properties, and on Los Padres National Forest land. Figures 4.10-1 through 4.10-8, and Figure 4.15-2, show the designated land use and zoning in the area of the Project.

4.10.1 Environmental Setting

Land use designations presented in the discussions below are drawn from the Santa Barbara County Comprehensive Plan, Santa Barbara County Coastal Land Use Plan, Ventura County General Plan, City of Carpinteria General Plan, and the Los Padres National Forest Land Management Plan.

Zoning designations are drawn from the Santa Barbara County Land Use and Development Code, Santa Barbara County Coastal Zoning Ordinance, Ventura County Non-Coastal Zoning Ordinance, and City of Carpinteria Municipal Code.

4.10.1.1 Telecommunications

The telecommunications route associated with the Project would traverse Segments 1, 2, and 4; land use and zoning along Segment 4 is presented later in Section 4.10.1.5.

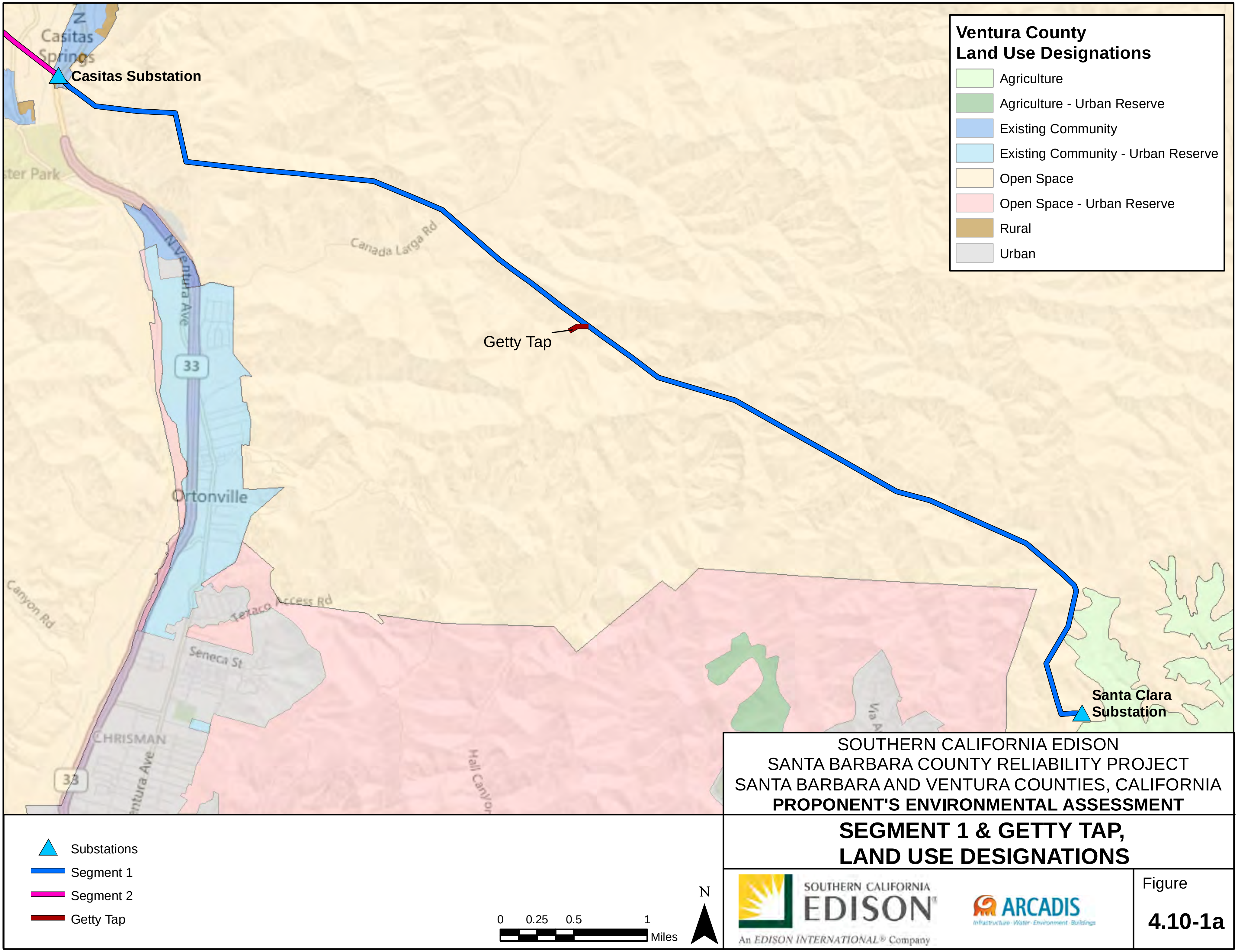
Segment 1 is located in unincorporated Ventura County on private lands. The eastern end of Segment 1 terminates at Santa Clara Substation, which is located to the east of the City of San Buenaventura (Ventura), and the western end terminates at Casitas Substation located to the south of the unincorporated community of Casitas Springs.

The majority of Segment 1 traverses lands designated in the Ventura County General Plan as Open Space; the western terminus of Segment 1 as it terminates at Casitas Substation is designated as Existing Community (Ventura County 2011a). Lands along Segment 1 are zoned as Open Space (OS) and Agriculture Exclusive (AE) (see Figures 4.10-1a and 4.10-1b).

Segment 2 is located between the unincorporated community of Casitas Springs and the 'Y', which is the location south-southwest of Lake Casitas where Segments 2, 3B, and 4 converge. The eastern end of Segment 2 terminates at Casitas Substation, and the western end terminates at the 'Y' where Segments 3B and 4 begin. Segment 2 is located on private lands.

The majority of Segment 2 crosses lands designated as OS; short distances of the eastern end of Segment 2 as it approaches Casitas Substation cross lands designated as Existing Community. The lands crossed by Segment 2 are zoned as AE, OS, Rural Exclusive, and Residential (see Figures 4.10-2a and 4.10-2b).

Telecommunications infrastructure also would be installed at Carpinteria Substation, Casitas Substation, and Santa Clara Substation; this work would be conducted within and outside the SCE-owned substation property, and on both outside infrastructure and within the MEERs at those locations. Information regarding the land use and zoning in the areas of these substations is presented below.



SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

SEGMENT 1 & GETTY TAP, LAND USE DESIGNATIONS

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Figure **4.10-1a**

ARCADIS: SCE_039, 6/18/12, R06

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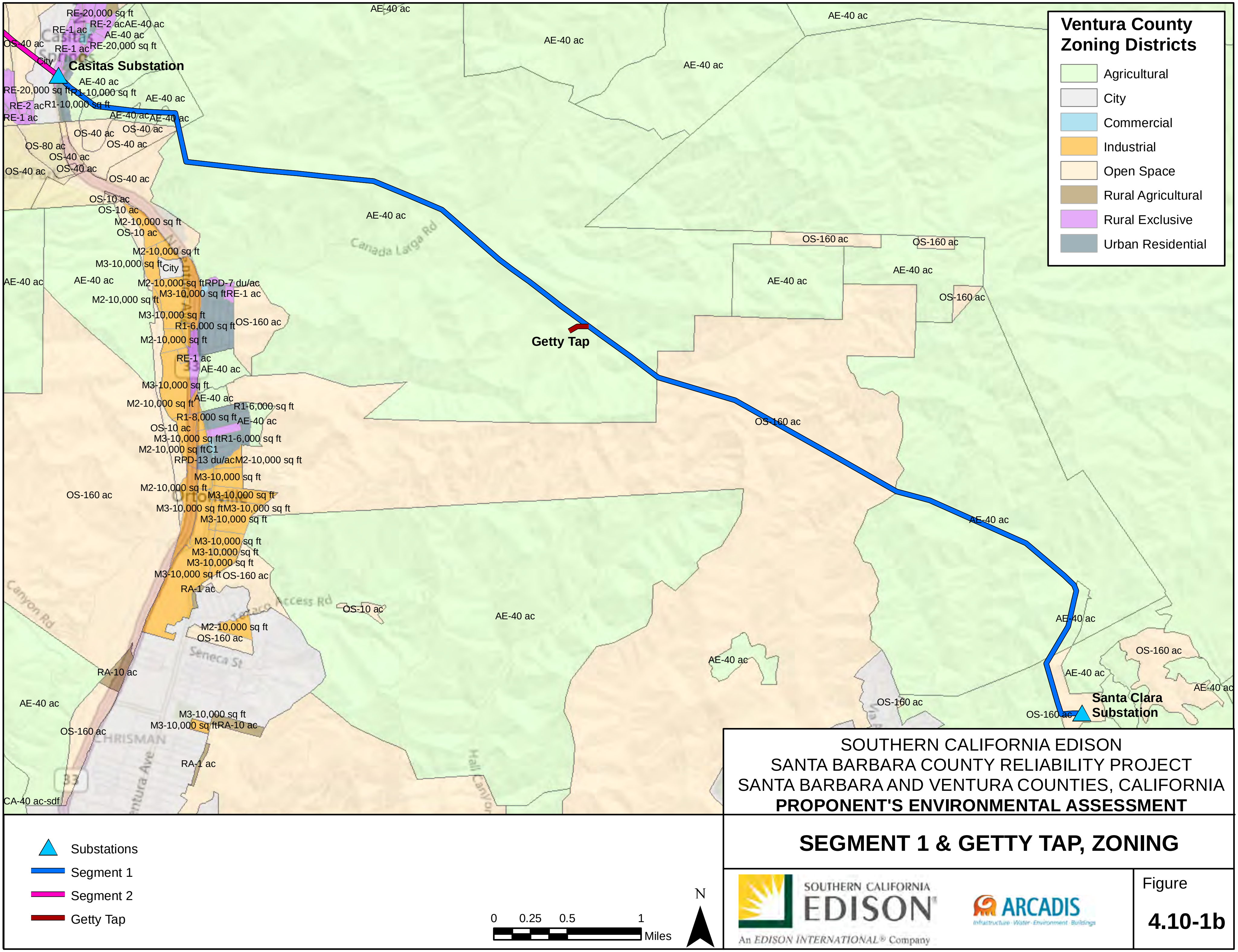

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SEGMENT 1 & GETTY TAP, ZONING

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Figure
4.10-1b

ARCADIS: SCE_040, 6/18/12, R05

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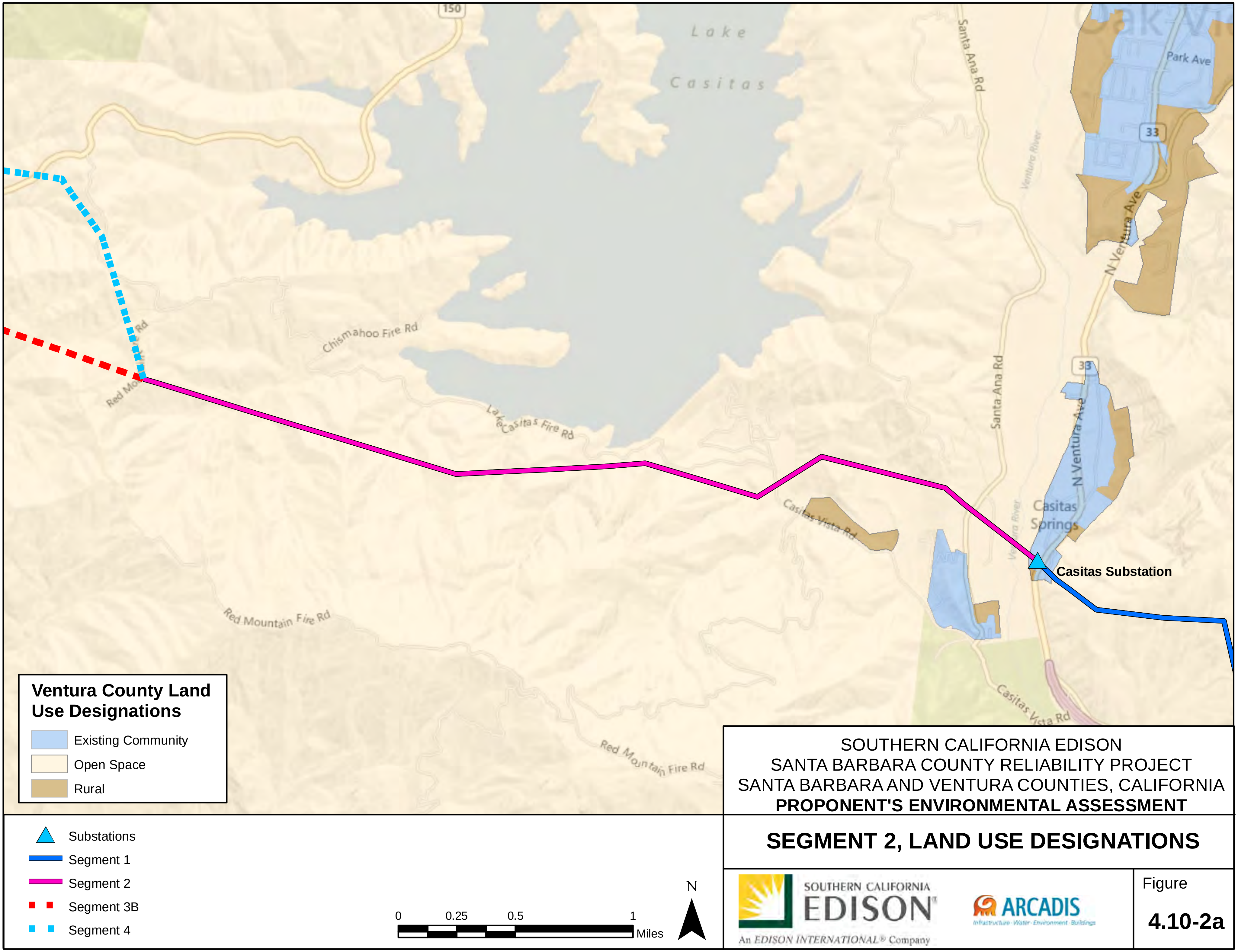

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SEGMENT 2, LAND USE DESIGNATIONS

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Figure
4.10-2a

ARCADIS: SCE_041, 6/18/12, R05

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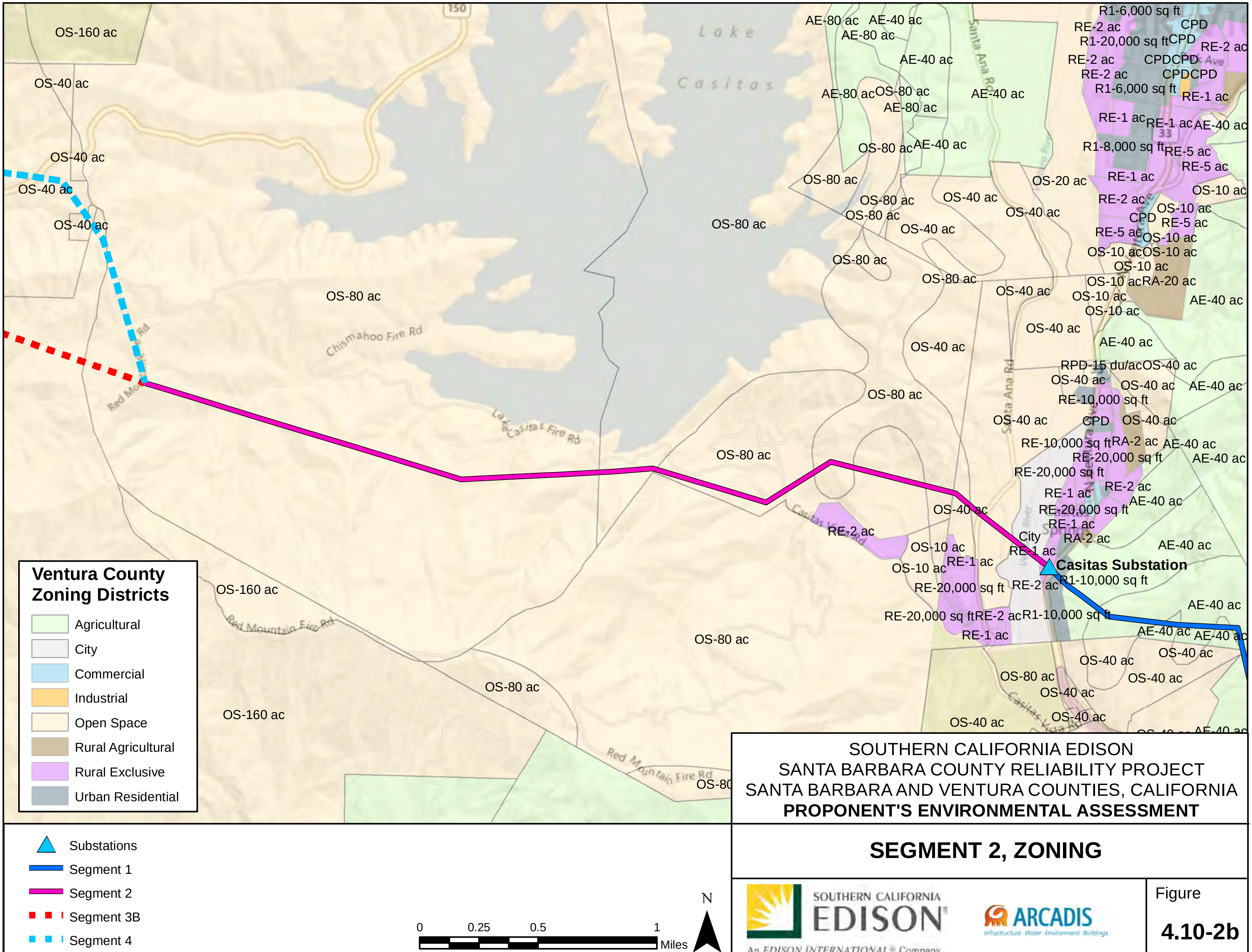

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SEGMENT 2, ZONING

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Figure
4.10-2b

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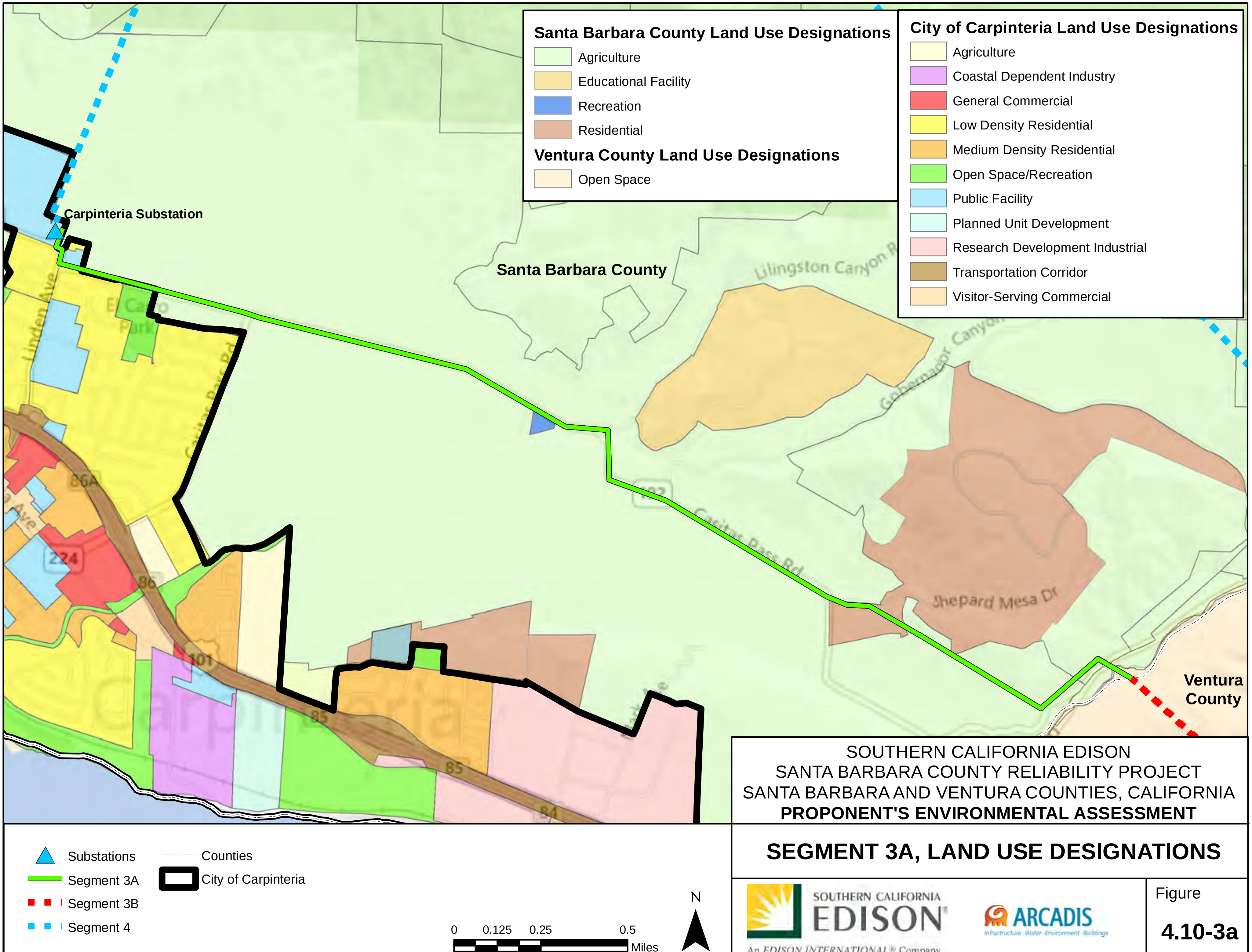

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PROPONENT'S ENVIRONMENTAL ASSESSMENT

SEGMENT 3A, LAND USE DESIGNATIONS

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Figure
4.10-3a

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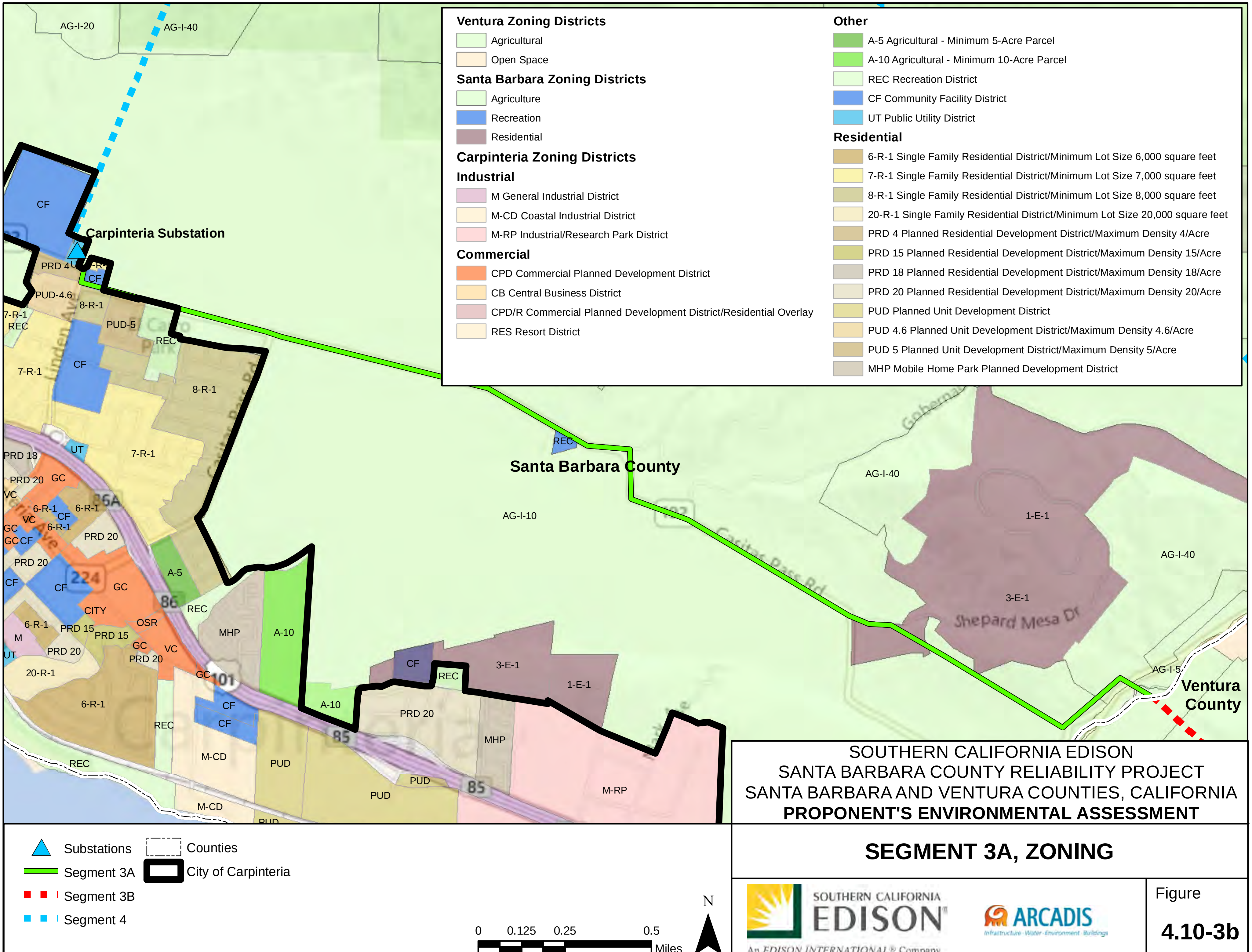

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PROPONENT'S ENVIRONMENTAL ASSESSMENT

SEGMENT 3A, ZONING

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Figure **4.10-3b**

ARCADIS: SCE_044, 6/18/12, R04

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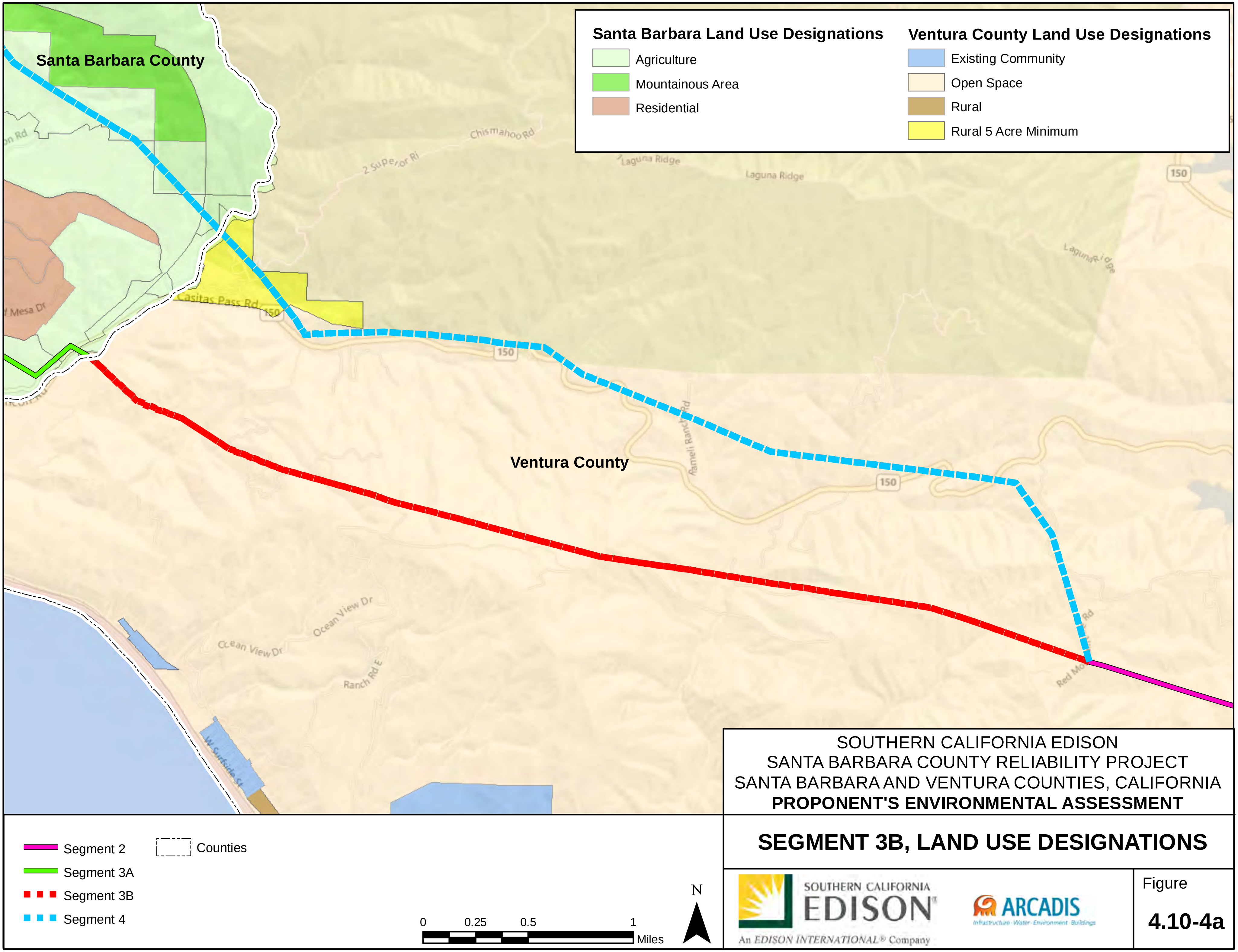

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SEGMENT 3B, LAND USE DESIGNATIONS

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Figure
4.10-4a

ARCADIS: SCE_045, 6/18/12, R05

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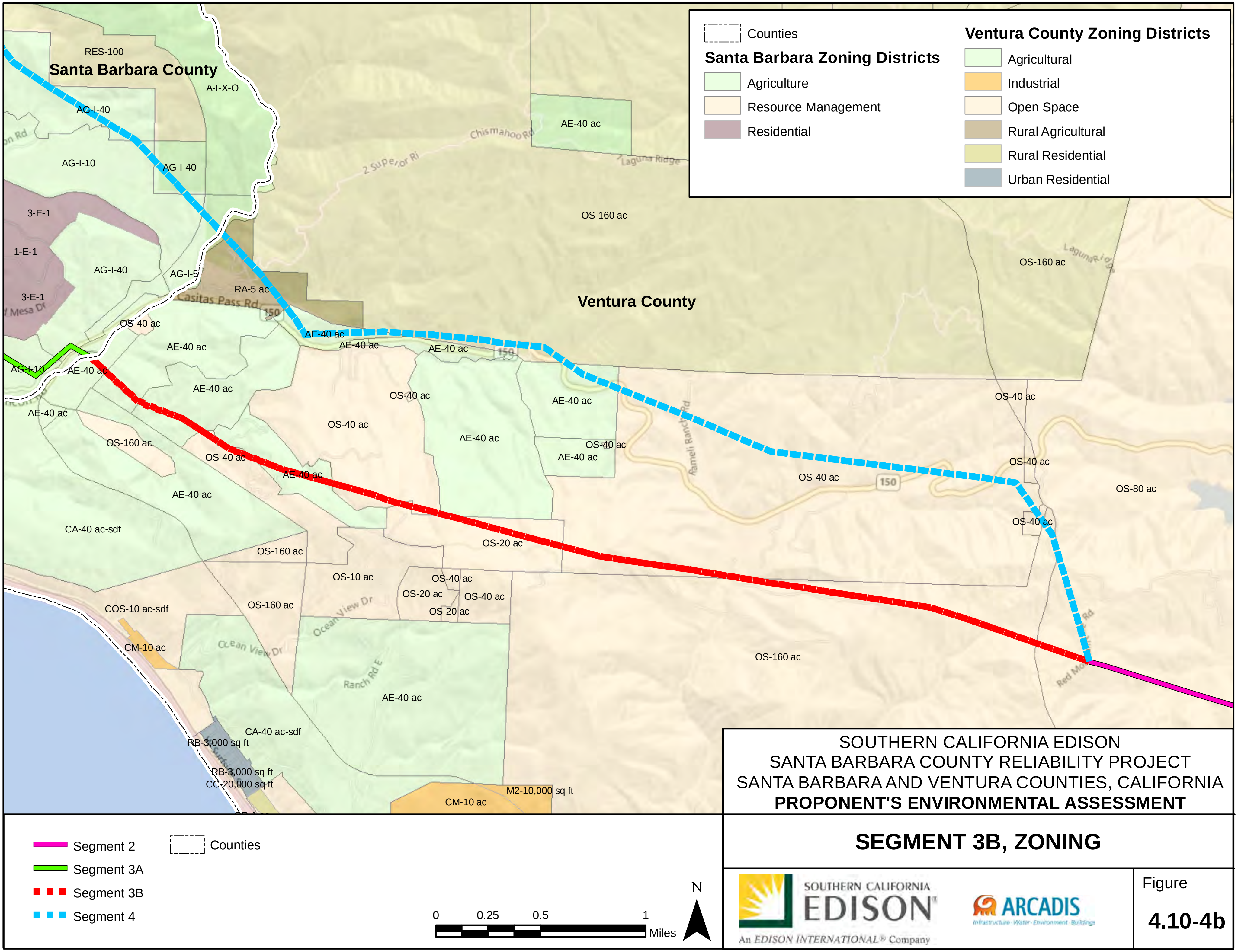

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SEGMENT 3B, ZONING

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Figure
4.10-4b

ARCADIS: SCE_046, 6/18/12, R05

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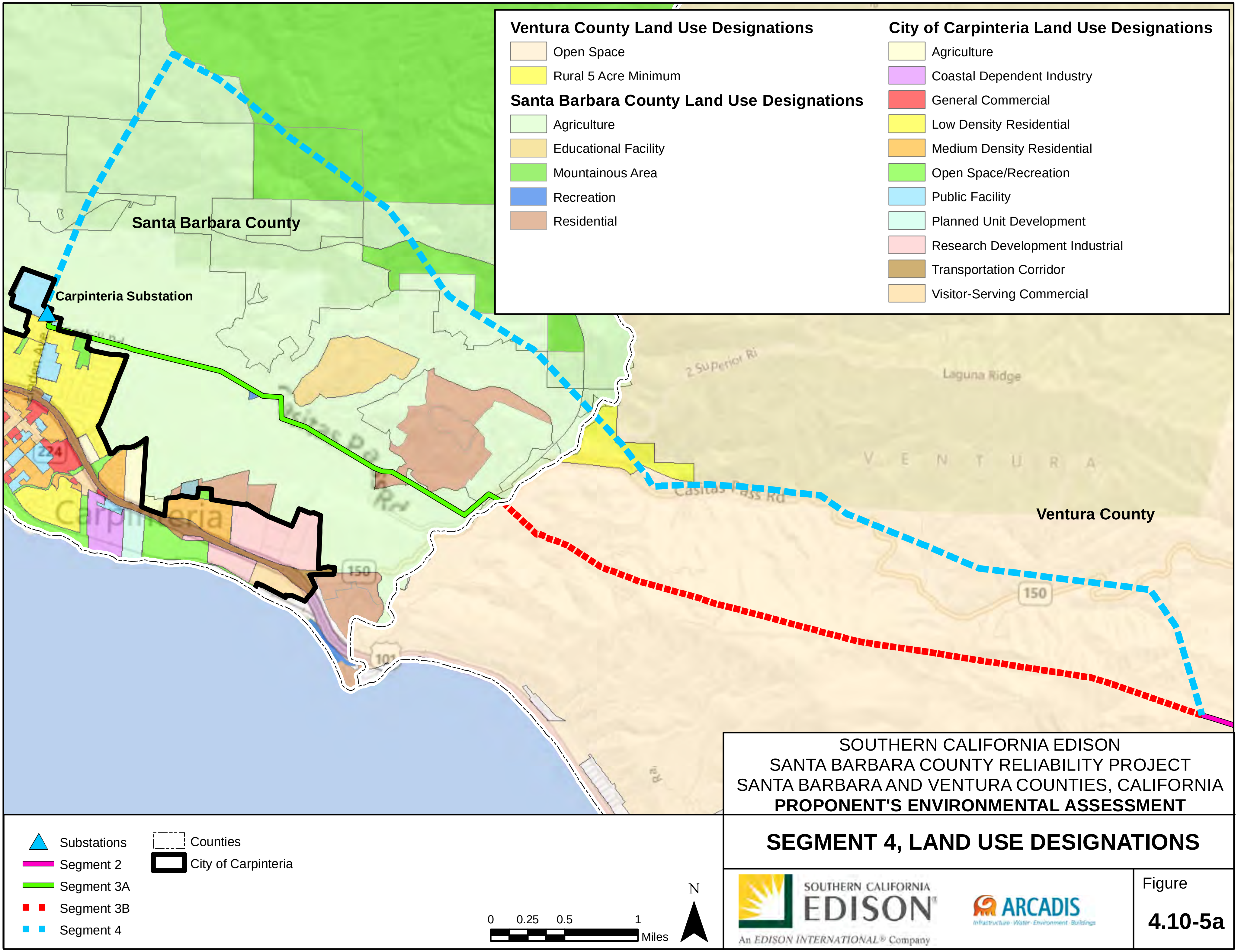

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SEGMENT 4, LAND USE DESIGNATIONS

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Figure
4.10-5a

ARCADIS: SCE_047, 6/18/12, R05

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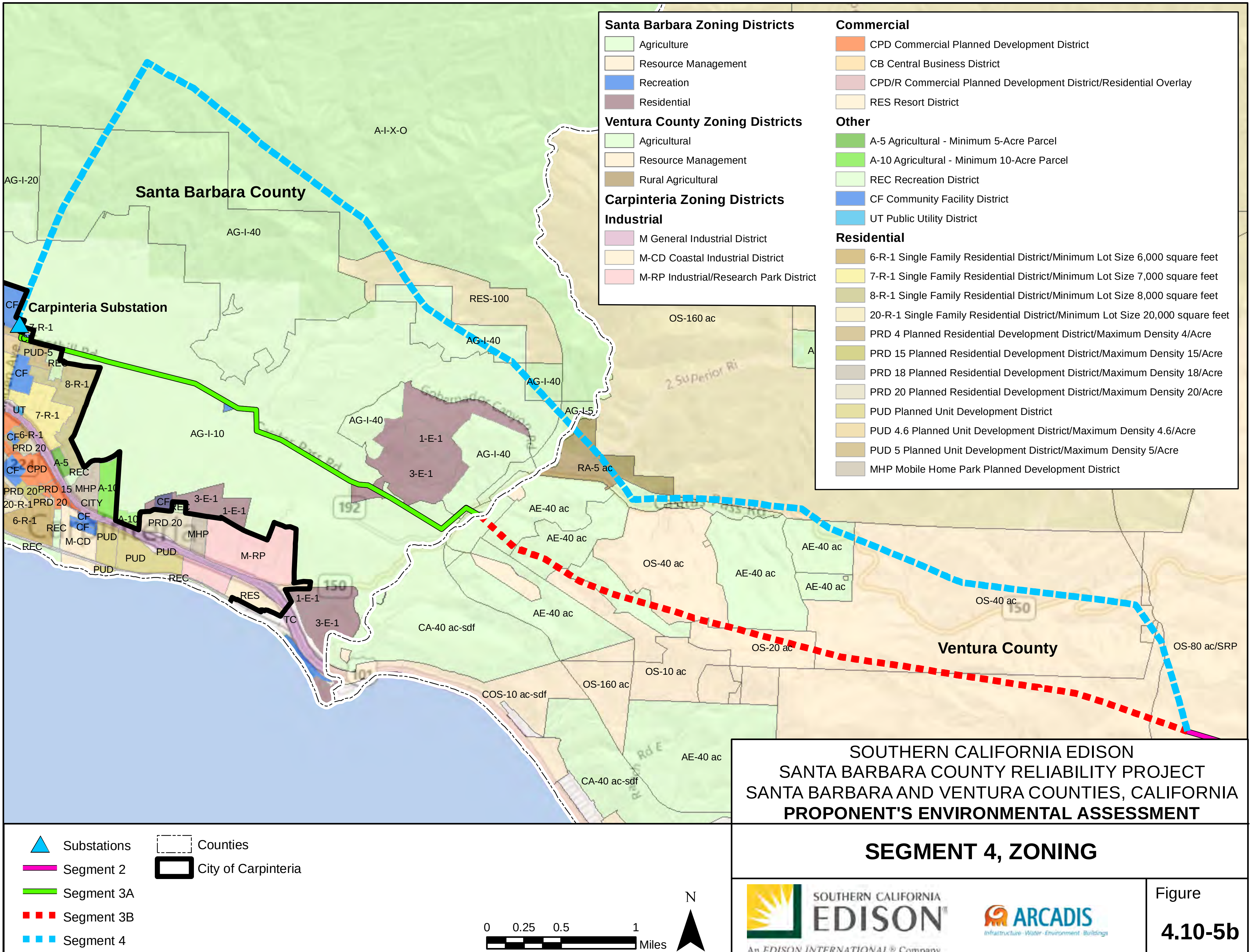

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PROPONENT'S ENVIRONMENTAL ASSESSMENT

