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: Kimball Substation Project	))))))))	Application No. _____ (Filed December 29, 2006)

PROPONENT'S ENVIRONMENTAL ASSESSMENT KIMBALL SUBSTATION PROJECT

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Abbreviations and Acronyms

ACSR	Aluminum Conductor Steel Reinforced
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CO	Carbon monoxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
dB	Decibels
dBA	Decibels on the A-weighted scale
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
HMI	Human Machine Interface
IEEE	Institute of Electrical and Electronics Engineers
kcmil	Thousand circular mils
kV	Kilovolt
L_{50}	Median sound level
LOS	Level of service
LWS	Light weight steel
MEER	Mechanical and Electrical Equipment Room
$\mu g/m^3$	Micrograms per cubic meter
MVA	Megavolt ampere
MVAR	Megavolt ampere reactive
NAAQS	National Ambient Air Quality Standards
NERC	North American Energy Reliability Council

Abbreviations and Acronyms

NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
O_3	Ozone
Pb	Lead
PEA	Proponent's Environmental Assessment
PM	Particulate matter
PM_{10}	Particulate matter less than 10 microns
$PM_{2.5}$	Particulate matter less than 2.5 microns
ppm	Parts per million
RCRA	Resource Conservation Recovery Act
RWQCB	Regional Water Quality Control Board
SAC	Stranded aluminum conductor
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCS	Soil Conservation Service
SCE	Southern California Edison Company
SO_2	Sulfur dioxide
SOx	Sulfur oxides
SPCC	Spill Prevention Control and Countermeasure Plan
SWPPP	Storm Water Pollution Prevention Plan
TBM	Thomas Bros. Map
TSP	Tubular steel pole
UBC	Uniform Building Code
USACE	US Army Corps of Engineers
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
VOC	Volatile organic compound
WECC	Western Electricity Coordinating Council

This Proponent's Environmental Assessment (PEA) evaluates the potential environmental impacts of Southern California Edison Company's (SCE) proposed Kimball Substation Project located near the shared boundaries of the City of Chino, City of Ontario, and Riverside County (Electrical Needs Area) (see Figure 1.2, Electrical Needs Area). This Project is required to improve electric system reliability and meet projected electric demand requirements in the area of the proposed substation. The Kimball Substation Project includes:

The Proposed Project includes the following elements:

- Construction of a new 66/12 kilovolt (kV) substation (Kimball Substation). The proposed Kimball Substation would be constructed on an approximately 2 acre site in the City of Chino, California. The Kimball Substation would be an unmanned, automated, low-profile, 56 megavolt-ampere (MVA) 66/12 kV substation.

- Modification of approximately 6.7 miles of the Chino-Corona-Pedley 66 kV subtransmission line and the construction two new 340-foot long underground circuits to extend the Chino-Corona-Pedley line into the proposed substation. The existing lines to be modified are located in either SCE-owned rights-of-way or public street rights-of-way. Along approximately 5.6 miles of the line, the existing wood poles would be replaced with light weight steel (LWS) poles and the conductor would be replaced. Along approximately 1.1 mile of the line, the conductor would be replaced on poles that will have been replaced before construction of the Kimball Substation Project as part of a separate relocation project exempt from General Order 131-D (GO 131-D). These modifications would form the new Chino-Kimball 66 kV subtransmission line.

- Addition of a second circuit to an approximately 0.9 mile segment of the existing Archibald-Chino-Corona 66 kV subtransmission line and construction of a new 0.4 mile segment within public street rights-of-way to connect the Chino-Corona-Pedley 66 kV line to the Archibald-Chino-Corona 66 kV line. These modifications would form the new Chino-Cimgen-Kimball 66 kV subtransmission line.

- Construction of six 12 kV underground circuits extending from the proposed substation to the nearest public street.

- Installation of new fiber optic cable and communication equipment to connect the proposed Kimball Substation to SCE's existing telecommunication system.

The distribution lines that serve the Electrical Needs Area originate from Archibald, Chino, Soquel, and Mira Loma Substations. These distributions lines range in length from 5 to 7 miles, an adequate length for a distribution line when the land was primarily used for dairy operations and agriculture. However, the Electrical Needs Area is now in a transitional phase. A review of general plans and specific plans affecting the Electrical Needs Area indicate that by 2025 there will be approximately 16,000 acres of new residential development, 900 acres of new commercial development, and 1,160 acres of

new light-industrial development. Construction of this planned development has commenced and it has brought greater electrical demand in the Electrical Needs Area.

To be able to accommodate this greater demand along with any future growth, additional transformer capacity at a substation is required to serve the Electrical Needs Area and the length of the distribution lines needs to be shortened. The shortened distribution lines would allow SCE the flexibility to shift electrical load between distribution lines and substations in response to variations in demand, thereby reducing the potential for existing electrical equipment to overload during periods of high demand. In addition, as more load is demanded from a long distribution line, the voltage to the end user decreases, resulting in reliability problems. Sections of the Electrical Needs Area are presently experiencing low voltage conditions caused by long distribution lines. SCE has a plan to correct the existing low voltage conditions for the present rate of electrical demand in the Electrical Needs Area, but as demand continues to grow and the sources of demand move further from the existing substations, it will be difficult to maintain CPUC-mandated voltage levels. Therefore, SCE is proposing a project to be operational in June 2009 to ensure the electrical distribution system has sufficient capacity and capability to provide safe and reliable electric service to customers in the Electrical Needs Area. Construction is scheduled to begin the third quarter of 2008.

This PEA includes the information required by the California Public Utilities Commission's (CPUC) PEA Guidelines (State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V), as well as the CPUC's requirements for a Permit to Construct (PTC) pursuant to General Order 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 (Chapter 2), and the project description (Chapter 3), this PEA evaluates the potential environmental impacts of the proposed project and the site alternatives (Chapter 4). Potential impacts are assessed for all environmental factors contained in the most recent CEQA Environmental Checklist Form (Appendix A). The PEA concludes that the proposed project will have less than significant or no impact to all environmental resource categories.

Although SCE does not anticipate significant impacts to any resource category, specific procedures have been outlined in this document that would be incorporated into the project construction plans and instituted as an added measure of protection to environmental resources that occur in the area. These SCE Proposed Measures apply to air quality, biological resources, and transportation and traffic (Appendix H).

A comparison of alternatives is described in Chapter 5. No cumulative impacts, growth-inducing impacts, or indirect effects (Chapter 6) were identified for the proposed project.

The names and titles of persons assisting in the preparation of this document are listed in Appendix B.

1.0 PROJECT PURPOSE AND NEED

1.1 Project Overview

Southern California Edison Company (SCE) proposes to construct the Kimball Substation Project (as described in Section 2.5 and referred to as the Proposed Project) to maintain electric system reliability and serve projected electrical demand in the cities of Chino and Ontario, and unincorporated areas of western Riverside County and southwestern San Bernardino County (Electrical Needs Area) as shown on Figure 1.1, Regional Map, and Figure 1.2, Electrical Needs Area. The Proposed Project is planned to be operational by June 1, 2009 to ensure that safe and reliable electric service is available to serve customer electrical demands in the Electrical Needs Area. Construction is scheduled to begin in the third quarter of 2008.

The Proposed Project includes the following elements:

- Construction of a new 66/12 kilovolt (kV) substation (Kimball Substation). The proposed Kimball Substation would be constructed on an approximately 2 acre site in the City of Chino, California. The Kimball Substation would be an unmanned, automated, low-profile, 56 megavolt-ampere (MVA) 66/12 kV substation.

- Modification of approximately 6.7 miles of the Chino-Corona-Pedley 66 kV subtransmission line and the construction two new 340-foot long underground circuits to extend the Chino-Corona-Pedley line into the proposed substation. The existing lines to be modified are located in either SCE-owned rights-of-way or public street rights-of-way. Along approximately 5.6 miles of the line, the existing wood poles would be replaced with light weight steel (LWS) poles and the conductor would be replaced. Along approximately 1.1 mile of the line, the conductor would be replaced on poles that will have been replaced before construction of the Kimball Substation Project as part of a separate relocation project exempt from General Order 131-D (GO 131-D). These modifications would form the new Chino-Kimball 66 kV subtransmission line.

- Addition of a second circuit to an approximately 0.9 mile segment of the existing Archibald-Chino-Corona 66 kV subtransmission line and construction of a new 0.4 mile segment within public street rights-of-way to connect the Chino-Corona-Pedley 66 kV line to the Archibald-Chino-Corona 66 kV line. These modifications would form the new Chino-Cimgen-Kimball 66 kV subtransmission line.

- Construction of six 12 kV underground circuits extending from the proposed substation to the nearest public street.

- Installation of new fiber optic cable and communication equipment to connect the proposed Kimball Substation to SCE's existing telecommunication system.

1.2 Project Purpose

The purpose of the Proposed Project is to ensure the availability of safe and reliable electric service to meet customer electrical demand.

Under the Federal Energy Regulatory Commission (FERC), North American Electric Reliability Council (NERC), Western Electricity Coordinating Council (WECC), and California Public Utilities Commission (CPUC) rules, guidelines and regulations, electrical transmission systems must have sufficient capacity to maintain safe, reliable, and adequate service to customers. The safety and reliability of the system must be maintained under normal conditions, when all facilities are in service, and also under abnormal conditions resulting from equipment or line failures, maintenance outages or outages that cannot be predicted or controlled due to weather, earthquakes, traffic accidents, and other unforeseeable events.

SCE utilizes a multi-step planning process to ensure that the necessary system facilities are operational in time to meet electrical demand and to reliably serve such demand. The planning process begins with the development of a peak demand forecast for each substation. Peak demand forecasts are developed using trends in population data, urbanization data, and meteorological data. Technical engineering analyses are then conducted to determine whether the forecast of peak demand can be accommodated on the existing transmission, subtransmission, and distribution systems. System facilities, such as substations or power lines, have defined operating limits. When projections indicate that these limits would be exceeded within an appropriate planning horizon, a project is proposed to keep the electrical system within specified operating limits.