SEGMENT 4, ZONING

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Figure
4.10-5b

ARCADIS: SCE_048, 6/18/12, R05

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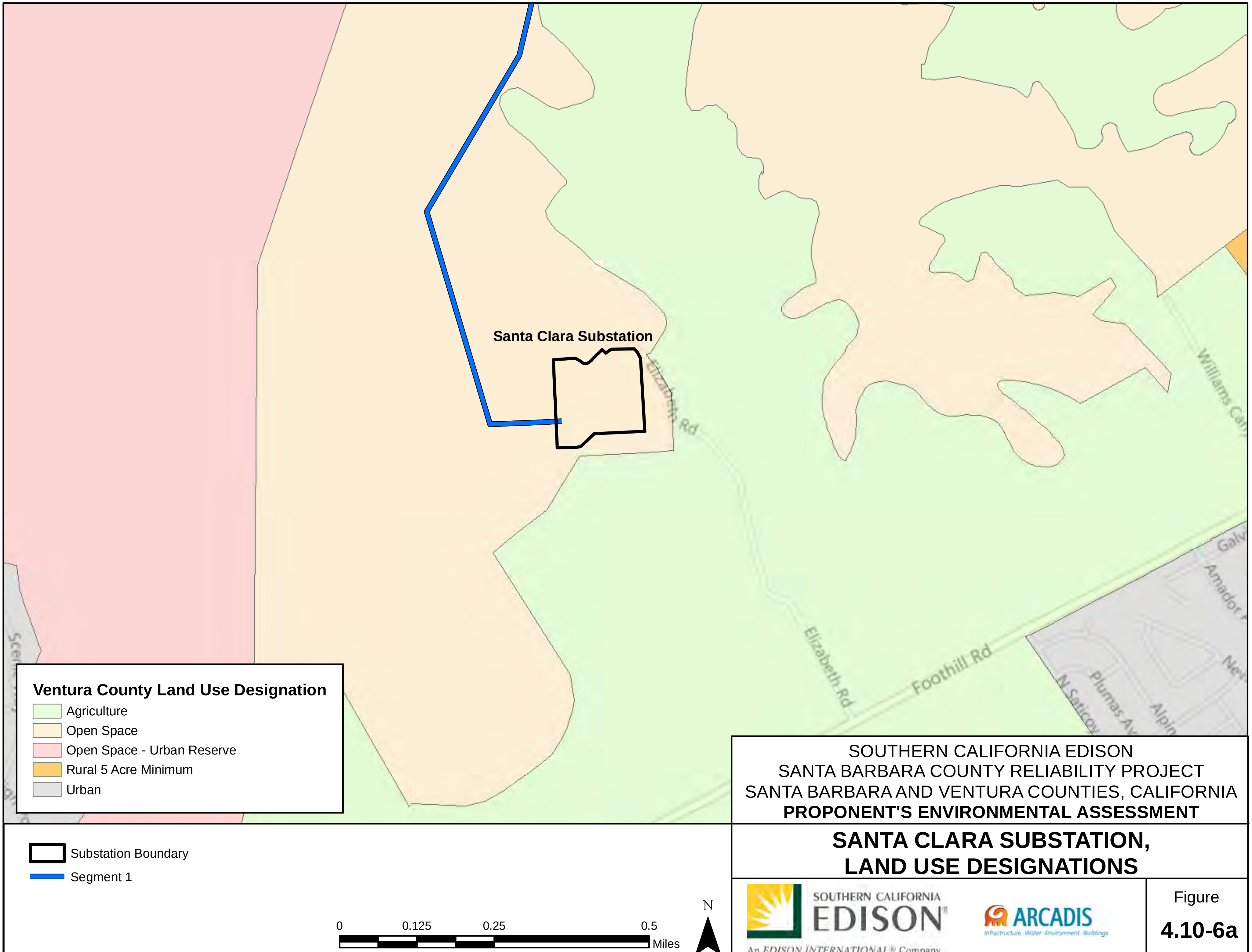

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SANTA CLARA SUBSTATION, LAND USE DESIGNATIONS

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Figure
4.10-6a

ARCADIS: SCE_026, 6/18/12, R06

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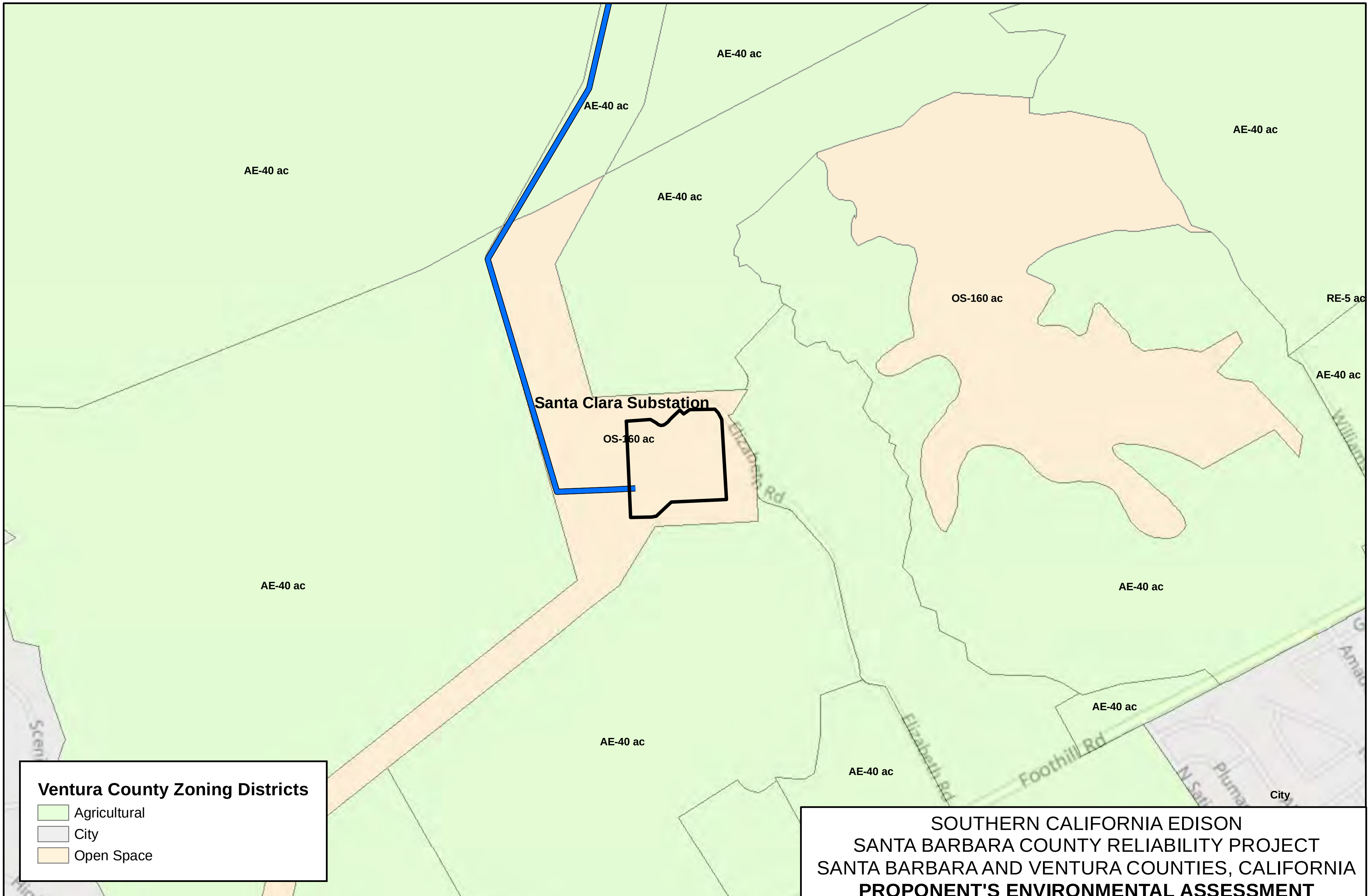

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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

SANTA CLARA SUBSTATION, ZONING

Substation Boundary
Segment 1

0 0.1 0.2 0.4 Miles

N

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Figure
4.10-6b

ARCADIS: SCE_023, 6/18/12, R06

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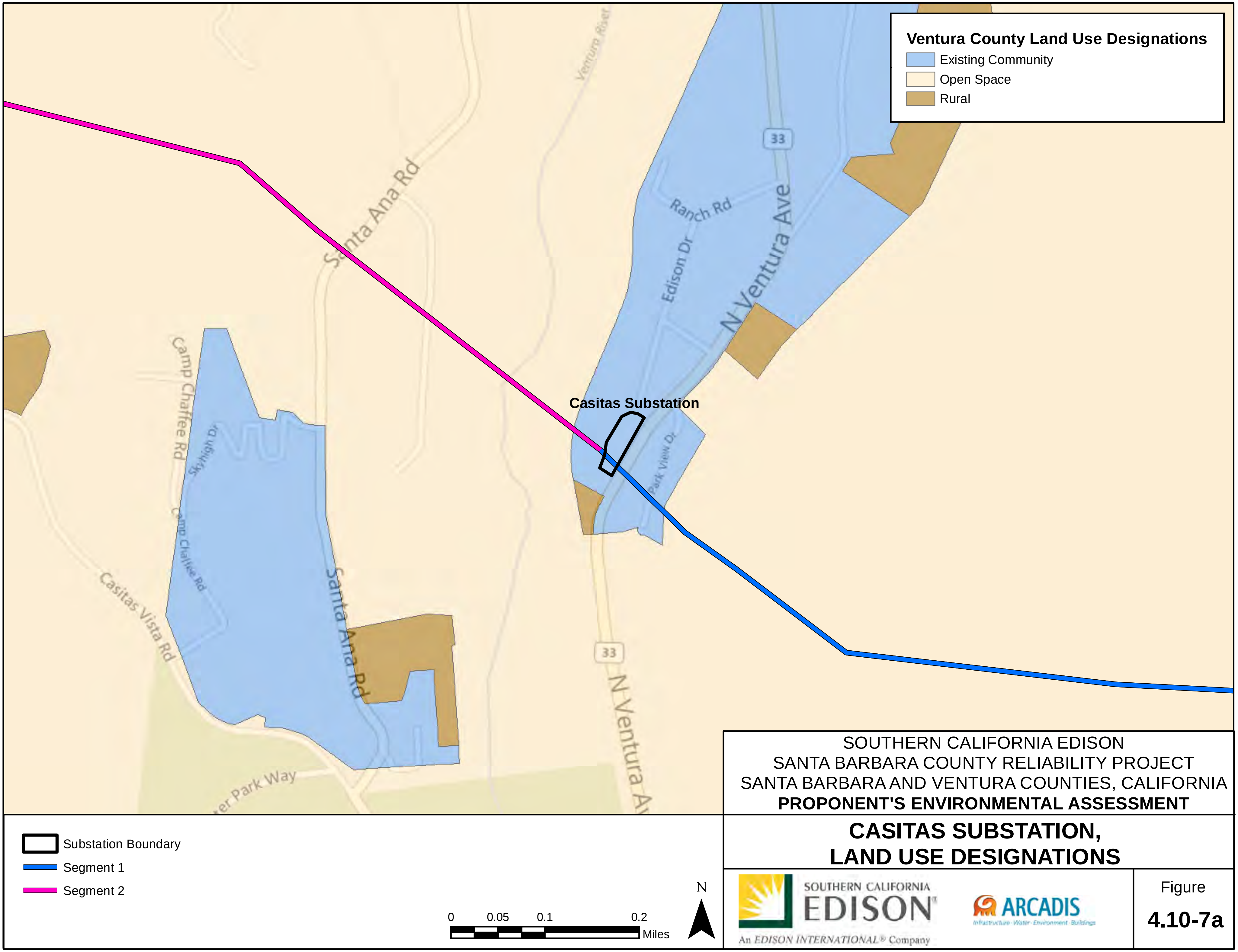

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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

CASITAS SUBSTATION, LAND USE DESIGNATIONS

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Figure
4.10-7a

ARCADIS: SCE_025, 6/18/12, R05

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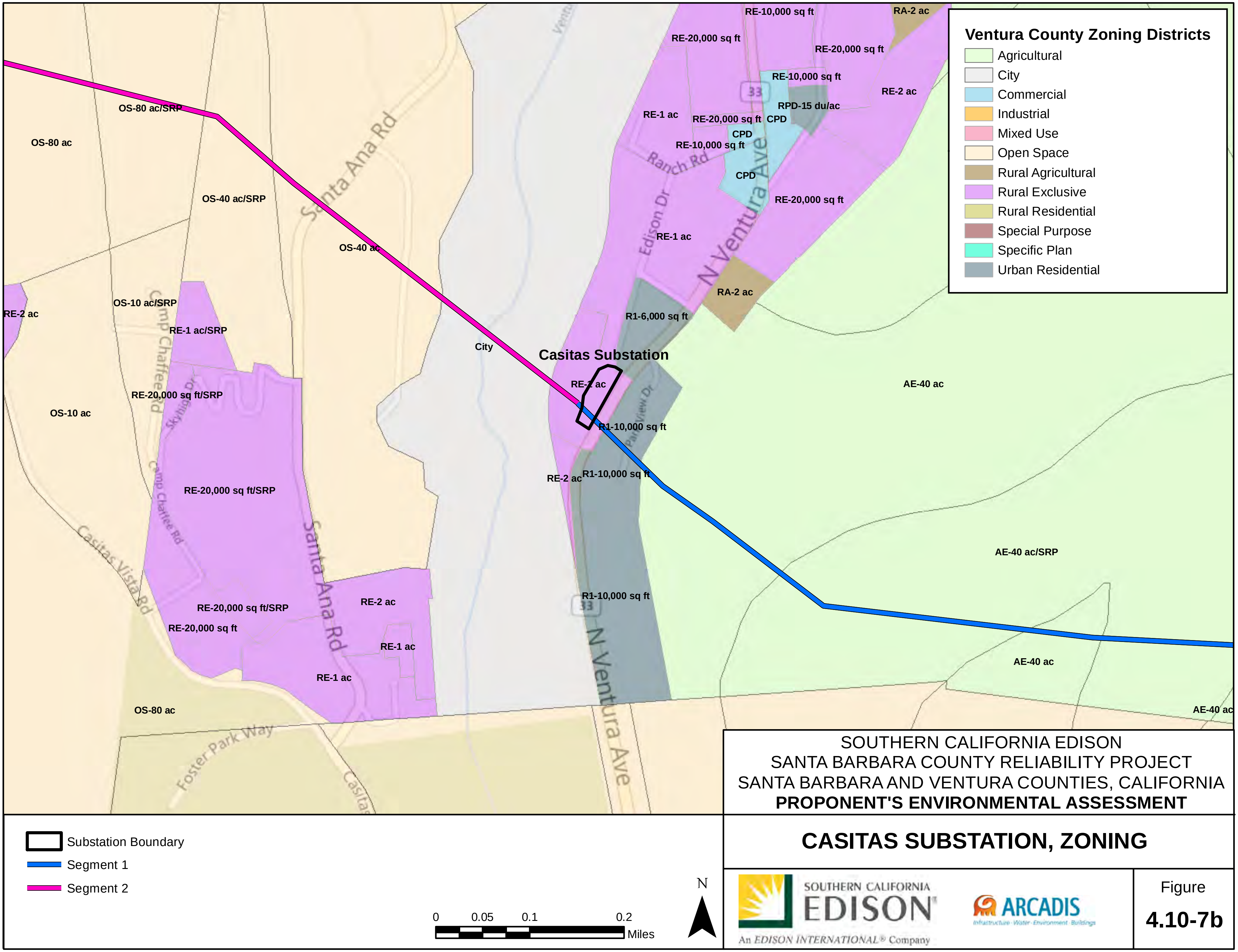

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CASITAS SUBSTATION, ZONING

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Figure
4.10-7b

ARCADIS: SCE_022, 6/18/12, R06

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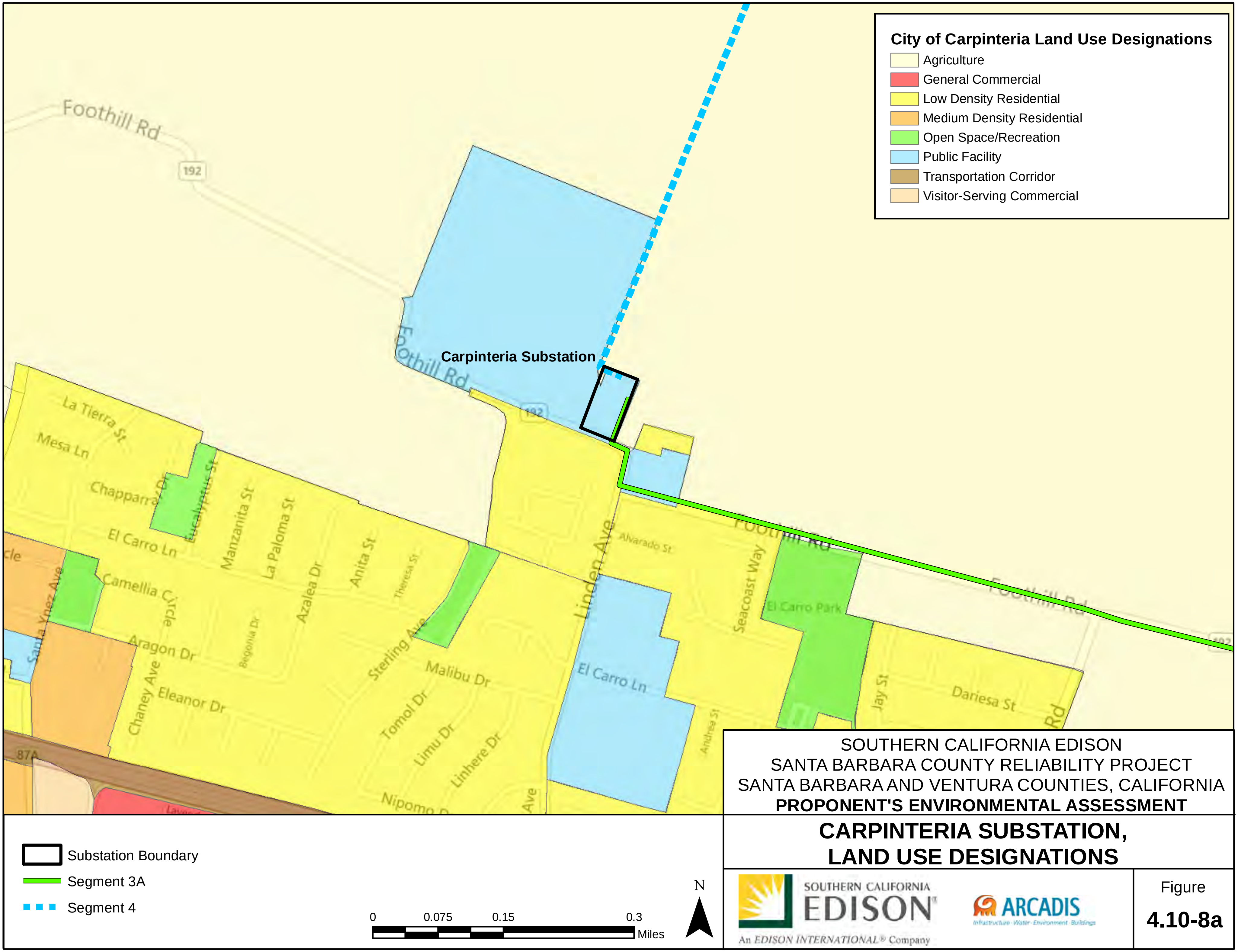

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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
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CARPINTERIA SUBSTATION, LAND USE DESIGNATIONS

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Figure
4.10-8a

ARCADIS: SCE_024, 6/18/12, R07

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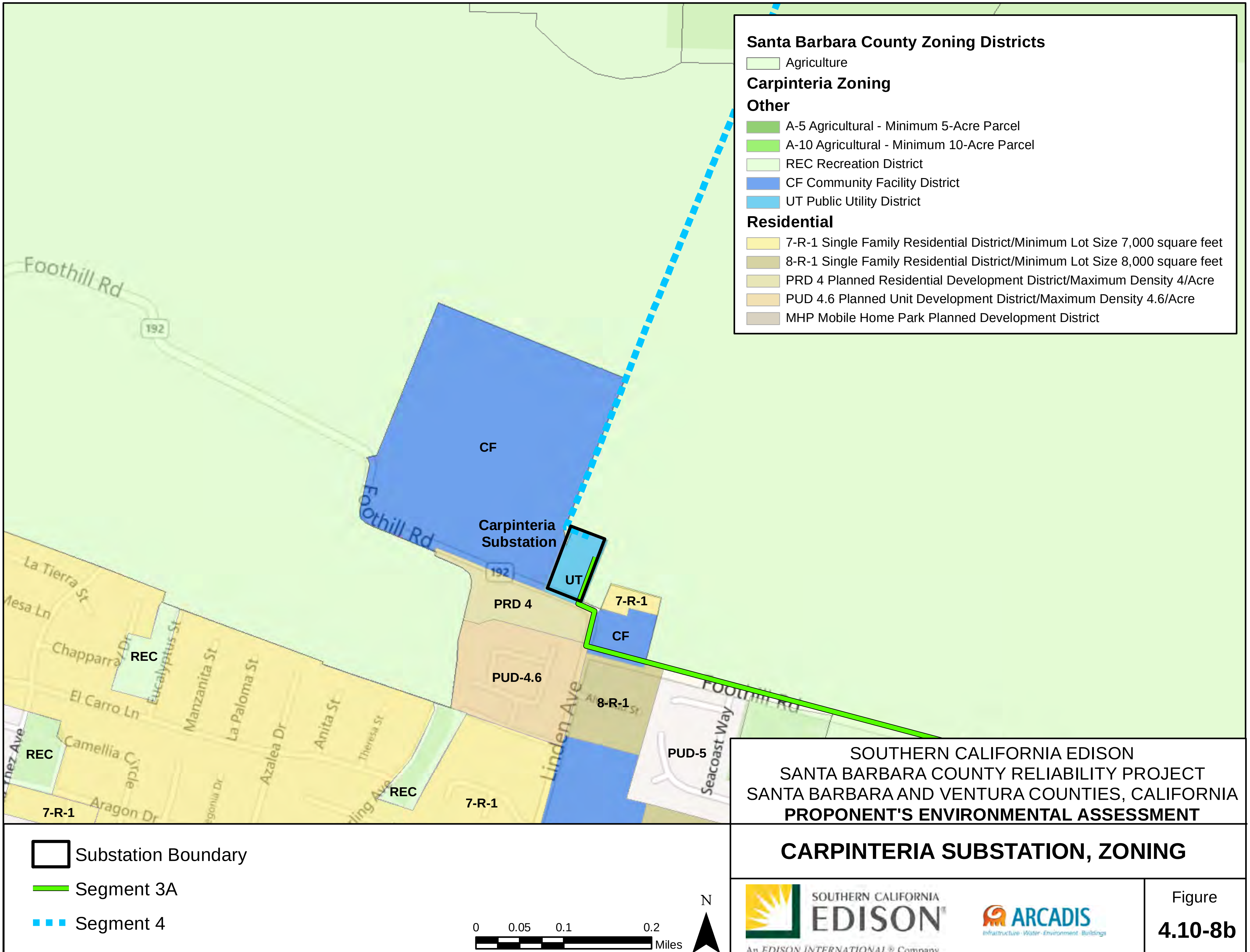

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CARPINTERIA SUBSTATION, ZONING

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Figure
4.10-8b

ARCADIS: SCE_021, 6/18/12, R06

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Work would also be performed at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation; all of this work would be conducted within the existing MEERs at these substations. This work would be conducted inside existing facilities on SCE-owned properties, and would have no bearing or potential impact on surrounding land uses or zoning. Therefore, it has been omitted from further discussion in this section.

4.10.1.2 Getty Tap

The Getty Tap would be located along Segment 1 in unincorporated Ventura County. The Getty Tap location is sited on private property with no public access. The Getty Tap is located on land designated in the Ventura County General Plan as Open Space. The land is zoned as Agricultural Exclusive (AE-40 ac) (see Figures 4.10-1a and 4.10-1b).

4.10.1.3 Segment 3A

Segment 3A is located in the City of Carpinteria and unincorporated Santa Barbara County within the Coastal Zone. Segment 3A originates at Carpinteria Substation, and parallels Foothill Road and Casitas Pass Road along much of its length. Segment 3A terminates at the Santa Barbara County/Ventura County line near the intersection of SR-150 and SR-192. The entirety of Segment 3A is located in existing SCE ROWs (see Figures 4.10-3a and 4.10-3b).

In Santa Barbara County, Segment 3A crosses lands designated in the Coastal Land Use Plan as Agriculture I with 10- and 40-acre minimums (A-I-10 and A-I-40) and Residential (RES 0.33). Segment 3A crosses lands zoned as Agriculture I with 5-, 10-, and 40-acre minimums (AG-I-5, AG-I-10, and AG-I-40) and Single Family Residential (3-E-1).

In the City of Carpinteria, Segment 3A crosses land designated as Public Facility (PF), as it terminates in Carpinteria Substation, and land zoned as Public Utility District (UT).

4.10.1.4 Segment 3B

Segment 3B begins at the Santa Barbara County/Ventura County line and terminates at the ‘Y’. Segment 3B crosses private land located entirely within Ventura County. Segment 3B traverses land designated in the Ventura County General Plan as Open Space; these lands are zoned as OS and AE (see Figures 4.10-4a and 4.10-4b).

4.10.1.5 Segment 4

Segment 4 is located in the City of Carpinteria, unincorporated Santa Barbara County, and in unincorporated Ventura County. The western terminus of Segment 4 is at Carpinteria Substation; its eastern terminus is at the ‘Y’ where Segments 2, 3B, and 4 meet.

In Santa Barbara County, Segment 4 is located on private lands and on land in the Los Padres National Forest. Private lands are designated as Agriculture (A-II) and Mountainous Areas (MA), and zoned as Agricultural (AG-I-10, AG-I-40, A-I-X-0). Segment 4 is routed through lands designated as Developed Area Interface in the Los Padres National Forest (see Figure 4.15-2 in the Recreation section).

In Ventura County, Segment 4 is located on private lands and on the Los Padres National Forest. These lands are designated OS in the Ventura County General Plan, and are zoned as OS (OS-40 ac, OS-160 ac) and AE (AD-40 ac) (see Figures 4.10-5a and b). Segment 4 is routed through lands designated as Back Country Motorized Use Restricted and Developed Area Interface in the Los Padres National Forest (see Figure 4.15-2 in the Recreation section).

In the City of Carpinteria, Segment 4 terminates at Carpinteria Substation, which is located on SCE-owned property on land designated as PF, and zoned as UT.

4.10.1.6 Santa Clara Substation

Santa Clara Substation is located on SCE-owned property in unincorporated Ventura County at the eastern end of Segment 1. The substation is located on land designated as OS (10-acre minimum). This land is zoned as OS (OS-160 ac) (see Figures 4.10-6a and 4.10-6b).

4.10.1.7 Casitas Substation

Casitas Substation is located on SCE-owned property in unincorporated Ventura County at the southern end of the unincorporated community of Casitas Springs. The substation is located on land designated as Existing Community. This land is zoned as Rural Exclusive (RE-1 ac) (see Figures 4.10-7a and 4.10-7b).

4.10.1.8 Carpinteria Substation

Carpinteria Substation is located on SCE-owned property within the City of Carpinteria. The substation is located on land designated as PF, and zoned as UT (see Figures 4.10-8a and 4.10-8b).

4.10.2 Regulatory Setting

4.10.2.1 Federal Regulatory Setting

The Los Padres National Forest Land Management Plan (Forest Plan) contains standards and guidelines to protect water, wilderness, wildlife, recreation, scenic landscapes, and heritage resources (U.S. Forest Service 2005b). The Los Padres National Forest covers approximately 1.8 million acres in Kern, Los Angeles, Monterey, San Luis Obispo, Santa Barbara, and Ventura counties.

The Forest Service has established a Commodity and Commercial Uses Program to manage certain land uses within the National Forest. The program's emphasis is on managing these uses while preserving recreation opportunities and resolving natural resource conflicts. Suitable commodity and commercial uses described by the Los Padres National Forest Management Plan include major utility corridors, road construction or reconstruction, and developed facilities (U.S. Forest Service 2005b). The Program's Lands 2 - Non-Recreation Special Use Authorizations Strategy notes an intent to "[m]aximize opportunities to co-locate facilities and minimize encumbrance of National Forest System land." (U.S. Forest Service 2005b).

The National Forest has established land use zones for the management of its lands. The Project would be located on Forest-owned land within two such zones:

Developed Area Interface

This zone includes areas adjacent to communities or concentrated developed areas with more scattered or isolated community infrastructure. The levels of human use and infrastructure are typically higher than in other zones.

The Developed Area Interface (DAI) zone is managed for motorized public access. Approximately 11.8 percent of the National Forest System and non-system user-created routes are found in this zone including 33 miles of unclassified road. The National Forest System roads are generally managed and maintained to a higher standard, facilitating public access to developed recreation opportunities and authorized infrastructure. A designated off-highway vehicle (OHV) system may be included in some locations, often including trailheads or staging areas leading to Back Country areas.

Although this zone may have a broad range of higher intensity uses, the management intent is to limit development to a slow increase of carefully designed facilities to help direct use into the most suitable areas while concentrating on improving facilities before developing new ones. National Forest staff expect that there will be some road construction, but anticipate no more than a 5 percent net increase in road mileage (U.S. Forest Service 2005b).

Back Country (Motorized Use Restricted)

This zone includes areas of the national forest that are generally undeveloped with few roads. Few facilities are found in this zone, but some may occur in remote locations. The levels of human use and infrastructure are low to moderate.

The zone will be managed for non-motorized (e.g., mechanized, equestrian, and pedestrian) public access. Motorized use is restricted to administrative purposes only that include U.S. Forest Service, other agency, or tribal government needs, as well as access needed to private land or authorized special uses.

Approximately 25.9 percent of the National Forest System and non-system roads are found in this zone including 114 miles of unclassified road. A limited number of National Forest System roads and other road systems that access administrative and authorized facilities and private land are found here.

Although this zone allows a range of low intensity land uses, the management intent is to retain the natural character of the zone and limit the level and type of development. Some roads will be constructed and maintained, but the intent is to manage the zone for no increase or a very low level of increase in system development. Managers will consider expanding the ability of existing facilities to meet demand before proposing new facilities and removing temporary facilities when they are no longer needed (U.S. Forest Service 2005b).

4.10.2.2 State Regulatory Setting

The Project would not be located on, or cross, any State lands.

4.10.2.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." G.O. 131-D, Section XV states that "A coastal development permit shall be obtained from the California Coastal Commission for development of facilities subject to this order in the Coastal Zone." As part of its environmental review process, SCE considered local land use plans and policies, and local land use priorities and concerns; these are discussed below.

Santa Barbara County Comprehensive Plan

The Santa Barbara County Comprehensive Plan, adopted in 1991 and republished in 2009, is a comprehensive policy document with several planning components. These components include agricultural, circulation, coastal land use, conservation, energy, environmental resources management, hazardous waste, housing, land use, noise, open space, scenic highways, safety, and seismic safety components (Santa Barbara County 2009a). This comprehensive document is designed to give long-range guidance to County officials making decisions affecting the growth and resources of Santa Barbara County. Further, this document helps to ensure that day-to-day decisions are in conformance with the long-range program designed to protect and further the public interest related to Santa Barbara County's growth and development. The Santa Barbara County Comprehensive Plan also serves as a guide to the private sector of the economy in relating its development initiatives to the public plans, objectives, and policies of Santa Barbara County.

Santa Barbara County Land Use and Development Code

The Santa Barbara County Land Use and Development Code is applicable to the unincorporated area of the county outside the Coastal Zone. This document implements the Comprehensive Plan and the Coastal Land Use Plan by classifying and regulating the uses of land, buildings, and structures in the unincorporated area of the county (Santa Barbara County 2011c).

Electric transmission lines within the jurisdiction of the county are identified as an allowable use in all zoning units subject to issuance of a conditional use permit. However, pursuant to G.O. 131-D, Section XIV.B., the Project would not require a conditional use permit.

Santa Barbara County Coastal Land Use Plan

The CLUP lays out the general patterns of development throughout the coastal areas of the county and can be found within the Santa Barbara County Comprehensive Plan (Santa Barbara County 2009a). Its purpose is to protect coastal resources while accommodating land use development within the Coastal Zone. The other Santa Barbara County Comprehensive Plan elements are applicable within the Coastal Zone; however, when there is a conflict, the CLUP takes precedence.

The CLUP notes:

> "The California Public Utilities Commission and California Energy Commission are the agencies responsible in the area of electric transmission lines which includes technical and safety performance and environmental concerns. All electric transmission lines proposed for the Coastal Zone are developments under the Coastal Act, thus the County will have permit review over them after certification."

Santa Barbara County Coastal Zoning Ordinance

This ordinance is applicable to the unincorporated Coastal Zone and implements the CLUP by classifying and regulating the uses of land, buildings, and structures in the Coastal Zone. This ordinance is Article II, Chapter 35 of the Santa Barbara County Code (Santa Barbara County 2008b).

Section 35-146, Applicability, of the Santa Barbara County Code notes that electric transmission lines "shall be permitted in all zone districts, except above ground electrical transmission lines shall not be permitted in the View Corridor Overlay District. Facilities which require only a Coastal Development Permit for approval shall be considered principal permitted uses." No portions of the Project would be located in a View Corridor Overlay District; the nearest View Corridor Overlay District is located along US-101 to the west and north of Carpinteria.

Ventura County General Plan

The Ventura County General Plan, last amended in 2011, sets forth the goals, policies, and programs that Ventura County will implement to manage future growth and land uses. In addition, the Ventura County General Plan has provided implementation measures that will ensure the policies of the plan are carried out. It describes the planning area, provides an overview of existing conditions, summarizes the issues raised during the preparation of the Ventura County General Plan, and identifies the environmental resources and constraints associated with the Ventura County General Plan.

> *"4.5.1 Goal*
>
> 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.
>
> *4.5.2 Policies*
>
> 1. New gas, electric, cable television, and telephone utility transmission lines shall use or parallel existing utility ROWs where feasible…
>
> 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 CPUC."

Ventura County Comprehensive Plan, Ojai Valley Area Plan

The purpose of an Area Plan is to specify the distribution, locations, types, and intensity of land uses within a prescribed area, as well as provide specific policies concerning development in that area. The Ojai Area Plan was originally developed in 1979, and updated in 2008. The primary goals of the Ojai Valley Area Plan are to preserve and protect the character of the Ojai Valley and ensure and maintain the quality of life for its residents. These goals can only be met by ensuring that population densities, land uses, and development are consistent with the appropriate use of existing valley resources. The Ojai Valley Area Plan contains goals, policies, and programs related to natural resources, hazards, land use, and public facilities and services.

Ventura County Non-Coastal Zoning Ordinance

The Ventura County Non-Coastal Zoning Ordinance, Division 8, Chapter 1 constitutes the comprehensive zoning regulations for the unincorporated area of the County of Ventura, excluding the Coastal Zone, and was adopted to protect and promote the public health, safety, and general welfare; to provide the environmental, economic, and social advantages which 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.

Per Section 8105-4 - Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones, transmission lines are permitted uses requiring a Planning Director-approved conditional use permit. However, pursuant to G.O. 131-D, Section XIV.B., the Project would not require a conditional use permit.

City of Carpinteria General Plan and Local Coastal Land Use Plan

The City's General Plan and Local Coastal Land Use Plan, adopted in 2003, is a policy document designed to guide the future growth and development of Carpinteria in a manner consistent with its physical, social, economic, and environmental goals. The plan provides a framework of policies and programs with which local decision makers may direct the growth of the community. At the same time, it constitutes a vehicle for citizen involvement both during the plan's development and throughout its implementation.

The General Plan is designed to be consistent with the California Coastal Act and provides the Land Use Plan and related policies for the various implementation programs such as the zoning ordinance. The Land Use Plan, together with the implementation programs, makeup the City's Local Coastal Program. There are no specific policies or goals in either plan directly relevant to the Project.

City of Carpinteria Municipal Code

Zoning and land use requirements are listed in Title 14 and all associated chapters of the City of Carpinteria Municipal Code.

Section 14.62.030 - Conditional uses, notes that "In addition to the conditionally permitted uses listed in specific zoning districts, the following uses may be permitted in any district in which they are not otherwise permitted, subject to the granting of a conditional use permit as set forth in this chapter". "Transmission lines, high voltage" are noted as a conditional use. However, pursuant to G.O. 131-D, Section XIV.B., the Project would not require a conditional use permit.

4.10.3 Significance Criteria

The significance criteria for assessing the impacts to land use and planning come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Physically divide an established community
- 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

- Conflict with any applicable habitat conservation plan or natural community conservation plan

4.10.4 Impact Analysis

Construction and operation of the Project would result in no impacts for the following CEQA criteria.

Would the project physically divide an established community?

Assessment Summary: No Impact

Construction Impacts

The Project would be located in largely rural areas where the lands are designated as Open Space or Agricultural. Only three areas along or near the route of the Project are designated or zoned residential: the immediate vicinities of Casitas Substation and Carpinteria Substation, and along a portion of Segment 3A. The Project involves modification and replacement of subtransmission infrastructure primarily within existing ROWs and installation of new overhead conductor and telecommunications cable. Neither the subtransmission structures, the conductor, nor telecommunications cable would physically divide an established community. Therefore, no impacts would occur under this criterion during construction.

Operation Impacts

The Project would be located in largely rural areas where the lands are designated as Open Space or Agricultural. Only three areas along or near the route of the Project are designated or zoned residential: the immediate vicinities of Casitas Substation and Carpinteria Substation, and along a portion of Segment 3A. All conductor and telecommunications system equipment would be installed and operated overhead on existing and newly installed subtransmission structures, or would be placed underground at substations. Because the Project infrastructure in proximity to residential areas and communities would be suspended overhead, and because the Project infrastructure would be operated on existing SCE ROWs, the Project would not physically divide any of these residential areas, and would not divide an established community, and thus no impacts would occur under this criterion during operations.

Would the project 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?

Assessment Summary: No Impact

Construction Impacts

The Project would be constructed in existing SCE ROWs located on private and federal lands within the County of Ventura, County of Santa Barbara, the City of Carpinteria, and Los Padres National Forest. As presented in the Regulatory Setting section, construction of electric transmission infrastructure is identified as an allowable use in all zoning units within the jurisdiction of Santa Barbara County; is a permitted use in Open Space, Agricultural, and Residential zones in Ventura County; and is a conditionally permitted use in any district in the City of Carpinteria. Therefore, construction of the Project would be consistent with each of these plans. The Los Padres National Forest Management Plan identifies current and projected future use of lands for electric transmission and distribution lines, and encourages collocation of facilities. Because the Project would be constructed in existing ROWs on forest land, the Project would be consistent with the management plan. Accordingly, no impacts would occur under this criterion.

Operation Impacts

The Project would be operated in existing SCE ROWs located on private and federal lands within the County of Ventura, County of Santa Barbara, the City of Carpinteria, and Los Padres National Forest. As presented in the Regulatory Setting section, operation of electric transmission infrastructure is identified as an allowable use in all zoning units within the jurisdiction of Santa Barbara County; is a permitted use in Open Space, Agricultural, and Residential zones in Ventura County; and is a conditionally permitted use in any district in the City of Carpinteria. Therefore, operation of the Project would be consistent with each of these plans. The Los Padres National Forest Management Plan identifies current and projected future use of lands for electric transmission and distribution lines, and encourages collocation of facilities. Because the Project would be operated in existing ROWs on forest land, the Project would be consistent with the management plan. Accordingly, no impacts would occur under this criterion.

Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Assessment Summary: No Impact

Construction Impacts

The Project would be located within the boundaries of the Los Padres National Forest, County of Ventura, County of Santa Barbara, and the City of Carpinteria. In Santa Barbara County, no official habitat or natural community conservation plan has been developed (Santa Barbara County 2012d). In Ventura County and the City of Carpinteria, there are no adopted habitat conservation plans or natural community conservation plans. Because there are no applicable habitat conservation plans or natural community conservation plans, construction of the Project would have no impacts under this criterion.

Operation Impacts

As presented above, there are no applicable habitat conservation plans or natural community conservation plans in the area of the Project. Therefore, operation of the Project would have no impacts under this criterion.

4.10.5 Applicant Proposed Measures

Because the Project would result in no impacts to land use and planning, no APMs are proposed.

4.11 Mineral Resources

This section describes the mineral resources in the area of the Project. The potential impacts are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.11.1 Environmental Setting

The Project is located within the foothills of the Santa Ynez Mountains, a sub-range of the Transverse Ranges. Earth materials within the Project Area generally consist of poorly consolidated to unconsolidated Quaternary sedimentary deposits overlying highly folded and faulted Quaternary to Tertiary sedimentary rocks. The thickness of Quaternary deposits typically decreases inland and uphill from the coastal piedmont to the Santa Ynez Mountains.

Oil exploration and production in the vicinity of the Project began in the mid-1800s on Sulphur Mountain, located approximately 7 miles to the northeast of Casitas Substation. In the intervening years, thousands of oil and gas wells have been drilled in Santa Barbara and Ventura counties. The Ventura and Rincon fields are located south of Segments 1 and 2 and Casitas Substation; portions of these fields are within 1 mile of components of the Project. Approximately 2,380 wells have been drilled in the Ventura field, and approximately 640 have been drilled in the Rincon field. There are no producing oil or gas wells within the ROW in which the Project would be constructed and operated.

Aggregate (sand and gravel) and clay resources are present and are mined throughout the region (CGS 2006; USGS 2012b). The Los Prietos mercury deposits west-northwest of the City of Carpinteria have been intermittently mined since 1860, but mining in these areas was not active as of 2010 (USDI 1965; Santa Barbara County 2010). Geothermal resources and uranium have been identified north of, but not within, the Project Area (CGS 2006; USGS 2012b).

4.11.2 Regulatory Setting

4.11.2.1 Federal Regulatory Setting

Surface Mining Control and Reclamation Act of 1977

This Act (30 U.S.C. §§ 1201-1328) establishes a program for regulating surface coal mining and reclamation activities. It establishes mandatory uniform standards for these activities on State and Federal lands, including a requirement that adverse impacts on fish, wildlife, and related environmental values be minimized. The Act creates an Abandoned Mine Reclamation Fund for use in reclaiming and restoring land and water resources adversely affected by mining practices.

4.11.2.2 State Regulatory Setting

California Surface Mining and Reclamation Act

The protection of regionally significant mineral resource deposits is one of the main emphases of the Surface Mining and Reclamation Act (SMARA) (Public Resources Code § 2710 et seq.). The law specifically mandates a two-phased process, commonly referred to as classification and designation, for mineral resources. The California Geological Survey is responsible under SMARA for carrying out the classification phase of the process. The California Mining and Geology Board is responsible for the second phase, which allows the Board to identify areas within a production-consumption region that contain significant deposits of certain mineral resources that may be needed to meet the region's future demand.