1.3 Project Need

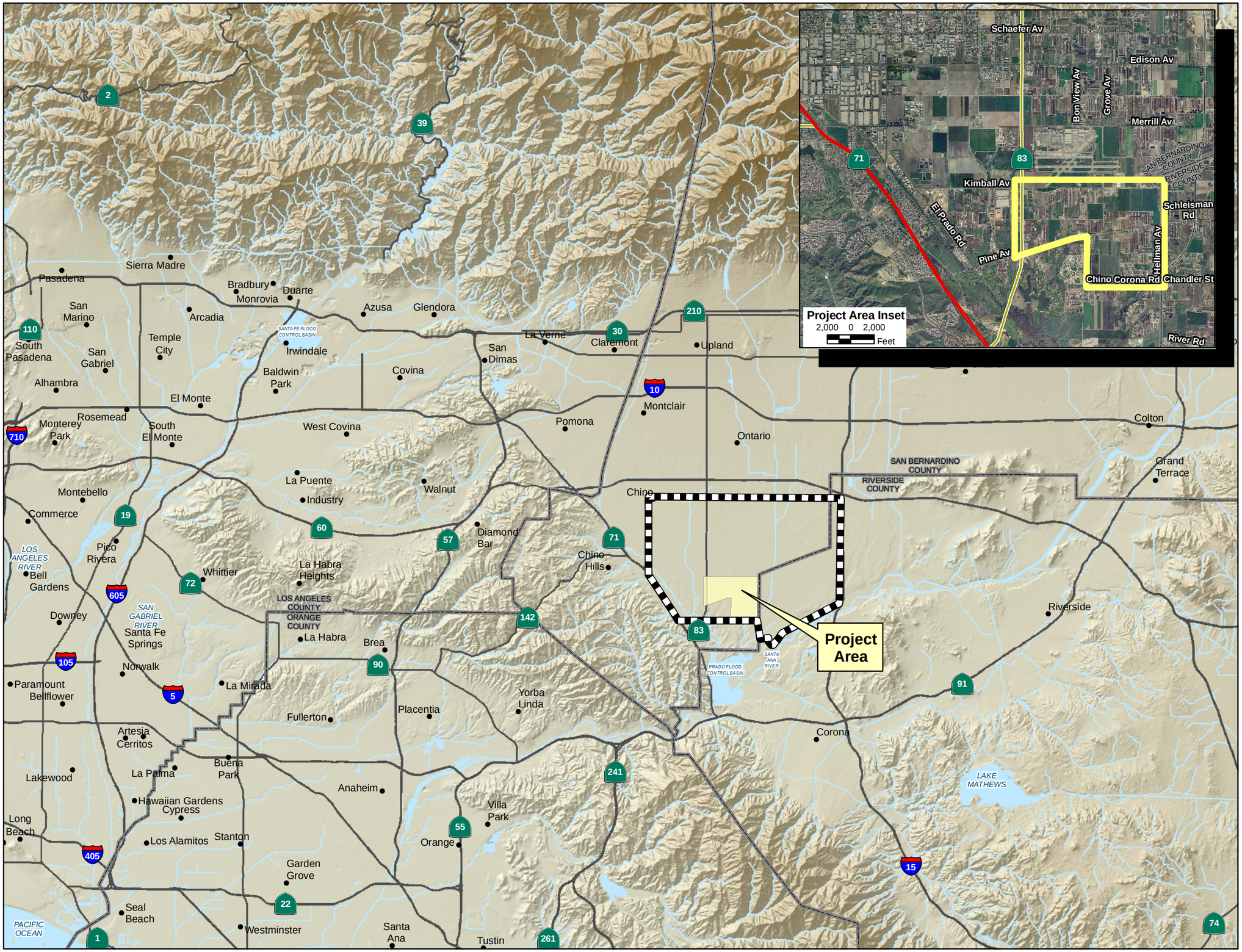
The Electrical Needs Area (see Figure 1.2) is currently served by SCE's Chino and Mira Loma 220 kV systems which are comprised of 220/66 kV transformers, 66 kV subtransmission lines, 66/12 kV transformers, and 12 kV distribution lines. The Chino 66/12 kV, Soquel 66/12 kV, Archibald 66/12 kV, and Mira Loma 66/12 kV Substations currently provide electrical service to approximately 37,000 metered customers and are the source substations for the new large residential, commercial, and light industrial developments within the Electrical Needs Area.

SCE's planning process is designed to ensure that the required capacity and operational flexibility is available to safely and reliably meet the projected peak electrical demands during periods of extreme heat under normal and abnormal conditions. Periods of extreme heat are defined as time periods wherein the temperature exceeds the ten-year average peak temperature and are termed "1-in-10 year heat storms". SCE adjusts the normal condition peak demand to reflect the forecasted peak demand during a 1-in-10 year heat storm. When this adjusted peak demand exceeds the maximum operating limits of the existing electrical facilities, a project is proposed to keep the electrical system within specified loading limits.

In 2005, the normal condition peak demand for the Chino, Mira Loma, Soquel, and Archibald Substations was collectively 223 MVA. The 2005 peak demand for these substations, adjusted for a 1-in-10 year heat storm, was 243 MVA.

Presently, the amount of electricity that can be delivered into the Electrical Needs Area by the Chino, Soquel, Archibald, and Mira Loma Substations is limited to the maximum amount of electricity that these four substations can transmit before exceeding designed operating limits. The combined electrical capacity of these substations is presently limited to 275 MVA. SCE has plans to add capacity at Archibald Substation in 2007,

Figure 1.1
Proposed Kimball Substation
Regional Map



- Cities (ESRI, 2000)
- Roadways (TBM, 2005)
- Project Area (SCE, 2006)
- Electrical Needs Area (SCE, 2006)
- County Boundaries (TBM, 2006)
- Water Features (TBM, 2005)

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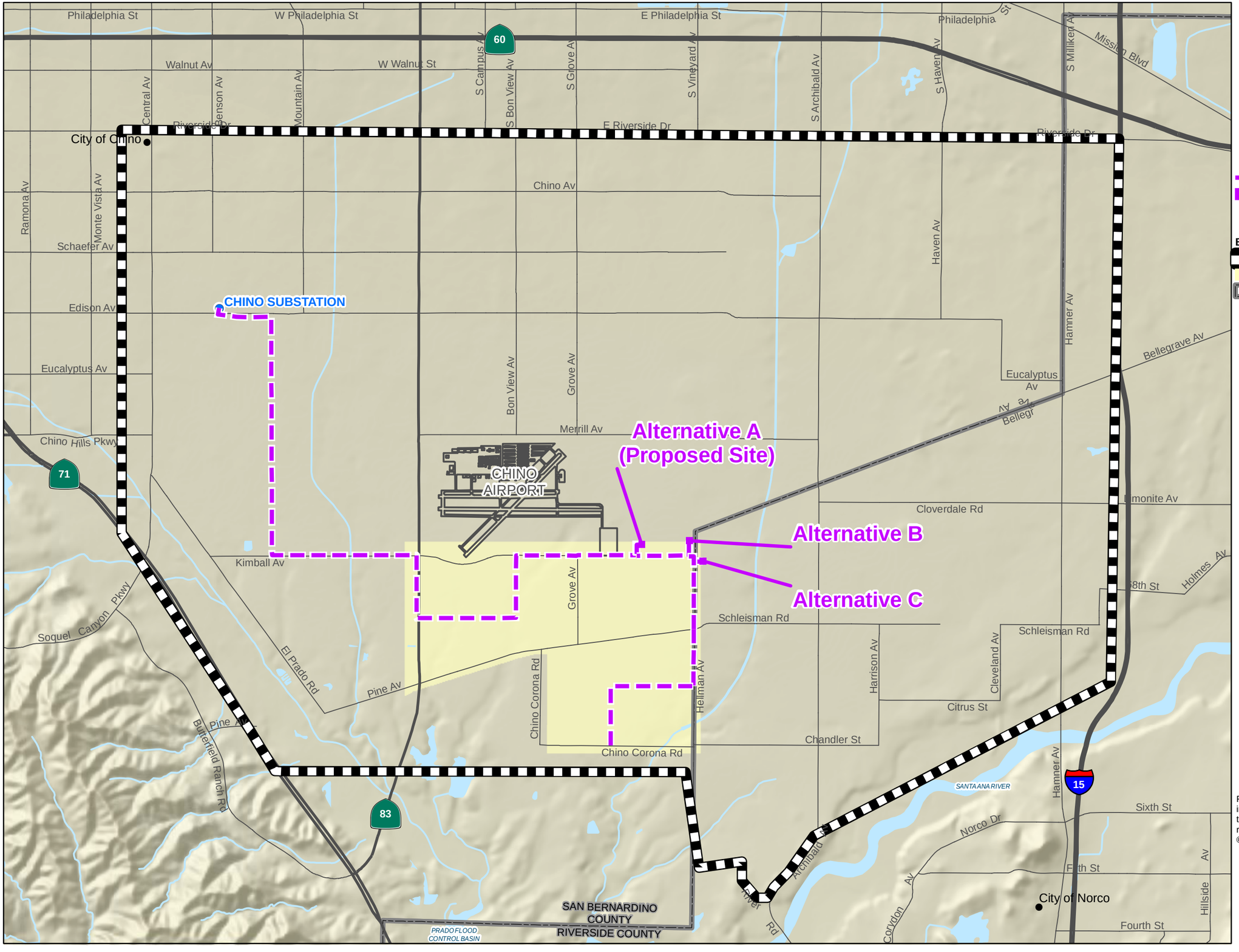
Figure 1.2
Proposed Kimball Substation
Electrical Needs Area



- Proposed Subtransmission Line Upgrades (SCE, 2005)
- Proposed Substation Sites (SCE, 2005)
- Exisiting Substations (SCE, 2005)
- Cities (ESRI, 2000)

Boundaries

- Electrical Needs Area (SCE, 2006)
- Project Area (SCE, 2006)
- County Boundaries (TBM, 2006)

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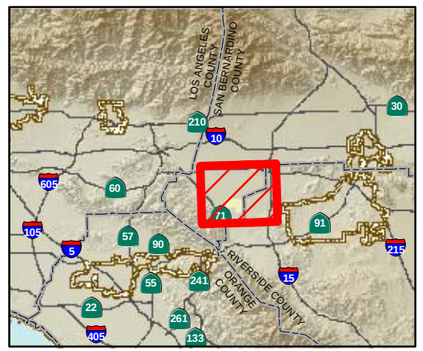

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which would increase the combined operating capacity of these four substations to 311 MVA.

A review of general plans and specific plans affecting the Electrical Needs Area indicate that by 2025 there will be approximately 16,000 acres of new residential development consisting of 59,800 new units, 900 acres of new commercial development, and 1,160 acres of new light-industrial development. This represents approximately 490 MVA of demand at full build-out by 2025 within the Electrical Needs Area.

SCE has incorporated these development plans into its 10-year forecast and projects that the normal condition peak demand for the substations serving the Electrical Needs Area will increase annually by 19 MVA (5.5 percent annual growth rate) over the next 10 years. For the year 2009, the forecasted peak demand for a 1-in-10 year heat storm is 313 MVA. This projected electrical demand will exceed the combined operating limits of the Chino 66/12 kV, Soquel 66/12 kV, Archibald 66/12 kV, and Mira Loma 66/12 kV Substations (311 MVA). Figure 1.4, Electrical Needs Area Substation Capacity and Peak Demand, illustrates the existing capacity limits and forecasted peak demand projections for both normal conditions and 1-in-10 year heat storm conditions. The data used to create Figure 1.3 is presented in Table 1.1, Electrical Needs Area Substation Capacity and Peak Demand.

Table 1.1 Electrical Needs Area Substation Capacity and Peak Demand

Actual	**2001**	**2002**	**2003**	**2004**	**2005**
Maximum Operating Limit (MVA)	221	221	239	239	275
Actual Peak Demand Normal Conditions (MVA)	163	175	196	208	223

Planned Capacity and Projected Demand	**2006**	**2007**	**2008**	**2009**	**2010**
Planned Maximum Operating Limit (MVA)	275	311	311	311	348
Projected Peak Demand Normal Conditions (MVA)	236	255	267	287	310
Projected Peak Demand 1-in-10 Year Heat Storm (MVA)	257	278	290	313	338
Planned Capacity and Projected Demand	**2011**	**2012**	**2013**	**2014**	**2015**
Planned Maximum Operating Limit (MVA)	348	348	348	384	384
Projected Peak Demand Normal Conditions (MVA)	329	350	372	391	410
Projected Peak Demand 1-in-10 Year Heat Storm (MVA)	358	382	406	427	448

Note: Planned capacity increases are set forth below:

2007: Capacity increase at Archibald Substation
2010: Capacity increase at Mira Loma Substation
2014: Capacity increase at Mira Loma Substation

Although SCE presently plans to upgrade Mira Loma Substation in 2010 to increase capacity in the Electrical Needs Area, these modifications do not eliminate the need for the Proposed Project because the distribution circuits from Mira Loma Substation as well as from Chino, Soquel, and Archibald Substations to certain areas within the Electrical Needs Area are too long to reliably serve demand.

Presently, areas within the Electrical Needs Area are experiencing low voltage conditions caused by long distribution lines. SCE has a plan to correct the existing low voltage conditions for the present rate of electrical demand in the Electrical Needs Area, but as demand continues to grow and the sources of demand move further from the existing substations, it will be difficult to maintain CPUC-mandated voltage levels.

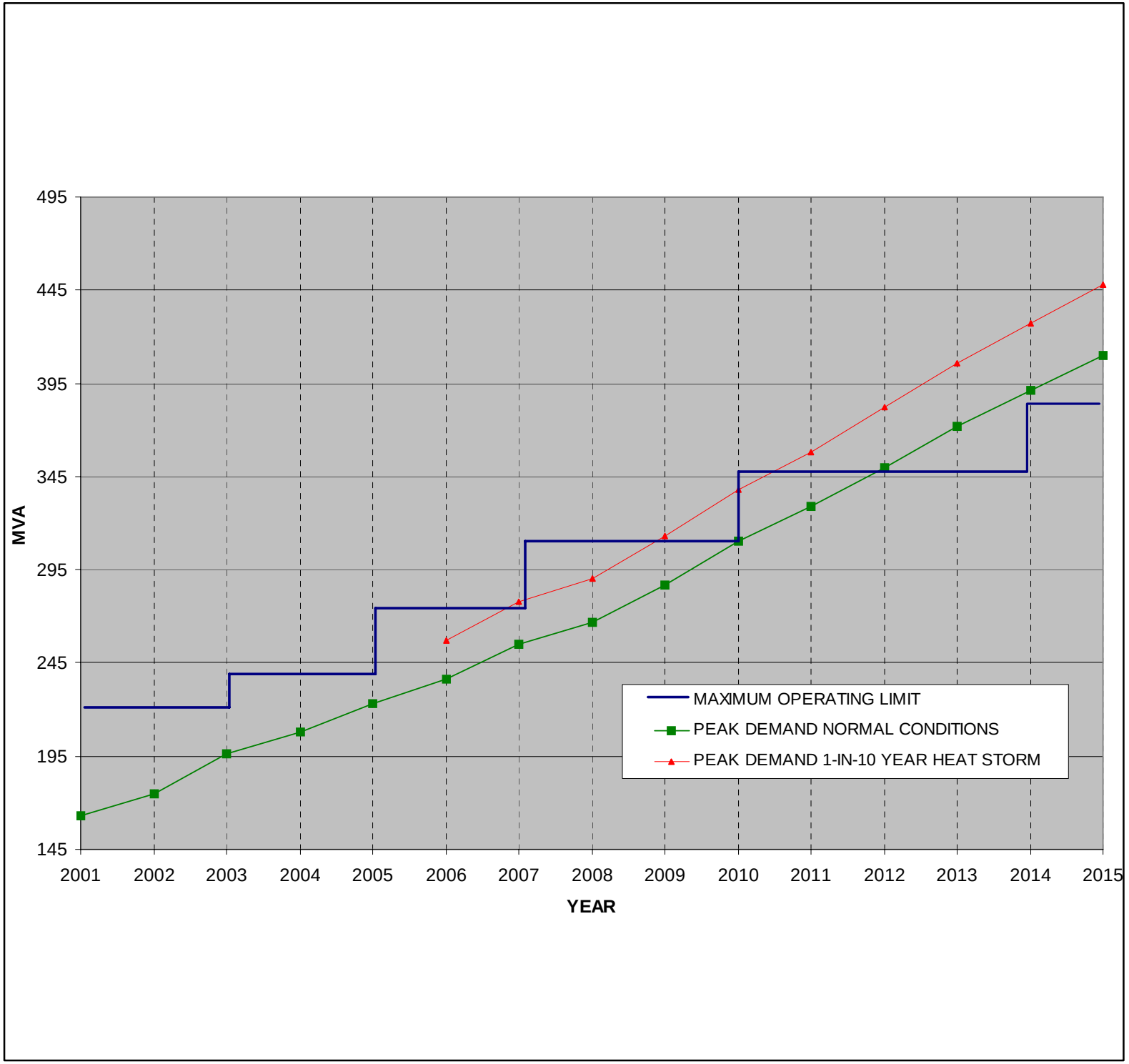
The distribution lines that serve the Electrical Needs Area originate from Archibald, Chino, Soquel, and Mira Loma Substations. Some of these distributions lines range in length from 5 to 7 miles, which were sufficient to serve electrical demand in the area when the land was primarily used for agriculture. However, a transition from agricultural uses to residential development in the Electrical Needs Area is impacting SCE's ability to serve growing electrical demand using these long distribution lines. To be able to accommodate the greater demand, the length of the distribution lines from the source substations to portions of the Electrical Needs Area needs to be shorter than the existing 5- to 7-mile long distribution lines. The shorter distribution line length is necessary to maintain adequate voltage levels at the end of the line and permits electric system operational flexibility. The shorter distribution line lengths allow SCE to transfer load between distribution lines and between substations in response to variations in demand, thereby reducing the possibility of overloading the equipment and its subsequent failure.

In 2009, the following electrical facility modifications and additions would be necessary in order to continue to safely and reliably serve the electrical demand in the Electrical Needs Area:

- An increase in the total transformation capacity available within the Electrical Needs Area; and

- The installation of additional distribution lines to provide electrical service to the Electrical Needs Area.

Figure 1.3
Proposed Kimball Substation
Electrical Needs Area
Substation Capacity
and Peak Demand



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1.4 Project Objectives

California Environmental Quality Act (CEQA) and the CEQA Guidelines (Section 15126.6.a) require the consideration of a range of alternatives to a proposed project or to the location of a proposed project that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects of the project. Therefore, SCE has defined the following objectives to address the Proposed Project purpose and need described in this chapter:

- Serve projected electrical demand requirements in the Electrical Needs Area beginning in 2009
- Maintain electrical system reliability within the Electrical Needs Area
- Enhance operational flexibility by providing the ability to transfer load between distribution lines and substations within the Electrical Needs Area
- Meet projected need while minimizing environmental impact
- Meet project need in a cost-effective manner

SCE considers these objectives in developing a reasonable range of alternatives to a project or to the location of a project. The following chapter describes the alternatives development process and the process for selecting alternatives for analysis in this Proponent's Environmental Assessment (PEA).

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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 to the location of the proposed project that 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 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).

The following sections describe the methodology for screening system alternatives and site alternatives, if needed. 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.

2.1 System Alternatives Screening Methodology

SCE uses the following four-step process to identify system alternatives in regions experiencing demand near the operating limits of existing electrical equipment.

Step 1. Technical engineering analyses are performed to determine whether the forecasted peak electrical demand can be accommodated by modifying the existing electrical infrastructure.

Step 2. If the forecasted electrical demand cannot be accommodated by modifying the existing electrical infrastructure, system alternatives are developed by considering feasible upgrades or additions to the existing electrical infrastructure.

Step 3. Each system alternative is evaluated in accordance with one or more of the following criteria:

- The extent to which an alternative would substantially meet the project objectives
- The feasibility of an alternative, considering capacity limits, ability to modify the system on existing sites, and economic viability

Step 4. If an alternative is not feasible then that alternative is eliminated from consideration. If it is feasible, the alternative is retained for full analysis in the PEA, as required by GO 131-D.

2.2 System Alternatives

Three system alternatives were considered to determine whether they met the project objectives:

(1) System Alternative 1 – The construction of a new substation and six new 12 kV distribution lines located within in the Electrical Needs Area;

(2) System Alternative 2 – The addition of transformer capacity at Soquel and Archibald Substations and six new 12 kV distribution lines;

(3) No Project Alternative.

Each of these alternatives is evaluated against the project objectives in the following sections.

2.2.1 System Alternative 1

System Alternative 1 includes the following elements:

- Construction of a new 66/12 kilovolt (kV) substation (Kimball Substation). The proposed Kimball Substation would be constructed on an approximately 2 acre site in the City of Chino, California. The Kimball Substation would be an unmanned, automated, low-profile, 56 megavolt-ampere (MVA) 66/12 kV substation.

- Modification of approximately 6.7 miles of the Chino-Corona-Pedley 66 kV subtransmission line and the construction two new 340-foot long underground circuits to extend the Chino-Corona-Pedley line into the proposed substation. The existing lines to be modified are located in either SCE-owned rights-of-way or public street rights-of-way. Along approximately 5.6 miles of the line, the existing wood poles would be replaced with light weight steel (LWS) poles and the conductor would be replaced. Along approximately 1.1 mile of the line, the conductor would be replaced on poles that will have been replaced before construction of the Kimball Substation Project as part of a separate relocation project exempt from General Order 131-D (GO 131-D). These modifications would form the new Chino-Kimball 66 kV subtransmission line.

- Addition of a second circuit to an approximately 0.9 mile segment of the existing Archibald-Chino-Corona 66 kV subtransmission line and construction of a new 0.4 mile segment within public street rights-of-way to connect the Chino-Corona-Pedley 66 kV line to the Archibald-Chino-Corona 66 kV line. These modifications would form the new Chino-Cimgen-Kimball 66 kV subtransmission line.

- Construction of six 12 kV underground circuits extending from the proposed substation to the nearest public street.

- Installation of new fiber optic cable and communication equipment to connect the proposed Kimball Substation to SCE's existing telecommunication system.

System Alternative 1 meets all the projects objectives. The estimated cost to construct System Alternative 1 is $13.3 million.

2.2.2 System Alternative 2

System Alternative 2 consists of upgrades at the existing Soquel and Archibald Substations that would include the addition of one new 28 MVA transformer and three new 12 kV distribution lines at each substation. The two new 28 MVA transformers (56 MVA total) would supply the necessary transformation capacity, while the six new 12 kV

underground distribution lines would deliver the increased capacity to the Electrical Needs Area.

In order to serve new and existing electrical demand in the Electrical Needs Area, distribution lines greater than five miles in length would need to be constructed from Soquel and Archibald Substations. Serving the forecasted increase in demand with distribution lines of this length would result in the inability to maintain reliable voltage levels at the end of the line. Consequently, System Alternative 2 does not meet all the project objectives. The estimated cost to construct System Alternative 2 is $16.2 million.

2.2.3 No Project Alternative

Under the No Project Alternative, no action would be taken. Therefore, this alternative would render SCE unable to provide sufficient, reliable service to the Electrical Needs Area. As discussed above, the electric demand in the Electrical Needs Area would exceed existing capacity by 2009. This would result in overloading the existing circuits that serve the Electrical Needs Area and cause customers to experience power outages. Additionally, the No Project Alternative would result in noncompliance with the CPUC-mandated voltage levels, and would not meet the project objectives.

2.2.4 System Alternative Recommendation

SCE is recommending System Alternative 1 as the preferred System Alternative. System Alternative 1 satisfies the project objectives by meeting long term projected electrical demands, maintaining reliability, and enhancing operational flexibility while minimizing impacts to the environment.

System Alternative 2 is not a feasible alternative, because it fails to address SCE's responsibility to maintain the necessary operational flexibility to safely and reliably serve the projected peak electrical demands during both normal conditions and abnormal conditions. The distribution lines that would be constructed as part of System Alternative 2 would be too long to maintain adequate voltage levels. In addition, longer distribution lines create difficulties in shifting electrical load between lines and between substations in response to demand. The inability to shift excess load causes the distribution lines and substations to overload, which may result in equipment failure and blackouts. System Alternative 2 is not a viable alternative and therefore was eliminated from further consideration in this PEA.

SCE determined that the No Project Alternative is not a viable option because it would prevent SCE from providing safe and reliable electrical service to its customers in the Electrical Needs Area. As a result, this alternative was eliminated from further consideration in this PEA.