SMARA requires the State Geologist to classify lands into Mineral Resource Zones (MRZs) based on the known or inferred mineral resource potential of that land. The classification process is based solely on geology, without regard to land use or ownership. The primary goal of mineral land classification is to help ensure that the mineral resource potential of land is recognized and considered in the land use planning process. The MRZ categories are described below:

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

MRZ information is only available for Ventura County; the State Geologist has not classified lands in Santa Barbara County. Segments 1, 2, 3B, and that portion of Segment 4 located in Ventura County are routed through areas designated as MRZ-1, MRZ-3, MRZ-3a, and MRZ-4 for mineral resources and aggregate. There are no existing mining permits authorizing mining activities at any of the substation locations or within the Project ROW. The USGS "Mineral Resource Data System" indicates the nearest mineral resources to the Project are aggregate resources currently mined at Santa Barbara Portable Plant in Casitas Springs and at a number of pits located along the Santa Clara River to the south of Santa Clara Substation in Ventura County (USGS 2012b).

4.11.2.3 Local Regulatory Setting

Santa Barbara County Comprehensive Plan

Santa Barbara County protects mineral resources by identifying Mineral Resources Sites in the Environmental Resources Management Element (ERME) of the Comprehensive Plan (Santa Barbara County 2009a). These sites are considered lands where urbanization should be prohibited and include the Los Prietos mercury deposits located approximately 20 miles west-northwest of Carpinteria Substation. No Mineral Resources Sites are located within the Project Area.

Ventura County General Plan

The General Plan establishes Mineral Resource Areas that are subject to the Mineral Resource Protection Overlay Zone. The purposes of this zone are to safeguard future access to important resources, facilitate long-term supply of mineral resources within Ventura County, minimize land use conflicts, and provide notice to landowners and the general public of the presence of mineral resources (Ventura County 2010b, 2011d). The substation locations and Project ROW would not be within any Mineral Resource Area.

City of Carpinteria

The General Plan and Local Coastal Plan notes that "[o]il is the only mineral resource known in the Planning Area in significant quantities. At this time, oil mining and extraction activities are limited to offshore drilling and extraction…". Furthermore, the city considers onshore oil and gas facilities within the city to be largely incompatible with established residential neighborhoods. City Objective OSC-12, Policies OSC-12a and OSC-12b, and Implementation Policies 57 and 58 are intended to maintain an understanding of oil and gas resources and plan for oil-related operations. Objectives and implementation policies promote cooperation with oil industry and government officials and incorporate oil resource concerns into land use planning (City of Carpinteria 2003).

4.11.3 Significance Criteria

The significance criteria for assessing the impacts to mineral resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State
- 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

4.11.4 Impact Analysis

Construction and operation of the Project would result in no impacts for the following CEQA criteria.

Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Assessment Summary: No Impact

Construction Impacts

Construction of the Project would not result in the loss of availability of any known mineral resource that would be of value to the region and the residents of the State. The Project Area is not currently known to contain any mineral resources. Access to these easements and properties is by public road and access roads located on private, State, and Federal lands; these access roads are not known to contain any mineral resources. Construction of the Project would involve drilling holes for the footings of TSPs and, the rehabilitation of some existing access roads, and construction of new spur roads and crane pad/turnaround areas; these activities would not result in the loss of any known mineral resource. Because construction activities related to the Project would not result in the loss of availability of any known mineral resources that would be of value to the region or residents of the State, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

Operation of the Project would require routine inspection and maintenance of subtransmission and telecommunications infrastructure. Operation and maintenance activities of the Project would occur using the same access roads and on the infrastructure installed during construction. Because construction of the Project would not result in the loss of any known mineral resource, neither would operation of the Project. Because operations activities related to the Project would not result in the loss of availability of any known mineral resources that would be of value to the region or residents of the State, no impacts would occur under this criterion as a result of the Project.

Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Assessment Summary: No Impact

Construction Impacts

As presented above, no component of the Project is located on an important mineral resource recovery site. The Los Prietos mercury deposits represent the only locally important mineral resource recovery site within the vicinity of the Project; the deposits are located approximately 20 miles west-northwest of Carpinteria Substation, the nearest component of the Project. Due to the substantial distance between any component of the Project and these deposits, no impacts to the availability of the Los Prietos mercury deposits would occur as a result of operation of the Project, and therefore no construction impacts would occur under this criterion.

Operation Impacts

Operation and maintenance activities would occur using the same access roads and on the infrastructure installed during construction. Because construction of the Project would not result in the loss of any important mineral resource recovery site, operation of the Project would likewise have no impacts under this criterion.

4.11.5 Applicant Proposed Measures

Because the Project would result in no impacts to mineral resources, no APMs are offered.

4.12 Noise

This section describes the noise in the area of the Santa Barbara County Reliability Project (the Project) as well as the potential noise impacts. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 has been or would be performed.

4.12.1 Environmental Setting

4.12.1.1 General Noise Information

Sound is a physical disturbance in a medium, such as air, that is capable of being detected by the human ear. Sound waves in air are caused by variations in pressure above and below the static value of atmospheric pressure. Sound is measured in units of decibels (dB) on a logarithmic scale. The "pitch" (high or low) of the sound is a description of frequency, which is measured in Hertz (Hz). Most common environmental sounds are a composite of frequencies. A normal human ear can usually detect sounds within frequencies from 20 to 20,000 Hz. However, humans are most sensitive to frequencies in the range of 500 to 4,000 Hz.

Certain frequencies are given more “weight” during assessment because human hearing is not equally sensitive to all frequencies of sound. The A-weighted decibel (dBA) scale corresponds to the sensitivity range for human hearing. Noise levels capable of being heard by humans are measured in dBA. A noise level change of 3 dBA or less is barely perceptible to average human hearing. However, a 5 dBA change in noise level is clearly noticeable. A 10 dBA change is perceived as a doubling or halving of noise loudness, while a 20 dBA change is considered a “dramatic change” in loudness. Table 4.12-1 provides typical instantaneous noise levels of common activities in dBA.

Sound from a source spreads out as it travels away from the source, and the sound pressure level diminishes with distance. Individual sound sources are considered “point sources” when the distance from the source is large compared to the size of the source (e.g., transformer banks, construction equipment, and turbines). Sound from a point source radiates hemispherically, which yields a 6 dB sound level reduction for each doubling of the distance from the source. If the sound source is long in one dimension, the source is considered a “line source,” (i.e., roadways and railroads). Sound from a line source radiates cylindrically, which typically yields a 3 dB sound level reduction for each doubling of the distance from the source.

In addition to distance attenuation, the air absorbs a certain amount of sound energy, and atmospheric effects (wind, temperature, precipitation), terrain, and vegetation also influence the sound propagation and attenuation over large distances from the source.

An individual’s sound exposure is a value based on a measurement of the noise that the individual experiences over a specified time interval. A sound level is a measurement of noise that occurs during a specified period of time. However, noise impact evaluations under CEQA are based on the project-related increases to the existing community noise levels. A continuous source of noise is rare for long periods of time and is typically not a characteristic of community noise. Rather, community noise refers to outdoor noise in the vicinity of a community.

A community noise environment varies continuously over time with respect to the contributing sources. Within a community, ambient noise levels gradually change throughout a typical day, and the changes can often be correlated to the increase and decrease of transportation noise or to the daytime/nighttime operation of stationary mechanical equipment. The variation in community noise throughout a day is also due to the addition of short-duration single-event noise sources, such as aircraft, sirens, and various natural sources.

Table 4.12-1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Concert
Jet Fly-over at 1,000 feet	100	
Gas Lawn Mower at 3 feet	90	
Diesel Truck at 50 feet, at 50 miles per hour (mph)	80	Food Blender or Garbage Disposal at 3 feet
Noisy Urban Area, Daytime Gas Lawn Mower at 100 feet	70	Vacuum Cleaner at 10 feet
Commercial Area Heavy Traffic at 300 feet	60	Normal Speech at 3 feet
Quiet Urban Daytime	50	Large Business Office, Dishwasher in Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night
	10	Broadcast/Recording Studio (background level)
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation 1998

The metrics for evaluating the community noise environment are based on measurements of the noise levels over a period of time. These metrics are used in order to characterize and evaluate the cumulative noise impacts. The most common metrics for evaluating community noise are as follows:

L_{dn}: The Day-Night Average Sound Level that represents a 24-hour A-weighted sound level average conducted from midnight to midnight, where sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting, but no added weighting on the evening hours.

L_{eq}: The equivalent sound level, or the time-integrated continuous sound level, that represents the same sound energy as the varying sound levels, logarithmically averaged over a specified monitoring period.

L_{max}: The instantaneous greatest noise level measured on a sound level meter during a designated time interval.

L_{min}: The instantaneous lowest noise level measured on a sound level meter during a designated time interval.

CNEL: The Community Noise Equivalent Level that represents a 24-hour A-weighted sound level average conducted from midnight to midnight, where sound levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dB weighting, and nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting.

These noise levels are typically evaluated at sensitive receptor locations to determine compliance with noise standards. Examples of sensitive receptors include residential land uses, schools, hospitals, and parks.

In addition to sound, construction activities also have the potential to create ground vibrations, depending on the kind of equipment and operations involved, and the distances between the construction activities and the nearest sensitive receptors. The effects of groundborne vibrations generated from construction activities are typically imperceptible to most people located outside the immediate proximity of the construction activities. However, high-magnitude vibrations can result in damage to nearby structures within the immediate vicinity of the source.

4.12.1.2 Environmental Setting

The Project would be located within Santa Barbara County and Ventura County. Project-related construction activities would occur mainly in rural areas. However, some Project activities would be conducted in proximity to residences and other potentially sensitive noise receptors. The noise-sensitive receptors potentially impacted by the Project's construction activities are single-family residences and a public high school located on properties near subtransmission structure locations. Existing noise sources identified in proximity to these noise sensitive receptors include community noise, including roadway vehicle noise, aircraft overflight noise, and the operation of agricultural equipment.

Santa Clara Substation is located in the unincorporated area of Ventura County to the east of the City of San Buenaventura (Ventura). Land located immediately adjacent to the substation is designated and zoned Rural and Agricultural. The existing noise sources in the area of the substation include substation transformer banks and agricultural vehicle noise. There are two locations near Santa Clara Substation that could potentially contain noise sensitive receptors that may be potentially impacted by construction operations at Santa Clara Substation. These are residences located approximately 0.7 miles southwest and 0.5 miles southeast of the substation.

Casitas Substation is located at the south end of Casitas Springs, an unincorporated community in Ventura County. The land use designation for the area immediately surrounding the substation is Existing Community, and the zoning is Rural Exclusive and Urban Residential; single-family residential communities have been developed immediately north of the substation, and east of the substation across North Ventura Avenue/State Route 33 (SR-33). The existing noise sources in the area of the substation include substation transformer banks, community noise, and vehicle noise associated with SR-33. The two nearest noise-sensitive receptors potentially impacted by the proposed construction operations at Casitas Substation are located immediately north of the substation and across SR-33 to the east of the substation.

Carpinteria Substation is located in the City of Carpinteria. Land located north and east of the substation is designated Agriculture, land located to the west is designated Public Facility, and land located to the south is designated Low Density Residential. The zoning for these lands is Agriculture (north and east), Community Facility District (west), and Planned Residential Development District (to the south). The existing noise sources in the area of the substation include substation transformer banks, community noise, and vehicle noise associated with Foothill Road. The two nearest noise-sensitive receptors potentially impacted by the proposed construction operations at Carpinteria Substation are Carpinteria High School (located adjacent to the substation to the west) and residences located across Foothill Road (south of the substation).

4.12.1.3 Existing Ambient Noise Level

To document the existing ambient noise conditions within the vicinity of the three existing substations, mechanized environmental noise monitors were placed along the northwestern property line of Carpinteria Substation, at the northern property line of Casitas Substation, and at the southwestern property line of Santa Clara Substation. These three 24-hour noise monitors were programmed to record continuously throughout a typical business day on Monday, February 13, 2012. The results of this monitoring are shown in Table 4.12-2 below; monitor locations are shown on Figures 4.12-1a, 4.12-1b, and 4.12-1c.

Table 4.12-2: Measured Existing 1-hour Noise Levels on February 13, 2012

Military Time	Carpinteria Substation Measured 1 hour Noise Level (dBA L_{eq})	Casitas Substation Measured 1 hour Noise Level (dBA L_{eq})	Santa Clara Substation Measured 1 hour Noise Level (dBA L_{eq})
0:00:00	43.8	51.5	42.7
1:00:00	41.4	47.6	43.5
2:00:00	40.7	49.5	43.8
3:00:00	43.8	50.5	43.8
4:00:00	45.7	52.7	43.1
5:00:00	47.8	56.8	42.0
6:00:00	52.0	59.9	47.5
7:00:00	50.0	61.7	43.9
8:00:00	50.4	61.3	54.4
9:00:00	51.3	60.3	53.3
10:00:00	52.8	59.9	53.0
11:00:00	53.0	60.1	47.1
12:00:00	54.2	59.8	48.4
13:00:00	56.9	60.0	53.9
14:00:00	56.8	60.9	57.9
15:00:00	56.5	62.2	48.5
16:00:00	56.4	61.4	53.7
17:00:00	54.4	62.3	49.8
18:00:00	50.5	60.1	47.5
19:00:00	49.0	58.8	43.9
20:00:00	48.7	57.8	43.4
21:00:00	48.1	56.6	43.3
22:00:00	46.1	55.1	42.1
23:00:00	42.5	54.0	42.4
CNEL	55.4	63.7	52.8

The noise monitoring data provided in Table 4.12-2 show that the ambient hourly noise levels measured at Carpinteria Substation range from 41 to 57 dBA Leq, resulting in a calculated CNEL of 55 dBA. The ambient hourly noise levels measured at Casitas Substation range from 48 to 62 dBA Leq, resulting in a calculated CNEL of 64 dBA. The ambient hourly noise levels measured at Santa Clara Substation range from 42 to 58 dBA Leq, resulting in a calculated CNEL of 53 dBA.

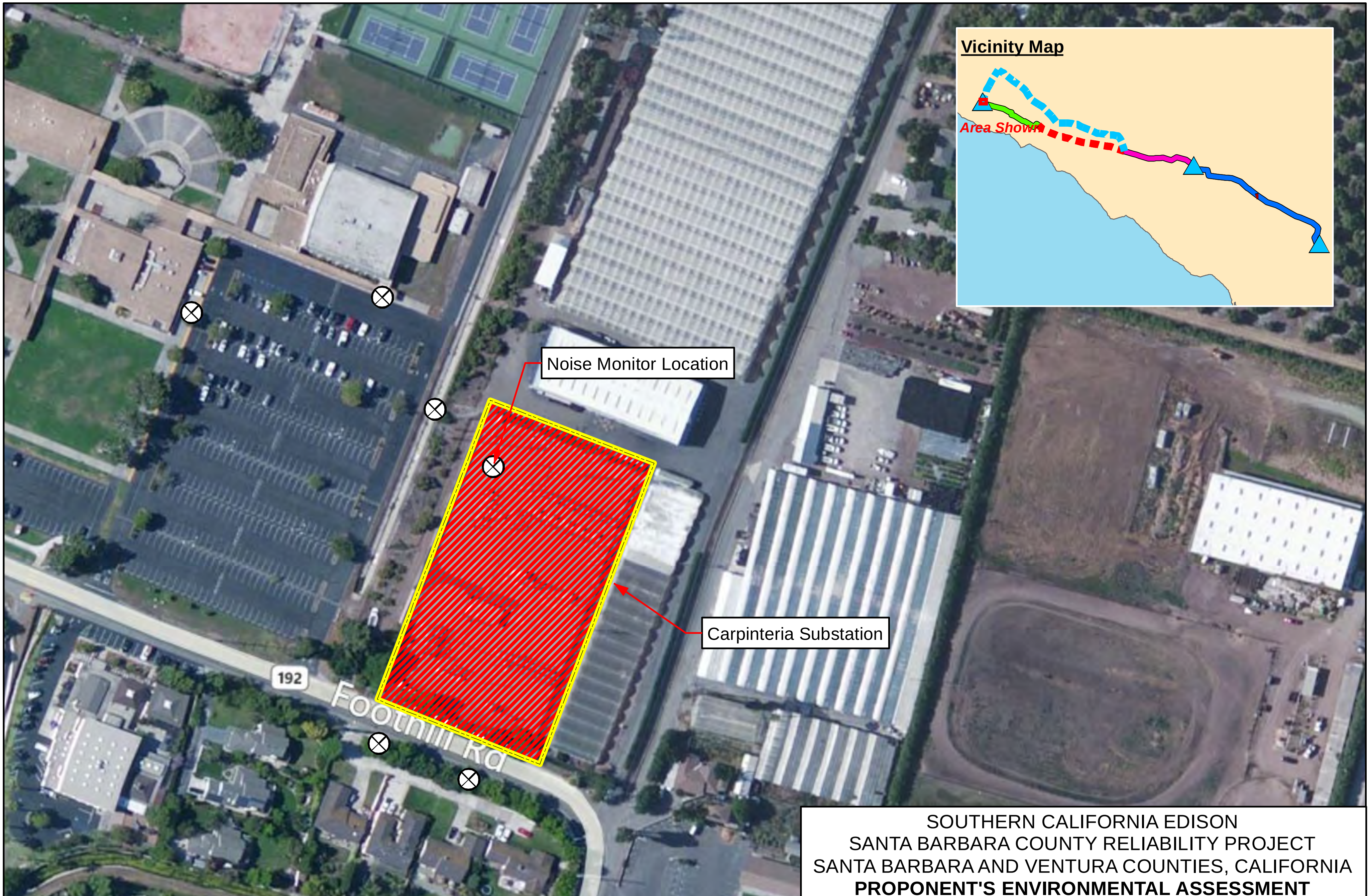
While measuring the existing site characterization noise, start and end times were recorded as was significant and background noise in the area, such as motor vehicle traffic traveling along nearby adjacent roadways and noise from the existing substation operations. Each 24-hour sound level measurement ran from midnight to midnight, and data were integrated and logged every 30 minutes. Other relevant field data were gathered at the site during the noise survey, including distances to receptors, angles-of-view, slopes, and site elevations. This information was subsequently cross-checked with available maps and records. All sound level meters used during field exercises were field-calibrated prior to and following the noise measurements to ensure accuracy. All sound level measurements conducted and presented in this report are in accordance with, and were made using a sound level meter that conforms to, the American National Standards Institute (ANSI SI.4-1983 - R2001) specifications for sound level meters. All instruments are maintained with the National Bureau of Standards traceable calibrations.

To further document the existing daytime ambient noise levels at several potential noise sensitive receptor locations, a series of one-hour equivalent sound level measurements (Leq, A-weighted) was conducted on Monday February 13, 2012, at a total of six locations, encompassing five in the vicinity of pole and conductor removal/replacement sites and one at the residential community subdivision located nearest Santa Clara Substation. The results of this monitoring are shown in Table 4.12-3 below.

Table 4.12-3: Measured Existing 1-hour Noise Levels at Sensitive Receptors on February 13, 2012

Noise Measurement Locations (Figures 4.12-2a through 4.12-2e)	Location Description	Measured 1-hour Noise Level (dBA L_{eq})
NM1	Segment 3B, east of SR-150/SR-192 junction	54
NM2	Segment 3B, south of SR-150/Mission Ridge Road junction	51
NM3	Segment 3B, south of SR-150/Mission Ridge Road junction	38
NM4	Segment 4 above Gobernador Canyon Road, Santa Barbara County	50
NM5	Segment 4, East of Stanley Park Road, Ventura County	52
NM6	Santa Clara Substation	46

The noise measurement data provided in Table 4.12-3 show that the independent noise levels measured at the six identified sensitive noise receptors range from 38 to 54 dBA L_{eq}.



SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

CARPINTERIA SUBSTATION AND NOISE MONITOR LOCATION

Noise Monitor
Substation Boundary

0 0.0125 0.025 0.05 Miles

N

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Figure
4.12-1a

ARCADIS: SCE_063, 6/20/12, R00

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Noise Monitors

Substation Boundary

0 0.0125 0.025 0.05 Miles

N

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

CASITAS SUBSTATION AND NOISE MONITOR LOCATION

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Figure
4.12-1b

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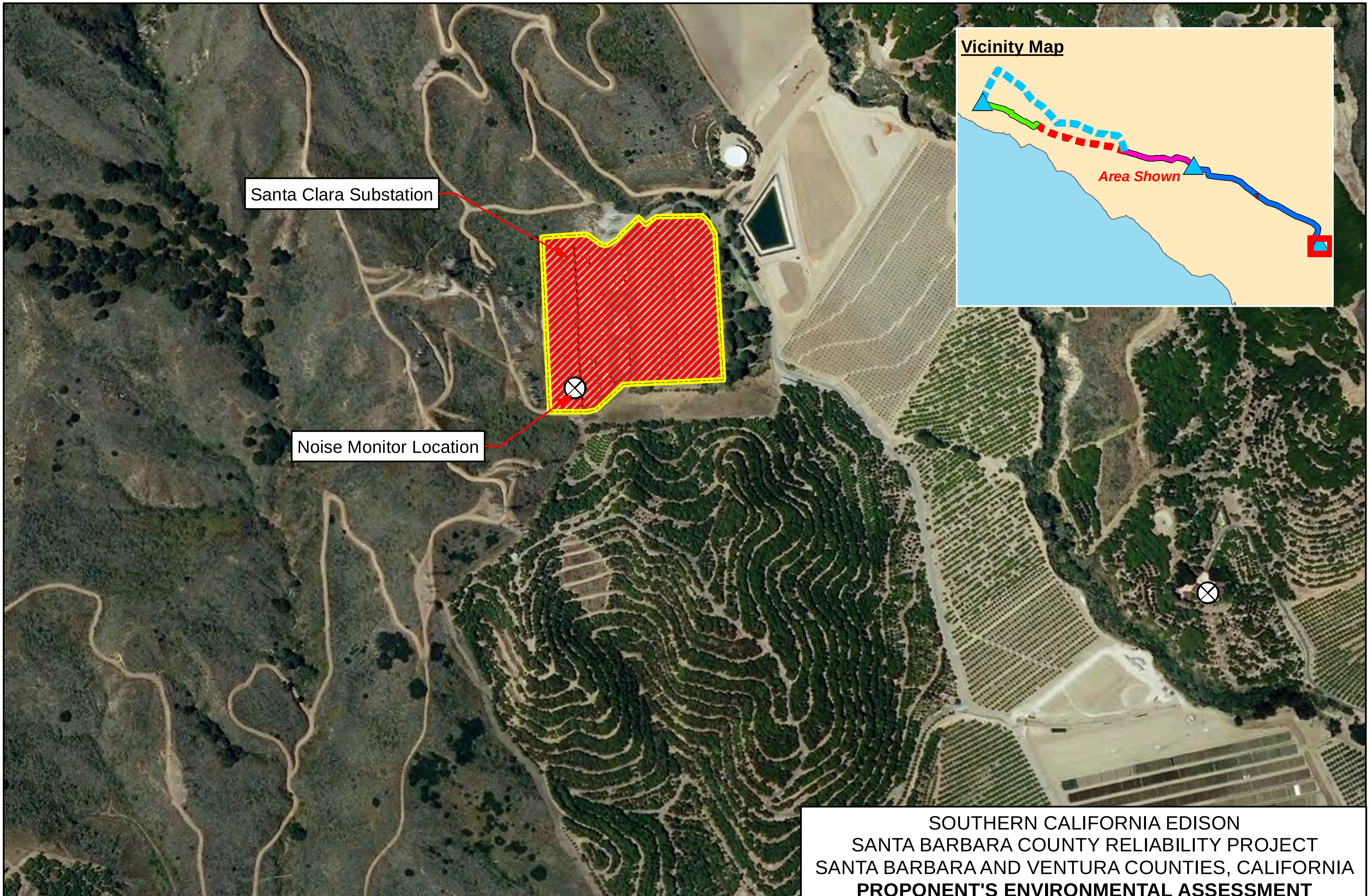

Noise Monitors

Substation Boundary

0 0.05 0.1 0.2 Miles

N

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SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

SANTA CLARA SUBSTATION AND NOISE MONITOR LOCATION

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Figure
4.12-1c

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4.12.2 Regulatory Setting

4.12.2.1 Federal Regulatory Setting

U.S. Environmental Protection Agency

The USEPA (USEPA 1974) has developed and published criteria for environmental noise levels with a directive to protect public health and welfare with an adequate margin of safety. This USEPA criterion (Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety) was developed to be used as an acceptable guideline when no other local, county, or State standard has been established. However, the USEPA criterion is not meant to substitute for agency regulations or standards in cases where States and localities have developed criteria according to their individual needs and situations.

Federal Transit Administration

The Federal Transit Administration (FTA) has developed vibration impact thresholds for noise-sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences and daycare facilities) and 83 VdB at institutional buildings (e.g., schools and churches). These thresholds apply to conditions where there are an infrequent number of events per day. Although established for transportation-related activities, these thresholds are widely used to evaluate the significance of non-transit project that may generate groundborne vibration (FTA 2006).

4.12.2.2 State Regulatory Setting

California Public Utilities Commission

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

In addition, CPUC uses the CEQA guidelines to determine the significance of the Project's noise impacts. This analysis considers, among other things, construction timing restrictions set forth in local ordinances to determine the significance of noise impacts.

4.12.3 Local Regulatory Setting

County of Santa Barbara

The County of Santa Barbara Code of Ordinances Section 14-22 limits grading and excavation operations from 7:00 a.m. to 7:00 p.m. The Code of Ordinances does not provide noise limits for temporary construction operations. However, the County has an established Environmental Thresholds and Guidelines Manual which states:

> "Noise from grading and construction activity proposed within 1,600 feet of sensitive receptors, including schools, residential development, commercial lodging facilities, hospitals or care facilities, would generally result in a potentially significant impact. According to EPA guidelines average construction noise is 95 dB(A) at a 50-foot distance from the source. A 6 dB drop occurs with a doubling of the distance from the source. Therefore, locations within 1,600 feet of the construction site would be affected by noise levels over 65 dB(A). To minimize this impact, construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8 a.m. to 5 p.m. only. Noise attenuation barriers and muffling of grading equipment may also be required. Construction equipment generating noise levels above 95 dB(A) may require implementation of APMs." (Santa Barbara County 2008a)

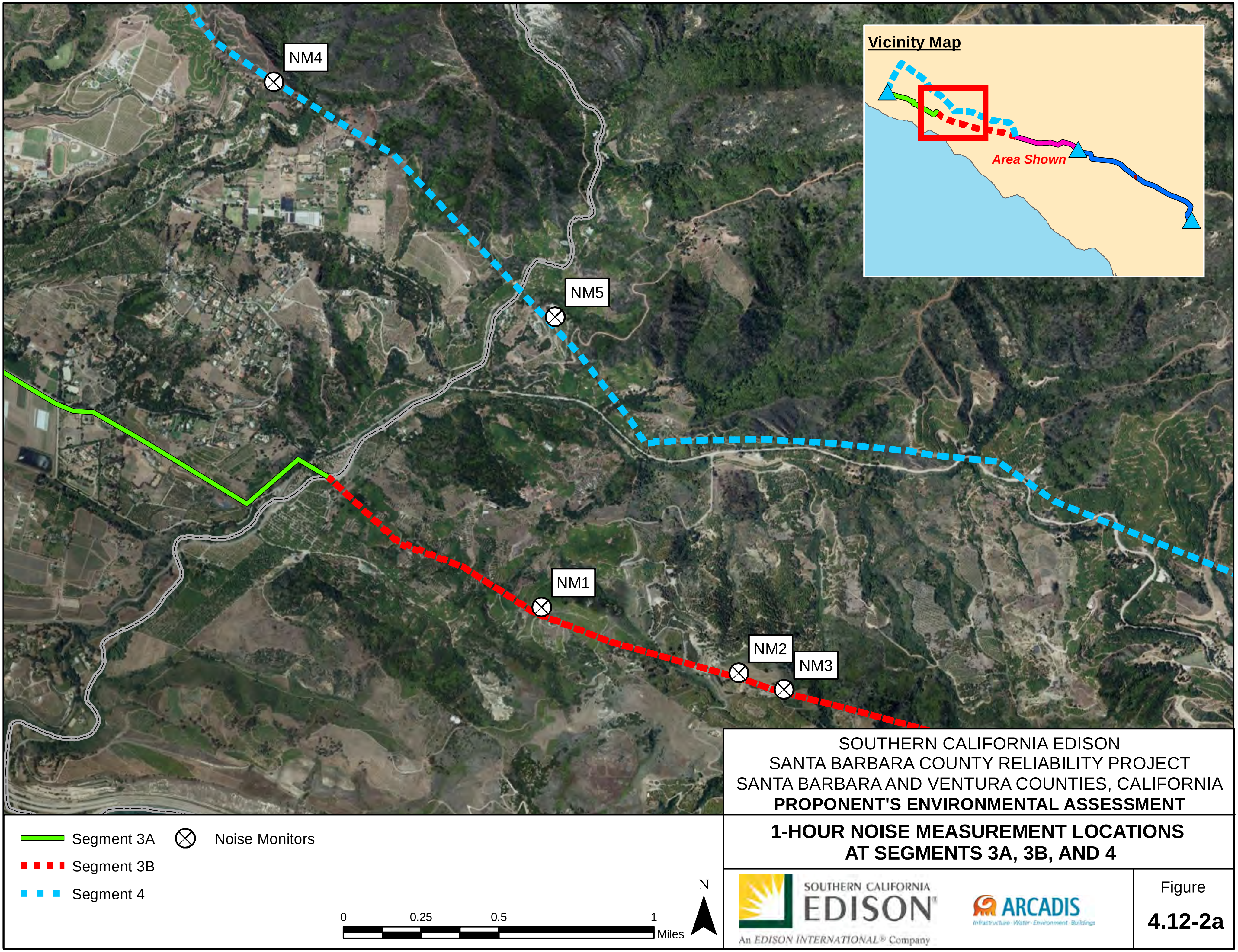
County of Ventura

The County of Ventura noise regulations are set forth in the County's Construction Noise Threshold Criteria and Control Plan (Ventura County 2010a). The daytime construction noise limits established within this Plan are provided in Table 4.12-4. Daytime is defined as 7 a.m. to 7 p.m. Monday through Friday, and 9 a.m. to 7 p.m. on weekends and holidays.

Table 4.12-4: Daytime Construction Activity Noise Threshold Criteria

Construction Duration Affecting Noise-sensitive Receptors	Daytime Noise Threshold Criteria (NTC) shall be the greater of these noise levels at the nearest receptor area or 10 feet from the nearest noise-sensitive building	
	Fixed Leq(h), dBA	Fixed Leq(h), dBA
0 to 3 days	75	Ambient Leq(h) + 3 dB
4 to 7 days	70	Ambient Leq(h) + 3 dB
8 to 13 days	65	Ambient Leq(h) + 3 dB
2 to 8 weeks	60	Ambient Leq(h) + 3 dB
8 weeks or longer	55	Ambient Leq(h) + 3 dB

Notes:
1. The instantaneous Lmax shall not exceed the NTC by 20 dBA more than eight times per daytime hour.
2. Local ambient Leq measurements shall be made on any midweek day prior to the project work.



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1-HOUR NOISE MEASUREMENT LOCATIONS AT SEGMENTS 3A, 3B, AND 4

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Figure
4.12-2a

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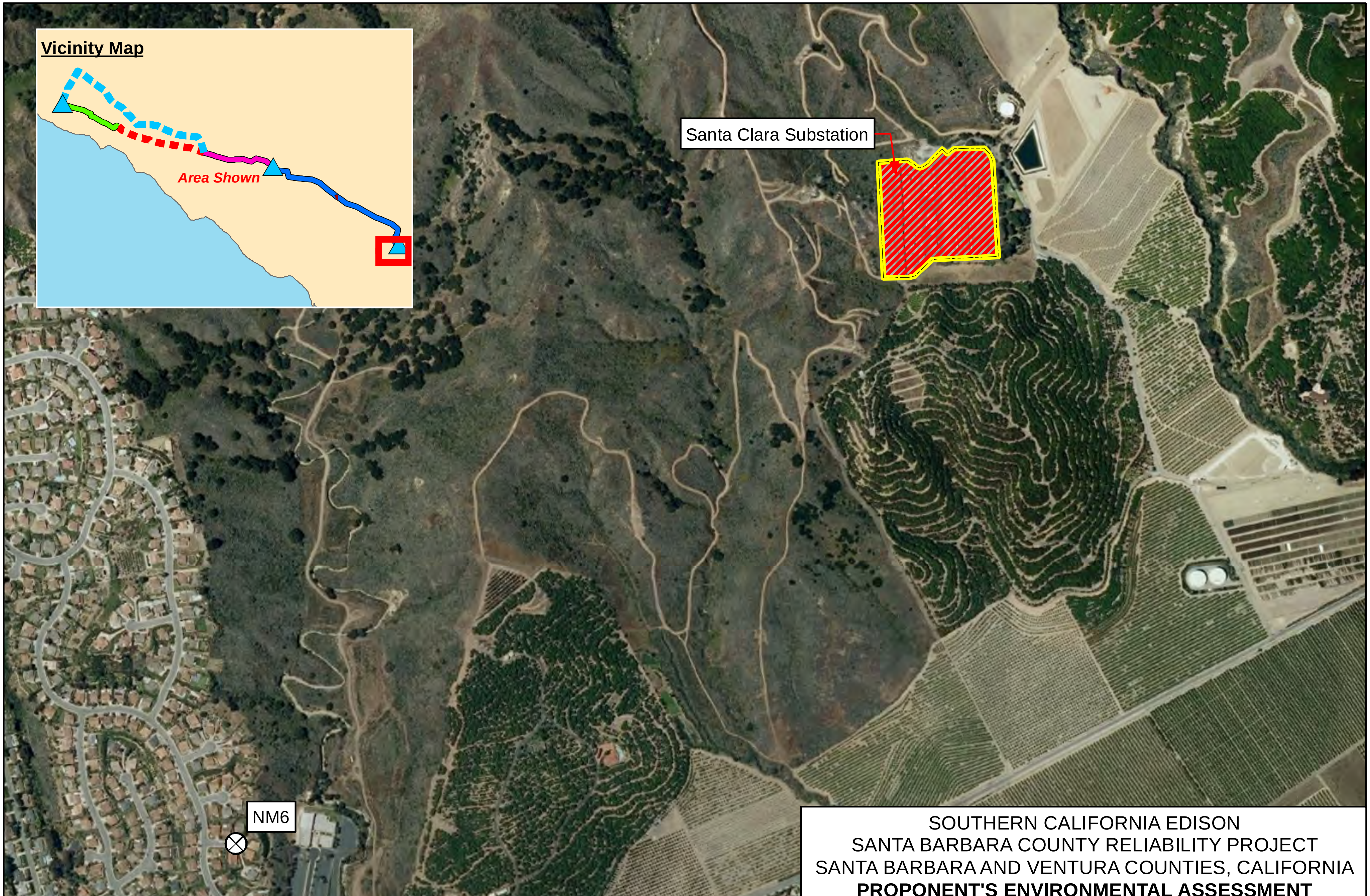

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PROPONENT'S ENVIRONMENTAL ASSESSMENT

1-HOUR NOISE MEASUREMENT LOCATION NEAR THE SANTA CLARA SUBSTATION

Noise Monitors
Substation Boundary

0 0.125 0.25 0.5 Miles

N

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Figure
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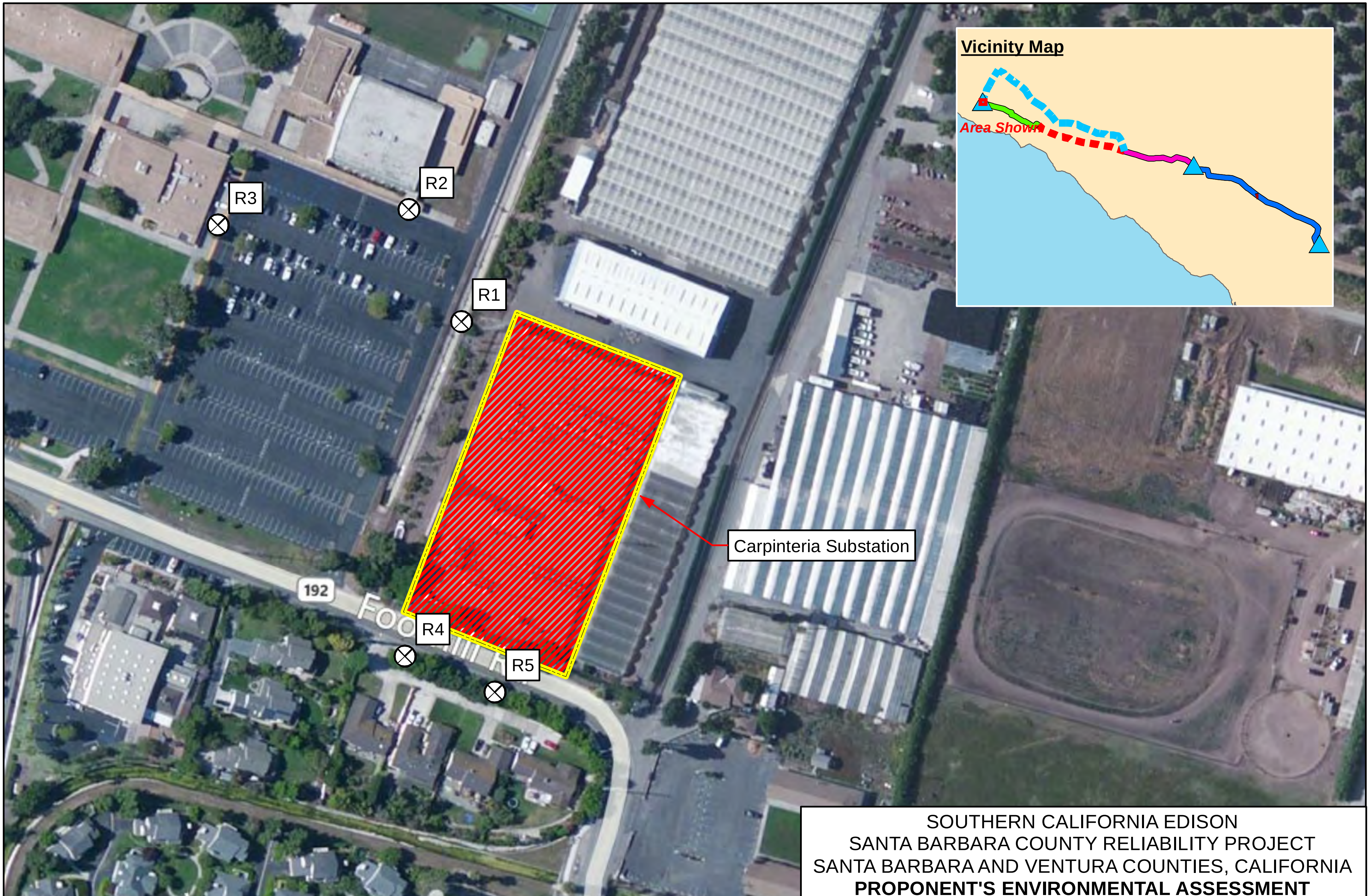

Noise Sensitive Receptors

Substation Boundary

0 0.0125 0.025 0.05 Miles

N

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CARPINTERIA SUBSTATION AND MODELED NOISE SENSITVE RECEPTORS

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Figure
4.12-2c

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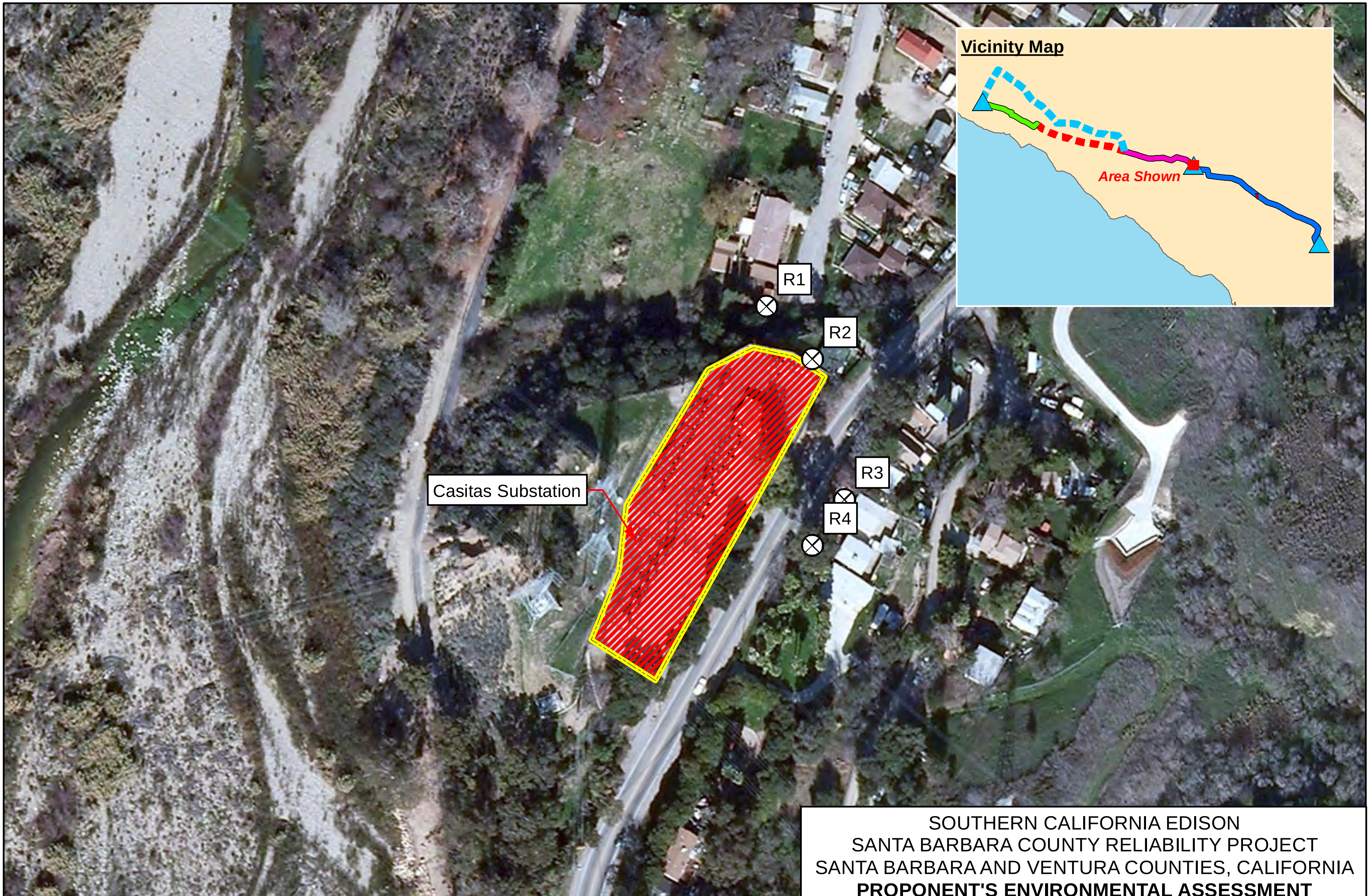

Noise Sensitive Receptors

Substation Boundary

0 0.0125 0.025 0.05 Miles

N

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PROPONENT'S ENVIRONMENTAL ASSESSMENT

CASITAS SUBSTATION AND MODELED NOISE SENSITIVE RECEPTORS

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Figure
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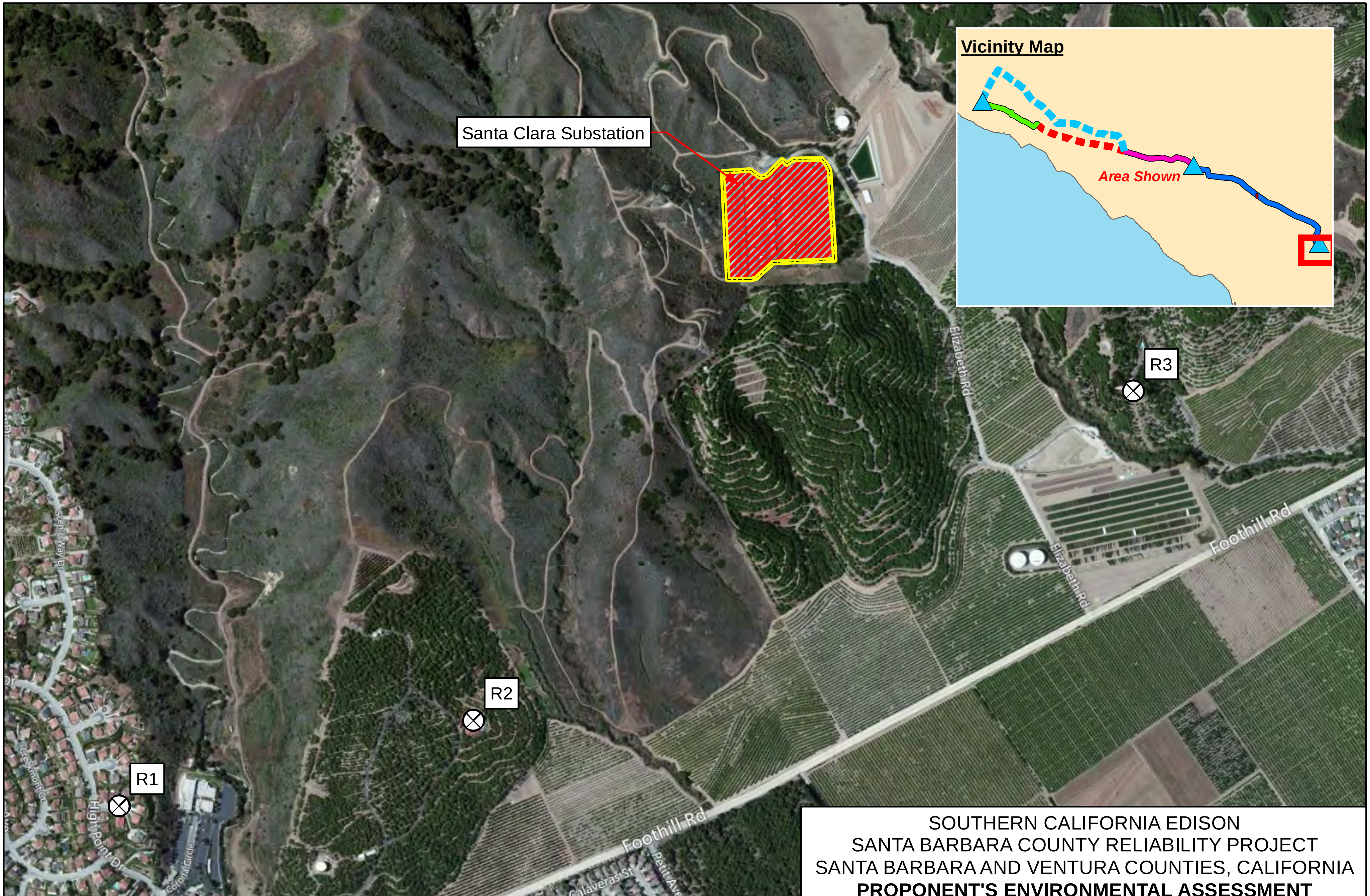

Noise Sensitive Receptors

Substation Boundary

0 0.125 0.25 0.5 Miles

N

SOUTHERN CALIFORNIA EDISON
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SANTA CLARA SUBSTATION AND MODELED NOISE SENSITIVE RECEPTORS

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Figure
4.12-2e

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4.12.4 City of Carpinteria

The City of Carpinteria noise regulations are set forth by Resolution No. 408 Noise Thresholds Section. This section states:

> "Temporary construction noise which exceeds 75 dB(A) CNEL for 12 hours within a 24-hour period at residences would be considered significant. Additionally, where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as day care facilities, hospitals or schools, temporary impacts would be considered significant."