2.3 Substation Site Selection

SCE has identified the area within the Electrical Needs Area roughly bounded by Kimball Avenue to the north, Hellman Avenue to the east, Chino-Corona Road to the south, and Euclid Avenue to the west (Project Area) as the optimal location within which (i) to construct a substation to provide the necessary increase in transformer capacity to the Electrical Needs Area, and (ii) to transfer load from existing distribution lines and substations to new shorter distribution lines served from the new substation.

SCE identified potential substation sites of at least 2 acres within the Project Area and evaluated each potential site applying a series of criteria, including, but not limited to:

- The proximity of each site to existing SCE subtransmission line infrastructure
- Engineering constraints imposed by each site
- The location of each site relative to growth within the Electrical Needs Area
- Relative compatibility with existing nearby land uses
- Relative compatibility with city and county land uses
- Potential environmental constraints imposed by each site

Based on the criteria listed above, SCE identified three possible substation sites: Alternative A, Alternative B, and Alternative C. (See Figure 2.1, Proposed Project and Alternative Substation Sites). All three sites would meet the proposed project objectives and would be environmentally acceptable; however, SCE's analyses indicate that Alternative A is preferred to the Alternative B or C sites. Descriptions of Alternative A, the preferred site, and Alternatives B and C follow.

2.4 Site Alternatives Evaluated in this PEA

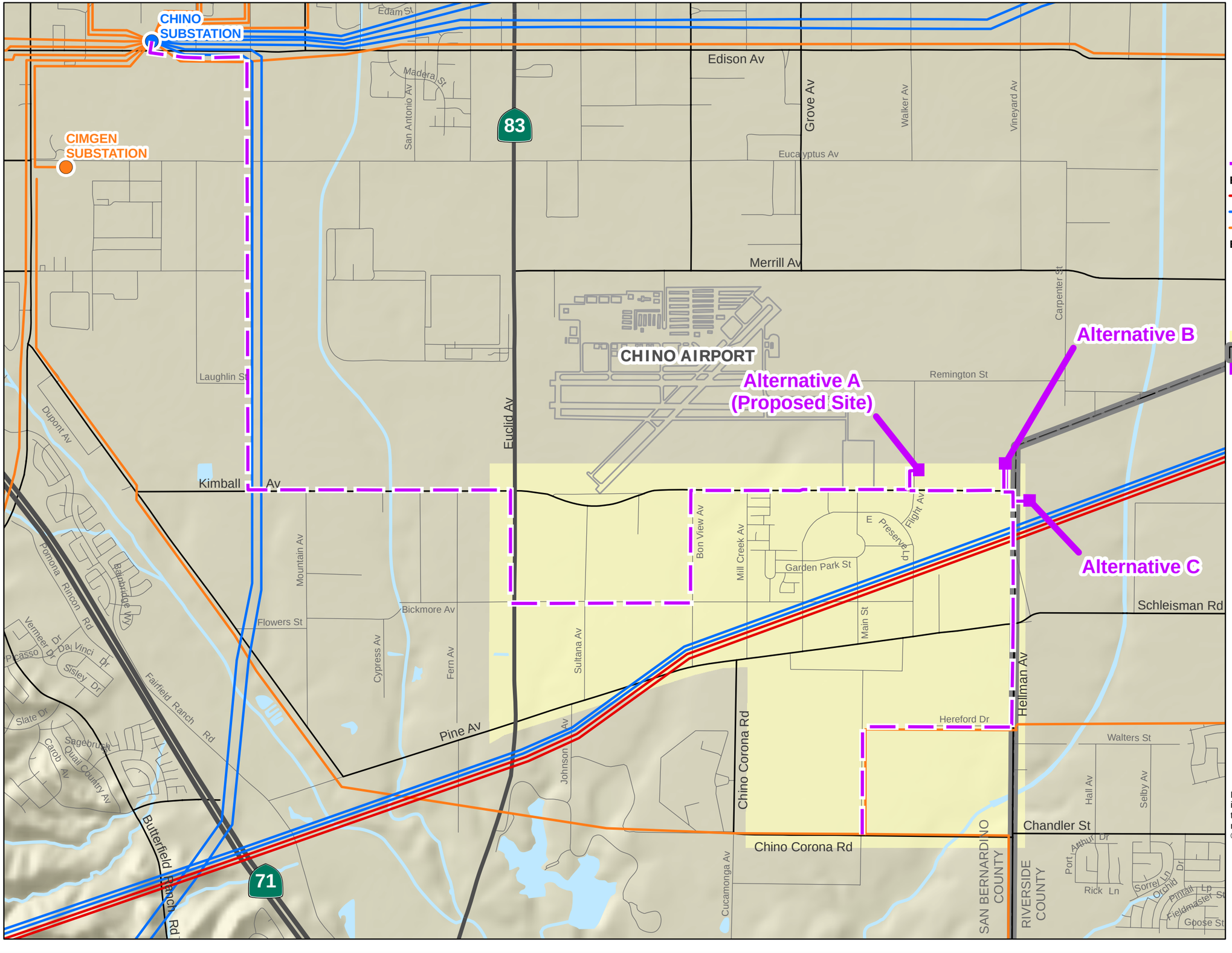
2.4.1 Alternative A

The Alternative A substation site is owned by SCE. It is located within the Project Area, in the City of Chino, on Walker Avenue approximately 340 feet north of Kimball Avenue in an area designated for airport-related development. The site is presently used as a storage yard for miscellaneous farm equipment and other materials. The site topography is generally flat, and the land is surrounded on the north and east by dairy facilities. There is a residence on the parcel to the south. The Chino Airport occupies the land west of the site. The Alternative A site is approximately 340 feet north of the Chino-Corona-Pedley 66 kV subtransmission line.

2.4.2 Alternative B

The Alternative B substation site is located in the Project Area in the City of Chino, approximately 500 feet north of the corner of Hellman Avenue and Kimball Avenue, in an area designated for light industrial use. The site is generally flat and is presently unused. A visual inspection of the site indicates that the site has been used as a settling pond for an adjacent dairy. Preparation of the site for substation construction may require extensive excavation, fill placement, and compaction. Low-growing weeds cover most of the site, and the land surrounding the site is presently being used for dairy operations. The Alternative B substation site is located approximately 500 feet north of the Chino-Corona-Pedley 66 kV subtransmission line.

Figure 2.1
Proposed Kimball Substation Proposed Project and Alternative Substation Sites



Proposed Subtransmission Line Upgrades (SCE, 2005)

Existing Transmission Lines (SCE, 2005)

- 500 kV
- 220 kV
- 66 kV

Existing Substations (SCE, 2006)

- 500 kV
- 220 kV
- 66 kV
- Cities (ESRI, 2000)
- Project Area (SCE, 2006)
- County Boundaries (TBM, 2006)
- Proposed Substation Sites (SCE, 2005)

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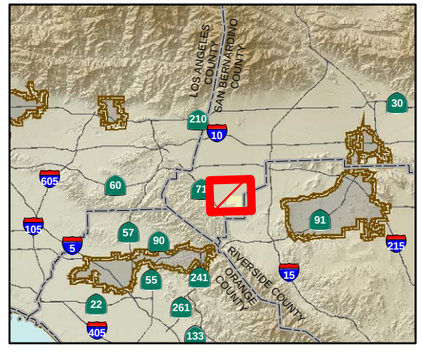

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2.4.3 Alternative C

Alternative C is located in the Project Area in unincorporated Riverside County approximately 250 feet west of Hellman Avenue and approximately 200 feet south of Kimball Avenue. According to the Southern California Association of Governments (2004), the land at the Alternative C site is designated for urban mixed use and office development. However, Tract Map 31309, updated June 2006, filed in the County of Riverside, depicts the Alternative C substation site within a proposed park site. Presently, there is no access from a public street to this site. The site is a generally flat, fallow agricultural field divided by an earthen berm traversing east-west across the site. The land to the north of the site is used for dairy operations and the land to the south is undeveloped. The Alternative C site is approximately 250 feet east of the Chino-Corona-Pedley 66 kV subtransmission line.

2.4.4 Substation Site Recommendation

Although all three sites meet the aforementioned criteria for substation site selection, Alternative A was determined to be the preferred alternative substation site. Alternative A would require only 340 feet of subtransmission line construction to connect the existing Chino-Corona-Pedley 66 kV subtransmission line to the substation, and 380 feet of new access road construction. The Alternative A site is compatible with surrounding land use designations, and poses the least engineering and environmental constraints to substation construction.

As compared to Alternative A, Alternative B would require an additional 200 feet of subtransmission line construction to connect the existing Chino-Corona-Pedley 66 kV subtransmission line to the substation, an additional 200 feet of new access road construction, and would pose greater engineering and environmental constraints to substation construction due to the presence of the settling pond.

As compared to Alternative A, Alternative C would pose greater engineering and environmental constraints to substation construction due to the presence of the earthen berm. Additionally, because Alternative C is located within a proposed park, acquisition of Alternative C may prove to be difficult, and may have an adverse impact to the surrounding park use.

2.5 Preferred Alternative (Proposed Project)

SCE recommends construction of System Alternative 1 with the substation facilities on site Alternative A (Kimball Substation Project or Proposed Project) as the preferred alternative.

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3.0 PROJECT DESCRIPTION

This section describes construction, operation, and maintenance of the substation, the associated subtransmission and distribution lines, and the telecommunication system for the Proposed Project and each of the alternatives.

3.1 Proposed Kimball Substation Facilities

3.1.1 Substation Description

The substation would consist of electrical equipment needed to operate the substation, underground distribution circuits leaving the substation, a perimeter wall surrounding the substation equipment with a gate to provide access in and out of the substation, and an access road to the substation from a public road. The substation footprint (area contained within the substation perimeter wall) is approximately 1.4 acres. The total area of the substation including a buffer area (area outside the substation perimeter wall) is approximately 1.9 acres. The substation would incorporate low-profile design features, which would limit the height of the electrical equipment to approximately 17 feet.

Substation Equipment

The substation would be an unmanned, automated, 56 MVA, 66/12 kV low-profile substation containing a 66 kV switchrack, two 28 MVA 66/12 kV transformers, two 4.8 MVAR 12 kV capacitor banks, and a 12 kV switchrack. The substation would be served from two 66 kV subtransmission source lines. Six 12 kV distribution circuits would be constructed underground from the substation to Kimball Avenue. The exact location and routing of these proposed circuits have yet to be determined, but will be underground within city streets. These circuits cannot be designed at this time because of the uncertainty of the precise location of future electrical demand.

The 66 kV switchrack would be a low-profile design with an operating and transfer bus configuration with one line breaker and three group disconnects. The bus-tie position would have one line breaker and one set of disconnects. The 12 kV switchrack would be a low-profile design with an operating bus, a transfer bus, and a provision for a second operating bus as well as 10 future 12 kV distribution lines, two additional 28 MVA transformers, and two additional 4.8 MVAR capacitors if needed in the future.

One prefabricated metal Mechanical-Electrical Equipment Room (MEER) measuring approximately 12 feet high, 36 feet long, and 20 feet wide would be erected to house control and relay racks, battery and battery chargers, AC and DC distribution switchboards and telecommunication equipment. The substation would be equipped with a substation automation system which includes one Human Machine Interface (HMI) rack and approximately twelve 19-inch equipment racks.

All equipment and structures at the substation would be electrically grounded in accordance with SCE and industry standards. Grounding calculations would be based on soil resistivity measurements.

Electrical equipment housed within the substation is summarized in Table 3.1, Substation Facility Equipment Summary.