Additionally, the section states:

> "an increase in noise would be considered significant if any of the following conditions occurred for an extended period of time:
>
> - An increase in noise levels of 10 dB(A) if the existing noise levels are below 55 dB(A) (creates a potential significant nuisance effect);
> - An increase in noise levels that exceeds noise level standards if the existing noise levels are between 55 and 60 dB(A) (violates existing regulatory requirement); or
> - An increase in noise levels of 5 dB(A) if the existing noise levels are above 60 dB(A) (violates or worsens a violation of an existing regulatory requirement)."

4.12.5 Significance Criteria

The significance criteria for assessing the impacts to noise levels come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would cause:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
- 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 expose people residing or working in the Project Area to excessive noise levels
- For a project within the vicinity of a private airstrip, where the project would expose people residing or working in the Project Area to excessive noise levels

4.12.6 Impact Analysis

The noise impact of the Project's construction activities was assessed using Computer Aided Noise Abatement (CadnaA), a computer program for predicting noise impacts, and the above listed CEQA criteria.

As presented earlier in this PEA, SCE has applied to Santa Barbara County for a CDP to cover construction of portions of the Project located within the Coastal Zone in Santa Barbara County. This includes a portion of Segment 4 and the entirety of Segment 3A. Between 1999 and 2004, some wood subtransmission structures in Segment 3A were replaced with LWS subtransmission poles, new conductor was installed, and the wood subtransmission structures identified for replacement with LWS poles were removed or topped before work was stopped.

Separate noise impact assessments are presented in this section: one for the work previously conducted in Segment 3A, and one that assesses the potential impacts that could result from construction and operation of the balance of the Project.

4.12.6.1 Impact Analysis, Segment 3A, Work Previously Conducted

Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Construction activities in Segment 3A required a variety of equipment. Typical maximum noise levels for construction equipment at 50 feet from the source are shown in Table 4.12-5, Typical Construction Equipment Noise Levels.

Table 4.12-5: Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Concrete mixer	85
Pump truck	82
Crane, Mobile	85
Dozer	85
Excavator	85
Generator	82
Grader	85
Man lift	85
Loader	80
Paver	85
Roller	85
Scraper	85
Trucks	80-84

Source: FHWA 2009

The construction activities in Segment 3A consisted of pole and conductor removal/replacement activities. Noise-generating construction activities generally occurred only during weekday daytime hours (8:00 a.m. to approximately 3:30 p.m.).

Pole and Conductor Removal/Replacement

In Segment 3A, existing wood poles were removed and replaced with LWS poles, and the existing conductor replaced. Some wood poles were not fully removed, but were instead topped and left in place. The construction noise contour distances are summarized in Table 4.12-6 below; these are described in greater detail in Appendix K.

Table 4.12-6: Pole Removal and Installation Noise Contour Distances, Segment 3A

Construction Operations	Contour Distance (feet)				
	75 dBA Leq	**70 dBA Leq**	**65 dBA Leq**	**60 dBA Leq**	**55 dBA Leq**
Conductor Removal	183	327	572	975	1,610
Wood Pole Removal	171	307	537	916	1,517
TSP Foundation Installation	173	309	539	924	1,534
TSP Assembly	134	243	428	739	1,240
TSP Erection	132	239	420	726	1,219
Conductor Installation	204	364	630	1,067	1,757

Note:
The installation of TSPs generates more noise than installation of LWS. Although only a single TSP was installed in Segment 3A, TSP-related noise data are used in this analysis. Therefore, these noise contours represent a conservative estimate of noise generated along the length of Segment 3A.

The County of Santa Barbara limits temporary construction activities from 8:00 a.m. to 5:00 p.m. where residences are located within 1,600 feet of the construction site. Noise generating construction activities generally occurred during weekdays between the hours of 8:00 a.m. to 3:30 p.m. with no evening or nighttime activities. Therefore, these noise impacts are considered less than significant.

Operation Impacts

No noise-generating components were replaced or installed in Segment 3A. As presented later in this section, the 'corona' noise associated with the reconductored 66 kV subtransmission lines is less than the ambient noise in the area, and does not exceed any local noise standards.[21] Therefore, the operation of infrastructure in Segment 3A has not resulted in noise levels in excess of the noise threshold limits set forth by the County of Santa Barbara. There are no noise impacts from operation of the infrastructure installed in Segment 3A.

[21] As shown in Table 4.12-8, the audible noise associated with transmission and subtransmission lines decreases with voltage; the audible noise associated with the 66 kV subtransmission lines would be lower than 33.5 dBA, which is less than the ambient noise measured at all locations.

Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Assessment Summary: Less than Significant Impact

Construction Impacts

Pole and conductor removal/replacement in Segment 3A generated groundborne vibration. Sources of vibration included excavators, dump trucks, backhoes, and other general construction equipment. With respect to construction activities, pile driving is typically the greatest source of groundborne vibration. However, no pile driving activities were used in Segment 3A.

According to the FTA guidelines, a vibration level of 65 VdB is the threshold of perceptibility for humans.[22] The FTA guidelines also state that, for a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (FTA 2006). Based on the approach set forth in the FTA guidelines, this analysis adopts a threshold of significance of 80 VdB for groundborne vibration impacts. Vibration impacts associated with construction operations would primarily affect those persons located closest to the substations and the pole and conductor removal/replacement locations. The vibration calculations are based on the FTA published vibration levels provided in Table 4.12-7.

Table 4.12-7: Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level (VdB) at 25 feet
Large bulldozer	87
Caisson drilling	87
Loaded trucks	86
Jackhammer	79
Small bulldozer	58

Source: FTA 2011

Pole and Conductor Removal/Replacement

Pole removal/installation and conductor removal/replacement construction activities occurred as close as 50 feet from residences. Screening-level calculations conducted in accordance with guidelines developed by the FTA indicate that distance to the nearest residence would have attenuated the vibration impact level to approximately 78 VdB. This analysis shows that vibration levels at all identified sensitive receptors was below the maximum of 80 VdB. Therefore, groundborne vibration impacts associated with construction in Segment 3A was less than significant.

[22] VdB: 20 times the logarithm of the ratio of the measured particle velocity to a reference particle velocity (usually 10^{-8} m/s).

Operation Impacts

The construction activities in Segment 3A did not include the replacement or installation of any vibration-generating components. Operation of the Project generally involves only the use of light-duty vehicles and bucket trucks during inspection and maintenance activities; these vehicles do not generate perceptible vibrations. Therefore, the operation of the infrastructure installed in Segment 3A does not generate groundborne vibrations, and there is no impact.

Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: No Impact

Construction Impacts

Construction activities in Segment 3A were temporary in nature. Construction work on linear projects such as that conducted in Segment 3A typically involves short-duration construction activities at individual sites along the length of the project, resulting in construction duration at any single location lasting no more than a period of weeks. As a result, construction did not involve permanent increases in ambient noise levels, and therefore there was no impact.

Operation Impacts

When a subtransmission line is in operation, an electric field is generated in the air surrounding the conductors, forming a corona. The corona results from the partial breakdown of the electrical insulating properties of the air surrounding the conductors. When the intensity of the electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy. Some of the energy may dissipate in the form of small local pressure changes that result in audible noise or in radio or television interference. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120 Hz hum. Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, thereby making corona discharge and the associated audible noise more likely. Therefore, audible noise from subtransmission lines is generally a foul-weather phenomenon that results from wetting of the conductor. However, during fair weather, insects and dust on the conductors can also serve as sources of corona discharge.

The Electric Power Research Institute (EPRI) has conducted several studies of corona effects (EPRI 1978 and 1987). The typical noise levels for transmission lines with wet conductors are shown in Table 4.12-8, Transmission Line Voltage and Audible Noise Level.

Table 4.12-8: Transmission and Subtransmission Line Voltage and Audible Noise Levels

Line Voltage (kV)	Audible Noise Level Directly Below the Conductor (dBA)
138	33.5
240	40.4
360	51.0

Notes:
kV = kilovolt
dBA = A-weighted decibels

As shown in Table 4.12-8, the audible noise associated with transmission and subtransmission lines decreases as the line voltage decreases; the audible noise associated with the 66 kV subtransmission lines is lower than 33.5 dBA, which is less than the ambient noise along Segment 3A.

Because operational noise along the subtransmission route is lower than ambient conditions, the operation of the infrastructure installed in Segment 3A has not resulted in a permanent increase in ambient noise levels, and there is no impact.

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: Less than Significant Impact

Construction Impacts

Pole and Conductor Removal/Replacement

The existing ambient noise levels at Carpinteria Substation (which is used as a proxy for Segment 3A pole and conductor removal/replacement locations) range from 40 to 57 dBA 1-hour Leq. The 55 dBA 1-hour Leq contour distances for construction activities range from 1,219 to 1,757 feet.[23] A temporary increase in ambient noise levels occurred at residences within the 55 dBA 1-hour Leq noise contour as a result of the pole and conductor removal and replacement activities.

However, due to the short-term and temporary nature of construction activities (installation of LWS poles generally takes only a matter of days), the increase in ambient noise levels was not substantial, and thus impacts were less than significant.

[23] Based on the existing ambient noise monitoring levels documented throughout the Project Area, the 55 dBA contour represents the limit in distance where the proposed temporary construction noise levels would become inaudible due to the proposed construction phases associated with the pole/conductor removal and replacement operations.

Operation Impacts

The construction activities in Segment 3A did not replace or install any noise-generating components. Operations and maintenance activities along the subtransmission infrastructure are conducted using light- and medium-duty vehicles, and are similar in nature and frequency to operations and maintenance activities that occurred prior to construction. In addition, as discussed above, corona noise levels associated with the new conductor are lower than existing ambient noise levels. Because of this, the existing operational noise levels along Segment 3A have not increased, and therefore operation of the infrastructure along Segment 3A has not resulted in any periodic increases in ambient noise levels, and there is no impact.

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 expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

Segment 3A is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, construction did not expose workers to excessive noise levels attributable to a public airport or public use airport, and there was no impact.

Operation Impacts

Segment 3A is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, operation of the Project does not expose workers to excessive noise levels attributable to a public airport or public use airport, and there is no impact.

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

There are no private airstrips located within the vicinity of Segment 3A. Therefore, the Project did not expose workers to excessive noise levels attributable to a private airstrip, and there was no impact.

Operation Impacts

There are no private airstrips located within the vicinity of Segment 3A. Therefore, the Project does not expose workers to excessive noise levels attributable to a private airstrip, and there is no impact.

4.12.6.2 Impact Analysis, Balance of Project

Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction of the Project would require a variety of equipment. Typical maximum noise levels for construction equipment at 50 feet from the source are shown in Table 4.12-9, Typical Construction Equipment Noise Levels.

Table 4.12-9: Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Concrete mixer	85
Pump truck	82
Crane, Mobile	85
Dozer	85
Excavator	85
Generator	82
Grader	85
Man lift	85
Loader	80
Paver	85
Roller	85
Scraper	85
Trucks	80-84

Source: FHWA 2011

The construction of the Project would consist of pole and conductor removal/replacement activities in Segments 3B and 4, pole removal and installation of FRC in Segment 3A, and telecommunications cable installation in Segments 1, 2, and 4. The Project would also include equipment modifications at the Carpinteria Substation, Casitas Substation, and Santa Clara Substation.[24] Construction activities would generally occur only during weekday daytime hours (7:00 a.m. to 7:00 p.m. in Ventura County and 8:00 a.m. to 5:00 p.m. in Santa Barbara County). If work is required outside these hours, SCE would obtain a variance, where applicable. Furthermore, the construction activities at each construction site would not occur for a period of more than 3 consecutive days.

Pole and Conductor Removal/Replacement, and FRC and Telecommunications Cable Installation

The pole and conductor removal/replacement construction activities would occur within Santa Barbara County and Ventura County. Project activities are divided according to their geographic location. In Segments 3B and 4, new TSPs would be installed, followed by installation of new conductor and removal of existing subtransmission structures. In Segment 3A, existing topped wood subtransmission poles would be removed and, where required, FRC would be installed on previously installed LWS poles. Installation of telecommunications cable would follow installation of subtransmission structures in Segment 4.

The proposed construction activities for pole and conductor removal/replacement would include conductor removal, wood pole removal, TSP installation, LWS pole installation, subtransmission structure removal, and conductor installation activities. The construction noise contour distances are summarized in Table 4.12-10 below; these are described in greater detail in Appendix K.

Table 4.12-10: Pole Removal and Installation Noise Contour Distances

Construction Operations	Contour Distance (feet)				
	75 dBA Leq	70 dBA Leq	65 dBA Leq	60 dBA Leq	55 dBA Leq
Conductor Removal	183	327	572	975	1,610
Wood Pole Removal	171	307	537	916	1,517
TSP Foundation Installation	173	309	539	924	1,534
TSP Assembly	134	243	428	739	1,240
TSP Erection	132	239	420	726	1,219
Conductor Install	204	364	630	1,067	1,757

[24] The Project also includes work at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation. Work that would be conducted at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation would involve only minor substation and telecommunications work as described in Chapter 3. Because this work would be largely conducted within the existing MEERs or communications rooms, no noise impacts would be generated, and these activities are not discussed in this PEA.

The County of Ventura limits temporary construction noise to 75 dBA Leq for durations of up to 3 days. Under the applied six construction scenarios described above, the modeled 75 dBA Leq noise contour distances range from 132 to 204 feet. Residences located within the 75 dBA Leq noise contour would be subject to exceedances of the County of Ventura noise threshold limit. Therefore, noise impacts to residences located within the 75 dBA Leq noise contour would be considered significant and would require APMs. However, with the incorporation of APMs presented in Section 4.12.5 these impacts would be reduced to less than significant.

The County of Santa Barbara limits temporary construction activities from 8:00 a.m. to 5:00 p.m. where residences are located within 1,600 feet of the construction site. The proposed construction would generally occur during weekdays between the hours of 8:00 a.m. to 5:00 p.m; evening or nighttime use of heavy construction equipment is not anticipated. However, if evening or nighttime work is required within 1,600 feet of a residence in unincorporated Santa Barbara County, work would be limited to activities that generate noise less than 65 dBA. Therefore, these noise impacts would be considered less than significant.

Helicopter operations would occur along Segment 1, 2, 3B and 4. Helicopters would be used to string new conductor and telecommunications cable, and possibly to install marker balls. These operations would occur for only short periods of time at any given location. If necessary, these operations would be limited to daytime working hours (as defined by the applicable jurisdiction in which such activities would occur) as described above, and would be of a short duration. Therefore, short-term construction noise impacts from helicopter operations would be less than significant.

Carpinteria Substation

Construction activities at Capinteria Substation would consist of pole and conductor removal/replacement, as well as minor substation equipment replacement and modifications.

The proposed construction activities would include conductor removal, wood pole removal, TSP installation, and conductor installation. The calculated construction noise levels are summarized in Table 4.12-11 below.

Table 4.12-11: Carpinteria Substation Construction Noise Impact Levels

Noise Receptor Number	Noise Receptor Location	Construction Operations Noise Impacts (dBA CNEL)					
		Conductor Removal	Wood Pole Removal	TSP Foundation Install	TSP Assembly	TSP Erection	Conductor Install
1	Property Line Adjacent to the School Parking Lot	79	79	79	76	77	80
2	Northern School Building Façade	73	72	73	70	70	74
3	Western School Building Façade	69	66	66	64	64	68
4	Southern Residence	69	67	67	65	65	69
5	Southern Residence	69	66	67	64	64	68

The City of Carpinteria Resolution No. 408 states that "[t]emporary construction noise which exceeds 75 dBA CNEL for 12 hours within a 24-hour period at residences would be considered significant. Additionally, where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as day care facilities, hospitals or schools, temporary impacts would be considered significant." The only sensitive receptors located within the City of Carpinteria are residences located to the south and Carpinteria High School located to the west of the substation.

The 75 dBA CNEL noise threshold is modeled to be exceeded at the substation property line facing the existing school to the west. Therefore, these noise impacts would be considered significant. However, with the incorporation of APMs presented in Section 4.12.5, these impacts would be reduced to less than significant.

The noise impacts to all other sensitive receptors in the area would not exceed the 75 dBA CNEL noise threshold limit and would therefore be considered less than significant.

Casitas Substation

The construction activities at Casitas Substation would consist of trenching operations, minor substation equipment replacement and upgrades, and installation of a single TSP. The calculated construction noise levels are summarized in Table 4.12-12 below.

Table 4.12-12: Casitas Substation Construction Noise Levels

Noise Receptor Number	Noise Receptor Location	Construction Operations Noise Impacts (dBA Leq)				
		Trenching Activities	Equipment Replacement Activities	TSP Foundation Install	TSP Assembly	TSP Erection
1	Northwestern Residence	69	68	60	58	58
2	Northern Residence	65	64	63	61	61
3	Western Residence	69	69	69	67	67
4	Western Residence	70	69	70	68	68

Casitas Substation is located within the County of Ventura, which permits temporary construction noise of 75 dBA Leq for durations of up to 3 days. The modeled construction noise impacts range from 60 dBA Leq at the northwestern residence to 70 dBA Leq at the western residence. The noise impacts from the construction activities would not exceed the County of Ventura noise limits. Therefore, these impacts would be less than significant.

Santa Clara Substation

The construction activities at Santa Clara Substation would consist of trenching operations, as well as minor substation equipment replacement and upgrades. The calculated construction noise levels are summarized in Table 4.12-13 below.

Table 4.12-13: Santa Clara Substation Construction Noise Impact Levels

Noise Receptor Number	Noise Receptor Location	Construction Operations Noise Impacts (dBA Leq)	
		Trenching Activities	Equipment Replacement Activities
1	Southwestern Residence	36	35
2	Southern Residence	41	40
3	Southeastern Residence	43	43

Santa Clara Substation is located within the County of Ventura, which has determined that temporary construction noise at 60 dBA Leq or less is acceptable where construction would take place for a period of between 2 and 8 weeks, and that construction activities with noise levels less than 55 dBA Leq have no time limit. The modeled construction noise impacts range from 35 dBA Leq at the southwestern residence to 43 dBA Leq at the southeastern residence. The noise impacts from the construction activities would not exceed the County of Ventura noise limits. Therefore, these impacts would be less than significant.

Operation Impacts

The Project would not replace or install any noise-generating components within any substations; the transformer banks within the substations would not be replaced or upgraded. The existing operational noise levels at the substations are not expected to change or increase. As presented later in this section, the 'corona' noise associated with the reconductored 66 kV subtransmission lines would be less than the ambient noise in the area, and would not exceed any local noise standards.[25] Therefore, the operations of the Project would not result in noise levels in excess of the noise threshold limits set forth by the County of Ventura, County of Santa Barbara, or the City of Carpinteria. There would be no noise impacts from operation of the Project.

Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Assessment Summary: Less than Significant Impact

Construction Impacts

Pole and conductor removal/replacement, trenching, and equipment replacement would all include the use of equipment that would generate groundborne vibration. Possible sources of vibration may include excavators, dump trucks, backhoes, and other equipment. With respect to construction activities, pile driving is typically the greatest source of groundborne vibration. However, no pile driving activities are anticipated for the construction of the Project.

According to the FTA guidelines, a vibration level of 65 VdB is the threshold of perceptibility for humans.[26] The FTA guidelines also state that, for a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (FTA 2006). Based on the approach set forth in the FTA guidelines, this analysis adopts a threshold of significance of 80 VdB for groundborne vibration impacts. Vibration impacts associated with construction operations would primarily affect those persons located closest to the substations and the pole and conductor removal/replacement locations. The vibration calculations are based on the FTA published vibration levels provided in Table 4.12-14.

[25] As shown in Table 4.12-15, the audible noise associated with transmission and subtransmission lines decreases with voltage; the audible noise associated with the 66 kV subtransmission lines would be lower than 33.5 dBA, which is less than the ambient noise measured at all locations.

[26] VdB: 20 times the logarithm of the ratio of the measured particle velocity to a reference particle velocity (usually 10^{-8} m/s).

Table 4.12-14: Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level (VdB) at 25 feet
Large bulldozer	87
Caisson drilling	87
Loaded trucks	86
Jackhammer	79
Small bulldozer	58

Source: FTA 2006

Pole and Conductor Removal/Replacement

The pole and conductor removal/replacement construction activities may occur as close as 50 feet from residences. Screening-level calculations conducted in accordance with guidelines developed by the FTA indicate that distance to the nearest residence would attenuate the vibration impact level to approximately 78 VdB. This analysis shows that vibration levels at all identified sensitive receptors would be below the maximum of 80 VdB. Therefore, groundborne vibration impacts associated with this activity would be less than significant.

Carpinteria Substation

The construction activities proposed at Carpinteria Substation may occur as close as 250 feet from the adjacent school and 450 feet from the nearest residence. Calculations show that distance to the adjacent receptors would attenuate the vibration impact levels to approximately 57 VdB at the adjacent school and 49 VdB at the nearest residence. This analysis shows that vibration levels at all identified sensitive receptors would be below the maximum of 80 VdB. Therefore, these impacts are considered less than significant.

Casitas Substation

The construction activities proposed at Casitas Substation may occur as close as 100 feet from the nearest residence. Calculations show that distance to the nearest residential receptor would attenuate the vibration impact level to approximately 69 VdB. This analysis shows that vibration levels at all identified sensitive receptors would be below the maximum of 80 VdB. Therefore, these impacts are considered less than significant.

Santa Clara Substation

The construction activities proposed at Santa Clara Substation may occur as close as 2,000 feet from the nearest residence. Calculations show that distance to the nearest residential receptor would attenuate the vibration impact level to approximately 30 VdB. This analysis shows that vibration levels at all identified sensitive receptors would be below the maximum of 80 VdB. Therefore, these impacts are considered less than significant.

Operation Impacts

The Project would not replace or install any vibration-generating components within any substations. Operation of the Project would generally involve the use of light-duty vehicles and bucket trucks during inspection and maintenance activities; these vehicles do not generate perceptible vibrations. Therefore, the operation of the Project would not generate groundborne vibrations, and there would be no impact.

Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: No Impact

Construction Impacts

Project-related construction activity would be temporary in nature, and would cease after the Project is fully constructed. Construction work on linear projects such as the Project typically involves short-duration construction activities at individual sites along the length of the project, resulting in construction duration at any single location lasting no more than a period of weeks. As a result, construction would not involve permanent increases in ambient noise levels, and therefore there would be no impact.

Operation Impacts

The existing operational noise levels at the substations are not expected to change or increase; the Project would not replace or install any noise-generating components within any substations.

When a subtransmission line is in operation, an electric field is generated in the air surrounding the conductors forming a corona. The corona results from the partial breakdown of the electrical insulating properties of the air surrounding the conductors. When the intensity of the electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy. Some of the energy may dissipate in the form of small local pressure changes that result in audible noise or in radio or television interference. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120 Hz hum. Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, thereby making corona discharge and the associated audible noise more likely. Therefore, audible noise from subtransmission lines is generally a foul-weather phenomenon that results from wetting of the conductor. However, during fair weather, insects and dust on the conductors can also serve as sources of corona discharge.

The Electric Power Research Institute (EPRI) has conducted several studies of corona effects (EPRI 1978 and 1987). The typical noise levels for transmission lines with wet conductors are shown in Table 4.12-15, Transmission Line Voltage and Audible Noise Level.

Table 4.12-15: Transmission and Subtransmission Line Voltage and Audible Noise Levels

Line Voltage (kV)	Audible Noise Level Directly Below the Conductor (dBA)
138	33.5
240	40.4
360	51.0

Notes:
kV = kilovolt
dBA = A-weighted decibels

As shown in Table 4.12-15, the audible noise associated with transmission and subtransmission lines decreases as the line voltage decreases; the audible noise associated with the 66 kV subtransmission lines would be lower than 33.5 dBA, which is less than the ambient noise measured at all locations.

Because the existing operational noise levels at the substations would not change or increase, and operational noise along the subtransmission route would be lower than ambient conditions, the operation of the Project would not result in a permanent increase in ambient noise levels, and there would be no impact.

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Pole and Conductor Removal/Replacement

The existing ambient noise levels at the pole and conductor removal/replacement locations range from 38 to 74 dBA 1-hour Leq. The 55 dBA 1-hour Leq contour distances for construction activities range from 1,219 to 1,757 feet.[27] A temporary increase in ambient noise levels would occur at residences within the 55 dBA 1-hour Leq noise contour as a result of the pole and conductor removal and replacement activities.

[27] Based on the existing ambient noise monitoring levels documented throughout the Project Area, the 55 dBA contour represents the limit in distance where the proposed temporary construction noise levels would become inaudible due to the proposed construction phases associated with the pole/conductor removal and replacement operations.

However, due to the short-term (3 consecutive days or less for any construction phase activity at any given structure installation site consistent with the application of APM NOISE-1) and temporary nature of construction activities, the anticipated increase in ambient noise levels is not considered substantial, and thus impacts would be less than significant.

Carpinteria Substation

Construction activities at Carpinteria Substation would generally occur on weekdays only from 8:00 a.m. to 5:00 p.m. The existing ambient noise levels during this time period range from 50 to 57 dBA Leq. The modeled construction noise impacts range from 66 dBA 1-hour Leq at the nearest residence to 80 dBA 1-hour Leq at the western substation boundary.

Where existing noise levels are less than 55 dBA, the City of Carpinteria noise regulations set forth in Resolution No. 408 state that an increase in noise would be considered significant if the noise level is greater than 10 dBA; for noise level standards between 55 and 60 dBA, Resolution No. 408 states that an increase in noise would be considered significant if the noise level exceeds noise level standards (in the case of construction noise, this standard is 75 dBA). Because the modeled construction noise at the nearest residence would neither be increased by more than 10 dBA, nor would exceed 75 dBA, temporary increases in ambient noise levels at the nearest residence would be considered less than significant.

The temporary increase in existing ambient noise levels attributable to construction activities at Carpinteria Substation would exceed the 75 dBA threshold of significance for construction noise. Therefore, this temporary increase would be considered substantial, and thus significant. However, with the incorporation of APMs presented in Section 4.12.5, these impacts would be reduced to less than significant, and thus would not be substantial.

Casitas Substation

Construction activities at Casitas Substation would generally occur on weekdays only between 7:00 a.m. and 7:00 p.m. The existing ambient noise levels during this time period range from 59 to 62 dBA Leq. The modeled construction noise impacts range from 64 dBA 1-hour Leq at the northern residence to 70 dBA 1-hour Leq at the western residence.

However, due to the short-term (7 consecutive days or less for any construction phase activity at the substation), the temporary increase in existing ambient noise levels attributable to construction activities at Casitas Substation would not exceed the thresholds established in the County of Ventura’s Construction Noise Threshold Criteria and Control Plan for short-term (less than 7 days) construction activities. Additionally, the construction activities would be conducted during daytime hours and would not increase the existing nighttime ambient noise levels when people are sleeping.

Because the short-term increase in ambient noise levels at the nearest residences attributable to construction activities noise would not exceed the County of Ventura's thresholds, temporary increases in ambient noise levels at the nearest residence would be less than significant.

Santa Clara Substation

The construction activities at Santa Clara Substation would generally occur on weekdays only from 7:00 a.m. to 7:00 p.m. The existing ambient noise levels during this time period range from 44 to 58 dBA Leq. The construction noise impacts range from 35 dBA 1-hour Leq at the nearest residence southwest of the substation to 43 dBA 1-hour Leq at the nearest residence southeast of the substation. Construction activities would result in a temporary increase of 3 dB or less at the nearest sensitive receptor. This temporary increase in existing ambient noise levels attributable to construction activities at Santa Clara Substation would not exceed the thresholds established in the County of Ventura's Construction Noise Threshold Criteria and Control Plan for construction activities of any duration.

Because the anticipated short-term increase in ambient noise levels at the nearest residences attributable to construction activities noise would not exceed the County of Ventura's thresholds, temporary increases in ambient noise levels at the nearest residences would be less than significant.

Operation Impacts

The Project would not replace or install any noise-generating components within the substations. Operations and maintenance activities at the substations and along the subtransmission infrastructure would be conducted using light- and medium-duty vehicles, and would be similar in nature and frequency to operations and maintenance activities that currently occur. In addition, as discussed above, corona noise associated with the new conductor would be less than existing corona noise and less than existing ambient noise levels. Because of this, the existing operational noise levels at the substations would not change or increase. Therefore, operation of the Project would not result in any periodic increases in ambient noise levels, and there would be no impacts.

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 expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

The Project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, construction of the Project would not expose workers to excessive noise levels attributable to a public airport or public use airport, and there would be no impact.

Operation Impacts

The Project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, operation of the Project would not expose workers to excessive noise levels attributable to a public airport or public use airport, and there would be no impact.

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

There are no private airstrips located within the vicinity of the Project. Therefore, the Project would not expose workers to excessive noise levels attributable to a private airstrip, and there would be no impact.

Operation Impacts

There are no private airstrips located within the vicinity of the Project. Therefore, the Project would not expose workers to excessive noise levels attributable to a private airstrip, and there would be no impact.

4.12.7 Applicant Proposed Measures

NOISE-1: Construction activities will be conducted or phased to ensure that the noise generated during construction would not exceed significance thresholds or durations identified by the City of Carpinteria Resolution No. 408; the County of Ventura noise regulations set forth in the County's Construction Noise Threshold Criteria and Control Plan (Ventura County 2010a); or the County of Santa Barbara Environmental Thresholds and Guidelines Manual (Santa Barbara County 2008a).

NOISE-2: Equipment and trucks used for Project construction shall employ the best available noise control techniques to the extent feasible.

NOISE-3: Stationary noise sources shall be located as far from adjacent noise sensitive receptors as reasonably possible and shall be enclosed if feasible.

NOISE-4: Where feasible, temporary portable sound barriers would be deployed where construction activities would cause noise levels at sensitive receptor locations to be in excess of an applicable criteria threshold. For purposes of this APM, schools would only be considered sensitive receptor locations during instruction hours.

NOISE-5: At least 2 weeks prior to the anticipated start of construction at a particular location, SCE will notify all property owners within 300 feet of that location that construction activities are about to commence at that location.

4.13 Population and Housing

This section describes population and housing in the area of the Project. The potential impacts are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.13.1 Environmental Setting

The largest affected incorporated cities in the Electrical Needs Area as defined in Chapter 1 include Goleta, Santa Barbara, and Carpinteria. The City of San Buenaventura (Ventura) is also included in the following discussion because it is the largest city near the eastern portion of the Project and SCE's Ventura Service Center, where many of the personnel who would construct and operate the Project are based. Because the components of the Project cross political jurisdictions, the discussion in this section is divided by political geography rather than by segment or substation.

Past and current population and housing data in this Section were obtained from Census Bureau decadal censuses. Population projections for cities were obtained from the Santa Barbara County Association of Governments and the Ventura Council of Governments; projections for counties were obtained from the California Department of Finance.

4.13.1.1 Population Profile

The past, current, and projected future populations of cities and counties in the Project Area are presented in Tables 4.13-1 and 4.13-2 below. The cities of Santa Barbara and Carpinteria both experienced population declines between 2000 and 2010; this was contrary to the population growth in the county as a whole. Between 1990 and 2010, the population of Santa Barbara County grew by approximately 13 percent, the population of the City of Carpinteria decreased by 4.4 percent, and the population of the City of Santa Barbara grew by 3.3 percent. Over the same period, the population of Ventura County grew by 18.7 percent, and the population of the City of San Buenaventura (Ventura) grew by approximately 15 percent. The population of the unincorporated portions of Ventura County grew by approximately 9 percent.[28]

[28] The population of the unincorporated portions of Santa Barbara County declined by more than 20 percent over this period; this decline resulted from the incorporation of the City of Goleta.

Table 4.13-1: Historical, Current, and Projected Population Data for Cities in the Project Area

Date	City of Carpinteria	City of Goleta	City of San Buenaventura (Ventura)	City of Santa Barbara
1990	13,747	__	92,575	85,571
2000	14,194	__	100,916	92,325
2010	13,140	29,888	106,433	88,410
2020	14,600	34,500	118,073	92,000
2030	15,000	37,300	127,836	92,800
2040	15,300	37,300	137,600	93,000

Note:
City of Goleta formed in 2002 (after 2000 Census), so no earlier data are available.

Table 4.13-2: Historical, Current, and Projected Population Data for Counties in the Project Area

Date	Santa Barbara County		Ventura County	
	Unincorporated	**Total**	**Unincorporated**	**Total**
1990	160,869	369,608	86,520	669,016
2000	162,202	399,347	93,120	753,197
2010	133,417*	423,895	94,937	823,318
2020	--	459,498	--	956,392
2030	--	484,570	--	1,049,758
2040	--	509,920	--	1,135,684
2050	--	534,447	--	1,229,737

Note:
* Population of unincorporated Santa Barbara County decreased due primarily to incorporation of City of Goleta.

4.13.1.2 Housing Profiles

Data on the past and current numbers of housing units in cities and counties in the vicinity of the Project Area are presented in Tables 4.13-3 and 4.13-4. Data on past and current residential rental property vacancy rates are presented in Table 4.13-5.

Short-term lodging is available at numerous hotels and motels located in the cities of Carpinteria, Santa Barbara, and San Buenaventura (Ventura).

Table 4.13-3: Historical and Current Housing Data in Cities in the Project Area

Date	City of Carpinteria		City of Goleta		City of San Buenaventura (Ventura)		City of Santa Barbara	
	Total	Occupied	Total	Occupied	Total	Occupied	Total	Occupied
1990	5,457	4,952	--	--	37,343	35,408	36,226	34,348
2000	5,464	4,989	--	--	39,803	38,524	37,076	35,605
2010	5,429	4,759	11,473	10,903	42,827	40,438	37,820	35,449

Table 4.13-4: Historical and Current Housing Data in Counties in the Project Area

Date	Santa Barbara County		Ventura County	
	Total	Occupied	Total	Occupied
1990	138,149	129,802	228,478	217,298
2000	142,901	136,622	251,712	243,234
2010	152,834	142,104	281,695	266,920

Table 4.13-5: Historical and Current Rental Vacancy Rates in the Project Area

Location	1990	2000	2010
City of Carpinteria	4.3%	9.8%	6.5%
City of Goleta	--	--	4.5%
City of San Buenaventura (Ventura)	5.7%	2.8%	5.5%
City of Santa Barbara	4.2%	2.3%	4.1%
Santa Barbara County	5.0%	2.8%	4.5%
Ventura County	4.9%	2.65	4.8%

4.13.2 Regulatory Setting

There are no applicable regulations for population and housing that apply to the Project. This is due to the fact that the Project would not induce any population growth or impact housing.

4.13.3 Significance Criteria

The significance criteria for assessing the impacts to population and housing come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of new roads or other infrastructure)
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

4.13.4 Impact Analysis

Would the project induce substantial population growth in the area, either directly (by proposing new homes and businesses) or indirectly (through the extension of new roads or other infrastructure)?

Assessment Summary: No Impact

Construction Impacts

The number of workers that would be employed to construct the Project would not directly or indirectly induce any population growth in the area. Construction activities are anticipated to occur for approximately 24 months, and during peak times, SCE expects to have fewer than approximately 75 laborers per day working during construction. The labor demands of the Project would be met by existing SCE employees or by hiring specialty electrical transmission contractors. The small number of positions required during the short construction phase would not directly or indirectly induce any population growth in the area.

Construction of the Project would not be expected to indirectly induce an increase in population. The electrical subtransmission and telecommunications infrastructure that would be constructed as part of the Project is needed to increase the reliability of existing service; it is not designed to facilitate or induce additional electrical consumption or population growth. In addition, the Project does not include any new infrastructure such as publicly accessible roads that could induce population growth.

Therefore, no impacts would occur under this criterion as a result of construction of the Project.

Operation Impacts

Operations and maintenance activities would be conducted by current SCE personnel, and the Project would not require the hiring of any additional operations personnel. Therefore, operation of the Project would not directly or indirectly induce any population growth in the area. The Project infrastructure would be unmanned during operations with the exception of routine maintenance.

Operation of the Project would not be expected to facilitate an increase in population. The need for the proposed upgrade to the electrical subtransmission system and the installation of telecommunication cable is mandated by the need to increase service reliability as described in Chapter 1 of this PEA. Accordingly, operation of the Project would not induce any population growth in the area.

Therefore, no impacts would occur under this criterion as a result of operation of the Project.

Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Assessment Summary: No Impact

Construction Impacts

The Project would not displace any existing housing. Project infrastructure would be installed on existing SCE-owned property, in existing or new ROWs, or on lands where SCE holds easement rights. Therefore, there would be no displacement of existing housing, and thus it would not be necessary to construct replacement housing elsewhere.