Table 3.1 Substation Facility Equipment Summary

Equipment	Description
66 kV Switchrack	The proposed 66 kV low-profile steel switchrack would consist of six bays: two positions for lines, two positions for banks, one bus tie position, and a vacant position for a future 66 kV line. The two operating and transfer buses would each be 136 feet long and consist of 1590 thousand circular mils (kcmil) aluminum conductor steel reinforced (ACSR) conductor for each phase. Four of the switchrack positions would be equipped with a breaker and three group disconnect switches. The fifth position would be equipped with a breaker and one group disconnect switch. A control cable trench from the switchrack to the MEER would be installed. The switchrack dimensions would be approximately 17' H x 118' L x 64' W.
Transformers	Transformation would consist of two 28 MVA 66/12 kV transformers with isolating switch disconnects on high and low sides, surge arresters and neutral current transformers. The dimensions would be approximately 15' H x 78.5' L x 42' W.
12 kV Switchrack	The 12 kV low-profile switchrack would consist of a nine position rack expandable to twenty positions with wrap-around arrangement; 486 feet of 3-1/2 inch diameter extra heavy aluminum pipe to be utilized for the operating and transfer buses; a power cable trench; and a control cable trench to the MEER. The dimensions would be approximately 17' H x 81' L x 34' W.
Capacitor Banks	Two 12 kV, 4.8 MVAR capacitor banks would be installed. The dimensions would be approximately 17' H x 15.5' L x 13' W.
Mechanical-Electrical Equipment Room	A MEER would be constructed and contain control and relay panels, battery and battery charger, AC and DC distribution, HMI rack, communication equipment, telephone, and local alarm. Dimensions would be approximately 12' H x 36' L x 20' W.

Substation Lighting

The proposed substation would have access and maintenance lighting. The access light would be low-intensity and controlled by photo sensors. Maintenance lights would consist of high-pressure sodium lights located in the switchracks, around the transformer banks, and in areas of the substation where maintenance activity may take place. Maintenance lights would be used only when required for maintenance outages or emergency repairs occurring at night. Maintenance lights would be controlled by a

manual switch and would normally be in the off position. The lights would be directed downward and shielded to reduce glare outside the facility.

Substation Landscaping

The substation site would not be landscaped immediately following construction. Instead, as the surrounding area develops, a plan for substation landscaping would be prepared and would be consistent with community and city standards to the extent that they are not inconsistent with SCE safety standards.

Substation Perimeter Features

To screen the substation from the public and to secure the facility, the substation would be enclosed on all four sides by a minimum 8 foot high perimeter wall and would be consistent with community standards. The metal access gate would also be approximately 20 feet wide and a minimum of 8 feet high. All perimeter walls and gates would be fitted with barbed wire for increased security. The barbed wire would not be visible from outside the perimeter wall.

Site Access

The substation would be accessed by a 16-foot wide asphalt concrete paved driveway connecting to the future Walker Avenue. The substation entrance would have a locked gate for two-way traffic access to the substation.

Substation construction may pre-date the completion of future Walker Avenue. If this is the case, SCE would construct a temporary 24-foot wide asphalt-paved access road to the substation from Kimball Avenue along the future Walker Avenue right-of-way. Construction of the access road is described in Section 3.1.2, Substation Construction.

3.1.2 Substation Construction

This section primarily discusses the substation construction plan for the Proposed Project substation site. Although the alternative substation sites are similar in nature to the Proposed Project substation site, there are differences between each alternative site and the Proposed Project substation site that would affect site preparation activities. These differences are summarized in this section below.

Table 3.2, Substation Construction Equipment Table, includes the approximate equipment, labor, and scheduling requirements for substation construction at the preferred site.

Substation Site Preparations for Alternative A

The substation site, including the buffer area, is approximately 272 feet by 300 feet and totals approximately 1.9 acres. The proposed substation site is bordered on the north and west by mature tamarisk (*Tamarix aphylla*) trees. Approximately nine small walnut trees within the substation footprint would be removed to the full depth of their root system. The mature trees along the north and west lines would be protected during construction and would not be removed.

In addition to the tree waste, the top six inches of soil (approximately 1,500 cubic yards of waste) would be removed and replaced with an appropriate fill material. Waste material would be tested for the presence of contaminants and transported off-site and disposed of at an appropriate landfill.

The existing site topography would be altered slightly by grading. The site would be graded at a one percent slope toward the south. The actual quantity of fill to be imported to the site would be calculated as part of the final engineering and design. It is estimated that approximately 6,000 cubic yards of imported fill would be required if the site is graded to a one percent slope. All grading would be conducted in compliance with local ordinances.

Storm water runoff at the substation site would flow from north to south, and would be directed towards a 3-foot wide concrete swale located at the southern perimeter wall. The majority substation area within the perimeter wall would be covered with a 4-inch thick, pervious, crushed rock surface layer that would provide some filtration for storm water runoff prior to it reaching the concrete swale. The swale would direct the storm water runoff to a local storm drain system, if future local storm drains are available at the time of substation construction. If local storm drains are not available or drainage to storm drains is not feasible, then storm water runoff would be discharged into an on-site fenced retention basin or other storm water best management practice in compliance with local ordinances.

In the event that the future Walker Avenue is not constructed prior to construction of the substation, a temporary access road would be graded and installed as outlined in Section 3.1.1, Substation Description. The temporary access road would be built based on the site topography, so that it would be accessible to all construction vehicles and equipment. This temporary access road would be built with gradients and curvatures that would permit heavy equipment usage and maneuvering.

Substation Site Preparations for Alternative B

The Alternative B substation site is presently unused. A visual inspection of the site indicates that the site has been used as a settling pond for an adjacent dairy. The site has the potential to have chemicals associated with agricultural waste present in shallow soil. Soils containing chemicals at hazardous concentrations would require excavation and removal prior to the start of construction activities. If there was extensive infiltration at the site as a result of its use as a settling pond, the soil may be unsuitable to support substation structures. If this is the case, over-excavation, replacement and recompaction of the soil would be required. Additionally, filling the settling pond during site grading would require a greater number of cubic yards of soil to be imported to the site.

In the event that the future Hellman Avenue is not constructed prior to construction of the substation, a temporary access road would be graded and installed. The temporary access road would be built based on the site topography, so that it would be accessible to all construction vehicles and equipment. This temporary access road would be built with gradients and curvatures that would permit heavy equipment usage and maneuvering.

Substation Site Preparations for Alternative C

The Alternative C substation site is presently a fallow agricultural field divided by an earthen berm traversing east-west across the site. Removal of the earthen berm would require more soil to be exported from the site during site grading. In addition, the entrance to the Alternative C substation site is not accessible by road. It is uncertain at this point how the access road to the Alternative C substation site would be configured due to the unknown timing of road extensions and realignments that have been proposed in the area.

Substation Facilities for Alternative A

After substation site preparation, a temporary chain-link fence would be erected around the perimeter of the site. Construction of the foundations and below-ground facilities (e.g., ground-grid, conduit, and other infrastructure) would be completed, followed by installation of the above-ground structures and the electrical equipment, and construction of the perimeter wall. Equipment laydown areas for substation construction would be within the substation footprint.

All materials for the substation would be delivered by truck. The transformers would be delivered by heavy transport vehicles and off-loaded on-site by large cranes with support trucks. If necessary, a traffic control service would be used for transformer delivery. The majority of the truck traffic would occur on designated truck routes and major streets, and when possible, would be scheduled for off-peak traffic hours. Some deliveries, such as cement truck deliveries, would occur during peak hours when footing work is being performed.

The approximate construction equipment, personnel and scheduling for the substation construction is shown in Table 3.2, Substation Construction Equipment Table.

Substation Facilities for Alternative B

The substation facilities that would be installed for Alternative B would be the same as those for Alternative A.

Substation Facilities for Alternative C

The substation facilities that would be installed for Alternative C would be the same as those for Alternative A except that additional bus support structures may be required due to an altered configuration caused by the shape of the property.

Table 3.2 Substation Construction Equipment Table

Construction Activity	Duration	Number of Personnel	Equipment[1]	Estimated Usage (Hours per Day)
Site Management	All		Office Trailer	
Grading	40 days	6	2 Water Trucks (Gasoline)	8
			Truck for Soil Test Inspector (Gasoline)	8
			980 Loader (Diesel)	8
			Grader (Diesel)	8
			Vibratory Compactor (Diesel)	6 (for 20 days)
Survey	45 days	2	2 Survey Trucks (Gasoline)	8
Civil (foundations, underground conduit, ground grid, etc.)	50 days	8	2 Crew Trucks (Gasoline/Diesel)	4
			2 Dump Trucks	2 - 4
			5-Ton Stake Bed Truck	2
			Trencher	8 (for 30 days)
			Drill Rig	8 (for 10 days)
			Tractor	6 - 8
			Forklift	4

Construction Activity	Duration	Number of Personnel	Equipment[1]	Estimated Usage (Hours per Day)
Electrical (MEER, switchracks, conductor, circuit breakers, etc.)	80 days	10	8-Ton Stake Truck	4
			2 Crew Cab Trucks (Gasoline/Diesel)	6
			2 Carryall Vehicles (Gasoline)	6
			2 Cranes	4
			Lift Truck	4
			2 Pickups (Gasoline/Diesel)	4
			Forklift	6
			2 Manlifts	8
			2 Support Trucks	4
Transformer Setup	20 days	5	Carryall Vehicle (Gasoline)	2
			Crew Truck (Gasoline/Diesel)	2
			Crane	6
			Forklift	6
			Processing Trailer (Electric)	24 (for 8 days)
			Low Bed Truck	4

Construction Activity	Duration	Number of Personnel	Equipment[1]	Estimated Usage (Hours per Day)
Test (relays, energization, etc.)	40 days	2	Test Truck (Gasoline/Diesel)	4
Paving Contractor	5 days	8	Foreman Truck (Gasoline/Diesel)	6
			2 Dump Trucks (Gasoline/Diesel)	6
			2 Skip Loaders	6
			Barbergreen	8 (for 2 days)
Fence Contractor	7 days	4	Foreman Truck (Gasoline/Diesel)	4
			Crewcab (Gasoline/Diesel)	4
			Bobcat (Gasoline)	8
			3-Ton Flatbed Truck	2 (for 2 days)

[1]Fuel for equipment is assumed to be diesel except where noted

3.1.3 Substation Operation and Maintenance

The proposed Kimball Substation would be unmanned and the electrical equipment within the substation would be monitored and controlled remotely by a power management system from Mira Loma Substation. Due to the remote operation of the substation, SCE personnel would generally visit for electrical switching and routine maintenance. Routine maintenance would include equipment testing, equipment monitoring and repair, as well as emergency and routine procedures for service continuity and preventive maintenance. SCE personnel would generally visit the substation two to three times per week.

Substation operation and maintenance would be the same for Alternative A, Alternative B, and Alternative C.

3.2 66 kV Subtransmission Line Description

3.2.1 Subtransmission Line Modifications

The existing Chino-Corona-Pedley 66 kV subtransmission line would be the source line for the proposed Kimball Substation. This subtransmission line would be looped into the proposed Kimball Substation. To accomplish this loop-in, two new 66 kV line segments, approximately 340 feet each, would be constructed underground from the Chino-Corona-Pedley 66 kV subtransmission line at the intersection of Kimball Avenue and Walker Avenue to the substation. As a result of the loop-in, two new 66 kV subtransmission lines would be formed; the Chino-Kimball 66 kV subtransmission line and the Chino-Cimgen-Kimball 66 kV subtransmission line (Figure 3.1, Subtransmission Line Arrangement for the Proposed Project). To accomplish the loop-in, the following modifications to existing 66 kV subtransmission lines would be necessary:

- Modify approximately 6.7 miles of the Chino-Corona-Pedley 66 kV subtransmission line by replacing the existing wood poles with light weight steel (LWS) poles and replacing the existing conductor with 954 kcmil stranded aluminum conductor (954 SAC). Modify an additional 1.1 mile of the line by replacing the conductor with 954 SAC.