The construction phase of the Project would not impact the local housing market. There may be a need for temporary accommodations during the construction phase for non-local workers while they work on particular components of the construction project. These individuals would not trigger any additional demand for housing because they would be expected to use one of the many hotels or motels located in the City of Santa Barbara, City of Carpinteria, or City of San Buenaventura (Ventura) for their short stays. Therefore, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

Operation and maintenance of the Project would not displace any existing housing. There will be no additional workers hired to operate or maintain the Project, and thus there would be no additional demand for housing and no impact to the local housing market. Therefore, no impacts would occur under this criterion as a result of the Project.

Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Assessment Summary: No Impact

Construction Impacts

Portions of the SCE ROWs on which the Project would be constructed are routed through and adjacent to areas that have been subdivided for residential development, and which contain occupied housing units. However, there are no occupied housing units within the existing SCE ROW or on any of the access roads that would be used during construction. Therefore, no people would be displaced during construction of the Project, and no replacement housing would be constructed elsewhere.

Operation Impacts

Portions of the existing and new SCE ROWs on which the Project would be constructed are routed through and adjacent to areas that have been subdivided for residential development, and which contain occupied housing units. However, there are no occupied housing units within the existing or new SCE ROWs or on any of the access roads that would be used during construction. Operation activities associated with the Project would occur within existing and new ROWs. Therefore, no people would be displaced during operation of the Project, and no replacement housing would be constructed elsewhere.

4.13.5 Applicant Proposed Measures

Because no impacts from the Project are anticipated, no APMs are proposed for population and housing.

4.14 Public Services

This section describes public services including fire protection, police, public hospitals, schools, and libraries in the area of the Project. The potential impacts to these public services are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.14.1 Environmental Setting

Public services were identified through review of general and comprehensive plans, county and city websites, school district websites, and aerial imagery. Information in this section is organized by public service type and the provider(s) of those services. Information on parks is provided in Section 4.15, Recreation. Figures 4.14-1a, 4.14-1b, and 4.14-1b c display the locations of public services in relation to components of the Project.

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SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

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Figure
4.14-1a

ARCADIS: SCE_036, 6/18/12, R03

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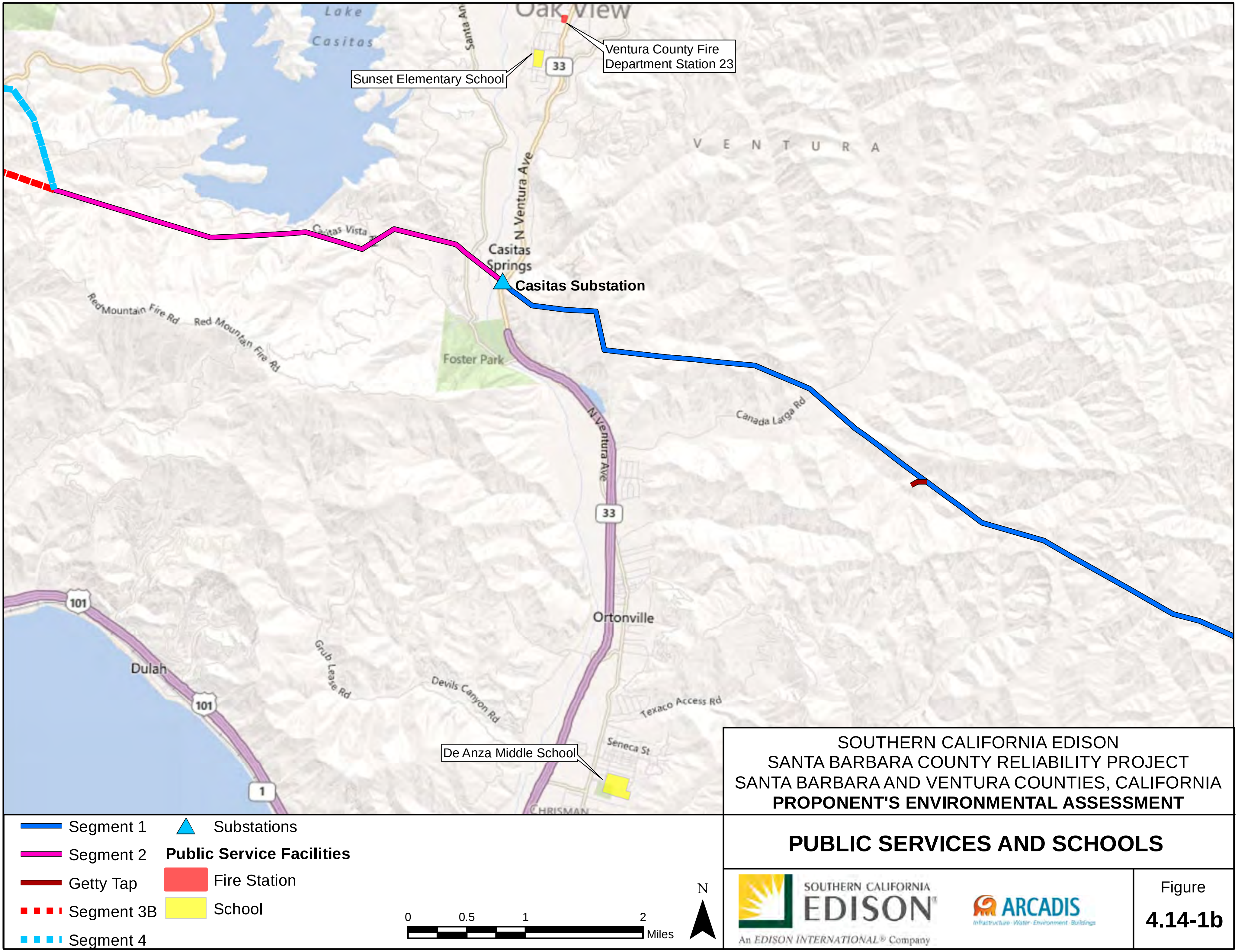

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Figure
4.14-1b

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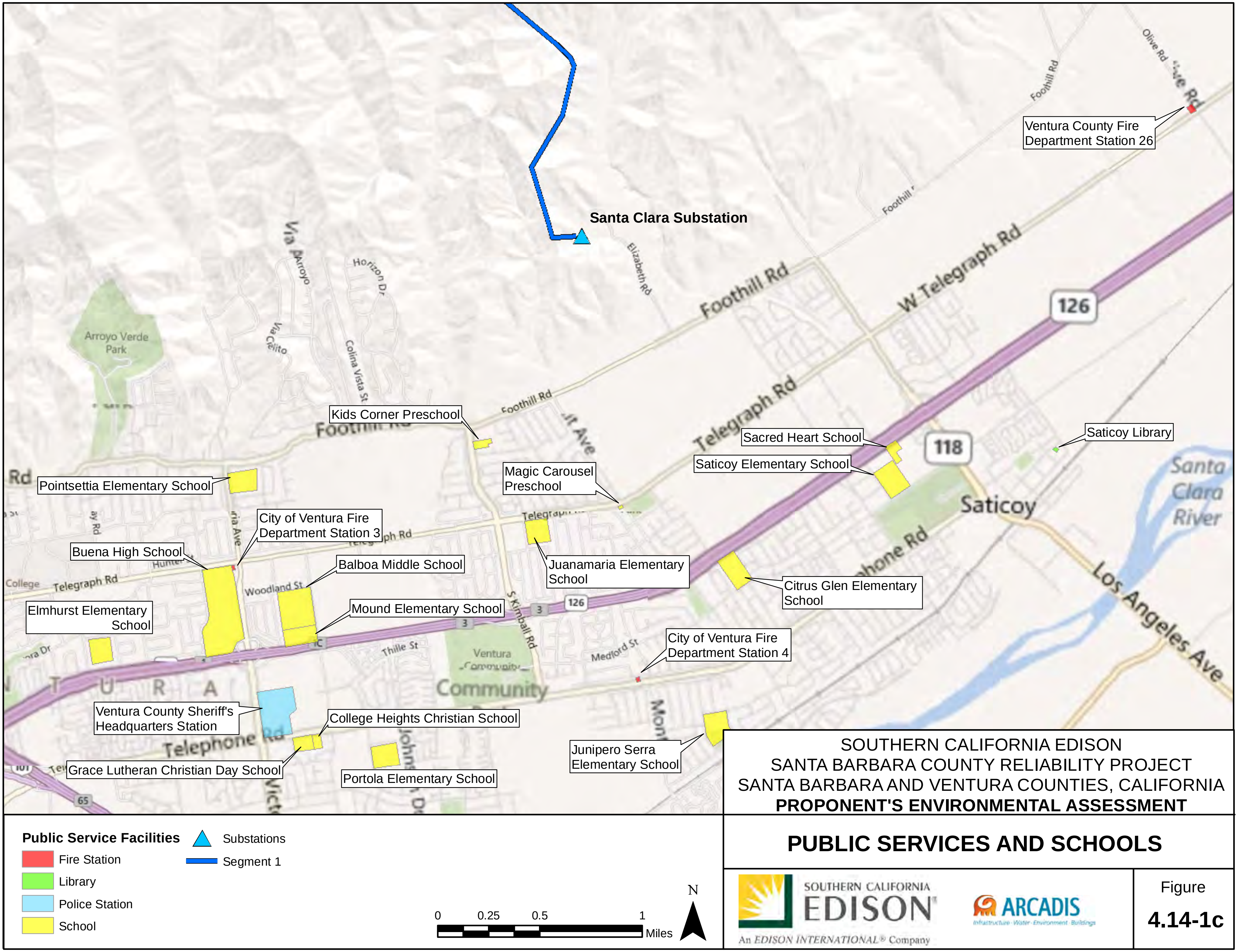

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Figure
4.14-1c

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4.14.1.1 Schools

Public schools in the vicinity of the Project are operated by the Carpinteria Unified School District and the Ventura Unified School District. There are also a number of private schools in the area.

Ventura Unified School District

The Ventura Unified School District operates 18 traditional elementary schools, five traditional middle schools, five traditional high schools, and a number of alternative schools and programs throughout Ventura County. Casitas Substation, Santa Clara Substation, the Getty Tap, Segment 3B, and the eastern portion of Segment 4, all located in Ventura County, are within the Ventura Unified School District's service area.

Carpinteria Unified School District

The Carpinteria Unified School District operates one preschool, three elementary schools, one middle school, one traditional high school, and two alternative high schools in Carpinteria.

Carpinteria Substation, Segment 3A, and the western portion of Segment 4, all located in Santa Barbara County, are in the Carpinteria Unified School District's service area.

4.14.1.2 Public Hospitals

The 242-bed Community Memorial Hospital in the City of San Buenaventura (Ventura) is located approximately 4.5 miles west-southwest of Santa Clara Substation. This is the nearest hospital to any component of the Project. The Cottage Health System operates a 408-bed public hospital in Santa Barbara. There are no hospitals located in the City of Carpinteria.

Fire Services

Fire protection in the vicinity of the Project is provided by the Ventura County and Santa Barbara County Fire Departments and by the Carpinteria-Summerland Fire Protection District.

Ventura County Fire Department

The Ventura County Fire Protection District provides fire and emergency response services to areas containing Santa Clara Substation and Casitas Substation, Segments 1, 2, and 3, the Getty Tap, and the eastern portion of Segment 4, all located in Ventura County. The nearest fire stations to components of the Project are Fire Station 26 (located approximately 3 miles east-northeast of Santa Clara Substation) and Fire Station 23 (located approximately 2.25 miles north of Casitas Substation) (see Figures 4.14-1b and c).

Carpinteria-Summerland Fire Protection District

The Carpinteria-Summerland Fire Protection District service area encompasses the areas around Carpinteria Substation, Segment 3A, and the western portion of Segment 4, located in Santa Barbara County. The District's single fire station in Carpinteria is located less than 1 mile from Carpinteria Substation (Figure 4.14-1a).

4.14.1.3 Police Services

Police and law enforcement in the Project Area is provided by the Santa Barbara County Sheriff's Department and the Ventura County Sheriff's Office.

Santa Barbara County Sheriff's Department

The Santa Barbara County Sheriff's Department provides law enforcement services in the area encompassing Carpinteria Substation, Segment 3A, and the western portion of Segment 4, located in Santa Barbara County. The Carpinteria Sheriff Station is located approximately 1.4 miles from Carpinteria Substation.

Ventura County Sheriff's Office

The Ventura County Sheriff's Office provides law enforcement services in the area encompassing the Casitas Substation, Santa Clara Substation, Segments 1, 2, and 3B, the Getty Tap, and the eastern portions of Segment 4, located in Ventura County. The nearest sheriff's offices to components of the Project are the headquarters office in Ventura (located approximately 2.6 miles from Santa Clara Substation) and the Ojai patrol office (located approximately 6.5 miles north-northeast of Casitas Substation).

4.14.1.4 Libraries

Libraries in the vicinity of the Project are operated by the Santa Barbara Public Library System and the Ventura County Library; the City of Carpinteria does not operate a library system.

Santa Barbara Public Library System

The Santa Barbara Public Library System operates the Carpinteria Branch Library located in Carpinteria.

Ventura County Library

The Ventura County Library operates 13 branches throughout the county. The Saticoy Library is located approximately 2.5 miles southeast of Santa Clara Substation, and the Oak View Library is located approximately 2.5 miles north of Casitas Substation.

4.14.2 Regulatory Setting

4.14.2.1 Federal Regulatory Setting

No federal regulations related to public services are applicable to the Project.

4.14.2.2 State Regulatory Setting

California Fire Code § 902.2.2.1

The California Fire Code, Section 902.2.2.1, requires fire apparatus access roads to have a minimum unobstructed width of 20 feet. Other State regulations are related to health, fire, and building safety, including the California Health Code, the California Fire Code, and the Uniform Building Code.

Title 12 California Code of Regulations §§ 1250-1258

Title 12 California Code of Regulations Sections 1250-1258 ("Fire Prevention Standards for Electric Utilities"), provide clearance standards for electric poles, tower firebreaks, and electric conductors.

CPUC General Order 95

General Order 95, Rules for Overhead Electric Line Construction covers aspects of design, construction, operation, and maintenance of electrical power lines and fire safety hazards.

4.14.2.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Santa Barbara County Comprehensive Plan

There are no components of the Comprehensive Plan applicable to the CEQA criteria below.

Ventura County General Plan

The Ventura County General Plan contains the following Objectives and Policies that may be relevant to the Project:

4.7.1 Goals

1. Provide for the protection of the public through effective law enforcement and emergency services.
2. Ensure that discretionary development provides adequate private security for the prevention of local crime.

4.7.2 Policies

1. The Sheriff's Department shall continue to review discretionary permits to ensure that an adequate level of law enforcement can be provided.
2. Discretionary development shall be conditioned to provide adequate site security during the construction phase (e.g., licensed security guard and/or fencing around the construction site, and all construction equipment, tools, and appliances to be properly secured and serial numbers recorded for identification purposes).
3. Discretionary development shall be conditioned to provide adequate security lighting (e.g., parking lots to be well lighted with a minimum 1 foot candle of light at ground level, lighting devices to be protected from the elements and constructed of vandal-resistant materials and located high enough to discourage anyone on the ground from tampering with them).
4. Discretionary development shall be conditioned to avoid landscaping which interferes with police surveillance (e.g., landscaping must not cover any exterior door or window, landscaping at entrances and exits or at any parking lot intersection must not block or screen the view of a seated driver from another moving vehicle or pedestrian, trees must not be placed underneath any overhead light fixture which would cause a loss of light at ground level).

4.8.1 Goal

Strive to reduce the loss of life and property by providing effective fire prevention, suppression, and rescue services and facilities.

4.8.2 Policies

1. Discretionary development shall be permitted only if adequate water supply, access, and response time for fire protection can be made available.

4.8.3 Programs

1. The Fire Protection District Bureau of Fire Prevention will continue to review all new development to ensure that an adequate level of fire protection can be provided (Ventura County 2010b).

City of Carpinteria General Plan and Local Coastal Plan

The City of Carpinteria General Plan notes that the Santa Barbara County Sheriff's Department standard for police protection is 1 officer per 500 people. The Plan also notes that there is no adopted fire protection manpower standard for the city. For library services, the Plan states a standard planning ratio of 0.5 square foot of library per capita.

The following Objectives and Policies may be relevant to the Project:

Objective PF-3

The City shall strive to maintain the best possible police and fire safety services for the community.

Policies

PF-3a. The City shall endeavor to monitor relevant statistics and enforcement criteria to assure adequate police service.

PF-3c. The City shall cooperate with the fire district for the purpose of determining district needs and to provide development mitigations as indicated by the study.

PF-3e. The City will require that proposed major projects demonstrate adequate fire and police response times and that the stations serving the Project have adequate staff and equipment available to serve increased demand.

Objective PF-5

To provide a high quality and broad range of public services, facilities, and utilities to meet the needs of all present and future residents of the Carpinteria Planning Area.

Policies

PF-5a. The City will strive to maintain adequate library service for the community of Carpinteria (City of Carpinteria 2003).

4.14.3 Significance Criteria

The significance criteria for assessing the impacts to public services come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities

4.14.4 Impact Analysis

Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

As discussed in the Population and Housing section, construction of the Project would not directly or indirectly induce any population growth, and thus the Project would not create a population growth-triggered increase for police or fire services; an increase in school enrollment; or an increase in the use of libraries, parks, or other public facilities that would result in a lowering of acceptable service ratios, response time, or other performance objectives.

Typically, Contractors or SCE personnel would not use libraries or parks during working hours.

SCE might, as necessary, hire private security personnel to guard construction-related staging yards and other Project locations. This would minimize any incremental demand on law enforcement services as a result of Project construction.

Construction activities would be conducted according to SCE standard health and safety protocols and applicable laws and regulations designed to protect workers and the public. Construction activities would also be conducted according to SCE fire prevention protocols as discussed in Section 4.8, Hazards and Hazardous Materials; among other things, compliance with these protocols would ensure that construction activities are conducted in a manner that would reduce the risk of igniting fires, including wildland fires.

Construction workers from outside the Project Area would reside in local hotels or motels during the construction period; the occupancy of these lodging establishments is taken to be approved by local emergency services, and incorporated into emergency planning. These features of the Project would minimize any incremental demand on law enforcement services as a result of Project construction.

SCE would apply for and obtain all necessary State, county, and local permits (e.g., traffic control, lane closure, encroachment) for activities in or affecting a public street ROW or private roadway or driveway; all work would be conducted consistent with applicable local ordinances and according to the stipulations and conditions of issued permits. In addition, the California Joint Utility Traffic Control Manual (CJUTCM) would guide the selection and implementation of measures to provide efficient and safe transit of emergency vehicles through construction areas; these measures may include the use of signage; flaggers; and high-intensity rotating, flashing, oscillating, or strobe lights on work vehicles. While the implementation of measures from the CJUTCM would reduce impacts to the transit of emergency vehicles, vehicle transit would be delayed compared with transit along a fully open road; these delays would be less than significant. Therefore, construction activities conducted along public roads would have less than significant impacts on the maintenance of acceptable service ratios, response times, or other performance objectives.

During the construction phase, existing fire and access roads would be used by construction equipment to access tower sites. To minimize surface disturbances, in some instances drill pads or crane pad/turnaround areas may encompass fire or access roads that are within SCE's existing ROW. Vehicle movements along, and use of, fire and access roads would be communicated to and coordinated with appropriate federal, State, and local agencies and emergency services. Equipment placed on crane pad/turnaround areas and drill pads would be situated to ensure emergency vehicle access per the California Fire Code and local regulations.[29]

As presented in the above discussion, the Project would not result in additional demand for police or fire services, and would have less than significant impacts on the maintenance of acceptable service ratios, response times, or other performance objectives for any public service. In addition, the Project would not result in a population growth-triggered need for new or physically altered governmental facilities or need for new or physically altered governmental facilities. Therefore, the construction of the Project would have less than significant impacts under this criterion.

<u>Operation Impacts</u>

As discussed in Section 4.13, Population and Housing, operation of the Project would not directly or indirectly induce any population growth, and thus the Project would not create a population growth-triggered increase for police or fire services; an increase in school enrollment; or an increase in the use of libraries, parks, or other public facilities that would result in impacts on the maintenance of acceptable service ratios, response time, or other performance objectives.

Operational activities would generally consist of routine visual inspection and as-needed maintenance of subtransmission and telecommunication infrastructure. The Project would, as necessary, employ a traffic control service, and all activities in or affecting a public street ROW would be permitted and conducted consistent with local ordinances.

The CJUTCM would guide the selection and implementation of measures to provide efficient transit of emergency vehicles through laydown/work areas during operations; these measures may include the use of signage, flaggers, and the use of high-intensity

[29] Rehabilitation of existing access roads conducted as part of the Project could potentially improve response times for emergency services, particularly in response to wildfires on private, state, or federal lands along the more remote sections of Segments 3A, 3B, and 4 in Ventura and Santa Barbara counties.

rotating, flashing, oscillating, or strobe lights on work vehicles. While vehicle transit would be delayed compared with transit along a fully open road, the implementation of measures from the CJUTCM would reduce impacts to the transit of emergency vehicles, resulting in delays that would be less than significant. Therefore, operations activities related to the Project that would be conducted along public roads would have less than significant impacts on the maintenance of acceptable service ratios, response times, or other performance objectives for any of public service.

As presented above, operation of the Project would have no adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities. Therefore, operation of the Project would have less than significant impacts under this criterion.

4.14.5 Applicant Proposed Measures

Because the Project would not result in significant impacts to public services, no Applicant Proposed Measures are offered.

4.15 Recreation

This section describes recreation in the area of the Project. The potential impacts are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.15.1 Environmental Setting

Federal, State, local, and private parks and recreation areas are found across the breadth of the Project. Parks and recreation areas are found in greatest numbers in proximity to the City of Carpinteria and in the suburban neighborhoods east of the City of San Buenaventura (Ventura) in the vicinity of Santa Clara Substation.

Parks and recreation areas were identified by reviewing county and city general plans, federal land management documents, site visits, and examination of aerial imagery. In this section, parks and recreation areas are identified and discussed by jurisdiction; locations of existing and/or developed parks and recreation areas are shown on Figures 4.15-1a, b, and c and on Figure 4.15-2.

4.15.1.1 Federal Recreational Areas

Los Padres National Forest

The Los Padres National Forest is the largest recreation area in the vicinity of the Project. The Forest covers approximately 1.8 million acres in five counties, and offers recreational opportunities at developed facilities (e.g., campgrounds, interpretive trails and displays) and in undeveloped areas.

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOCAL PARKS

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL® Company
ARCADIS

Figure
4.15-1a

ARCADIS: SCE_032, 6/18/12, R05

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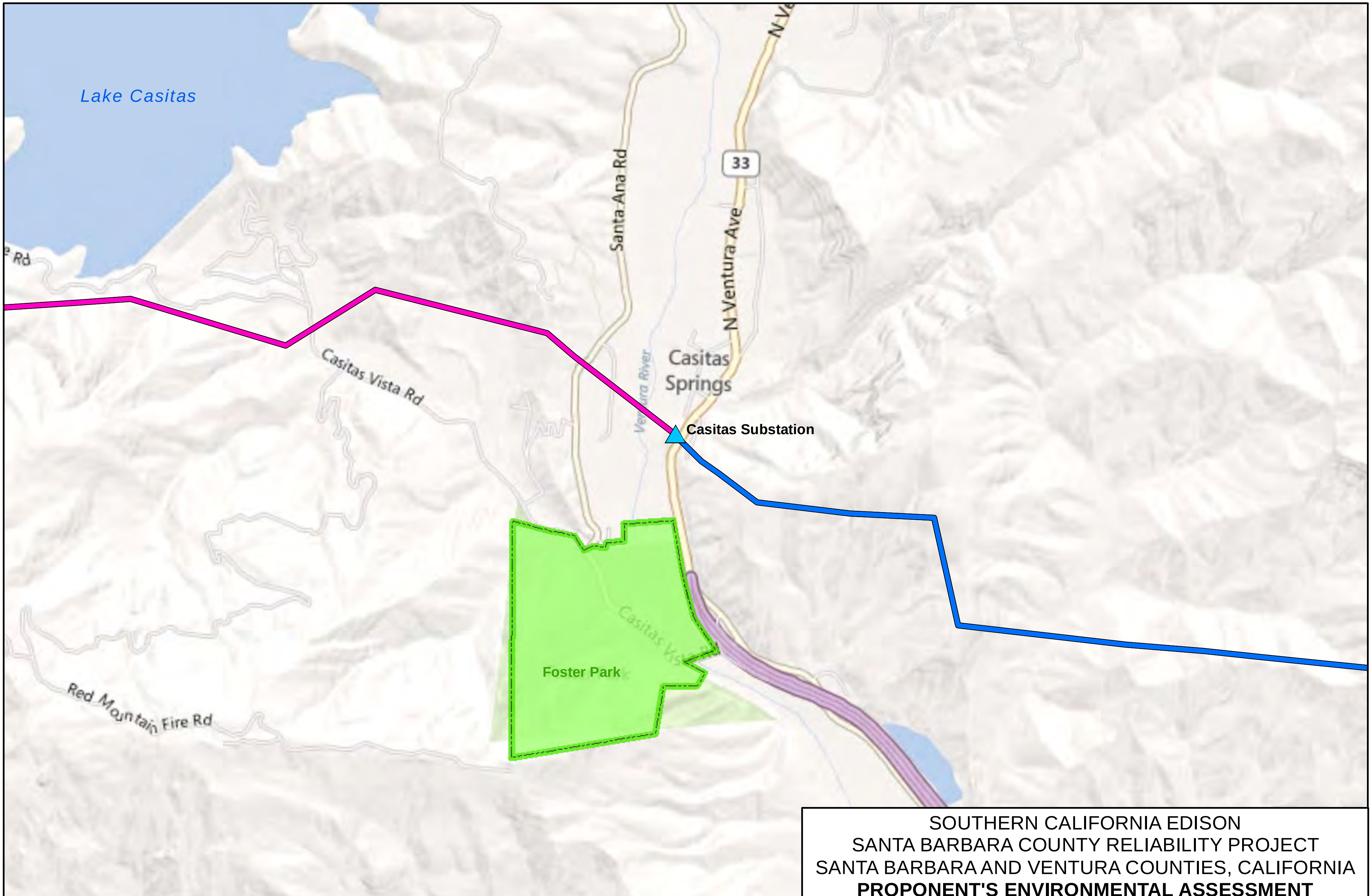

Segment 1
Segment 2
Substations
Parks

0 0.25 0.5 1 Miles

N

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOCAL PARKS

SOUTHERN CALIFORNIA EDISON
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Figure
4.15-1b

ARCADIS: SCE_033, 6/18/12, R03

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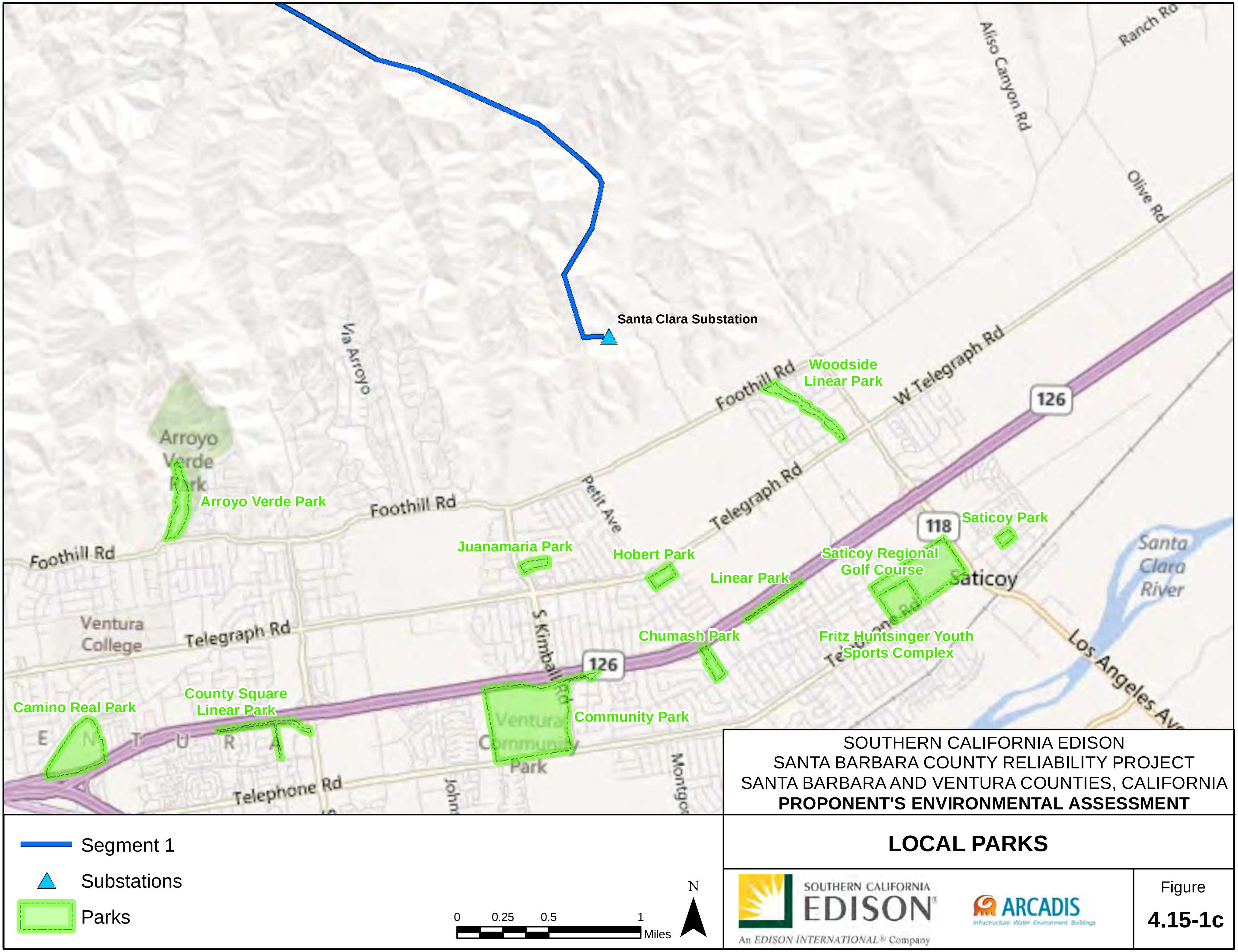

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOCAL PARKS

SOUTHERN CALIFORNIA EDISON
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Figure
4.15-1c

ARCADIS: SCE_034, 6/18/12, R04

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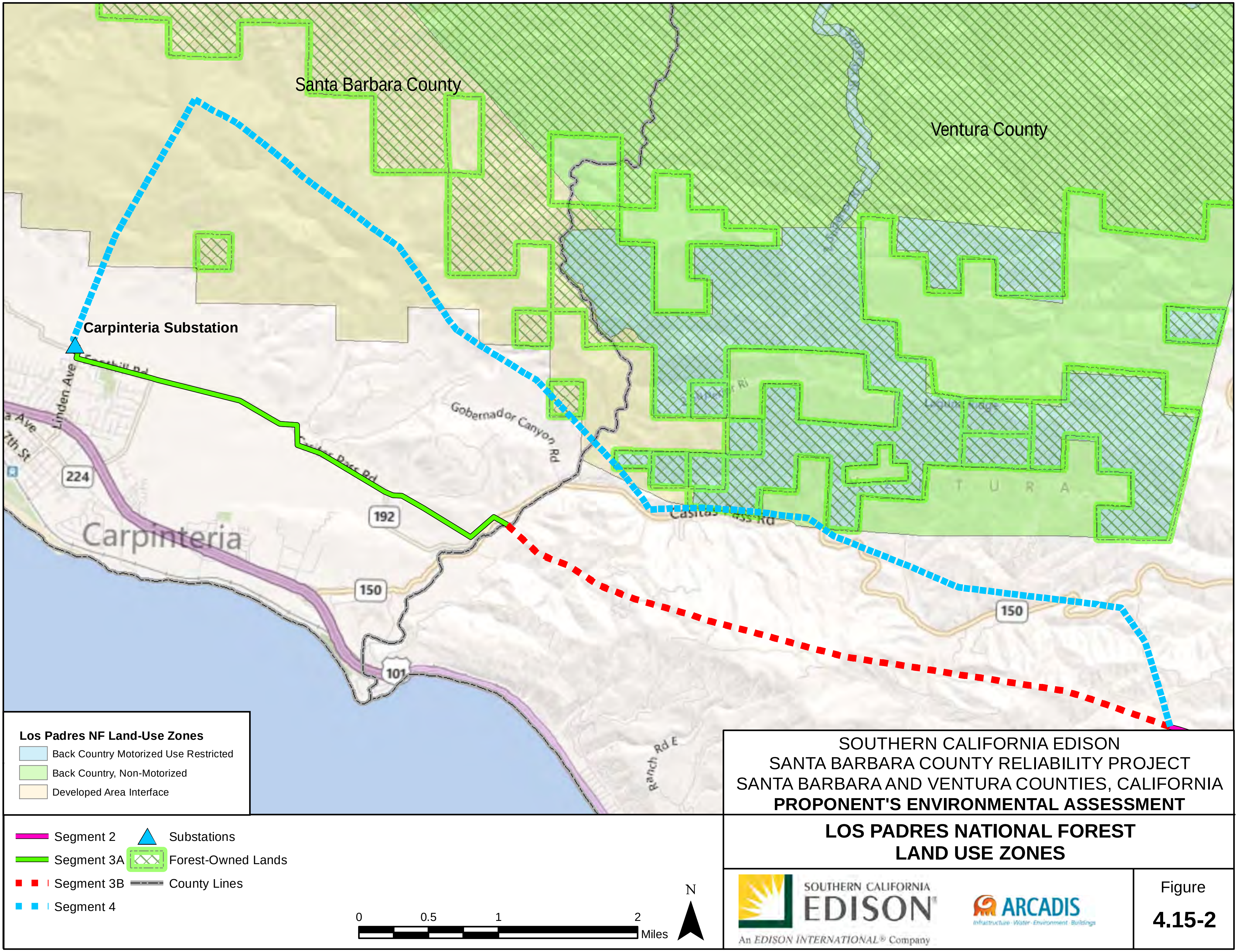

SOUTHERN CALIFORNIA EDISON
SANTA BARBARA COUNTY RELIABILITY PROJECT
SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOS PADRES NATIONAL FOREST LAND USE ZONES

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Figure
4.15-2

ARCADIS: SCE_027, 6/21/12, R08

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The Forest Service refers to the area nearest the Project Area as the Santa Barbara Front. The lands in the Santa Barbara Front are identified in the Los Padres National Forest Management Plan mostly as Developed Area Interface lands and Back Country Motorized Use Restricted lands. Recreation opportunities in the Santa Barbara Front primarily focus on day-use, and include hiking, bicycling, paragliding and hang-gliding, horseback riding, rock climbing and wildlife viewing. Many roads and non-motorized trails provide 'backyard access' to the foothills and ridgetops for local hiking and biking enthusiasts from the urban areas (U.S. Forest Service 2005b).

4.15.1.2 State Recreational Areas

Carpinteria State Beach is the only State recreational area or park in the vicinity of the Project. Carpinteria State Beach, located approximately 1 mile from Carpinteria Substation and approximately 1.4 miles from the nearest point on Segment 3A, offers a campground, picnic areas, covered patios, beach and tidepool areas.

4.15.1.3 County of Santa Barbara Recreational Area

Rincon Beach Park is the only County of Santa Barbara park or recreation area in the vicinity of the Project. The Park is located approximately 2.5 miles from Carpinteria Substation and approximately 1.25 miles from the nearest point on Segment 3A. Rincon Beach Park offers beach access, benches, picnic tables, restrooms, and is known for its surfing beaches and bird watching.

4.15.1.4 County of Ventura Recreational Areas

The County of Ventura operates Foster Park, located approximately 0.25 miles south of Casitas Substation. The park offers camping and day use areas. The southern terminus of the Ojai Valley Trail, a paved multi-purpose trail and wood-chip equestrian trail, is located in the park. The trail runs within approximately 100 feet of the substation property. The County also operates the Casitas Springs Community Center, located approximately 0.2 miles north of Casitas Substation.

Woodside Linear Park is located approximately 0.75 miles south-southeast of Santa Clara Substation. The park, located along a riparian area in a residential neighborhood, offers a paved multi-purpose trail and grassy areas.

4.15.1.5 Casitas Valley Municipal Water District

The Casitas Valley Municipal Water District operates the Lake Casitas Recreation Area, which encompasses the entirety of Lake Casitas. Non-contact recreation (boating, fishing) is allowed in Lake Casitas. On the north shore of the lake, the Water District operates a number of developed recreation facilities including camping and picnic areas, a boat launch, and a water park. There are no developed recreation facilities along the south shore of the lake nearest the Project.

4.15.1.6 City of Carpinteria

The City of Carpinteria has approximately 98 acres of city parks within the city boundary; parks range in size from 0.25 to nearly 53 acres. These recreational park sites provide facilities for a variety of recreational opportunities including sports fields and courts, playgrounds, picnic areas, and natural open spaces.

There are five parks located within 1 mile of Carpinteria Substation. El Carro Park is located approximately 0.25 miles from the substation; this park contains a soccer pitch, baseball fields, and a playground. Franklin Creek Park is located approximately 0.2 miles south of the substation; this park offers grassy areas, swings, and is the terminus of the Franklin Creek hiking and biking trail. Heath Ranch Park is located approximately 0.4 miles west-southwest of the substation; this park contains a playground, picnic tables, grassy areas, the Russell Heath Adobe landmark, and a historic eucalyptus grove. Memorial Park is located approximately 0.6 miles south-southwest from the substation; the park is a passive recreation park with a playground, picnic tables, and barbecues.

The Salt Marsh Nature Park, located 1 mile south of the substation, offers natural open space, a trail and overlook, and an amphitheater. The Carpinteria Community Pool is located approximately 1 mile south of the substation location. No component of the Project crosses any park or recreational area in the City of Carpinteria.

4.15.1.7 Other Recreational Areas

The Carpinteria Lions Park, a privately-owned but publicly-accessible 2 acre park, is located on Casitas Pass Road/CA-192 adjacent to Segment 3A.

The Franklin Trail, which as of September 2012 has not been constructed, would originate in the City of Carpinteria and would pass through several privately-owned ranches as it climbs to meet a series of trails in Los Padres National Forest. The lower (southern) portion of the trail would be routed through private lands; the upper (northern) portion of the trail would be located on the access road used and maintained by SCE. The Land Trust for Santa Barbara County owns the easements for the trail's route through the private lands. The Franklin Trail would, upon its completion, be open to the public.

4.15.2 Regulatory Setting

4.15.2.1 Federal Regulatory Setting

There are no federal laws for recreation that apply to the Project.

Los Padres National Forest Strategy

The Los Padres National Forest Land Management Plan describes the strategic direction at the broad program-level for managing the land and its resources. The Plan is directed toward the realization of the desired conditions using strategies that are consistent with the concept of adaptive management and sustainable resource use. The Plan's programs and strategies tier from a number of National Strategic Plan Goals, including Goal 3.1 - Provide for Public Use and Natural Resource Protection. The Plan includes strategy REC 1 - Recreation Opportunity: Manage national forest land to achieve recreation opportunity spectrum (ROS) classes. The ROS for lands through which the existing public utility easement is routed are classified as Semi-Primitive Non-Motorized and Roaded Natural (U.S. Forest Service 2005b).

4.15.2.2 State Regulatory Setting

There are no State regulations for recreation that apply to projects subject to G.O. 131-D.

4.15.2.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Santa Barbara County Comprehensive Plan

The Land Use Element of the Santa Barbara County Comprehensive Plan states that 4.7 acres of park land are needed for every 1,000 persons. The Element also contains a number of policies related to parks and recreation including:

1. "Bikeways shall be provided where appropriate for recreational and commuting use.
2. Opportunities for commercial and sport fishing should be preserved and improved where appropriate.
3. Future development of parks should emphasize meeting the needs of the local residents.
4. Opportunities for hiking and equestrian trails should be preserved, improved, and expanded wherever compatible with surrounding uses.
5. Schools and other public-owned lands should be utilized for joint use recreational activities whenever possible." (Santa Barbara County 2011d)

Ventura County General Plan

The Ventura County General Plan contains a number of goals and policies related to parks and recreational areas, including the following:

Goals

Ensure compatibility between recreation facilities and adjoining land uses.

Policies

The County shall maintain and enforce the local parkland dedication requirements (Quimby Ordinance), to acquire and develop neighborhood and community recreation facilities. Parkland dedication shall be based on a standard of 5 acres of local parkland per 1,000 population, including neighborhood and community parks. (Ventura County 2007a)

City of Carpinteria General Plan and Local Coastal Plan

The City of Carpinteria General Plan contains a number of goals and policies related to parks and recreational areas, including the following:

Objective LU-1

Establish the basis for orderly, well planned urban development while protecting coastal resources and providing for greater access and recreational opportunities for the public.

Implementation Policy LU-1d

Ensure that the type, location and intensity of land uses planned adjacent to any parcel designated open space/recreation or agriculture are compatible with these public resources and will not be detrimental to the resource.

Objective OSC-14

Provide for adequate park and recreation facilities to meet the needs of the community and visitors.

Implementation Policy 61

Support development of new or expanded park and recreation facilities as demand/need dictates. When latent demand for parks and recreation facilities is identified, adequate parkland and facilities shall be identified and pursued.

Implementation Policy 62

Continue to update and collect parkland in-lieu, Quimby, and development impact fees to assist the City in acquisition of new parkland to maintain the desired level of service. The minimum level of service shall be 3 acres per 1000 population. Park impact fees shall apply to both commercial/industrial and residential development. (City of Carpinteria 2003)

4.15.3 Significance Criteria

The significance criteria for assessing the impacts to recreational resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment

4.15.4 Impact Analysis

Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Assessment Summary: No Impact

Construction Impacts

The use of parks and recreational facilities is closely tied to population; as population increases, the use of existing parks and recreational facilities can be expected to increase proportionally. Similarly, the loss of existing parks and recreational facilities would result in a concentration of use at remaining parks and facilities.

As presented in the Population and Housing section (Section 4.13), the Project would not directly or indirectly induce any population growth during construction. During construction, local parks may be used by workers during their lunch or break periods; the short duration of construction activities and the small number of construction workers would not result in a significant increase in the use of existing parks or recreational facilities.

The limited increase in the use of parks and recreational facilities by workers during construction and the lack of population growth as a result of the Project would not result in either a significant increase in the use of existing parks or recreational facilities or the occurrence or acceleration of substantial physical deterioration to existing parks and recreational facilities. Therefore, no impacts would occur under this criterion as a result of construction of the Project.

Operation Impacts

As presented in the Population and Housing section (Section 4.13), the Project would not directly or indirectly induce any population growth during operations. Operation of the Project would not require additional personnel above current normal staffing levels because substations would be unstaffed and visits to subtransmission infrastructure sites would be infrequent and irregular, but occurring at least once per year. During operations, personnel may use local parks during their lunch or break periods; because no additional personnel would be required during operations, use of local parks would represent a potential continued use, and not a new use. Therefore, the Project would not result in either a significant increase in the use of existing parks or recreational facilities or the occurrence or acceleration of substantial physical deterioration of existing parks and recreational facilities, and no impacts would occur under this criterion as a result of operation of the Project.

Would the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Assessment Summary: No Impact

Construction Impacts

The Project would not include any recreational facilities. The Project is not expected to result in a population increase and would not require the construction or expansion of any recreational facilities. As a result, there would be no adverse physical effect on the environment from the construction of new, or expansion of existing, recreational facilities. Therefore, no impacts would occur under this criterion as a result of construction of the Project.

Operation Impacts

The Project would not include any recreational facilities. The Project is not expected to result in a population increase and would not require the construction or expansion of any recreational facilities. As a result, there would be no adverse physical effect on the environment from the construction of new, or expansion of existing, recreational facilities. Therefore, no impacts would occur under this criterion as a result of operation of the Project.

4.15.5 Applicant Proposed Measures

Because the Project would not result in significant impacts to recreation, no Applicant Proposed Measures are offered.

4.16 Transportation and Traffic

This section describes transportation and traffic in the area of the Project. The potential impacts to traffic and transportation as a function of the construction and operation of the Project are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 has been and would be performed, with the exceptions noted below.

Work that would be conducted at the Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation would involve only minor substation and telecommunications work as described in Chapter 3. This work would be accomplished by fewer than three individuals in two light-duty vehicles such as pickups or vans to access the substations; these activities would result in de minimis impacts to transportation or traffic, and thus are not described further in this section.

4.16.1 Environmental Setting

Streets and highways serve as the dominant system of transportation in Ventura County and Santa Barbara County, and in the cities and communities within the counties. Other transportation systems in these counties include mass transit, bicycle routes, rail service, and air transportation. The discussions in the following sections are focused on geographical areas near components of the Project (e.g., the City of Carpinteria) as well as areas through which Project-related vehicles would travel (e.g., the City of San Buenaventura [Ventura]).

4.16.1.1 Streets and Highways

The Project would be executed largely in rural areas with limited transportation infrastructure. State Route 33 (SR-33), SR-118, SR-126, SR-150, and SR-192 are present within the Project area; these highways are all two-lane rural highways where they are adjacent to components of the Project. State Route 33 is crossed by the western end of Segment 1, and Casitas Substation is located immediately adjacent to the highway. State Route 150 runs parallel to, and is crossed by, the eastern portion of Segment 4. State Route 192 runs immediately adjacent to, and is crossed by, Segment 3A. Figures 4.16-1a, b, and c illustrate the areas where work associated with the Project would occur within, along, or in the immediate vicinity of a public ROW. US-101 does not cross any component of the Project, but links the City of San Buenaventura (Ventura) and the City of Carpinteria.

The flow of vehicle traffic is frequently described using the level of service (LOS) scale, which is a measurement of operational characteristics of traffic flow on a roadway or at the intersection of roadways, based on traffic volumes and facility type. Traffic operations are assessed using levels ranging from “A” to “F,” with “A” representing the highest (best) level of service in terms of travel speed, delay, maneuverability, driver comfort, and convenience. In general, the following descriptions apply to the qualitative levels described above: “A” – free flow; “B” – reasonably free flow; “C” – stable flow; “D” – approaching unstable flow; “E” – unstable flow; and “F” – forced or breakdown flow (gridlock).

No traffic studies have been completed by SCE specific to the Project. A traffic study conducted for a non-SCE development in the vicinity of the Project indicates that all intersections in Carpinteria that may be used by vehicles related to the Project operated at LOS C or better during both the morning and afternoon peak hours in 2011 (City of Carpinteria 2011a). Traffic volumes along the highways and at intersections in the vicinity of the Project are shown in Tables 4.16-1 and 4.16-2.

The 2009 Santa Barbara County Congestion Management Plan (CMP) contains information regarding traffic on State, county, and local roadways in Santa Barbara County. Information regarding traffic flows on State highways that could be travelled by Project-related traffic is presented here:

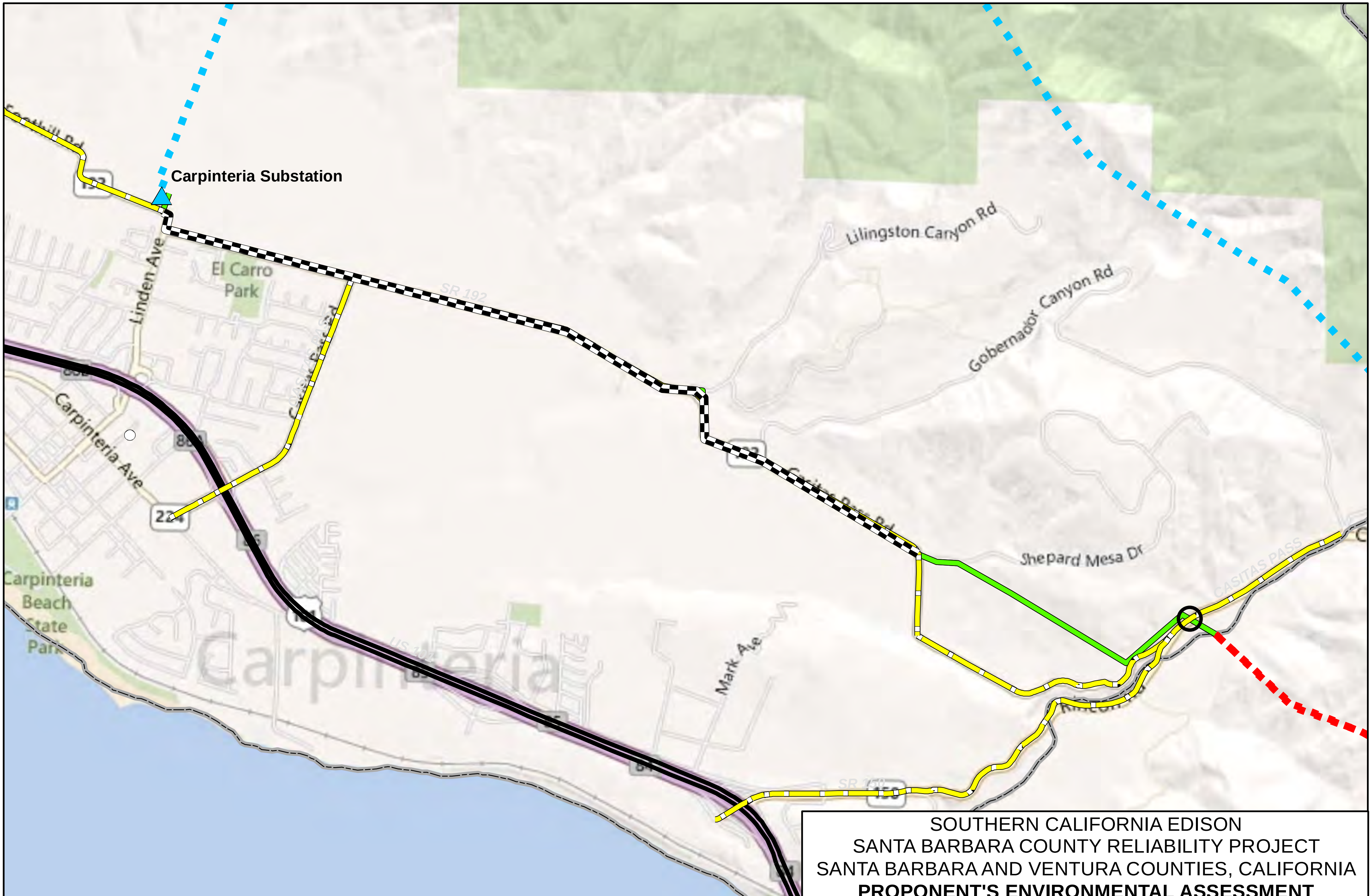
- SR-150. Operates at LOS C or better at all times.
- SR-192. Operates at LOS C or better at all times.

The 2009 Ventura County CMP contains information regarding traffic on State, county, and local roadways in Ventura County. Information regarding traffic flows on State highways that could be travelled by Project-related traffic is presented here:

- SR-33. Operating speeds remain good with stable traffic flow on both sides of the highway. From US-101 to Casitas, SR-33 operates at LOS A or B in both the a.m. and p.m. peak times.
- City of San Buenaventura (Ventura). Operating speeds remain good with stable traffic flow at most CMP monitored locations in the city. With a single exception in the downtown area (where Project-related vehicle movements are unlikely), all monitored locations within the City operate at LOS C or better.
- County of Ventura. Operating speeds remain good with stable traffic flow at all CMP monitored locations in the county unincorporated area that may be traversed by Project-related vehicles.

The Final Environmental Impact Report (FEIR) for the City of San Buenaventura’s (Ventura) General Plan identifies that all intersections in the vicinity of Santa Clara Substation and the SCE Ventura Service Center operate at LOS A, with intersection capacity utilization (ICU) values of less than 0.60 (City of San Buenaventura 2005).

Major roadways and intersections likely to be used during the construction and operation of the Project are shown in Tables 4.16-1 and 4.16-2.



SOUTHERN CALIFORNIA EDISON
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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

TRUCK ROUTES AND POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

- Segment 3A
- Segment 3B
- Segment 4
- Substations
- County Lines
- Potential Lane Closure Area
- Road Crossing/Potential Lane Closure Area

Truck Networks

- CA Legal Advisory Route
- National Network (STAA)

0 0.25 0.5 1 Miles

N

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Figure
4.16-1a

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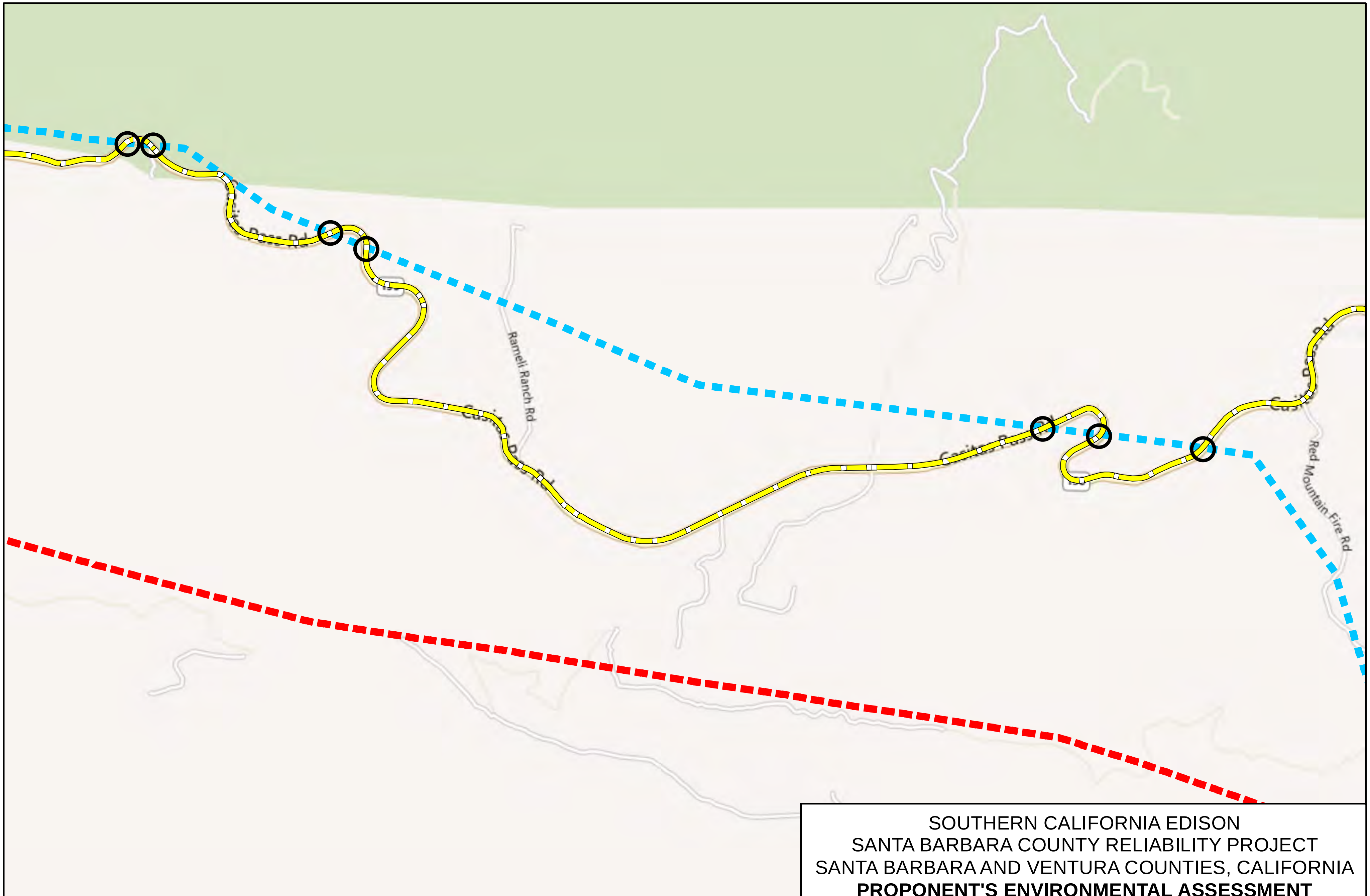

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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

TRUCK ROUTES AND POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

Segment 3B
Segment 4
Road Crossing/Potential Lane Closure Area

Truck Networks

CA Legal Advisory Route

0 0.125 0.25 0.5 Miles

N

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Figure
4.16-1b

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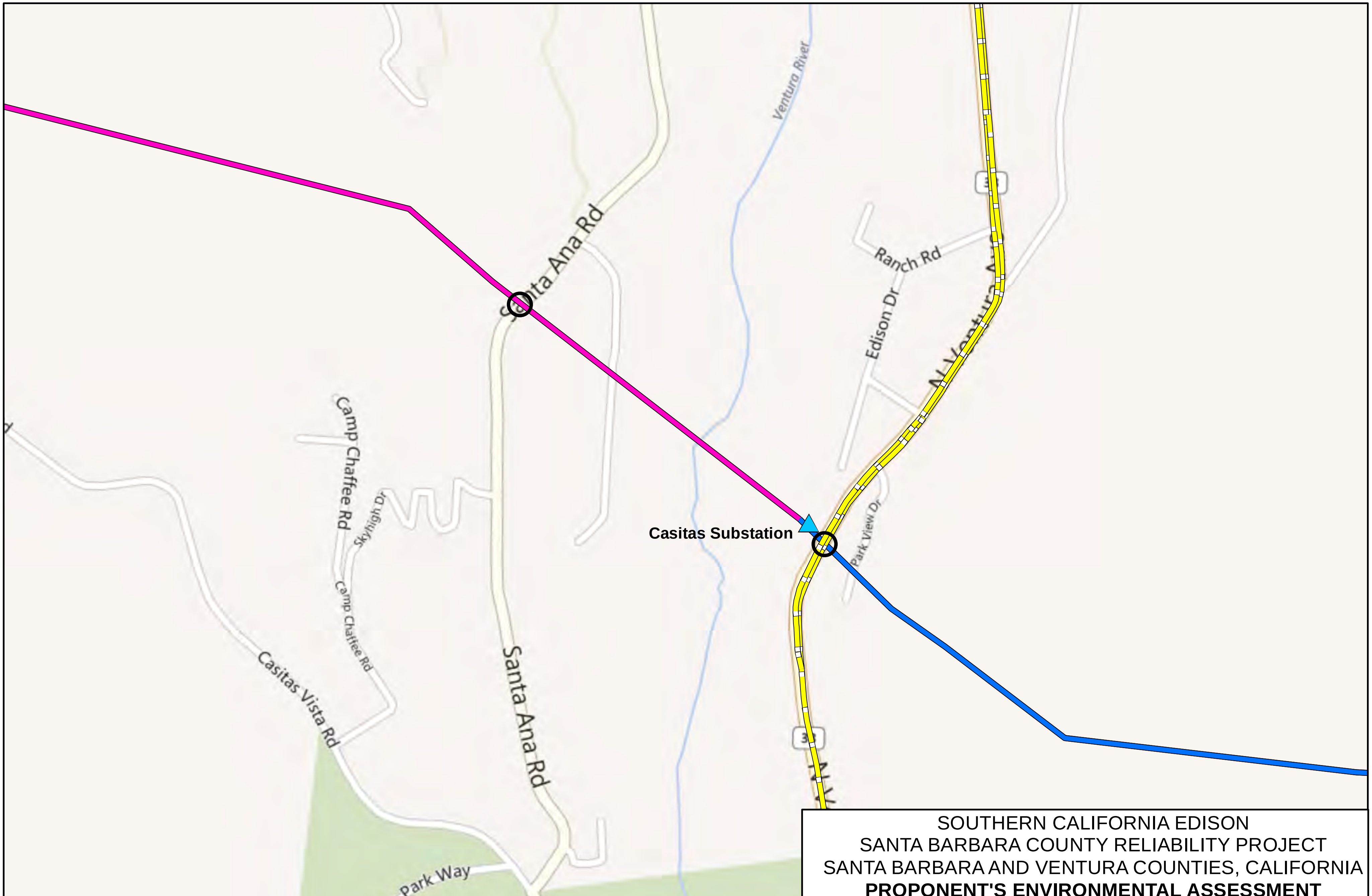

Segment 1
Segment 2
Substations
Road Crossing/Potential Lane Closure Area
Truck Networks
CA Legal Advisory Route

0 0.05 0.1 0.2 Miles

N

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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
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TRUCK ROUTES AND POTENTIAL LANE CLOSURES AND ROAD CROSSINGS

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Figure
4.16-1c

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Table 4.16-1: Roadways That May be Used during Construction and Operations

Roadway	From	To	Current LOS AM Peak	Current LOS PM Peak	Annual Average Daily Traffic (vehicles)	Jurisdiction
US-101	SR-126	SR-33	NB: C SB: B to C	NB: A to D SB: C to D	30,000 – 122,000	Ventura County [a]
US-101	SR-33	Ventura/Santa Barbara County Line	NB: C SB: A to B	NB: A SB: C	67,000 – 71,000	Ventura County [a]
US-101	Ventura/Santa Barbara County Line	SR-150	NB: B SB: A	NB: A SB: C	68,000[c]	Santa Barbara County [c]
US-101	SR-150	Casitas Pass Road	NB: F SB: B	NB: C SB: C	68,000[c]	Santa Barbara County [c]
SR-33	US-101	Casitas Springs	NB: A SB: B	NB: B SB: A	27,000 – 42,000	Ventura County [a]
SR-126	SR-118	US-101	WB: C EB: B	WB: B EB: C	36,000 – 48,000	Ventura County [a]
SR-150	US-101	SR-192	No Data	NB: C SB: C	3,100 – 4,180[c]	Santa Barbara County [b]
SR-150	Ventura/Santa Barbara County Line	SR-33	No Data	No Data	2,700 – 10,200	Ventura County [a]
SR-192	Carpinteria Substation	SR-150	No Data	NB: C SB: C	72 – 2,9000[c]	Santa Barbara County [b]

Notes:
NB – Northbound
SB – Southbound
WB – Westbound
EB – Eastbound

Sources:
a. Ventura County 2009
b. SBCAG 2009
c. Caltrans 2011

Table 4.16-2: Intersections That May be Used during Construction and Operations

Intersection	Current LOS AM Peak	Current LOS PM Peak	Annual Average Daily Traffic	Jurisdiction[a]
US-101 NB Offramp to SR-150	C	B	No Data	City of Carpinteria
US-101 NB Offramp to Casitas Pass Road	F	C	No Data	City of Carpinteria
Casitas Pass Road Onramp to SB US-101	B	C	No Data	City of Carpinteria
SR-150 Onramp to SB US-101	A	C	No Data	City of Carpinteria

Notes:
NB – Northbound
SB – Southbound
WB – Westbound
EB – Eastbound

Source:
a. City of Carpinteria 2011a

Commercial Traffic

Commercial transportation of goods and materials in the area of the Project is largely accomplished by truck.

State Route 33, SR-150, and SR-192, are part of Caltrans' truck network and designated for the passage of large trucks. SR-150 and SR-192, which parallel much of Segments 3A, 3B, and 4, have been designated by Caltrans as California Legal Advisory Routes, which means that trucks with trailers are allowed a maximum kingpin-to-rear-axle (KPRA) length of 40 feet (this describes a conventional semi truck/trailer combination); however, Caltrans advises truckers not to use a California Legal Advisory Route unless their KPRA is less than 40 feet. State Route 33, along which Casitas Substation is located, has been designated by Caltrans as a Terminal Access route, meaning that large trucks (semi truck/trailer combinations and trucks with double trailers) can travel the roadway. US-101, the primary north-south highway in the area of the Project, is a National Network highway designated for the movement of commercial vehicles.

In the City of Carpinteria, an existing truck route directs trips on Via Real between the Bailard Ave./US-101 freeway interchange and Mark Avenue to Carpinteria Avenue, SR-150 and Via Real (east of Mark) (City of Carpinteria 2003). Truck routes in the City of San Buenaventura (Ventura) are identified in Section 16.140.020—Weight limit; truck route of the city's Code of Ordinances.

4.16.1.2 Mass Transit

There is no mass transit/bus service along the large majority of the length of the Project as shown in Figure 4.16-2a, b, and c. The Santa Barbara Metropolitan Transit District operates several bus routes to and within Carpinteria, and the Ventura Intercity Service Transit Authority operates bus service between the cities of San Buenaventura (Ventura) and Carpinteria; none of these routes run adjacent to or cross any segment of the Project. Gold Coast Transit provides fixed-route bus and paratransit services in the Cities of Ojai, Oxnard, Port Hueneme, and Ventura, and in the unincorporated county areas between the cities, with Gold Coast routes 10 and 16 specifically serving areas in the vicinity of Santa Clara Substation and Casitas Substation. Private bus services, such as those offered by the Central Coast Shuttle, Clean Air Express, Coastal Express, Easy Lift, Greyhound, Santa Barbara Air Bus, Silverado Coast Flyer, and Traffic Solutions also operate in the area (Caltrans 2012).

4.16.1.3 Bicycle Routes

Bikeways are found throughout the Project Area (Figures 4.16-2a, b, and c). These routes range from dedicated paths to shared lanes. In Segment 2, existing overhead conductor crosses a bikeway (see Figure 4.16-2b).

4.16.1.4 Rail Service

Rail service in the vicinity of the Project is limited to the Union Pacific Railroad lines that run along the coast. Amtrak provides passenger service to stations in San Buenaventura (Ventura) and Carpinteria (City of Carpinteria 2003). The Union Pacific Railroad operates an average of 13 freight trains daily on its line through Carpinteria (Ventura County 2009).

4.16.1.5 Air Transportation

There are three public airports in the general vicinity of the Project. Santa Barbara Municipal Airport is located approximately 18 miles west of Carpinteria Substation; Oxnard Airport is located approximately 6.5 miles south-southwest of Santa Clara Substation; and Camarillo Airport is located approximately 7 miles south-southeast of Santa Clara Substation.

4.16.2 Regulatory Setting

4.16.2.1 Federal Regulatory Setting

Hazardous Materials Transportation Act of 1974

This Act directs the United States Department of Transportation (USDOT) to establish criteria and regulations regarding safe storage and transportation of hazardous materials. The Hazardous Materials Regulations promulgated by USDOT (49 CFR 171.1 et seq.)

address transportation of hazardous materials, types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials. Additionally, the Motor Carrier Safety Regulations (49 CFR 390.1 et seq.) specify safety considerations for the transport of hazardous materials over public roadways.

Federal Aviation Administration

A sponsor proposing any type of construction or alteration of a structure that may affect the National Airspace System (NAS) is required under the provisions of Title 14 Code of Federal Regulations (14 CFR Part 77) to notify the FAA by completing the Notice of Proposed Construction or Alteration form (FAA Form 7460-1).

Construction or alternation of a structure that may affect the NAS includes:

- any construction or alteration exceeding 200 feet above ground level
- any construction or alteration within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet, or within 10,000 feet of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 feet within 5,000 feet of a public use heliport which exceeds a 25:1 surface
- any highway, railroad, or other traverse way whose prescribed adjusted height would exceed the above noted standards
- when requested by the FAA, any construction or alteration located on a public use airport or heliport regardless of height or location

4.16.2.2 State Regulatory Setting

California Department of Transportation

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

All construction in the public ROW would comply with the California Manual on Uniform Traffic Control Devices (Caltrans 2010).

An encroachment permit must be obtained from the local Caltrans District Office for all proposed activities for placement of encroachments within, under, or over the State highway ROWs. Some examples of work requiring an encroachment permit are: utilities, excavations, and driveways. Only Caltrans has authority to approve and issue permits for activities on Caltrans' ROW. Authority for Caltrans to control encroachments within the State highway ROWs is contained in the Streets and Highways Code starting with Section 660.

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SANTA BARBARA AND VENTURA COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PUBLIC TRANSPORTATION AND BIKEWAYS

Segment 3A
Segment 4
VISTA Bus Routes
Seaside Shuttle SBMTD 36
SBMTD 20/21X
Bikeways
Railroad
Substations

0 0.125 0.25 0.5 Miles

N

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Figure
4.16-2a

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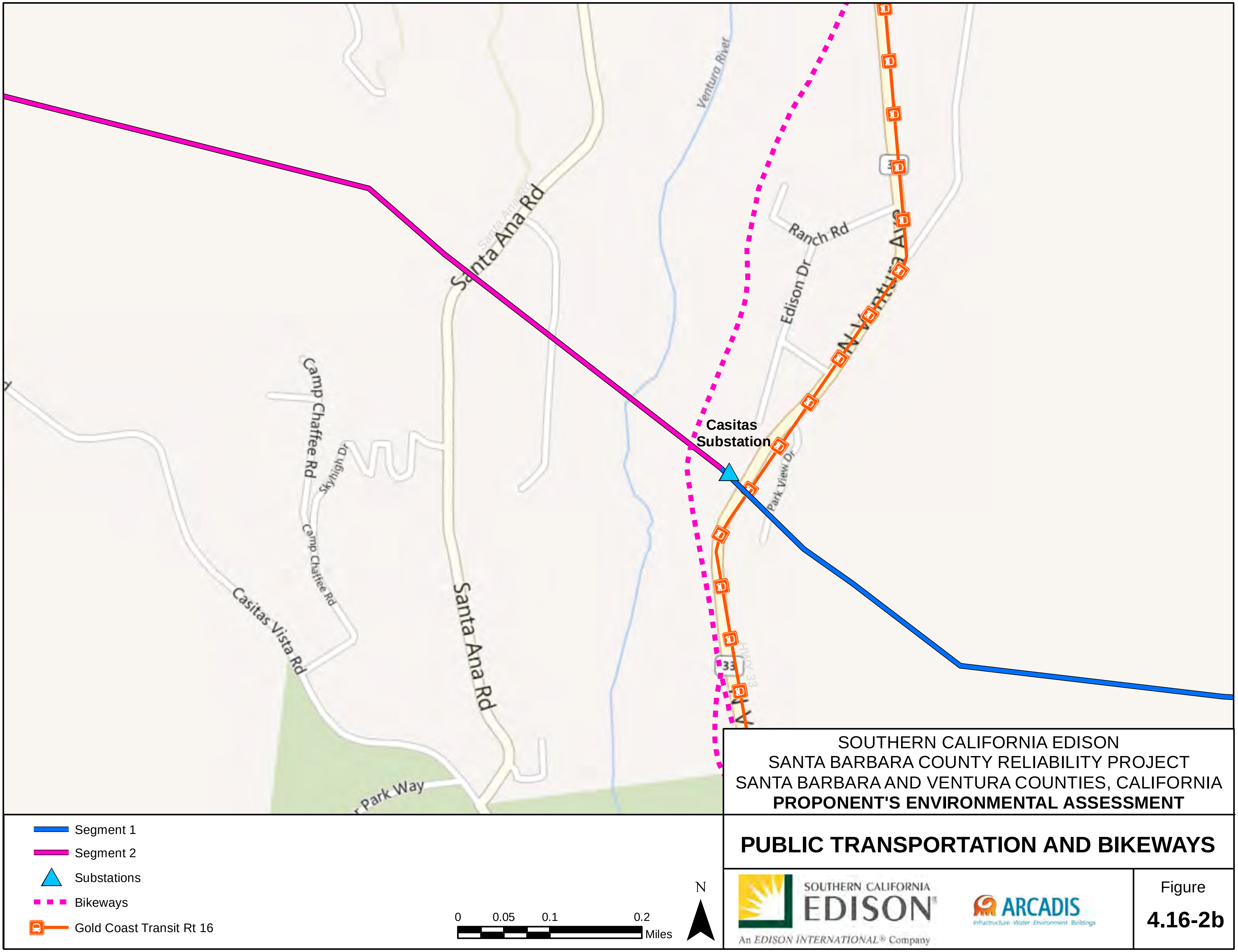

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PUBLIC TRANSPORTATION AND BIKEWAYS

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Figure
4.16-2b

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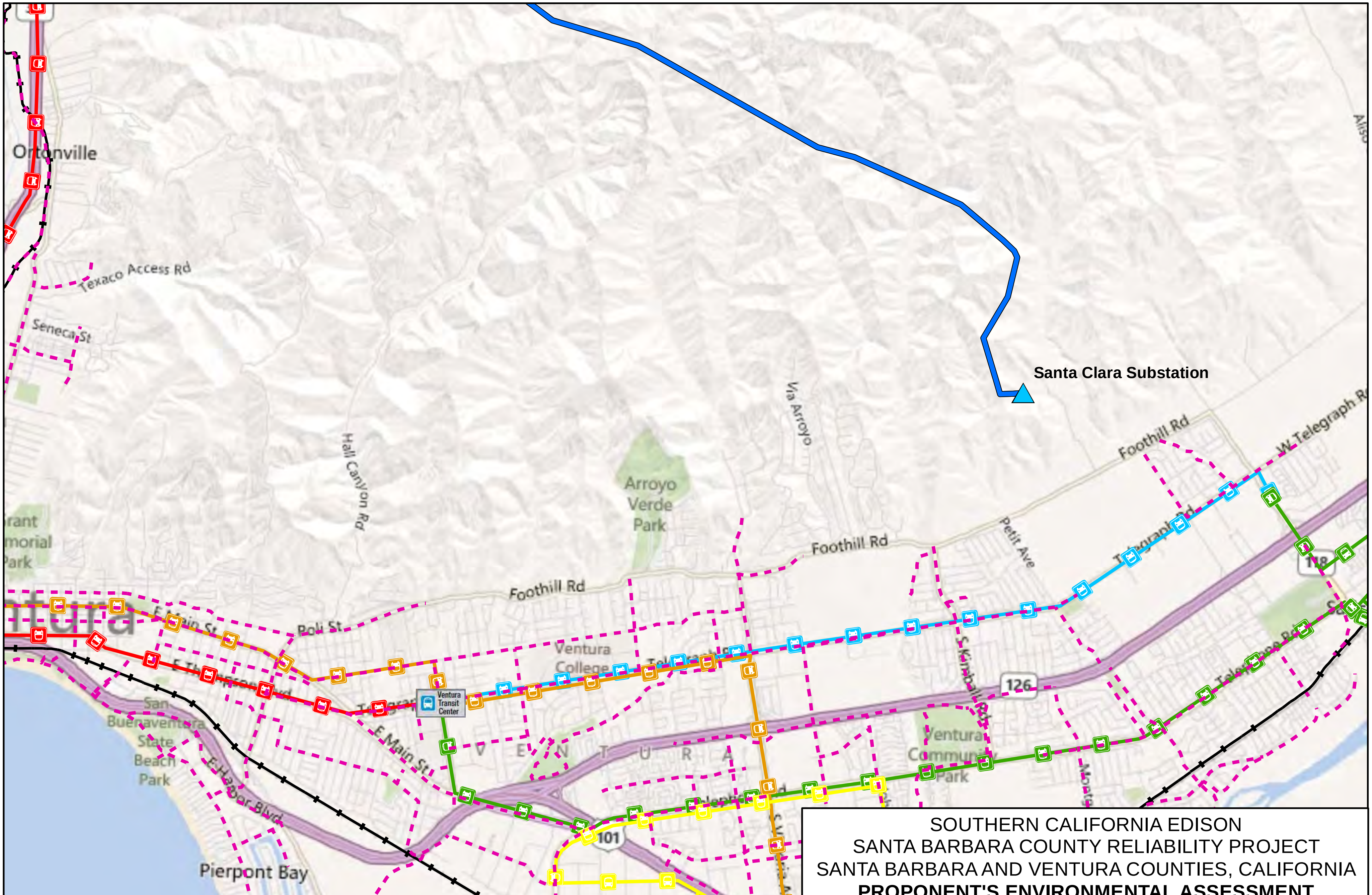

Gold Coast Transit Bus Routes

- Segment 1
- Bikeways
- Railroad
- Substations
- 6
- 10
- 11
- 16
- 40

0 0.375 0.75 1.5 Miles

N

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PUBLIC TRANSPORTATION AND BIKEWAYS

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Figure
4.16-2c

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4.16.2.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Santa Barbara County Comprehensive Plan, Circulation Element

The Circulation Element of the Santa Barbara County Comprehensive Plan defines policy capacity levels for various roadway classifications and presents how these levels are applied in making findings of project consistency with the Element. Consistency is determined based upon the average daily trips (ADTs) associated with or caused by a project.

The Circulation Element contains a number of policies related to transportation and traffic, including:

- Policy A. The roadway classifications, intersection levels of service, and capacity levels adopted in this Element shall apply to all roadways and intersections within the unincorporated area of the county.
- Policy C. The county shall continue to develop programs that encourage the use of alternative modes of transportation including, but not limited to, an updated bicycle route plan, park-and-ride facilities, and transportation demand management ordinances (Santa Barbara County 1997).

The Circulation Element also contains standards for roadways and intersections; these standards are used to determine a proposed project's consistency with the Circulation Element. The standards are as follows:

> "B. Roadway Standards:
>
> The policy capacities provided in this Element shall be used as guidelines for evaluating consistency with this section of this Element. A project's consistency with this section shall be determined as follows:
>
> a. A project that would contribute ADTs to a roadway where the Estimated Future Volume does not exceed the policy capacity would be considered consistent with this section of this Element.

b. For roadways where the Estimated Future Volume exceeds the policy capacity but does not exceed the Acceptable Capacity, a project would be considered consistent with this section of this Element only if the number of ADTs contributed by the project to the roadway was less than or equal to 2 percent of the remaining capacity of that roadway or 40 ADT, whichever is greater.

c. For roadways where the Estimated Future Volume exceeds the acceptable capacity but does not exceed Design Capacity, a project would be considered consistent with this section of this Element only if the number of ADTs contributed by the project to the roadway does not exceed 25 ADT.

d. For roadways where the Estimated Future Volume exceeds the design capacity, a project would be consistent with this section of this Element only if the number of ADTs contributed by the project to the roadway does not exceed 10 ADT."

…

"D. Intersection Standards:

1. Projects contributing PHTs (peak hour trips) to intersections that operate at an Estimated Future Level of Service that is better than LOS C shall be found consistent with this section of this Element unless the project results in a change in V/C (volume/capacity) ratio greater than 0.20 for an intersection operating at LOS A or 0.15 for an intersection operating at LOS B.

2. For intersections operating at an Estimated Future Level of Service that is less than or equal to LOS "C", a project must meet the following criteria in order to be found consistent with this section of this Element.

- For intersections operating at an Estimated Future Level of Service C, no project must result in a change of V/C ratio greater than 0.10.
- For intersections operating at an estimated future Level of Service D, no project shall contribute 15 or more Peak Hour Trips.
- For intersections operating at an Estimated Future level of Service E, no project shall contribute 10 or more Peak Hour Trips.
- For intersections operating at an Estimated Future Level of Service F, no project shall contribute 5 or more Peak Hour Trips.

3. Where a project's traffic contribution does not result in a measurable change in the V/C ratio at an intersection but does result in a finding of inconsistency with Intersection Standard 2 above, intersection improvements that are acceptable to the Public Works Department shall be required in order to make a finding of consistency with these intersection standards. A measurable change in V/C ratio shall be defined as a change greater than or equal to 0.01.

4. Where a project's traffic contribution does result in a measurable change in V/C ratio and also results in a finding of inconsistency with Intersection Standards 1 or 2, above, intersection improvements that are sufficient to fully offset the change in V/C ratio associated with the project shall be required in order to make a finding of consistency with these intersection standards.

5. The above intersection standards shall also apply to all projects which generate Peak Hour Trips to intersections within incorporated cities that are operating at levels of service worse than those permitted by the city's Circulation Element."

Santa Barbara County Congestion Management Plan

As the Congestion Management Agency (CMA) for Santa Barbara County, the Santa Barbara County Association of Governments (SBCAG) is responsible for the development and implementation of the Santa Barbara County CMP. The CMP is a comprehensive program designed to reduce automobile-related congestion through capital improvements, travel demand management, and coordinated land use planning among all jurisdictions (SBCAG 2009).

The Santa Barbara County CMP states that projects should be evaluated for potential impacts to the "off-site" CMP system if total trip generation exceeds 50 peak hour trips or 500 daily trips (SBCAG 2009).

The Santa Barbara CMP states that the minimum LOS standard for the roadway system shall be "D" or the existing LOS of the facility, whichever is worse (SBCAG 2009).

Santa Barbara County Code of Ordinances

Chapter 28, Roads, Article I, Excavations and Encroachments regulates and controls all secondary uses of county roads in order to protect and preserve the primary purpose and use of such roads. The article details encroachment permit requirements, means of protecting the traveling public, and routing measures among others.

Ventura County General Plan

The Ventura County General Plan contains a number of goals and policies related to transportation and traffic:

4.2.1 Goals

1. Facilitate the safe and efficient movement of persons and goods by encouraging the design, construction, and maintenance of an integrated transportation and circulation system consisting of regional and local roads, bus transit, bike paths, ridesharing, rail transit and freight service, airports, and harbors.
2. Facilitate the safe and efficient movement of persons and goods by designing, constructing, and maintaining a Regional Road Network and Local Road Network

that is consistent with the county road standards and that will function at an acceptable LOS.

7. Promote the expansion of a safe, efficient, convenient, integrated, and economical community, intercommunity, and countywide bus transit system.
8. Encourage transit providers and the Ventura County Transportation Commission to increase ridership and meet the needs of the commuting public and the special transportation needs of the elderly, school children, low income, physically handicapped, other low mobility groups, and bicyclists.
9. Encourage the use of bicycling and ridesharing (e.g., carpooling, vanpooling, and bus pooling) as a percentage of total employee commute trips throughout the county in order to reduce vehicular trips and miles traveled and consequently vehicular emissions, traffic congestion, energy usage, and ambient noise levels.
10. In cooperation with the ten cities and the Ventura County Transportation Commission, plan a system of bicycle lanes and trails linking all county cities, unincorporated communities, and California State University—Channel Islands.

4.2.2 Policies

3. The minimum acceptable LOS for road segments and intersections within the Regional Road Network and Local Road Network shall be as follows:
    - LOS-'D' for all county thoroughfares, federal highways, and State highways in the unincorporated area of the county, except as otherwise provided
    - LOS-'E' for SR-33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, SR-34 north of the City of Camarillo, and SR-118 between Santa Clara Avenue and the City of Moorpark
    - LOS-'C' for all county-maintained local roads
    - At any intersection between two roads, each of which has a prescribed minimum acceptable LOS, the lower LOS of the two shall be the minimum acceptable LOS for that intersection.

Ventura County Transportation Commission

The Ventura County Transportation Commission (VCTC) is the designated CMA for Ventura County and is responsible for coordinating land use, transportation planning, and air quality to mitigate traffic congestion. The VCTC has prepared the Ventura County CMP to provide the resources necessary to positively impact traffic congestion throughout Ventura County. The Ventura County CMP requires a local agency to prepare and submit a deficiency plan when the LOS on a road segment or at an intersection on the CMP network drops to “F” (Ventura County 2009).

The County of Ventura has determined that a potentially significant adverse project-specific traffic impact is assumed to occur at any intersection on the Regional Road Network if the project will exceed the thresholds established in Table 4.16-3 (Ventura County 2011e).

Table 4.16-3: Thresholds of Significance for Changes in LOS at Intersections

Intersection LOS (Existing)	Increase in V/C or Trips greater than
A	0.20
B	0.15
C	0.10
D	10 PHTs*
E	5 PHTs*
F	1 PHT*

Notes:
* To critical movements. These are the highest combination of left and opposing through/right-turn PHT movements.
V/C – Volume/Capacity
PHT – Peak Hour Trip
Source: Ventura County 2011e

Ventura County Code of Ordinances, Division 12, Highway Encroachments

Division 12 of the Ventura County Code of Ordinances contains the definitions of encroachments and the procedures for encroaching on a highway. Section 12152 notes that "[a]ll encroachments shall be planned and executed in such a manner that they will not unreasonably interfere with the safe and convenient travel of the general public."