- Construct two new 66 kV underground line segments using 3000 kcmil copper cable to extend the existing Chino-Corona-Pedley 66 kV subtransmission line approximately 340 feet into the proposed Kimball Substation.

- Construct a new, approximately 0.4-mile long 66 kV subtransmission line segment using LWS poles and 954 SAC.

- Add a second 66 kV subtransmission line approximately 0.9-mile long to existing structures using 954 SAC.

The location of the subtransmission line modifications is shown on Figure 3.2, Proposed Project Subtransmission Line Modifications, and is detailed below.

Segment 1. This segment is routed south from Chino Substation to the south side of Edison Avenue, east in existing utility rights-of-way, and south to Kimball Avenue. Approximately 10,500 feet of conductor and 56 poles would be replaced along this segment.

Segment 2. This segment is routed east along the north side of Kimball Avenue to Euclid Avenue. Approximately 6,500 feet of conductor and 30 poles would be replaced along this segment.

Segment 3. This segment is routed south along the west side of Euclid Avenue to Bickmore Avenue. No modifications associated with the Proposed Project would be necessary on this segment.

Segment 4. This segment is routed east along the south side of Bickmore Avenue to Bon View Avenue (future Rincon Meadow Avenue). Approximately 6,400 feet of conductor and 10 poles would be replaced along this segment.

Segment 5. This segment is routed north on the west side of Bon View Avenue to Kimball Avenue. Approximately 2,600 feet of conductor and 10 poles would be replaced along this segment.

Segment 6. This segment is routed east on the north side of Kimball Avenue to Walker Avenue. Approximately 4,300 feet of conductor and 30 poles would be replaced along this segment. At the intersection of Walker Avenue and Kimball Avenue a tubular steel pole (TSP) riser would be installed to transition the overhead lines to underground cables. Two new 66kV underground lines would be extended approximately 600 feet from the TSP riser into Kimball Substation.

Segment 7. This segment is routed east along the north side of Kimball Avenue to Hellman Avenue. Approximately 2,200 feet of conductor and 15 poles would be replaced along this segment.

Segment 8. This segment is routed south along the west side of Hellman Avenue to Schleisman Avenue. Approximately 3,100 feet of conductor would be installed on poles that will be replaced prior to construction of the Proposed Project.

Segment 9. This is a new segment to be constructed along the west side of Hellman Avenue to Hereford Drive. Approximately 2,300 feet of new conductor and 9 new poles would be installed.

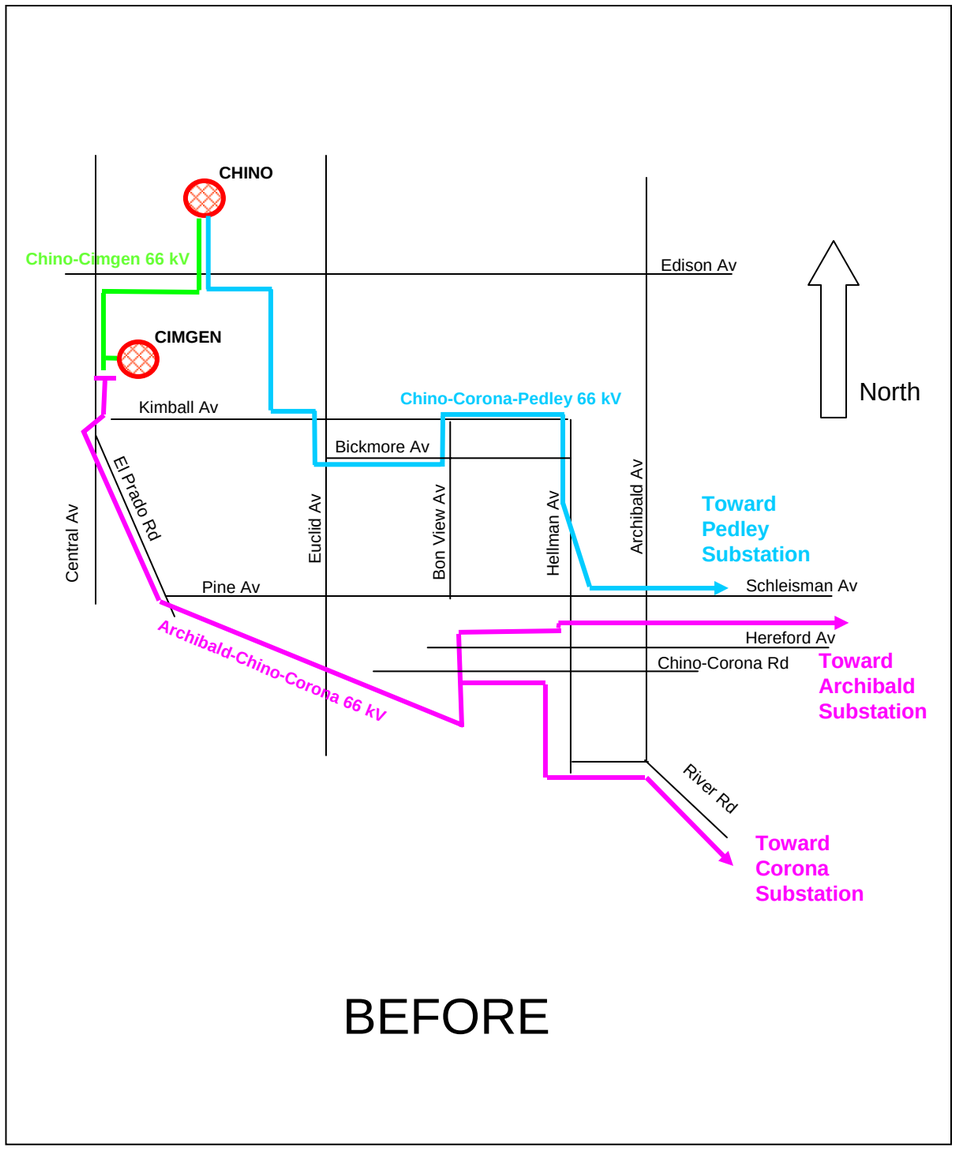
Segment 10. This segment is routed west along the north side of Hereford Drive to Comet Avenue, then south along the west side of Comet Avenue to SCE's existing 66 kV subtransmission line at Chino-Corona Road. Approximately 4,800 feet of new conductor would be installed on existing structures.

In summary, the subtransmission modifications would result in a total of 160 new LWS poles and 9.1 miles of new 954 kcmil stranded aluminum conductor. One TSP riser would be installed at the intersection of Walker Avenue and Kimball Avenue to connect the overhead conductor to underground cables. In areas where there are existing SCE distribution lines and third-party owned telecommunication and cable television lines attached to the existing wood poles, they either will be undergrounded in public streets prior to commencement of the Proposed Project as part of a separate project exempt from GO 131-D or transferred to the new LWS poles at approximately the same height above ground level as they are now. The new LWS poles would be approximately 10 feet taller than the existing wood poles. A simulation of the proposed poles is shown on Figure 3.3, Existing and Proposed Subtransmission Line Poles.

Except for the location and length of the underground 66 kV line segments from the Chino-Corona-Pedley 66 kV subtransmission line into the substation, modifications to the subtransmission lines would be the same for Alternative A, Alternative B and Alternative C.