City of Carpinteria General Plan, Circulation Element

The City of Carpinteria's Circulation Element contains a number of objectives, policies, and implementation measures related to traffic and transportation.

- Objective C-3: Provide a balanced transportation network with consistent designations and standards for roadways that will provide for the safe and efficient movement of goods and people through the community.
- Objective C-8: Support and develop safe, direct, and well maintained bicycle and pedestrian systems and recreational boating facilities that serve all segments of the public.
- Implementation Policy 1. Projects contributing peak hour trips (PHTs) to intersections that operate at an estimated future level of service that is better than LOS C shall be found consistent with this implementation measure unless the project results in a change in volume/capacity (V/C) ratio greater than 0.20 for an intersection operating at LOS A or 0.15 for an intersection operating at LOS B. For intersections operating at an estimated future level of service that is less than or equal to LOS C, a project must meet the following criteria in order to be found consistent with this measure:

- For intersections operating at an estimated future LOS C, no project shall result in a change of V/C ratio of greater than 0.10.
- For intersections operating at an estimated future LOS D, no project shall contribute 15 or more PHTs.
- For intersections operating at an estimate future LOS E, no project shall contribute 10 or more PHTs.
- For intersection operating at an estimated future LOS F, no project shall contribute 5 or more PHTs.

City of Carpinteria Code of Ordinances

Chapter 12.08 of the City of Carpinteria's Code of Ordinances contains standards and procedures adopted to protect the public health and safety of Carpinteria's citizens and visitors as well as to ensure preservation of the existing aesthetic and architectural features and qualities of the City of Carpinteria. The chapter regulates the manner in which encroachments onto city property are to be reviewed, permitted, and conditioned.

City of San Buenaventura (Ventura) General Plan/Final Environmental Impact Report

The City of San Buenaventura General Plan does not quantify level of service standards; the FEIR for the General Plan establishes performance standards for principal intersections. These standards are as follows:

- Level of Service E (peak hour ICU less than or equal to 1.00) for freeway ramp intersections.
- Level of Service D (peak hour ICU less than or equal to 0.90) for all other principal intersections

The FEIR also establishes thresholds of significance. For an intersection that is forecast to operate worse than its performance standard, the impact of a given project is considered to be significant if the project increases the ICU by more than 0.01. An ICU increase of more than 0.01 does not cause the threshold of significance to be exceeded if the with-project ICU does not exceed the maximum ICU value. LOS ranges are shown in Table 4.16-4.

Table 4.16-4: LOS Ranges, City of San Buenaventura (Ventura)

ICU	Level of Service
0.00-0.60	A
0.61-0.70	B
0.71-0.80	C
0.81-0.90	D
0.91-1.00	E
Above 1.00	F

City of San Buenaventura (Ventura) Code of Ordinances

Section 24.105.030. – Purposes, of Division 24, Zoning Regulations, has the purpose of promoting and protecting

> "the public health, safety, and general welfare. The promotion and protection of the public health, safety, or general welfare may include, without limitation, the advancement of any, or any combination of, the following objectives:
>
> 3. To promote a safe and efficient traffic circulation system which provides acceptable levels of service…"

4.16.3 Significance Criteria

The significance criteria for assessing the impacts to transportation and traffic come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- 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
- Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities

4.16.4 Impact Analysis

As presented earlier in this PEA, SCE has applied to Santa Barbara County for a CDP to cover construction of portions of the Project located within the Coastal Zone in Santa Barbara County; this includes a portion of Segment 4 and the entirety of Segment 3A. Between 1999 and 2004, some wood subtransmission structures in Segment 3A were replaced with LWS subtransmission poles, new conductor was installed, and the wood subtransmission structures that were identified for replacement with LWS poles were removed or topped before work was stopped.

Separate traffic and transportation impact assessments are presented in this section: one for the work previously conducted in Segment 3A, and one that assesses the potential impacts that could result from construction and operation of the balance of the Project.

4.16.4.1 Impact Analysis, Segment 3A, Work Previously Conducted

Construction and operation of the Project resulted in no or less than significant impacts for the following CEQA criteria.

Would the project 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?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

The construction phase of the Project included the movement of light, medium, and heavy-duty vehicles (including oversize vehicles such as cranes) over US-101, SR-150, SR-192, and local roads maintained by the City of Carpinteria, Santa Barbara County, and Ventura County.

Project-related vehicles and equipment generally traveled from a local temporary staging yard (e.g., SCE’s Ventura Service Center) or contractor yards to work sites in the morning, returning to their points of departure in the evening. It is estimated that the construction activities in Segment 3A generated a maximum of approximately 72 daily vehicle trips. The actual number of daily vehicle trips was likely lower depending on the daily construction schedule; the maximum number of daily vehicle trips is used here to conservatively estimate potential impacts.

The 72 daily vehicle trips is inclusive of each worker making two daily personal vehicle trips (one trip in the morning from home to the staging yard, and one trip in the reverse in the evening); the estimated 24 construction personnel working on any given day thus generated approximately 48 daily vehicle trips. Due to the normal working hours of utility crews, the majority of these personal vehicle trips occurred outside the morning and evening peak hours.

The temporary increase in Project-related traffic during construction (assumed maximum of 72 trips per day) accounted for a minimal increase over average daily volumes along the roadways and at the intersections identified in Tables 4.16-1 and 4.16-2.

In Santa Barbara County, Project-related traffic during construction traveled over SR-150 and SR-192. The policy capacity of both roads is 10,000 average daily trips; current volume on these roadways in the vicinity of Segment 3A is less than 4,200 trips per day. Even assuming a doubling of average daily trips as the Estimated Future Volume (EFV), the EFV did not exceed the policy capacity of the roadways. The intersections used to access Segment 3A all operate at LOS C or better during the times that project-related traffic used them; because only 12 construction vehicle movements occurred through these intersections per day, the project did not result in a significant change in the volume/capacity ratio. Therefore, the construction-related traffic was considered consistent with the County's Circulation Element.

Project-related vehicle movements occurred at a number of intersections within the City of San Buenaventura (Ventura) in the vicinity of the Ventura Service Center; these intersections are identified below in Table 4.16-5. LOS D is the performance standard for these intersections, corresponding to an ICU of 0.81 to 0.90. The current ICU at these intersections is substantially below the threshold of 0.81, and the small number of Project-related vehicle movements did not result in the crossing of this threshold.

Table 4.16-5: City of San Buenaventura (Ventura) Intersection Traffic Levels

Intersection	ICU/LOS A.M Peak	ICU/LOS P.M. Peak	Average Traffic
Telegraph Rd. and Saticoy Ave.F	.46/A	.42/A	101
Foothill Rd. and Saticoy Ave.	.27/A	.23/A	171
Telegraph Rd. and Wells Rd.	.54/A	.52/A	102
Telegraph Rd. and Kimball Rd.	.21/A	.30/A	58
Foothill Rd. and Kimball Rd.	.46/A	.40/A	169

Project activities required temporary lane closures during construction along the roadways identified in Table 4.16-6. Temporary closure of travel lanes could have impacted the performance of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. SCE obtained encroachment permits from the local jurisdictions and Caltrans, as appropriate, for construction activities that encroached within any public ROW or easement. In addition, SCE implemented measures contained in the CJUTCM, including consulting and coordinating with local jurisdictions, to ensure the safe and efficient transit of vehicles, bicyclists, and pedestrians through laydown/work areas.[30]

Based on the number of daily vehicle trips generated by construction in Segment 3A, and the implementation of measures contained in the CJUTCM, impacts to the performance of the circulation system were less than significant.

Operation Impacts

SCE personnel visit infrastructure along Segment 3A for routine or emergency repair or maintenance purposes; and infrastructure along the Segments have been inspected at least once annually. The number of vehicle trips along Segment 3A during normal operation have been less than 6 per month; therefore, impacts to the current circulation system have been less than significant.

Table 4.16-6: Public Roadways along which Potential Short-Term Closures May Occur

SR-150 at its intersection with SR-192
SR-192/Casitas Pass Road from Carpinteria Substation to its intersection with SR-150

Would the project 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?

Assessment Summary: Less than Significant Impact

Construction Impacts

The majority of roads and intersections used during construction in Segment 3A currently operate at an LOS of D or better (Table 4.16-2). None of the roads or intersections used during construction in Segment 3A are identified in a CMP as experiencing unusual growth in average annual daily traffic volumes; given the small change in population in the area around Segment 3A, it is taken that these roadways also operated at an LOS or D or better during construction.

[30] The CJUTCM is coordinated and prepared by the California Joint Utility Traffic Control Committee. It provides the basic standards for the safe movement of traffic upon highways or streets in accordance with Section 21400 of the CVC and the California Manual on Uniform Traffic Control Devices for Street and Highways 2010 Edition. Caltrans has reviewed the CJUTCM and has found it to be in conformance with the California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2003 Revision 2, as amended for use in California) also called California MUTCD 2010 issued by Caltrans on January 21, 2010.

The Project generated a maximum of 12 peak hour trips and 72 daily trips; these numbers of trips are below the 50 peak hour/500 daily trip thresholds contained in the Santa Barbara County CMP, and thus there was no requirement to evaluate the potential impacts to the “off-site” CMP system in Santa Barbara County.

Given the currently acceptable LOS of roads and intersections, and the small number of trips that were generated during construction, work in Segment 3A did not alter the existing LOS or interfere with the performance standards of any applicable CMP or other standards established by the applicable jurisdiction. Therefore, less than significant impacts occurred under this criterion.

<u>Operation Impacts</u>

All roads and intersections used during operation of infrastructure installed in Segment 3A currently operate at an LOS of D or better. None of the roads or intersections that have been used during operation are identified in a CMP as experiencing unusual growth in average annual daily traffic volumes.

Operation of the infrastructure in Segment 3A has generated approximately 6 vehicle trips per month; on a daily basis, this number of trips is below the 50 peak hour/500 daily trip thresholds contained the Santa Barbara County CMP, and thus there was no requirement to evaluate the potential impacts to the “off-site” CMP system in Santa Barbara County.

Given the currently acceptable LOS of roads and intersections, and the small number of trips generated during operations, work in Segment 3A has not altered the existing LOS or interfered with the performance standards of any applicable CMP or other standards established by the applicable jurisdiction. Therefore, less than significant impacts occurred under this criterion.

Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Assessment Summary: No Impact

<u>Construction Impacts</u>

Construction in Segment 3A did not require FAA notification, and did not result in a change in air traffic patterns. No impacts occurred under this criterion.

<u>Operation Impacts</u>

The operation of the infrastructure in Segment 3A has not resulted in a change in the location of any airport or airstrip. There are no known air traffic patterns in the immediate vicinity of Segment 3A. No impacts occur under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

No incompatible uses or construction of any public roads were included in the construction of infrastructure in Segment 3A. Therefore, no impacts occurred under this criterion as a result of the Project.

Operation Impacts

No incompatible uses or construction of any public roads were included in the construction of Segment 3A. Along Casitas Pass Road/SR-192, new subtransmission poles were installed in existing SCE ROWs. Existing poles along the roadway were replaced with new poles of similar diameter, height, and appearance, and the new poles were placed proximate to existing poles within the ROW; as a result, the new poles do not increase hazards to users of the roadway. Therefore, no impacts have occurred under this criterion.

Would the project result in inadequate emergency access?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction in Segment 3A did not result in inadequate emergency access. Subtransmission-related construction work along Segment 3A required temporary closure of travel lanes on public roadways, private roads, and driveways, and involved the movement of heavy vehicles that could affect emergency vehicle access to and through work areas. To ensure that all construction-related activities resulted in less than significant impacts to emergency access, SCE implemented measures contained in the Work Area Protection and Traffic Control Manual (WATCH manual). Implementation of these measures provided for efficient and safe transit of emergency vehicles through construction areas. SCE also used its blanket Caltrans encroachment permit for work within Caltrans easements.

Given these features of construction in Segment 3A and the measures implemented during construction, less than significant impacts occurred under this criterion.

Operation Impacts

Operation of construction in Segment 3A has not resulted in inadequate emergency access. Operation and maintenance work along the subtransmission line included visual inspections, maintenance, and repair of facilities. The majority of Segment 3A is located along public roadways or private roads or driveways. Operation and maintenance work may have required very infrequent temporary closure of travel lanes and oversize vehicle trips that could have disrupted emergency vehicle access. In order to ensure that all operations-related activities resulted in less than significant impacts to emergency access, SCE implements measures contained in the CJUTCM, including signage, flaggers, and coordination with relevant agencies and emergency responders, to provide efficient and safe transit of emergency vehicles through areas where operations-related work is being conducted. SCE also obtained encroachment permits from the local jurisdictions and Caltrans, as appropriate, for operations activities that encroached upon any public ROW or easement.

Given these features of the Project and measures that are implemented during operations, less than significant impacts occurred under this criterion.

Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction in Segment 3A did not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, as presented in Section 4.16.2.3 above. Construction activities in any given location occurred over a short time period, and were largely conducted in areas with no public transit service or bicycle or pedestrian facilities (although public transit service and bicycle and pedestrian facilities are available in the City of Carpinteria, the route of Segment 3A does not overlap any of these). Work in Segment 3A was conducted on SCE-owned property, within existing public utility easements, and in a public ROW. SCE obtained encroachment permits from the local jurisdictions and Caltrans, as appropriate, for construction activities that encroached upon any public ROW or easement. In cases where construction work required temporary closure of travel lanes or oversize vehicle trips that could disrupt public transit, bicycle, or pedestrian traffic, SCE implemented measures contained in the WATCH manual, including signage, flaggers, and coordination with relevant agencies, to ensure the safety of pedestrians and bicyclists, and reduce any performance impacts to less than significant levels.

Operation Impacts

Operation of the infrastructure in Segment 3A involves the routine inspection and as-needed maintenance of project components, some of which are located near public transit routes or bicycle or pedestrian facilities. For operations activities that could decrease the performance or safety of such services or facilities, SCE obtained appropriate permits from the local jurisdictions. For operations activities that would encroach upon any public ROW or easement, SCE obtained appropriate permits from Caltrans, as applicable, and implemented measures contained in the CJUTCM. As discussed above, these measures ensured the safety of pedestrians and bicyclists, and reduced any performance impacts to less than significant levels.

4.16.4.2 Impact Analysis, Balance of Project

Construction and operation of the Project would result in no or less than significant impacts for the following CEQA criteria.

Would the project 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?

Assessment Summary: Less than Significant Impact

Construction Impacts

The construction phase of the Project would include the movement of light, medium, and heavy-duty vehicles (including oversize vehicles such as cranes) over US-101, SR-33, SR-150, SR-192, and local roads maintained by the City of Carpinteria and Santa Barbara and Ventura counties.

Project-related vehicles and equipment would generally travel from local temporary staging yards or contractor yards to work sites in the morning, returning to their points of departure in the evening. It is estimated that work described in Chapter 3 would generate a maximum of approximately 100 daily vehicle trips across the breadth of the Project. The actual number of daily vehicle trips may be lower depending on the final construction schedule; the maximum number of daily vehicle trips is used here to conservatively estimate potential impacts.

The 100 daily vehicle trips is inclusive of each worker making two daily personal vehicle trips (one trip in the morning from home to the staging yard, and one trip in the reverse in the evening, for a total of 87 roundtrips per day); due to the normal working hours of utility crews, the majority of these personal vehicle trips would occur outside the morning and evening peak hours.

The temporary increase in Project-related traffic during construction (assumed maximum of 100 trips per day) would account for a minimal increase over average daily volumes along the roadways and at the intersections identified in Tables 4.16-1 and 4.16-2.

In Santa Barbara County, Project-related traffic during construction would travel over SR-150 and SR-192. The policy capacity of both roads is 10,000 ADT; current volume on these roadways in the vicinity of Segments 3A, 3B, and 4 is less than 4,200 trips per day. Even assuming a doubling of ADT as the Estimated Future Volume (EFV), the EFV would not exceed the policy capacity of the roadways. The intersections that would be used to access the Project all operate at LOS C or better during the times that project-related traffic would be using them; because only 12 construction vehicle movements would occur through these intersections per day, the project would not result in a significant change in the volume/capacity ratio. Therefore, the construction-related traffic would be considered consistent with the County's Circulation Element.

Project-related vehicle movements may occur at a number of intersections within the City of San Buenaventura (Ventura) in the vicinity of Santa Clara Substation and the Ventura Service Center; these intersections are identified in Table 4.16-5. LOS D is the performance standard for these intersections, corresponding to an ICU of 0.81 to 0.90. The current ICU at these intersections is substantially below the threshold of 0.81, and the small number of Project-related vehicle movements would not result in the crossing of this threshold.

Project activities may require temporary lane closures during construction (e.g., stringing of conductor or installing marker balls) along the roadways identified in Table 4.16-7. Temporary closure of travel lanes could impact the performance of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. SCE would obtain encroachment permits from the local jurisdictions and Caltrans, as appropriate, for construction activities that would encroach within any public ROW or easement. In addition, SCE would implement measures contained in the CJUTCM, including consulting and coordinating with local jurisdictions, to ensure the safe and efficient transit of vehicles, bicyclists, and pedestrians through laydown/work areas.

Based on the number of daily vehicle trips generated by construction, and the implementation of measures contained in the CJUTCM, impacts to the performance of the circulation system would be less than significant.

<u>Operation Impacts</u>

All components of the Project would be unstaffed during operations. Electrical equipment would be remotely monitored and controlled by an automated system. However, SCE personnel would visit project components for routine or emergency repair or maintenance purposes; and infrastructure along the Segments would be inspected at least once annually. The estimated number of vehicle trips expected during normal operation of the Project would be lower than 15 per month; therefore, impacts to the current circulation system would be less than significant.

Table 4.16-7: Public Roadways along which Potential Short-Term Closures May Occur

SR-33 at Casitas Substation
SR-150 from its intersection with SR-192 to its crest at Casitas Pass
SR-192/Casitas Pass Road from Carpinteria Substation to its intersection with SR-150

Would the project 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?

Assessment Summary: Less than Significant Impact

Construction Impacts

The majority of roads and intersections that may be used during construction of the Project currently operate at an LOS of D or better (Table 4.16-2). None of the roads or intersections anticipated to be used during Project construction or operation have been identified in a CMP as experiencing unusual growth in average annual daily traffic volumes.

The Project would generate a maximum of 12 peak hour trips and 100 daily trips; these numbers of trips are below the 50 peak hour/500 daily trip thresholds contained in the Santa Barbara County CMP, and thus the potential impacts to the “off-site” CMP system need not be evaluated in Santa Barbara County.

In Ventura County, a potentially significant adverse project-specific traffic impact is assumed to occur on any road segment if any one of the following results from the project:

a. If the project would cause the existing LOS on a roadway segment to fall to an unacceptable level (lower than a C on a county-maintained local road, or lower than D on thoroughfares and State highways).

b. If the project will add one or more PHT to a roadway segment that is currently operating at an unacceptable LOS.

As presented in Table 4.16-2, all highways in Ventura County on which Project-related traffic may travel are currently operating at or above the minimum acceptable level of service. Traffic counts on these roads indicate that there is excess capacity available for use that would not trigger the LOS of the roadways to drop below the acceptable level, with the exception of US-101 between SR-126 and SR-33. The LOS D threshold for a six-lane freeway is 123,000, and the LOS E threshold is 132,000 (Ventura County 2005a). The current traffic count along that stretch of US-101 is 122,000 (Ventura County 2009). Because the Project would not generate more than 1,000 additional vehicle movements per day on US-101, it would not exceed the thresholds of significance for Ventura County.

Given the currently acceptable LOS of roads and intersections, and the small number of trips that would be generated during construction and operations, the Project is not expected to alter the existing LOS or interfere with the performance standards of any applicable CMP or other standards established by the applicable jurisdiction. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

<u>Operation Impacts</u>

All roads and intersections anticipated to be used during operation of the Project currently operate at an LOS of D or better. None of the roads or intersections that may be used during operation have been identified in a CMP as experiencing unusual growth in average annual daily traffic volumes.

Operation of the Project would generate a maximum of 15 vehicle trips per month. On a daily basis, this number of trips is below the 50 peak hour/500 daily trip thresholds contained the Santa Barbara County CMP, and thus the potential impacts to the "off-site" CMP system need not be evaluated. The small number of trips associated with operation of the Project would not exceed the thresholds of significance for Ventura County as discussed above.

Given the currently acceptable LOS of roads and intersections, and the small number of trips that would be generated during operations, the Project is not expected to alter an existing LOS or interfere with the performance standards of any applicable CMP or other standards established by the applicable jurisdiction. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

The construction of the Project would not result in a change in air traffic pattern locations. The Project may be subject to FAA 7460 Requirements due to the height above ground of the conductor and telecommunications cable. If the Project is found to be subject to these requirements, it would be constructed in accordance with applicable regulations and conditions, and thus changes in air traffic pattern locations would not result in any substantial safety risks.

Construction activities may result in a short-term increase in air traffic levels, as helicopters may be used to install conductor or remove old infrastructure. It is anticipated that a total of approximately 120 flight hours may be required over the entirety of the 24-month construction period; these flights would be conducted along

Segments 1, 2, 3B, and 4.These flights would be coordinated with and subject to the regulations of the appropriate federal authorities, and thus would result in a less than significant impact to air traffic patterns.

Therefore, less than significant impacts would occur under this criterion as a result of the Project.

<u>Operation Impacts</u>

The operation of the Project would not result in a change in the location of any airport or airstrip. There are no known air traffic patterns in the immediate vicinity of any component of the Project. During operations, very infrequent helicopter overflights of the Project may be conducted to visually inspect Project infrastructure; these flights would be coordinated with appropriate agencies and conducted in accordance with applicable regulations, and thus would result in a less than significant impact to air traffic levels.

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

Assessment Summary: No Impact

<u>Construction Impacts</u>

No incompatible uses or construction or alteration of any public roads are proposed. Therefore, no impacts would occur under this criterion as a result of the Project.

<u>Operation Impacts</u>

No incompatible uses or construction or alteration of any public roads are proposed. Therefore, no impacts would occur under this criterion as a result of the Project.

Would the project result in inadequate emergency access?

Assessment Summary: Less than Significant Impact

<u>Construction Impacts</u>

Construction of the Project would not result in inadequate emergency access. All construction at substations would be conducted within the fence lines of the facilities; activities and construction vehicles would not reduce the dimensions of access roads or driveways, or block roads or driveways, and thus would not impair emergency access to substations.

Subtransmission-related construction work along Segments 3A, 3B, and 4, and the stringing of telecommunications cable and installation of marker balls in Segments 1, 2, and 4 may require temporary closure of travel lanes on public roadways, private roads, and driveways, and would involve the movement of oversize vehicles that could affect emergency vehicle access to and through the Project area. To ensure that all construction-related activities result in less than significant impacts to emergency access, SCE would implement measures contained in the CJUTCM, including signage, flaggers, and coordination with relevant agencies and emergency responders. Implementation of these measures would provide for efficient and safe transit of emergency vehicles through construction areas. SCE would also obtain the appropriate permits from the local jurisdictions and Caltrans, as applicable, for construction activities that would encroach upon any public ROW or easement.

Given these features of the Project and measures to be implemented during construction, less than significant impacts would occur under this criterion.

Operation Impacts

Operation of the Project would not result in inadequate emergency access. As presented in Chapter 3, operations-related activities at substations are conducted periodically, and generally require only small crews and the operation of light-duty vehicles and bucket trucks. All operations-related activities at substations would continue to be conducted within the fence lines of the facilities; activities would not reduce the dimensions of access roads or driveways or block roads or driveways, and vehicles would be parked on the substation property so that driveways and access roads are not blocked. Thus, operations activities at substations would not result in inadequate emergency access.

O&M work along the subtransmission lines would continue to include visual inspections, maintenance, and repair of facilities. The majority of Project infrastructure is located on private lands; accordingly, a majority of this work would not occur along public roadways or private roads or driveways. O&M work may, however, require very infrequent temporary closure of travel lanes and oversize vehicle trips that could disrupt emergency vehicle access to and through the Project area. In order to ensure that all operations-related activities result in less than significant impacts to emergency access, SCE would implement measures contained in the CJUTCM, including signage, flaggers, and coordination with relevant agencies and emergency responders, to provide efficient and safe transit of emergency vehicles through areas where operations-related work is being conducted. SCE would also obtain encroachment permits from the local jurisdictions and Caltrans, as appropriate, for operations activities that would encroach upon any public ROW or easement.

Given these features of the Project and measures to be implemented during operations, less than significant impacts would occur under this criterion.

Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Assessment Summary: Less than Significant Impact

Construction Impacts

The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, as presented in Section 4.16.2.3 above. While the construction phase may exceed 2 years in duration, construction activities in any given location would occur over a short time period, and would largely be conducted in rural areas with no public transit service or bicycle or pedestrian facilities. Construction activities conducted in populated areas with public transit service or bicycle or pedestrian facilities include subtransmission and telecommunications equipment upgrades and installation at Casitas Substation and Carpinteria Substation and a number of activities in Segment 3A (installing FRC, transferring distribution lines, and removing topped wood subtransmission poles). Work in these areas would be conducted on SCE-owned property, within existing public utility easements, or in a public ROW. SCE would obtain encroachment permits from the local jurisdictions and Caltrans, as appropriate, for construction activities that would encroach upon any public ROW or easement. In cases where construction work may require temporary closure of travel lanes or oversize vehicle trips that could disrupt public transit, bicycle, or pedestrian traffic, SCE would implement measures contained in the CJUTCM, including signage, flaggers, and coordination with relevant agencies, to ensure the safety of pedestrians and bicyclists, and reduce any performance impacts to less than significant levels.

Operation Impacts

Operation of the Project would involve the routine inspection and as-needed maintenance of project components, some of which are located adjacent to or near public transit routes or bicycle or pedestrian facilities. Should operations-related activities be planned that could decrease the performance or safety of such services or facilities, SCE would obtain appropriate permits from the local jurisdictions and Caltrans, as applicable, for operations activities that would encroach upon any public ROW or easement, and would implement measures contained in the CJUTCM. As discussed above, these measures would ensure the safety of pedestrians and bicyclists, and would reduce any performance impacts to less than significant levels.

4.16.5 Applicant Proposed Measures

Because the Project would result in less than significant impacts to traffic or transportation, no Applicant Proposed Measures are offered.

4.17 Utilities and Service Systems

This section describes the utilities and service systems in the area of the Project. The regulatory setting and potential impacts to these systems are also discussed. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3 would be performed.

4.17.1 Environmental Setting

The activities related to the Project would include activities conducted in portions of unincorporated Ventura County, unincorporated Santa Barbara County (both within and outside the Coastal Zone), the City of Carpinteria, and the Los Padres National Forest. Segments 1, 2, 3A, 3B, and 4 are largely located in a rural area; because of the low population density in the area, only the Carpinteria Substation, Casitas Substation, and Santa Clara Substation are served by water or wastewater treatment facilities. Residences in these rural areas are served by well water and septic systems.

Solid waste facilities and water and wastewater services are described in the following subsections; the discussions are divided according to the type of utility or service system.

Project-related construction and operation activities at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation would require approximately three personnel working for approximately 2.5 days. The substations would continue to be unstaffed during operations. Any utilities and service system impacts from this short construction period and unstaffed operations would be de minimis, and thus are not discussed further in this section.

4.17.1.1 Solid Waste Facilities/Landfills

The Toland Road Landfill serves the Santa Clara River Valley and western portion of unincorporated Ventura County, including the area around the Casitas Substation and Santa Clara Substation. This municipal waste site receives only non-hazardous waste. The permitted maximum disposal rate is 1,500 tons per day. The total estimated permitted capacity is 30.0 million cubic yards, with an estimated remaining capacity of 26.7 percent (CalRecycle 2011).

Non-hazardous solid waste generated in unincorporated Santa Barbara County is handled at the Tajiguas Sanitary Landfill. The permitted maximum disposal rate at the landfill is 1,500 tons per day. The total estimated capacity is 23.3 million cubic yards, with an estimated remaining capacity of 28.6 percent (CalRecycle 2011).

Non-hazardous solid waste generated in the City of Carpinteria is collected by E.J. Harrison and Sons, Inc. of Ventura. Once collected, waste is transported to the Gold Coast Material Recovery Facility and residual waste is ultimately deposited in the Simi Valley Landfill, located approximated 26 miles south of the transfer station in Ventura County. The permitted maximum disposal rate is 3,000 tons per day. The total estimated capacity is 43.5 million cubic yards, with an estimated remaining capacity of 52.7 percent (CalRecycle 2011).

4.17.1.2 Water Supply

The United Water Conservation District (WCD) serves unincorporated portions of Ventura County, including the area around Santa Clara Substation. The Casitas Municipal Water District (MWD) provides water to the western portion of unincorporated Ventura County, including Casitas Substation and surrounding area. The annual average per-capita water use rate countywide in 1986 was 0.209 acre-feet per year (AFY), which is approximately 68,000 gallons per person per year. By 2020 water demand within the Casitas MWD is projected to be 23,254 AFY and the water supply projection for the Casitas MWD is anticipated to be 29,950 AFY.

The Carpinteria Valley Water District (CVWD) serves the Carpinteria Valley Planning Area, including portions of unincorporated Santa Barbara County and the City of Carpinteria. CVWD derives its water supply from the Carpinteria Groundwater Basin and from surface deliveries from Lake Cachuma. The current safe yield from the groundwater basin is estimated to be 4,500 AFY and CVWD has an existing uncommitted surplus of approximately 950 AFY (Santa Barbara County 2010).

4.17.1.3 Wastewater Treatment

The Ojai Wastewater Treatment Plant serves the westernmost portion of unincorporated Ventura County, including Casitas Substation and surrounding area. The plant is operated by the Ojai Valley Sanitary District. Wastewater receives advanced tertiary treatment before final discharge to the Ventura River. The treatment plant has a design capacity of 3.0 million gallons per day (mgd), and is anticipated to have sufficient capacity until the year 2020 (Ventura County 2007a).

The Carpinteria Sanitary District serves the City of Carpinteria. The unincorporated areas of the Carpinteria Valley outside of city limits rely on septic tanks, although soil and drainage in many parts have caused problems for septic systems. The Carpinteria Sanitary District's wastewater treatment facility has a design capacity of 2.0 mgd. With an average dry weather peak flow of 1.6 mgd, the facility is at 80 percent of capacity and is able to provide service for approximately 3,600 additional people (Santa Barbara County 2010).

The Central Coast Regional Water Quality Control Board (Central Coast RWQCB) has jurisdiction for Santa Barbara County and the Los Angeles Regional Water Quality Control Board (Los Angeles RWQCB) has jurisdiction for Ventura County. Regional Water Quality Control Boards regulate wastewater discharges to surface water (rivers, ocean, etc.) and to groundwater (via land). The Boards also regulate stormwater discharges from construction, industrial, and municipal activities; discharges from irrigated agriculture; dredge and fill activities; the alteration of any federal water body under the 401 certification program; and other activities with practices that could degrade water quality. A component of the Boards' regulation of wastewater discharges to surface water is the establishment and enforcement of treatment requirements for water treatment plants.

4.17.2 Regulatory Setting

4.17.2.1 Federal Regulatory Setting

Federal Clean Water Act

The Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) is the primary federal law in the United States governing the protection of water quality through the goals of eliminating water pollution and providing for standards of water quality necessary for human sports and recreation. The construction phase of the Project would disturb a surface area greater than 1 acre; therefore, SCE would be required to obtain coverage under the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ ("2009 Construction General Permit").

4.17.2.2 State Regulatory Setting

California Health and Safety Code § 25150.7(d)(1)

If treated wood is developed as a waste product, the California Health and Safety Code requires treated wood to be disposed of in either a Class I hazardous waste landfill or in a composite-lined portion of a solid waste landfill that meets RWQCB-specified requirements.

California Integrated Waste Management Act (Public Resources Code § 40050 et seq.)

Enacted in 1989, the California Integrated Waste Management Act established a new approach to managing California's waste stream, the centerpiece of which mandated goals of 25 percent diversion of each city's and county's waste from disposal by 1995, and 50 percent diversion in 2000, along with a process to ensure environmentally safe disposal of waste that could not be diverted. The Act requires city and county governments to be responsible for planning and monitoring solid waste management and recycling efforts.

4.17.2.3 Local Regulatory Setting

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. The CPUC has adopted G.O. 131-D to regulate the construction of electric public utility facilities. G.O. 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." While the CPUC has preemptive authority over utility infrastructure projects with respect to local land use and zoning regulations and permitting, G.O. 131-D, Section XIV.B. requires utilities to "consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Local regulations that may be related to the Project include those related to the disposal and handling of solid waste. Local regulations for Santa Barbara and Ventura counties and the City of Carpinteria are summarized in the following subsections.

Santa Barbara County Comprehensive Plan, Energy Element

Policy 4.5

Waste Collection and Recycling Programs—The County shall continue to support the programs associated with efficient waste collection and recycling, public school education, and composting.

Santa Barbara County Comprehensive Plan, Source Reduction and Recycling Element

The Source Reduction and Recycling Elements (SRRE) is a component of the Santa Barbara County Comprehensive Plan. The SRRE is mandated by the California Integrated Waste Management Act of 1989, which requires city and county governments to be responsible for planning and monitoring solid waste management and recycling efforts. Each city and county is required to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a SRRE which includes a program for management of solid waste generated within the respective local jurisdiction. The SRREs place primary emphasis on implementation of all feasible source reduction, recycling, and composting programs while identifying the amount of landfill and transformation capacity that will be needed for solid waste which cannot be reduced, recycled, or composted.

The SRRE is implemented by regulations contained within Article II (Regular Solid Waste Handling Services) of Chapter 17, Solid Waste Services, of the Santa Barbara County Code of Ordinances.

County of Santa Barbara Land Use and Development Code

Section 35.30.100 - Infrastructure, Services, Utilities and Related Facilities states:

> A. Adequacy of infrastructure required. Issuance of a Coastal Development Permit (Section 35.82.050) or a Land Use Permit (Section 35.82.110) or Zoning Clearance (Section 35.82.210) shall require that the review authority first find, based on information provided by environmental documents, staff analysis, and the applicant, that adequate public or private services and resources (e.g., water, sewer, roads) are available to serve a proposed development.

County of Santa Barbara Coastal Zoning Ordinance

The County of Santa Barbara's Local Coastal Program administers the County's Coastal Land Use Plan, which is implemented by the Coastal Zoning Ordinance. The Coastal Zoning Ordinance is applicable to developments within the Coastal Zone in the County. Section 35-60.5 of the Coastal Zoning Ordinance provides:

> "Prior to issuance of a Coastal Development Permit, the County shall make the finding, based on information provided by environmental documents, staff analysis, and/or the applicant, that adequate public or private services and resources (i.e., water, sewer, roads, etc.) are available to serve the proposed development."

Ventura County Source Reduction and Recycling Element (SRRE)

The Source Reduction and Recycling Element is a component of the Ventura County General Plan. The SRRE is implemented by regulations contained within Article 3 (Solid Waste Programs for Unincorporated Areas) of Chapter 7 (Regulation of Solid Waste Storage, Collection, Disposal, Transfer, Resource Recovery, and Environmental Health Permits and Fees) of the Ventura County Code of Ordinances.

City of Carpinteria Municipal Code

The City of Carpinteria Municipal Code does not apply to the Project per 15.16.020 - Permit—Exemptions, which states:

> "No permit shall be required for:
>
> …
>
> C.
>
> Installation, alteration or repair of electrical wiring, devices, appliances, apparatus or equipment installed by or for any public utility, municipal corporation or public district for the use of such utility, municipal corporation or public district in the generation, transmission, distribution or metering of electrical energy or in the operation of signals or the transmission of intelligence in the exercise of its function as a serving utility;"

City of Carpinteria General Plan, Local Coastal Land Use Plan and Environmental Impact Report

Objective PF-2

Ensure adequate service systems for the transmission, treatment and disposal of sewage and wastewater generated within this area as well as the disposal of trash, green waste and recyclable material.

Policies

PF-2a. The City will monitor capacity of the sewer plant to assure adequate service to meet future needs.

PF-2d. The City shall support source reduction and recycling efforts through the use of recycled products in all City departments, whenever economically and technically feasible.

PF-2e. If adequate capacity ceases to be available at the Toland Road or Simi Valley Landfill, the City shall seek other site(s) to accommodate solid waste generated in the city.

4.17.3 Significance Criteria

The significance criteria for assessing the impacts to public services come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if the project:

- Exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board
- Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Requires or results in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Does not have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed
- Results in the 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
- Is served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs
- Does not comply with federal, State, and local statutes and regulations related to solid waste

4.17.4 Impact Analysis

Construction and operation of the Project would not result in impacts for the CEQA criteria as described in the following paragraphs.

Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Assessment Summary: No Impact

Construction Impacts

The Project would not exceed wastewater treatment requirements of the wastewater treatment plants serving the Project. Currently, small volumes of domestic wastewater are generated at the substations; this wastewater does not exceed wastewater treatment requirements of either the Central Coast RWQCB or Los Angeles RWQCB. Domestic wastewater is the only wastewater that would be generated during construction of the Project. Because the additional volume of wastewater generated at the substations during construction would be minimal, it would not exceed wastewater treatment requirements.

For subtransmission and telecommunications-related work along the segments, portable toilets would be provided on-site for workers during the construction phase according to California Occupational Safety and Health Act requirements; the portable toilets would be serviced by a licensed contractor who would dispose of the waste off-site and in compliance with all applicable laws and regulations.

Therefore, no exceedances of wastewater treatment requirements would be realized during construction of the Project.

Operation Impacts

Operation of the Project would not exceed wastewater treatment requirements set forth by the RWQCBs because no additional volumes of domestic wastewater would be generated during operations. The volume of wastewater discharge from the substations would be similar to the currently discharged volumes which do not exceed treatment requirements.

Would the project 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?

Assessment Summary: No Impact

Construction Impacts

Construction of the Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. This is because only small volumes of wastewater would be generated by the Project during construction, and because only small volumes of water would be required for dust control during the short construction period (see Chapter 3). Therefore, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

Operation of the Project would not 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. Operation of the Project would consume water volumes and generate wastewater volumes generally equivalent to those currently generated by operation of the existing subtransmission system. Therefore, because only small volumes of wastewater would be generated by the Project during operations, and because only small volumes of water would be required for continued landscape irrigation at substations during operations (no new or additional landscaping would be developed as part of the Project), no impacts would occur under this criterion.

Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction of the Project does not require the development of large-scale impermeable surfaces that would increase the amount of stormwater discharge from the site that would require construction of new off-site stormwater drainage facilities or expansion of existing facilities. During construction, the Project would disturb a surface area greater than 1 acre. Therefore, SCE would obtain coverage under the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ. As part of compliance with the General Permit, SCE would prepare one or more SWPPP(s) and implement BMPs. Commonly used BMPs include stormwater runoff quality control measures (boundary protection), dewatering procedures, spill reporting, and concrete waste management. The SWPPP(s) would be based on final designs and would cover all Project components.

Operation Impacts

During operation of the Project, stormwater drainage patterns would be similar to those under current conditions. As a result, Project operations would not require the construction of new stormwater drainage facilities or expansion of existing facilities in the area.

Would the project not have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed?

Assessment Summary: No Impact

Construction Impacts

Sufficient water supplies are available to serve the Project from existing entitlements and resources; no new or expanded entitlements would be needed.

SCE would utilize water to support construction activities and to minimize emissions of fugitive dust. The water used during the construction phase would be sourced from the Casitas MWD, United WCD, or CVWD. As presented in the Environmental Setting discussion, water surpluses are present in the area of the Project. Due to the small volume of water that would be used (see Chapter 3), and the short duration over which water would be consumed, the construction phase of the Project would not require new or expanded entitlements.

Operation Impacts

No new landscaping at the substations is included in the Project, and thus no additional water would be required during operations for landscaping. Water consumption for domestic use at the substations during operations would not increase above the small volume used currently at the substations.

Similarly, operation of the Project's 66 kV subtransmission lines would involve water volumes equivalent to those currently associated with operation of the existing subtransmission system. Due to the small volumes of water that would be used, and the sufficient water supplies available to serve the Project, no impacts would occur under this criterion as a result of the Project.

Would the project result in the 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?

Assessment Summary: No Impact

Construction Impacts

Construction of the Project would generate only small incremental volumes of domestic wastewater from the substations and from portable toilets that would be provided on-site for workers during the construction phase according to California Occupational Safety and Health Act requirements; the portable toilets would be serviced by a licensed contractor who would dispose of the waste off-site and in compliance with all applicable laws and regulations.

Given unused treatment capacity at the treatment plants currently serving the substations, and that only small volumes of sanitary wastewater would be generated by the construction of the Project along Segments 1, 2, 3A, 3B, and 4, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

Operation of the Project would generate volumes of wastewater equivalent to those generated by operation of the existing subtransmission system. Given unused treatment capacity at the treatment plants currently serving the substations, and that only small volumes of sanitary wastewater would be generated during operations, no impacts would occur under this criterion as a result of the Project.

Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?

Assessment Summary: No Impact

Construction Impacts

Small volumes of construction-related waste and removed infrastructure components may require disposal during development of the substation improvements, construction or reconductoring of subtransmission lines, and installation of the fiber optic telecommunication system. This waste may include wood power poles replaced during construction, conductor or wire, excavated materials, concrete from removed footings, and miscellaneous construction materials (pallets, strapping, packaging, etc.). SCE would recycle all materials as appropriate; materials that cannot be recycled would be disposed of in accordance with all applicable federal, State, and local statutes and regulations. All treated wood poles removed as part of the Project would, depending on the condition of each pole, be reused, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of an RWQCB-certified municipal landfill. The existing capacity available at the landfills that would serve the Project are adequate to accommodate the small volume of waste expected to be generated during the construction phase.