Figure 3.1

Subtransmission Line Arrangement for the Proposed Project



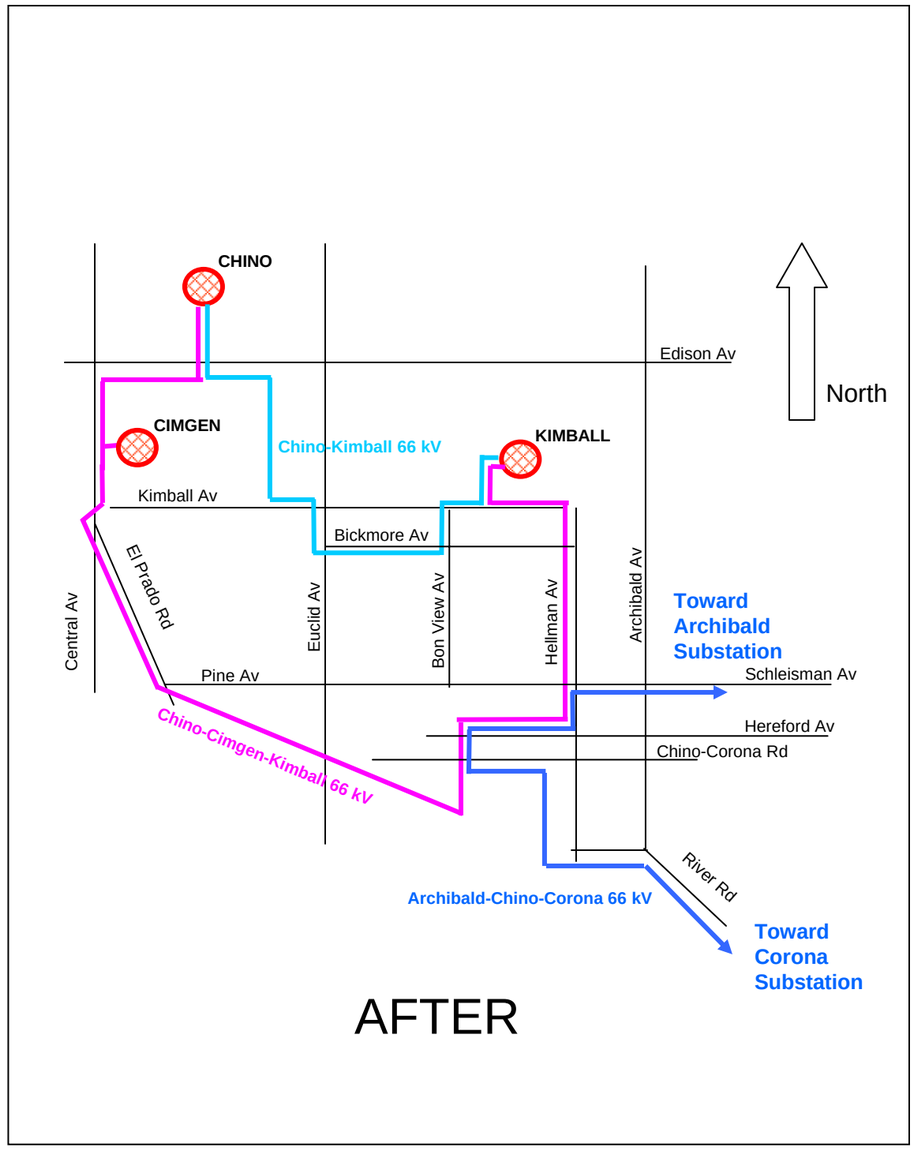


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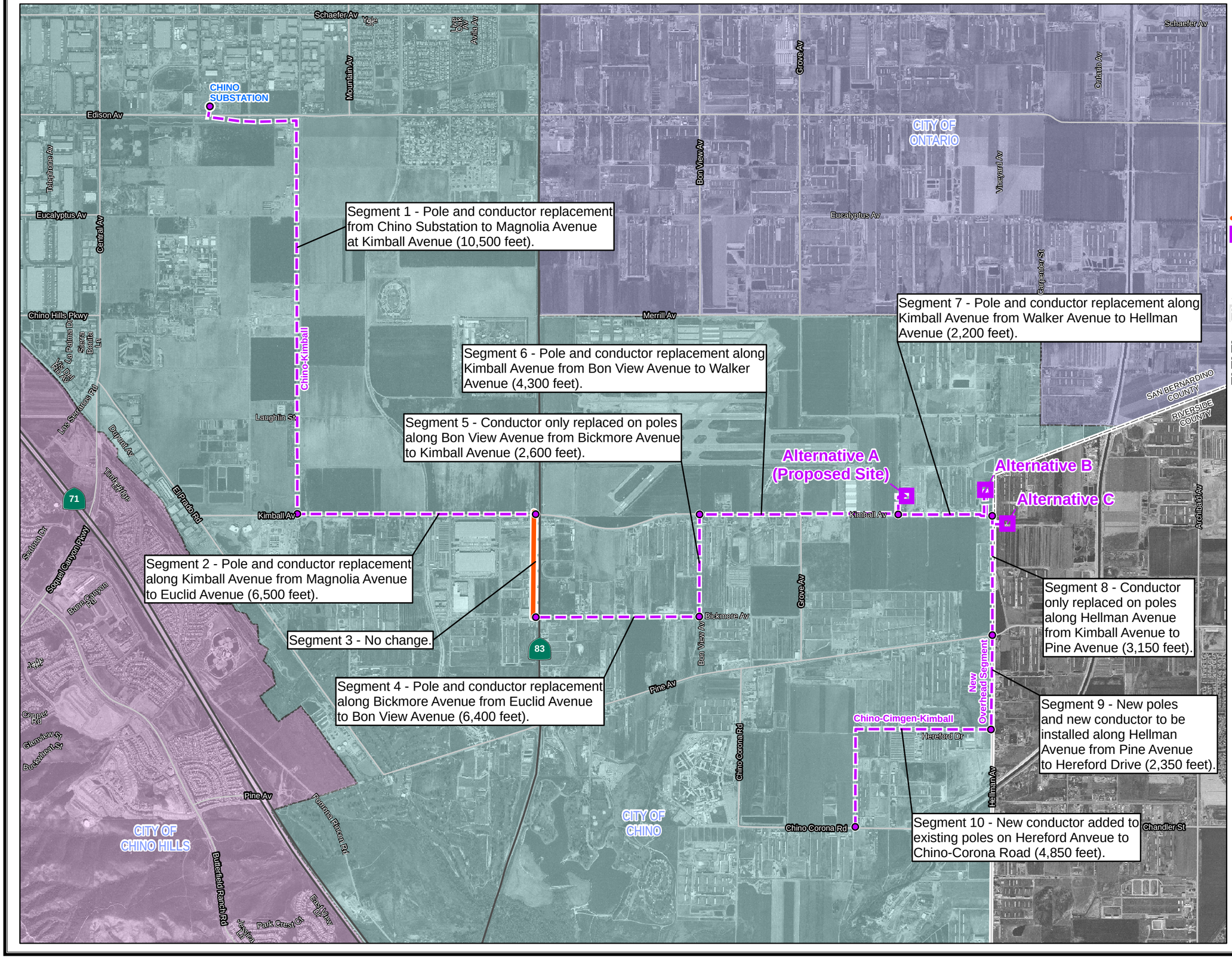
Figure 3.2
Proposed Kimball Substation
Proposed Project
Subtransmission
Line Modifications



- Proposed Subtransmission Line Upgrades (SCE, 2005)
- No Change
- Proposed Substation Sites (SCE, 2005)
- Existing Substations (SCE, 2006)

Transportation

- US Highways
- Road
- County Boundaries (TBM, 2006)

Cities (TBM, 2006)

- Chino
- Chino Hills
- Ontario

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

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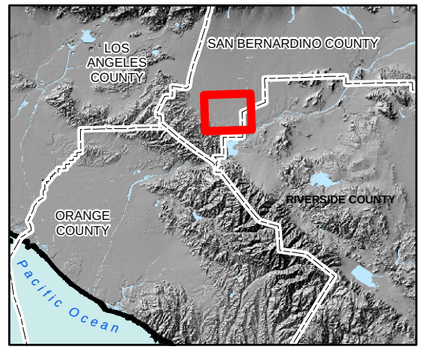

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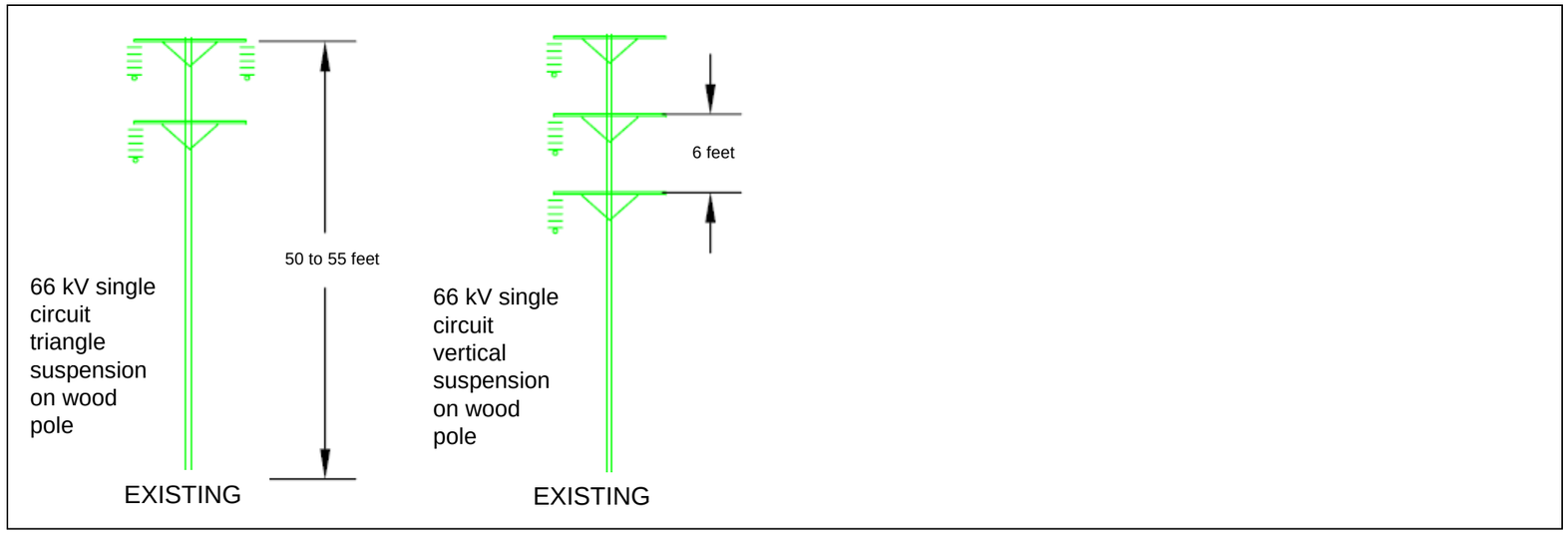
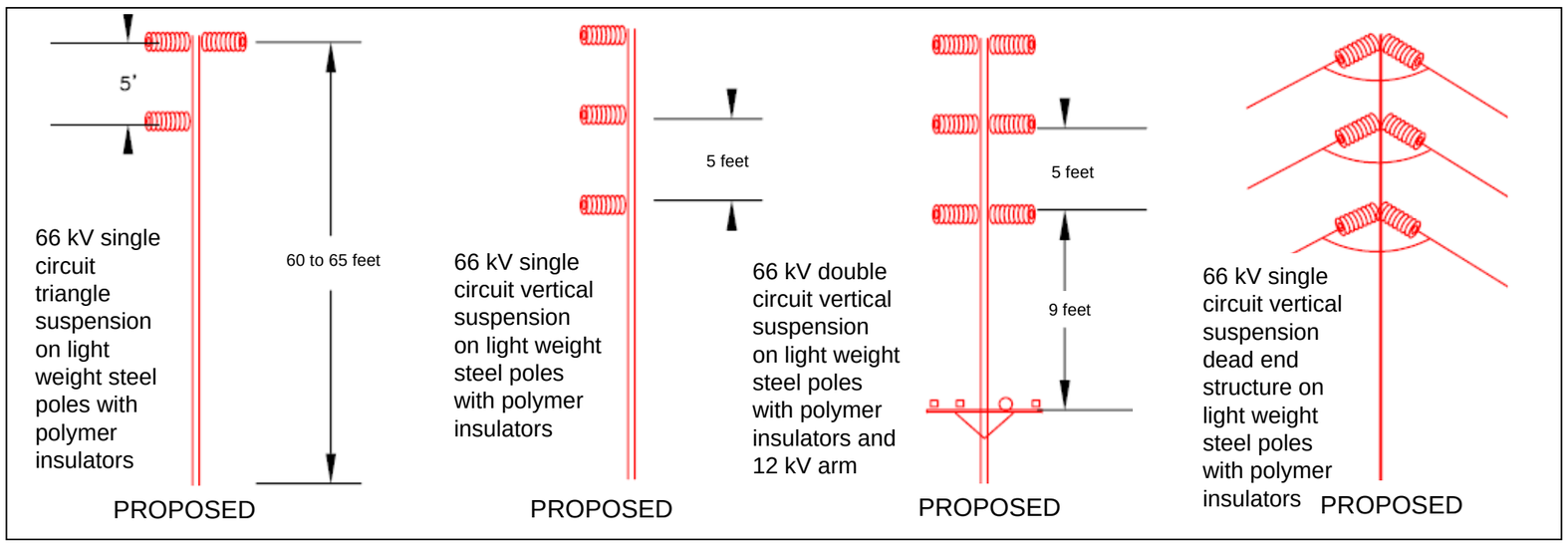
Figure 3.3

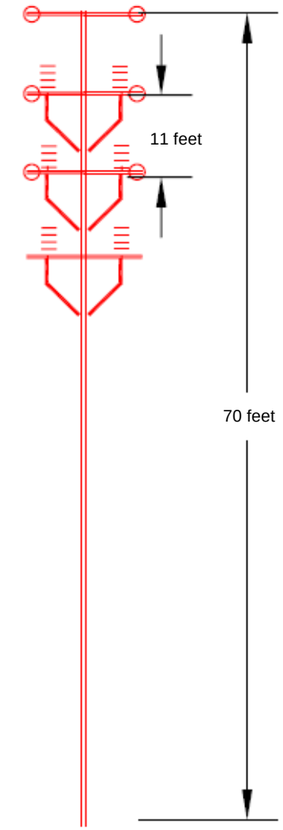
Existing and Proposed Subtransmission Poles

The existing wood poles are approximately 50 to 55 feet above grade. Porcelain insulators are attached to 10 foot long wood crossarms that are mounted approximately 6 feet apart. 12 kV arms are mounted approximately 9 feet below the lowest subtransmission conductor. Communications circuits (if present) are attached directly to the pole at 10 feet below the 12 kV arm. Poles are approximately 24 inches diameter at the base and approximately 12 to 16 inches at the top.



The wood poles would be replaced with light weight steel poles and polymer insulators. 12 kV arms would be mounted 9 feet below the lowest subtransmission conductor. Communications circuits (if present) would be attached directly to the pole at 10 feet below the 12 kV arm. Poles are approximately 24 inches diameter at the base and approximately 12 to 16 inches at the top.





66 kV double circuit Tubular Steel Pole Riser

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3.2.2 Subtransmission Line Construction

The following sections outline the construction activities for the overhead and underground 66 kV subtransmission line modifications associated with the Proposed Project.