Due to the small volumes of construction-related waste that may be generated, and the millions of cubic yards of available capacity at the landfills that would serve the Project, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

Typically, only small volumes of solid waste (e.g., material packaging) are currently generated during routine maintenance activities; the operation of the Project would not increase the volume or type of solid waste typically generated. SCE would recycle all materials as appropriate; materials that cannot be recycled would be disposed of in accordance with all applicable federal, State, and local statutes and regulations. The existing capacities available at the landfills that would serve the Project are adequate to accommodate the very small volume of waste expected to be generated during the operation of the Project. Due to the small volumes of operation-related waste that may be generated, and the available capacity at the landfills, no impacts would occur under this criterion as a result of the Project

Would the project not comply with federal, state, and local statutes and regulations related to solid waste?

Assessment Summary: No Impact

Construction Impacts

All solid waste generated by the Project during construction would be handled in accordance with all applicable federal, State, and local statutes and regulations. All treated wood poles removed as part of the Project would, depending on the condition of each pole, be reused, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of an RWQCB-certified municipal landfill. Therefore, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

All solid waste generated by the Project during operations would be handled in accordance with all applicable Federal, State, and local statutes and regulations. Therefore, no impacts would occur under this criterion as a result of the Project.

4.17.5 Applicant Proposed Measures

Because the Project would not result in significant impacts to utilities and service systems, no Applicant Proposed Measures are offered.

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5.0 Comparison of Alternatives

This chapter compares the environmental impacts of the alternatives described in Chapter 2 of this PEA. The CEQA Guidelines (Section 15126.6(d)) require that an environmental impact report include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Santa Barbara County Reliability Project (the Project).

The Project Objectives, developed in Section 1.4, are as follows:

- Provide long-term reliability and continuity of service to the ENA in the event of a natural disaster or other occurrence that affects the 220 kV transmission system serving the area.
- Enhance operational flexibility by providing the ability to transfer the electric load between local substations and remove existing 220 kV or 66 kV lines from service when needed for maintenance purposes.
- To the extent practicable, use existing ROWs and facilities constructed to date to minimize:

    (i) Environmental impacts

    (ii) Construction schedule, and

    (iii) Project cost and impact on ratepayers

- Design and construct the Project in conformance with SCE's current engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.

These objectives guide in developing a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives.

CPUC G.O. 131-D requires that an Application for a Permit to Construct (PTC) include the "[r]easons for adoption of the power line route or substation location selected, including comparison with alternative routes or locations, including the advantages and disadvantages of each."

SCE's planning process for the Project began in 1998, and in 1999, SCE initiated construction of the Project under the assumption that the Project was exempt from permitting pursuant to G.O. 131-D and the California Coastal Act.

As set forth in Chapter 2, when SCE originally initiated construction of the Project, SCE did not consider route alternatives due to the fact that the Project would involve the reconductoring and replacement of existing 66 kV subtransmission lines and structures. However, for the purposes of this application and at the request of the County of Santa Barbara, this analysis includes certain alternatives developed in consultation with the

County. It should be noted that the CPUC will be the lead agency under CEQA as part of its PTC, and the County of Santa Barbara will be a Responsible Agency under CEQA. It is anticipated that the County of Santa Barbara will use the CEQA document prepared by the CPUC when the county considers whether to issue a Coastal Development Permit (CDP).

In light of the County's request for an evaluation of route alternatives, SCE recently developed three potential Line Route Alternatives for preliminary consideration. The technical aspects of these Line Route Alternatives and their potential impacts and benefits are contained in Chapter 2. In summary, only one alternative (Line Route Alternative 1) would meet most of the Project Objectives, and it would result in the fewest potential environmental impacts of the alternatives. Therefore, Line Route Alternatives 2 and 3 were dismissed from consideration, and Line Route Alternative 1 was carried through for analysis in Chapter 4. Similarly, the No Project Alternative was dismissed from consideration due to its failure to meet the basic Project Objectives.

Because there are no viable Alternatives to the Project, there is no comparison of Alternatives to present. As described in Chapter 4, Environmental Impact Assessment, with the implementation of Applicant Proposed Measures, all environmental impacts from the Project would be less than significant.

6.0 Other CEQA Considerations

This section analyzes the potential for the Project to cause or contribute to significant cumulative effects when the impacts of projects listed in Table 6.1-1 are considered together with the impacts of the Project.

6.1 Cumulative Impacts

CEQA requires lead agencies to consider the cumulative impacts of proposals under their review. Section 15355 of the CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact "consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts" (Section 15130(a)(1)). The cumulative impacts analysis "would examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects." (Section 15130(b)(3))

Section 15130(a)(3) also states that an environmental document may determine that a project's contribution to a significant cumulative impact would be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of mitigation measure(s) designed to alleviate the cumulative impact.

In conducting a cumulative impacts analysis, impacts are referenced to the temporal span and spatial areas in which the Project could cause impacts. Accordingly, a discussion of cumulative impacts must include either: (1) a list of past, present, and probable future projects, including, if necessary, those outside the lead agency's control; or (2) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provided that such documents are referenced and made available for public inspection at a specified location (Section 15130(b)(1)). A "probable future project" is defined to include approved projects that have not yet been constructed; projects that are currently under construction; projects requiring an agency approval for an application that has been received at the time a Notice of Preparation is released; and projects that have been budgeted, planned, or included as a later phase of a previously approved project (Section 15130(b)(1)(B)(2)).

The cumulative impact analysis for the Project includes a review of other projects in the vicinity of the Project.[31]

[31] Work to be conducted at Getty Substation, Goleta Substation, Ortega Substation, Santa Barbara Substation, and Ventura Substation would occur within existing enclosures on the substation properties, or would be conducted in areas with no public viewpoint. As described in Chapter 3, the scope of this work is minor, and as described in Chapter 4, would have no impact on any resource area. Because this work would have no or *de minimis* impact on any resource area, it would not contribute to any cumulative impact, and therefore is not discussed in this Chapter.

Each resource analysis describes the geographic context of the cumulative impact analysis (e.g., the air basin, the contiguous watershed, the viewshed). Probable future projects were identified by contacting utilities, Santa Barbara County, Ventura County, the City of Carpinteria, Caltrans, and the U.S. Forest Service; conducting internet research; and reviewing recent CEQA documents.

Table 6.1-1 lists the recently completed past, current, and probable future projects that could overlap with the construction and/or operation of the Project and could affect the same resources. Table 6.1-1 describes the projects, their locations, estimated construction schedules, and access roadways. Where construction schedules are unavailable or uncertain, the cumulative impact analysis conservatively assumes that construction would overlap with the Project. The cumulative projects identified are associated with private developers, Southern California Edison, Caltrans, local jurisdictions, and the U.S. Forest Service; no projects were identified within Santa Barbara County. These projects involve commercial developments, offices, residential/retirement facilities, electrical transmission utilities, and roadway improvements.

6.1.1 Significance Criteria

The CEQA Environmental Checklist provides significance criteria for assessing the cumulative impacts of the Project. A project causes a potentially significant cumulative impact if:

- The project has impacts that are individually limited, but cumulatively considerable, where "cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

6.1.2 Impact Assessment

The following section discusses the potential cumulative impacts of the Project for aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology and soils, GHG emissions, hazardous materials, hydrology and water quality, noise, public services, traffic, and utilities and service systems. This section does not evaluate cumulative impacts where the Project would have no impacts and therefore no contribution to cumulative impacts. Based on the evaluation presented in Chapter 4, the Project would have no impacts on land use, mineral resources, population and housing, and recreation. For example, because the Project would have no impacts on recreation (e.g., parks, bicycle trails), there would be no cumulative recreation effects in conjunction with any of the cumulative projects.

Table 6.1-1: Cumulative Projects Located in the Vicinity of the Santa Barbara County Reliability Project

Project	Project Description	Location	Construction Schedule
County of Santa Barbara			
Franklin Trail	Construct hiking trail above Carpinteria	Private and public lands north of Carpinteria Substation	Approved
City of Carpinteria			
Carpinteria Valley Arts Center	Construction of 7,911 square foot community art center	Linden Ave	Approved
Ellinwood/Green Heron Spring	30 condominiums	Cravens Lane	Approved
Peoples' Self-Help Housing Corporation, Casas De Las Flores	43 apartments, community center	Via Real	Approved
Lagunitas	Mixed use – 37 single-family homes, 36 condominiums, 85,000 square foot commercial office	Via Real	Approved
People's Self-Help Housing Corporation, Dahlia Court	Expansion of existing development with 33 apartments and a 4,347 square foot community center. Removal of existing trailers at Carpinteria Camper Park.	Dahlia Court	Approved
Paredon	Extended Reach Oil and Gas Development	Carpinteria Ave	Proposed
Albertson's Expansion	20,000 square foot expansion	Casitas Pass Road	Under Construction
Carpinteria Rincon Trail	Construct hiking and bicycle trail between Carpinteria and Rincon County Park	Padero Lane	
Carpinteria Sanitary District Bluffs Project	Construction of new sewer line	Carpinteria Avenue	
Chevron/Venoco Soil Remediation	Soil remediation pursuant to RWQCB order including grading, excavation, soil removal, drainage, and restoration.		
Carpinteria Valley Water District	7,300 linear feet of new/replacement water pipelines for the districts Central Pressure Zone and to connect new El Carro Well	Public ROWs and existing easements	

Table 6.1-1: Cumulative Projects Located in the Vicinity of the Santa Barbara County Reliability Project (continued)

8th Street Bridge	Replacement of bridge crossing Carpinteria Creek to improve flow and fish passage	8th Street	2010-2011
Carpinteria Avenue Bridge Replacement	Replacement of Carpinteria Avenue Bridge crossing of Carpinteria Creek		
California State Lands Commission			
Carpinteria Offshore Field Redevelopment Project (Carone Petroleum Corporation)	Development of oil and gas in state waters using the existing Platform Hogan. Drill up to 25 new wells with a new electric drill. Oil and gas transport and processing using existing facilities.	Offshore existing platform	2013? - ?
Southern California Edison			
Carpinteria Substation Modification	Substation modification within existing substation wall/fence with no increase in voltage rating involving removal of bank and switchrack	Carpinteria Substation, Carpinteria	2013
Santa Clara Substation Modification	Substation modification within existing substation wall/fence with no increase in voltage rating involving miscellaneous equipment additions and replacements	Santa Clara Substation, Unincorporated Ventura County	2011-2012
Santa Clara Substation Modification	Substation modification within existing substation wall/fence with no increase in voltage rating involving replacement of bank and related miscellaneous equipment	Santa Clara Substation, Unincorporated Ventura County	2014
Casitas Substation Modification	Substation modification within existing substation wall/fence with no increase in voltage rating involving replacement of banks	Casitas Substation, Unincorporated Ventura County	2011
Casitas Substation Modification	Substation modification within existing substation wall/fence with no increase in voltage rating involving replacement of breakers	Casitas Substation, Unincorporated Ventura County	2009

Table 6.1-1: Cumulative Projects Located in the Vicinity of the Santa Barbara County Reliability Project (continued)

Goleta Substation Modification	Substation modification within existing substation wall/fence involving equipment upgrades and replacements of banks	Goleta Substation, Goleta	2007-2008
Goleta Substation Modification	Substation modification within existing substation wall/fence involving equipment upgrades and installation of breakers	Goleta Substation, Goleta	2011-2012
Ortega Substation Modification	Substation modification within existing substation wall/fence involving replacement of 33 kV circuit breaker	Ortega Substation, Summerland	2014
Santa Clara-Casitas-Tayshell Reconductor Project	Reconductor 2.7 miles of Santa Clara-Casitas-Tayshell 66 kV subtransmission line	Unincorporated Ventura County west of Santa Clara Substation	2012
Wet Crossing (concrete ford)	SCE operations and maintenance work to install concrete ford across Cañada Larga for rerouted access road per landowners request	Cañada Larga	2013
Santa Clara-San Marcos Tower Removal	Remove up to five lattice steel towers and conductor.	Unincorporated Ventura County	2012/2013
County of Ventura			
Verizon Wireless communication facility (CUP LU11-0068)	Wireless communication facility located on existing transmission tower including 12 four-foot panel antennas located 70 feet above grade, prefabricated equipment shelter, and fence.	East of Victoria Avenue, City of San Buenaventura (Ventura)	2012
City of San Buenaventura (Ventura)			
Central Coast Investors	Mixed use – 43 condominiums and 4,500 sf commercial	North City of San Buenaventura (Ventura)	Approved Dec 2008
Logue Family	Mixed use – 105 condominiums, 7,000 sf commercial	North City of San Buenaventura (Ventura)	Not approved
The Bluffs	Mixed use – 355 dwelling units and 28,225 sf non-residential	Vista Del Mar Dr., City of San Buenaventura (Ventura)	Approved Nov 2011

Table 6.1-1: Cumulative Projects Located in the Vicinity of the Santa Barbara County Reliability Project (continued)

New Urban Ventures	Mixed use – 80 condominiums, 1,779 sf commercial/retail	North City of San Buenaventura (Ventura)	Approved Oct 2009
Centex	Residential – 120 single-family homes, 36 condominiums, 50 apartments	North City of San Buenaventura (Ventura)	Approved June 2007
Aldea Hermosa	47 single-family homes and 9 residential 2nd units	Darling Rd., City of San Buenaventura (Ventura)	Under construction
Caltrans			
South Coast High Occupancy Vehicle (HOV) Lane	HOV lane upgrades between the Santa Barbara/Ventura County border and the City of Carpinteria (between Mobil Pier Undercross in Ventura County and Casitas Pass Road in Santa Barbara County) (10.8 miles)	Hwy 101	2016
Linden Ave – Casitas Pass Interchange Project	Replacement of the Linden Ave and Casitas Pass Road Interchanges including wider overpasses, new ramp connections, and extension of the frontage road (Via Real)	Linden Ave and Casitas Pass Roads	2013-2016
Ventura Freeway (US 101) Improvement Project	Rehabilitation of pavement, ramps, median, and guardrails	Hwy 101 - Camarillo to Ventura	2011-2012
Arroyo Parida Creek Bridge	Caltrans bridge replacement. Relocation of SCE Carpinteria-Ortega-Santa Barbara 66 kV subtransmission line and Sheffield 16 kV lines due to replacement of the Arroyo Parida Creek Bridge in Carpinteria.	SR-192, Carpinteria	
U.S. Forest Service			
Fuel Break	Brush clearing for fire control	Los Padres National Forest	2013?

Note:
TBD = to be determined

6.1.2.1 Aesthetics

Assessment Summary: Less than Significant Impact

The geographic scope of the cumulative impact analysis for aesthetic impacts includes the viewsheds within 2 miles that may be affected by the Project. This includes views from public areas and the Lake Casitas Scenic Resource Area; however, it does not include views from any Designated State Scenic Highways, as none occur in the area.

Because there are no recognized scenic vistas in the vicinity of the Project, the Project would not contribute to a cumulative impact on scenic vistas. Components of the Project would be visible from the Lake Casitas Scenic Resource Area in Ventura County; however, Project infrastructure is located a considerable distance from this area, and is barely discernible in the distant background. No portion of the Project is located within or adjacent to a Designated State Scenic Highway. Therefore, construction and operation activities would not damage any scenic resources within a Designated State Scenic Highway.

Project construction and operations would generally be conducted during the day, and thus would not be a source of substantial light that would affect nighttime views. Project components would either be non-specular (conductor) or would be constructed of a dull gray galvanized steel that would weather over time (subtransmission structures), and thus would not be a source of glare.

As presented in Section 4.1, construction and operation of the Project would not substantially degrade the visual character or quality of the surrounding area. Project construction would result in temporary impacts to existing visual character and quality of each construction site due to the presence of equipment, materials, and work crews. These changes would be temporary; therefore, construction-related impacts would be less than significant. Operation of the Project would introduce a minor, incremental, long-term change to the visual character of the surrounding area.

Due to the remote location of most Project infrastructure, few if any cumulative projects would be located within the same viewsheds as Project infrastructure. Therefore, the visual character and quality of the Project's sites and surrounding areas are not likely to be substantially affected by the Project and cumulative projects at the same time, and thus the Project would not have a cumulatively considerable contribution to visual resources.

6.1.2.2 Agriculture and Forestry Resources

Assessment Summary: Less than Significant Impact

The geographical area evaluated for cumulative impacts to agricultural and forestry resources includes the geographic area in the immediate vicinity of the Project components.

As presented in Section 4.3, construction and operation of the Project would not conflict with existing zoning for agricultural use, forest or timberlands, or a Williamson Act contract; would not result in the loss or conversion of forest land; and would not change the existing environment in a manner that would result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use. Therefore, the Project would have no cumulative effects for these criteria.

Construction and operation of the Project would, as presented in Section 4.3, result in the permanent conversion of approximately 7.8 acres of lands identified as Important Farmland (0.6 acre of Prime Farmland and 7.2 acres of Unique Farmland). These conversions would represent a loss of 0.00000036 percent of the approximately 219,508 acres of Important Farmland identified in Santa Barbara County and Ventura County. The conversion of this small amount of farmland would not contribute to a cumulatively considerable impact to agricultural lands in either Santa Barbara County or Ventura County.

6.1.2.3 Air Quality

Assessment Summary: Less than Significant Impact

The geographical area evaluated for cumulative impacts to air quality includes the geographic boundaries of the Ventura County and Santa Barbara Air Pollution Control Districts.

As presented in Section 4.3, neither construction nor operations-related emissions are expected to substantially contribute to regional emissions, and the Project would not conflict with or obstruct implementation of the applicable air quality plans. The VCAPCD and SBCAPCD have not adopted air quality standards for construction impacts; therefore, construction of the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Construction of the Project would result in the emission of NO_x and ROG at levels lower than those that would trigger emission control measures pursuant to SBCAPCD and VCAPCD regulations. Fugitive PM_{10} emissions would be minimized with the incorporation of APM AQ-1. Therefore, the Project would not result in a cumulatively considerable net increase of any criteria pollutant, and impacts would be less than significant.

Pollutant emissions would be distributed over the construction period, and not concentrated in any one area. In addition, pollutant emissions during construction would be reduced by APMs. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations or expose a substantial number of people to objectionable odors. Because all impacts would be less than significant, and because construction activities are geographically dispersed and do not physically overlap with any cumulative project, cumulative impacts associated with construction of the Project would not be cumulatively considerable and would be less than significant.

Operation of the Project would not differ in scope or scale from current operations-related activities along the 66 kV subtransmission lines or at the substations. The emissions associated with current and future Project operation would represent a very small fraction of the regional emission inventories and would not be expected to substantially contribute to a violation of any air quality standard or contribute substantially to an existing or projected air quality violation; to result in a cumulatively considerable net increase of any criteria pollutant, and impacts would be less than significant; to expose sensitive receptors to substantial pollutant concentrations; or expose significant numbers of people to objectionable odors. Therefore, cumulative impacts associated with operation of the Project would not be cumulatively considerable and would be less than significant.

6.1.2.4 Biological Resources

Assessment Summary: Less than Significant Impact

The geographical area evaluated for cumulative impacts on biological resources includes areas directly affected by clearing and construction as well as adjacent habitat potentially affected by construction activities. The geographical extent of the cumulative impact analysis also includes federal and State-regulated jurisdictional wetlands and other waters of the U.S.

Construction could affect several listed plant species, and cumulative projects listed in Table 6.1-1 would have the potential for related impacts; however, those cumulative projects are primarily planned at lower elevations on the coastal plain in disturbed urban areas. Therefore, the Project's contribution to any cumulative impact would not be cumulatively considerable and would be less than significant.

Project construction would have less than significant impacts to special-status wildlife species with the incorporation of APMs presented in Section 4.4, and impacts to all species would be localized and temporary. Cumulative projects would similarly have the potential for localized, temporary construction impacts on wildlife; however, cumulative projects are planned primarily in the City of Carpinteria and City of San Buenaventura (Ventura). Because of the physical distance between Project construction sites, and the short-term nature of construction activities, the Project's contribution to any cumulative impact would not be cumulatively considerable and would be less than significant.

Periodic operation and maintenance (O&M) activities at and along facilities and access roads would not result in any significant impacts on protected plant and wildlife species. O&M activities would be periodic, infrequent, and performed as needed, and would be confined to previously disturbed areas. Therefore, the contribution of O&M activities to any cumulative impact would not be cumulatively considerable and would be less than significant.

Operation of subtransmission lines could have potential impacts to migrating birds because the project is located in the Pacific Flyway. Cumulative impacts could result from impacts associated with other utility projects. However, all such projects are expected to follow USFWS guidance, thus reducing any cumulative impacts to less than significant.

Project construction could affect riparian habitats in Segment 4 as a result of water body crossings. Cumulative projects involving waterway crossings include the 8th Street Bridge improvements in Carpinteria and SCE's proposed crossing of Cañada Larga. The Project and all cumulative projects would comply with CDFG regulations and permits regarding streambed alteration, and the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

Construction and operation of the Project would have less than significant impacts on California Black Walnut Woodland communities along Segments 3B and 4. Work would comply with Ventura County and Santa Barbara County tree ordinances and applicable permits. Cumulative projects would be required to comply with local tree ordinances as well, reducing any cumulative impacts from operations to less than significant.

Project construction and operation could have direct impacts on wetlands as defined by Section 404 as a result of access road rehabilitation and maintenance. Compliance with applicable State and federal regulations (including Section 404 and 401 of the Clean Water Act), as well as State and local streambed and storm water regulations, and compliance with applicable permit conditions, would reduce wetland impacts to less than significant. Cumulative projects with potential wetland impacts, such as trail improvements and SCE's proposed crossing of Cañada Larga could also affect wetlands. Such cumulative projects would also be expected to comply with applicable federal, State, and local regulations, and to comply with permit conditions. Therefore, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

Construction and operation activities may result in temporary changes in wildlife movement due to construction noise and human presence. However, these impacts would be localized, temporary, and less than significant. The cumulative projects also would have localized footprints and would not be expected to affect species migration. For example, no new highways, levees, or other major infrastructure is planned. Therefore, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

Project construction and operation would not conflict with any local policies or ordinances protecting biological resources, including trees. Like the Project, all cumulative projects would be expected to comply with local policies, ordinances, and the conditions of applicable permits. In addition, Project-related impacts associated with tree trimming or removal would be localized, and would not overlap with impacts associated with any cumulative project. Therefore, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

No Habitat Conservation Plans; Natural Community Conservation Plans; or other approved local, regional, or State habitat conservation plans exist for the Project area. Therefore, the Project would not contribute to a cumulative impact involving conflicts with adopted natural resource plans.

6.1.2.5 Cultural Resources

Assessment Summary: Less than Significant Impact

Impacts to cultural and paleontological resources are inherently site-specific. The geographic scope of potential cumulative cultural and paleontological resource impacts is limited to the immediate vicinity of ground-disturbing activities that would occur during construction and operations. As a result, they are not typically additive or cumulative in nature. Because there are no cumulative projects that physically overlap with any Project construction or infrastructure site, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

6.1.2.6 Geology and Soils

Assessment Summary: Less than Significant Impact

Geological hazards are generally site-specific and depend on localized geologic and soil conditions. The geographic scope of potential cumulative geological and soils impacts is limited to the immediate vicinity around each Project construction and infrastructure site. As a result, they are not typically additive or cumulative in nature. In addition, like the Project, all cumulative projects would be expected to comply with applicable laws, regulations, ordinances, and permits, and would be expected to implement BMPs and SWPPPs where applicable. Because there are no cumulative projects that physically overlap with any Project construction or infrastructure site, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

6.1.2.7 Greenhouse Gas Emissions

Assessment Summary: Less than Significant Impact

The geographical context for GHG and climate change effects includes the earth's atmosphere. GHGs released to the atmosphere generally have no effect locally but are correlated with rising global temperatures.

As presented in Section 4.7, Project construction would result in emissions of GHGs from on-site construction equipment and off-site worker trips. Over the entire construction period of the Project, approximately 4,324 $MTCO_2e$ would be emitted. GHG construction emissions from the Project amortized over 30 years is approximately 141 $MTCO_2e$. The estimated annual emissions of GHG from Project equipment are 8 $MTCO_2e$, primarily from SF_6 emissions (see Appendix F, Air Quality Calculations, for details). As explained in Section 4.3, inspection and maintenance-related emissions would be equivalent to emissions associated with current inspection and maintenance activities. As a result, the 149 $MTCO_2e$ emissions associated with Project construction and SF_6 emissions would be well below the 10,000 $MTCO_2e$ threshold of significance recommended by VCAPCD. Therefore, the Project would not generate, either directly or indirectly, GHG emissions that would have a significant impact on the environment. As a result, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

As presented in Section 4.7, GHG emissions from construction and operation of the Project would fall well below the interim numerical thresholds of significance. With implementation of SCE's existing SF_6 Gas Management Guidelines, SF_6 emissions from the Project would be expected to meet the regulatory requirements, and thus would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, the Project would not conflict with any applicable plan, policy, or regulation and would have a less than significant contribution to cumulative impacts resulting from any cumulative project's conflict with such plans, policies, or regulations.

6.1.2.8 Hazards and Hazardous Materials

Assessment Summary: Less than Significant Impact

The geographic scope for hazardous materials includes areas near Project sites that could be affected by a release of hazardous materials, including schools within 0.25 miles. Impacts from such releases are usually site-specific and localized. The geographic scope also includes areas affected by the cumulative projects listed in Table 6.1-1 including downgradient air, water bodies, groundwater, and areas subject to wildland fire hazards. Materials delivery routes are also included to account for the potential impacts from a traffic accident-related spill.

The Project would not be constructed or operated on a site listed as a hazardous materials site pursuant to Section 65962.5; would not be constructed or operated within an airport land use plan area, or within the vicinity of, or within 2 miles of, a public airport, public use airport, or private airstrip; and would not interfere with an adopted emergency response plan or emergency evacuation plan, and therefore would not contribute to any hazards-related cumulative impact.

Project construction would result in less than significant impacts associated with the transport, use, disposal, or foreseeable upset of, or accidents involving, hazardous materials during construction. Like SCE, cumulative projects would be expected to implement BMPs and adhere to all applicable laws and regulations to reduce to less than significant the potential impacts from hazards, including impacts associated with emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

The potential for igniting vegetation would be minimized through the measures presented in Section 4.8. Most cumulative projects are planned at lower elevations on the coastal plain in disturbed urban areas, and thus would not have a significant risk of igniting vegetation. Therefore, construction of the Project would have a less than significant impact to risk of loss, injury, or death involving wildland fires, and the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

Project operation would entail the transportation, use, and handling of the same hazardous materials as during construction; however, operations would require fewer vehicles and would require less use of materials. Therefore, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

6.1.2.9 Hydrology and Water Quality

Assessment Summary: Less than Significant Impact

The geographic context for the cumulative impacts associated with hydrology and water quality consists of the watersheds of several coastal waterways, including Franklin, Carpinteria, and Rincon Creeks in the Central Coast Basin, and the Ventura River and several coastal watersheds of the Los Angeles Basin. It also includes the underlying groundwater basins.

As presented in Section 4.9, the Project presents no impacts related to groundwater withdrawals or risk associated with tsunamis or seiches, and only incremental, less than significant impacts related to water quality standards, flooding and flood hazards, alteration of drainage patterns, and stormwater drainage systems. Many of these potential incremental impacts are negligible (i.e., impacts to groundwater) or specific to the immediate vicinity of the construction and operation locations (i.e., alteration of drainage patterns). Due to the distance between the cumulative projects and the Project locations (where any effects may be realized), the incremental and less than significant effects that may result from the Project would not, in combination with effects generated by cumulative projects, result in a cumulatively considerable impact.

6.1.2.10 Noise

Assessment Summary: Less than Significant Impact

Noise and vibration impacts are localized such that the geographic area in which cumulative impacts may occur is limited to the immediate vicinity of construction and operation activities.

The Project is not located within an airport land use plan, nor is it within 2 miles of a public airport or public use airport. Therefore, neither construction nor operation of the Project would contribute to any cumulative impact involving resident or worker exposure to airport noise.

Construction would not result in permanent increases in ambient noise levels and would not contribute to a cumulative impact from permanent noise increases. Noise from construction of the Project would not exceed any thresholds in Santa Barbara County, Ventura County, or the City of Carpinteria. The Project would not generate excessive groundborne vibration or noise, and any vibration or groundborne noise would attenuate within a short distance. Construction of the Project would result in temporary increases in ambient noise levels during the construction period. None of the cumulative projects would be conducted in a similar timeframe within close proximity of the Project, and therefore there would be no cumulative noise- or vibration-related impacts during construction.

O&M activities of the Project would not differ in scope or scale from current O&M activities along the 66 kV subtransmission lines or at the substations. This is because the Project involves the reconductoring of existing 66 kV subtransmission lines and thus would not generate the need for additional operations-related trips or activities. Activities during the operation of the Project would not exceed any noise thresholds in Santa Barbara County, Ventura County, or the City of Carpinteria.

Even with potential corona noise, the Project's operational noise would be less than 33.5 dBA, which is the ambient noise level in the area, and would comply with noise regulations. The Project would not replace or install any vibration-generating components, and use of light-duty vehicles and bucket trucks during inspection and maintenance activities would not generate perceptible vibrations. The Project would not install any new noise-generating components within the substations, or require an increase in O&M activities along the subtransmission lines. Because no change would occur, operation would not contribute to a cumulative impact.

6.1.2.11 Public Services

Assessment Summary: Less than Significant Impact

The geographic scope for potential impacts on public services encompasses the local jurisdictions providing public services including Santa Barbara and Ventura counties as well as the cities of Carpinteria and San Buenaventura (Ventura).

Neither Project construction nor operation would result in an increased demand for police or fire services; an increase in school enrollment; or an increase in the use of libraries, parks or other public facilities. Therefore, the Project would have no contribution to any cumulative impacts.

In combination with the fact that construction activities would be of short duration and O&M activities would be infrequent and of short duration, implementation of traffic control measures would ensure that the Project does not impact performance objectives for fire and police protection, even considering the effects of cumulative projects. Like SCE, cumulative projects would be expected to implement traffic control measures where feasible. Therefore, the Project would not contribute to any cumulative impacts.

6.1.2.12 Transportation and Traffic

Assessment Summary: Less than Significant Impact

The geographic scope for cumulative transportation and traffic impacts includes the regional and local roadways that may be used to access the Project or that could otherwise be impacted by construction or operations. The geographic scope also includes the bus routes and pedestrian and bike paths in the area.

Construction and operation of the Project would result in less than significant impacts to the level of service and congestion on roadways or to public transport, bicycle, or pedestrian travel. Any lane closures would be coordinated with local jurisdictions and Caltrans, as applicable, and would have temporary, less than significant impacts. Given the small construction crews and geographic scope of the Project, the Project would have a less than cumulatively considerable impact on freeways, local streets, and intersections; would have no impacts on pedestrian or bicycle paths or mass transit; and would not contribute to any conflict with any applicable congestion management program.

Neither Project construction nor operation would change air traffic patterns or location. SCE would comply with FAA recommendations regarding the installation of marker balls, if required. Helicopter operations would be conducted in accordance with FAA regulations. Few of the cumulative projects would likely include any air transportation, and therefore, the Project would not result in cumulative impacts to air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The Project would not introduce incompatible uses or design features such as changes to public roads. Therefore, the Project would not contribute to any cumulative impact involving hazards due to a design feature or incompatible uses.

In combination with the fact that construction activities would be of short duration and O&M activities would be infrequent and of short duration, implementation of traffic control measures would ensure that the Project does not result in inadequate emergency access, even considering the effects of cumulative projects. Like SCE, cumulative projects would be expected to implement traffic control measures where feasible. Therefore, the Project would have no contribution to any cumulative impacts.

6.1.2.13 Utilities and Service Systems

Assessment Summary: No Impact

The geographic scope of potential cumulative impacts on utilities is limited to the immediate vicinity of the Project area for disruption impacts and the service areas of regional service/utility providers.

The Project would not exceed wastewater treatment requirements of the wastewater treatment plants serving the Project; would not involve, require, or result in the construction or operation of new water or wastewater treatment facilities or expansion of existing facilities; and would not introduce substantial impermeable surfaces that would require new storm drainage facilities. Water needed for construction and operation would be supplied by the Casitas Municipal Water District, United Water Conservation District, or Carpinteria Valley Water District; all districts have sufficient water to support construction activities such as dust control, and no additional water would be needed for operations. Therefore, the Project's contribution to any cumulative impacts would not be cumulatively considerable and would be less than significant.

Given the small volumes of wastewater and solid waste that would be generated by the Project and the unused treatment capacity at the wastewater treatment plants that service the existing substations, the Project's contribution to any cumulative impacts on provider capacity would not be cumulatively considerable. Additionally, all solid waste generated by the Project during construction and operation would be handled in accordance with all applicable federal, State, and local laws and regulations. Like SCE, cumulative projects would be expected to manage solid waste in accordance with federal, State, and local laws and regulations; therefore, the Project would not contribute to any cumulative impact related to compliance with solid waste laws or regulations.

6.2 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines states that environmental documents should "...discuss 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..."

A project could be considered to have growth-inducing effects if it:

- Either directly or indirectly fosters economic or population growth or the construction of additional housing in the surrounding area
- Removes obstacles to population growth
- Requires the construction of new community facilities that could cause significant environmental effects
- Encourages and facilitates other activities that could significantly affect the environment, either individually or cumulatively

An EIR must describe any growth-inducing impacts of a proposed project 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" (Pub. Res. Code § 21100(b)(5); CEQA Guidelines §§ 15126(d), 15126.2(d)). 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, and the removal of major obstacles to growth. It is important to note that these direct forms of growth have secondary effects including 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-inducing 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.

Would the project either directly or indirectly foster economic or population growth or the construction of additional housing in the surrounding area?

Assessment Summary: No Impact

As presented in Chapter 1, the purpose of the Project is to ensure the availability of safe and reliable electric service to help meet customer electrical demand in the Electrical Needs Area (ENA) during emergency conditions, the purpose of the Project is not to provide new electrical service that might induce economic or population growth. The Project has been designed to minimize the potential for prolonged customer outages due to a natural disaster or other events that may affect service to the ENA. The Project is not designed to provide new electrical service to areas that are currently unserved or under-served. Within the current 10-year planning period, SCE does not expect electrical demand in the ENA to exceed current capacity under normal operating conditions.

The Project would not result in population growth through direct or indirect employment of workers needed to construct and operate the facilities. The construction labor demands of the Project would be met by existing SCE employees or by hiring specialty electrical transmission contractors. The small number of positions required during the short construction phase would not directly or indirectly induce any population growth in the area.

O&M activities would be conducted by SCE personnel, and the Project would not require the hiring of any additional operation personnel. Therefore, operation of the Project would not directly or indirectly induce any population growth in the area. The Project infrastructure would be unmanned during operation with the exception of routine maintenance.

The local communities have adequate infrastructure and services to meet the needs of temporary workers including hotels and motels (Ventura Visitors and Convention Bureau 2011a, 2011b, 2011c). In January 2010, Ventura's countywide apartment vacancy rate was 5.24 percent, which is approximately the same as it has been since January 2008 (Dyer 2010). A 5 percent apartment vacancy rate generally means there are ample choices for tenants (Dyer 2010). Additional short-term accommodations are available in the City of Carpinteria. Therefore, construction of the Project would not increase the local population, adversely affect the housing market, or induce growth by creating new opportunities for local industry or commerce.

Would the project remove obstacles to population growth?

Assessment Summary: No Impact

As presented in Chapter 1, the purpose of the Project is to ensure the availability of safe and reliable electric service to help meet customer electrical demand in the ENA during emergency conditions. The Project has been designed to minimize the potential for prolonged customer outages due to a natural disaster or other events that may affect service to the ENA. The Project is not designed to provide new electrical service to areas that are currently unserved or under-served. Within the current 10-year planning period, SCE does not expect electrical demand in the ENA to exceed current capacity under normal operating conditions.

Growth in Santa Barbara County, Ventura County, and local communities 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. 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. The Project would not remove obstacles to population growth. Therefore, no impacts would occur under this criterion as a result of the Project.

Would the project require the construction of new community facilities that could cause significant environmental effects?

Assessment Summary: No Impact

The Project would not involve or result in the construction of any new or upgraded community facilities such as parks or libraries. In addition, the Project would not build public roads that would provide new access to undeveloped or underdeveloped areas, or extend public services to new areas. Therefore, the Project would not require the construction of new community facilities that could cause significant environmental effects.

Would the project encourage or facilitate other activities that could significantly affect the environment, either individually or cumulatively?

Assessment Summary: No Impact

As presented in Chapter 1, the purpose of the Project is to ensure the availability of safe and reliable electric service to help meet customer electrical demand in the ENA during emergency conditions. The Project has been designed to minimize the potential for prolonged customer outages due to a natural disaster or other events that may affect service to the ENA. The Project has not been designed to, and would not, encourage or facilitate other activities that could significantly affect the environment. Therefore, there would be no impact under this criterion.

6.3 Significant Environmental Effects that Cannot be Avoided

Sections 15126.2(b) of the CEQA Guidelines requires identification of significant environmental effects that cannot be avoided or reduced to less than significant through mitigation. The Project would not result in any significant and unavoidable environmental impacts that cannot be avoided or reduced to less than significant through incorporation of APMs.

6.4 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, use of non-renewable resources, or provision of access to previously inaccessible areas, as well as accidents that could change the environment in the long term.

Development of the 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 and operation of the of the Project would result in the permanent conversion of 7.8 acres of lands identified as Important Farmland (0.6 acre of Prime Farmland and 7.2 acres of Unique Farmland due to subtransmission structure installation). Operation of the Project would allow for the transmission of electrical power generated from renewable and non-renewable resources, although the Project itself would not require the future use of specific amounts of non-renewable resources. The construction and operation of the Project would entail the use of non-renewable resources; however, the volume of these resources that would be committed to the Project is small, and therefore impacts resulting from the Project would be less than significant.

Accidents, such as the release of hazardous materials, can trigger irreversible environmental damage. As discussed in Section 4.8, Hazards and Hazardous Materials, construction and operation of the Project would involve the use of small quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, and oils. 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, and the environment. Improper storage, use, handling, or accidental spilling of such materials could result in a hazard to the public or the environment. Considering the small volumes of hazardous materials that would be used for the Project, and the emergency response plans and other procedures that would be employed, 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 minimized. Therefore, no significant irreversible changes from accidental releases would occur.

6.5 Significant Environmental Effects of the Project

The CEQA Guidelines (Section 15126.2) require a discussion of the overall significance of the environmental effects of a project. This discussion is intended to distinguish between the direct and indirect significant effects of a project, and the short-term/long-term significant effects of a project. These potential significant environmental effects are summarized in Table 6.5-1. Please note, however, that with the incorporation of APMs, all the potential significant environmental effects associated with the Project would be reduced to less than significant.

Table 6.5.1: Potential Significant Environmental Effects

Resource	Description	Direct/Indirect	Short term/ Long term	APMs Applied
Air Quality				
Air quality standard Air quality violation	Potential violation of air quality thresholds in Ventura County during construction	Direct	Short term	AQ-1 AQ-2
Biological Resources				
Species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS	Potential effects from impacts to habitat or individuals during construction	Direct and Indirect	Short term	BIO-1 BIO-2 BIO-3 BIO-4 BIO-5 BIO-6
Riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS	Potential effects from access road rehabilitation and maintenance	Direct	Short term and Long term	BIO-1 BIO-2 BIO-3
Federally protected wetlands	Potential effects from access road rehabilitation and maintenance	Direct	Short term and Long term	BIO-1 BIO-2 BIO-3
Conflict with any local policies or ordinances protecting biological resources	Potential effects from access road rehabilitation and maintenance	Direct	Short term and Long term	BIO-1 BIO-2 BIO-3
Cultural Resources				
Human remains	Potential disturbance of human remains during ground disturbing activities	Direct	Short term and Long term	CUL-1
Paleontological resource or site or unique geologic feature	Potential damage to or destruction of paleontological resources during ground disturbing activities	Direct	Short term and Long term	CUL-2

Table 6.5-1: Potential Significant Environmental Effects (continued)

Geology				
Geotechnical hazards	Potential impacts to people and structures due to liquefaction or landslides, or construction on unstable or potentially unstable soils or expansive soils	Direct	Short term and Long term	GEO-1
Noise				
Sensitive receptors	Noise impacts on nearby residences and Carpinteria High School	Direct	Short term	NOI-1 NOI-2 NOI-3 NOI-4 NOI-5

6.6 Mandatory Findings of Significance

The Mandatory Findings of Significance are as follows:

Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Assessment Summary: Less than Significant Impact

The Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major period of California history or prehistory.

The Project would involve short-term construction activities, consisting of replacing existing facilities and modifying substations. Neither construction nor operation would substantially degrade the quality of the environment.

The Project would result in less than significant impacts to existing habitats, wetlands, and waterways. Therefore, the Project would not substantially reduce the habitat of a fish or wildlife species.

The Project would not have substantial impacts on wildlife habitat and would have no impacts on wildlife refuges or critical habitat. It would not require substantial clearing of vegetation or impacts on wildlife habitat. Any placement of fill in waterways would comply with federal and State wetlands and waterways regulations, and no discharges of domestic or industrial effluent would occur that could threaten the survival of a species. The Project's impacts on biological resources would be less than significant with incorporation of APMs. Therefore, the Project would not cause a fish or wildlife population to drop below self-sustaining level or threaten to eliminate a plant or animal community.

The Project would have less than significant impacts on special-status plants and animals. It would not involve construction of a highway, levee, or other major infrastructure that could restrict the range of a species. Therefore, the Project would not restrict the range of a rare or endangered plant or animal and any biological impacts would be less than significant.

The Project would not affect historic structures, and would not eliminate important examples of the major periods of California history or prehistory. Therefore, any impacts to cultural resources would be less than significant.

Overall, the Project would not substantially degrade the quality of the environment and all environmental impacts would be reduced to less than significant with the incorporation of APMs.

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

Assessment Summary: Less than Significant Impact

As discussed in Section 6.1 above, the Project, with the incorporation of APMs, would not result in any cumulatively considerable impacts to any environmental resource category. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Assessment Summary: Less than Significant Impact

The Project would not result in environmental impacts that would have substantial direct or indirect effects on human beings, including air quality, noise, traffic, or potential for hazards from hazardous materials or accidents in close proximity to residential or recreational areas. As presented in Chapter 4, the direct and indirect impacts of the Project's construction and operation would be less than significant.

6.7 References

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