Overhead Subtransmission Line Construction

The equipment installing and removing poles, and for pulling overhead conductor would be positioned on existing streets directly adjacent to the new and existing lines. The personnel, equipment, and construction schedule for the overhead subtransmission line modification work is provided in Table 3.3, Overhead Subtransmission Line Construction Equipment Table.

Light Weight Steel Pole Installation. Installation of LWS poles would require excavation to approximately 9 feet below ground surface and the poles would be set directly in native soil. All construction equipment for LWS pole installation (including delivery by truck) would be staged on public street rights-of-way and would require the use of a traffic control service. All lane closures would be conducted in accordance with local ordinances.

Wood Pole Removal. The existing wood poles would be completely removed (including the portion below ground surface) and the hole would be backfilled using imported fill in combination with fill that may be available from excavation from the installation of the new LWS poles. The wood poles to be replaced would be returned to the manufacturer, 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.

Tubular Steel Pole Riser Installation. A TSP riser is the structure used to transition between overhead conductors to underground cables. A TSP riser footing typically requires a borehole 8 to 9 feet in diameter and 20 to 40 feet deep. Reinforcing steel and mounting bolts would be positioned in the excavation and concrete would be placed around the structures to set the footing. After the footing has set, the TSP riser would be assembled on site, erected and bolted to the foundation.

Conductor Installation. Pole installation would be followed by installing the overhead conductors. This would include tensioning and clipping in the conductor. Conductor pulling would require a 50 to 100 foot by 10 foot area at each end of the pull, one for feeding out conductor and one for pulling. Typically, pulling sites are located every 6,500 feet.

All conductor installation would be in accordance with SCE specifications, similar to process methods detailed in IEEE Standard 524-1992 (Guide to the Installation of Overhead Transmission Line Conductors).

Table 3.3 Overhead Subtransmission Line Construction Equipment Table

Construction Activity	Duration	Number of Personnel	Equipment[1]	Estimated Usage (Hours per Day)
Installation of 160 LWS poles and removal of wood poles	60 Days	8	Heavy Line Truck	4
			Carry-All (Gasoline)	4
			Light Material Truck	4
			75' Bucket Truck	4
			Pickup Truck (Gasoline)	4
Wire Replacement Attachment and Termination	75 Days 15 Days	8	Heavy Line Truck	4
			Carry-All (Gasoline)	4
			Light Material Truck	4
			Pickup Truck (Gasoline)	4
Final connection of new lines	2 Days	8	Heavy Line Truck	4
			Carry-All (Gasoline)	4
			Light Material Truck	4
			Pickup Truck (Gasoline)	4

[1]Fuel for equipment is assumed to be diesel except where noted.

Underground Subtransmission Line Construction

This section describes installation of the underground subtransmission line segments that would extend the existing Chino-Corona-Pedley 66 kV subtransmission line at the corner of Kimball Avenue and Walker Avenue to the proposed Kimball Substation. Two new line segments consisting of 3000 kcmil copper cable would be placed in an approximately 340-foot long concrete encased PVC duct bank that would be installed between the substation and the TSP riser. The personnel, equipment, and construction schedule is provided in Table 3.4, Underground Subtransmission Line Construction Equipment Table.

Digging and Trenching. A 24-inch wide by 5-foot deep trench would be required to place the conduits underground. Trenching would be performed with a backhoe and other machinery specifically designed for this purpose. Spoils would be tested for the presence of contaminants, and where appropriate, either used at the substation site, transported off-site for use as clean fill, or disposed of at an appropriate landfill. If the trenching requires the removal of pavement, it would be disposed of at an appropriate facility as construction debris. The trench would be backfilled with two-sack slurry. As with all SCE underground construction, Underground Service Alert would be contacted at least 48 hours prior to excavation in order to minimize impacts to other utilities.

Vault Installation. Vaults are below grade (i.e., below ground surface) concrete enclosures where the duct banks terminate. The vaults are constructed specifically for use in roadways and can accommodate vehicle loads without damage. One vault will be located inside Kimball Substation and one vault will be located north of the TSP riser along the proposed Walker Avenue. The top of the vaults will be installed approximately 3 feet below surface and will house equipment and splices for underground lines.

Duct Bank Installation. Five-inch diameter polyvinyl chloride (PVC) conduits are configured and encased in approximately 3 inches of five-sack hardened concrete at a minimum depth of 36 inches. This is known as a duct bank. One duct bank would be installed from the vault within Kimball Substation to the vault north of the TSP riser along the proposed Walker Avenue. Thereafter, the duct bank extends from the vault to the TSP riser. Typical 66 kV subtransmission duct bank installations would accommodate six cables and one 4/0 copper ground wire. The concrete encasement provides protection from accidental third party damage and improves heat dissipation.

Backfill Placement. Once the concrete has cured, two-sack concrete slurry would be used to backfill the trench to the finished grade at a ninety percent rate of compaction. If the trench is installed in a paved roadway, the excavation would be repaved to match the existing roadway per local ordinance specifications.

Cable Pulling. Upon completion of all substructures including the TSP riser, the 66 kV underground subtransmission line segments will be installed by pulling underground cables from a reel positioned at the vault within the proposed Kimball Substation to the vault north of the TSP riser along the proposed Walker Avenue. The cable would then be pulled from the vault to the TSP riser. Another set of underground cables would then be pulled from the substation to the vault outside the substation, and the ends of each cable would be spliced together.

Table 3.4 Underground Subtransmission Line Construction Equipment Table

Construction Activity	Duration	Number of Personnel	Equipment[1]	Estimated Usage (Hours per Day)
Tubular Steel Pole Riser Footing Installation	2 Days	4	4 Cement Trucks	4
			Pickup Truck (Gasoline)	3
			Tractor with Trailer	3
			Dump Truck	5
			Backhoe	5
			Drill Rig	6
Construction of 66 kV Duct Bank Install 2 vaults	6 Days 4 Days	6	Backhoe	8
			Equipment Truck	4
			Dump Truck	8
			Pickup Truck (Gasoline)	3
			6 Cement Trucks	3

Construction Activity	Duration	Number of Personnel	Equipment[1]	Estimated Usage (Hours per Day)
Cable Pulling	5 Days	6	Cable Puller	6
Cable Terminating	5 Days		60-Ton Crane	5
			Light Material Truck	3
			Manlift Truck	6
			Tractor with Trailer	4
			Pickup Truck (Gasoline)	3
			Carry-All (Gasoline)	2

[1]Fuel for equipment is assumed to be diesel except where noted.

3.2.3 Subtransmission Line Operation and Maintenance

SCE regularly inspects subtransmission lines, vaults, and associated components. The inspections may lead to routine and preventative maintenance. There may also be emergency repair and maintenance performed for service continuity. No additional SCE personnel above normal staffing levels would be required to operate or maintain these subtransmission lines.

3.3 Telecommunication System

The Proposed Project would require construction of diverse communication paths for the operating and monitoring of the substation and subtransmission line equipment. The paths would connect the Kimball Substation to Mira Loma Substation via Archibald and Chino Substations. The following sections describe the telecommunication improvements required for the Proposed Project.

3.3.1 Telecommunication Improvements

Constructing the proposed telecommunications system improvements for the Proposed Project would require the installation of fiber optic cable between the Kimball Substation and Archibald Substation, and between the Kimball Substation and the existing fiber optic cable located on Central Avenue (see Appendix G, Telecommunication Route

Map). A 48-strand fiber optic cable would be used. The fiber optic cable installation route would utilize both overhead and underground facilities.

New telecommunications equipment would be installed at Kimball Substation. An equipment rack installed in the Kimball Substation MEER would hold telecommunications equipment for the substation. The MEER would contain conduits that connect to off-site fiber optic cables. Telecommunications equipment upgrades would occur at Cimgen, Chino, Ontario, Firehouse, Milliken, Mira Loma and Archibald Substations to facilitate the new interconnections.

3.3.2 Telecommunications Construction

The personnel, equipment and construction schedule for the telecommunication system improvements are listed in Table 3.5, Telecommunications Improvements Construction Equipment Table.

Overhead Cable Construction. The overhead telecommunications cable would be installed by attaching the cable to new and existing subtransmission poles. A truck with a cable reel would be set up at one end of the section to be pulled, and a truck with a winch would be set up at the other end. The cable would be pulled onto the poles with pull rope. The cable would then be permanently secured to the poles. The sections typically vary between 8,000 and 12,000 feet in length. The fiber strands would be spliced between each section.

Underground Construction. The underground telecommunication cable would be installed in new underground trenches at the proposed Kimball Substation and the existing Archibald Substation, as well as in a new borehole that would be installed along a portion of Archibald Road where it would cross under the 500 kV transmission line corridor. At Archibald Substation, a new underground vault and conduits would be installed to bring the fiber optic cable from the substation to the nearest subtransmission line pole.

At the proposed Kimball Substation and the existing Archibald Substation, a trench 18-inches wide and 36-inches deep would be excavated with a backhoe. A 5-inch PVC conduit would be placed in the trench and covered with a layer of slurry, and paved. A vault would be installed at the beginning and the end of each section of trench.

Where the telecommunications route crosses the 500 kV corridor, the underground conduits would be installed using a horizontal boring method. A 7 foot by 10 foot hole would be excavated to a depth of 7 feet at each side of the corridor, and the boring machine would be placed inside one hole and directed to the second. The diameter of the boring would be approximately 7 inches. An underground conduit, approximately 250 feet long, would be installed within the boring to house the telecommunication cable across the corridor. A vault would be installed at both ends of the boring to house the cable splice.

3.3.3 Telecommunication System Operation and Maintenance

The telecommunications system would require periodic routine maintenance as well as emergency procedures for service continuity. Routine maintenance would include equipment testing, equipment monitoring, and repair. No additional SCE personnel,

beyond normal staffing levels, would be required to operate or maintain the telecommunication system for the substation.

Table 3.5 Telecommunication Improvements Construction Equipment Table

Construction Activity	Duration	Number of Personnel	Equipment[1]	Estimated Usage (Hours per Day)
Substation Communications Installation Crew	24 days	2	2 Vans (Gasoline)	Commute only
Overhead Communications Installation Crew	24 days	4	Bucket Truck	8
			Reel Truck	8
Underground Trenching Crew	7 days	3	Flatbed Truck	1
			Backhoe	8
			Stakebed Truck	2
			Crew Truck	2
Underground Boring Crew	5 days	3	Flatbed Truck	1
			Boring Machine	8
			Stakebed Truck	2
			Crew Truck	2
Underground Cable Installation Crew	6 days	4	Bucket Truck	8
			Reel Truck	8

[1]Fuel for equipment is assumed to be diesel except where noted.

3.4 Project Schedule and Personnel Requirements

Construction duration for the substation, subtransmission lines, and telecommunication upgrades is estimated to be up to 12 months.

The projected completion date for the substation and subtransmission line is April 1, 2009. Approximately two months would be required to energize and test subtransmission line components once construction has been completed. The projected operating date for the Proposed Project is June 1, 2009.

The Proposed Project construction would require up to approximately 15 crew members during peak activity. Accordingly, this number has been used to evaluate impacts to each environmental resource category throughout Section 4.0. Construction would be performed by either SCE construction crews or contractors depending on the availability of SCE construction personnel at the time of construction. If SCE construction crews are used they would be based locally. Contractor construction personnel would be locally-based or from out-of-area. Anticipated construction personnel, construction and scheduling construction equipment have been summarized in Table 3.2, Substation Construction Equipment Table; Table 3.3, Overhead Subtransmission Line Construction Equipment Table; Table 3.4, Underground Subtransmission Line Construction Equipment Table; and Table 3.5, Telecommunication Improvements Construction Equipment Table.

4.0 ENVIRONMENTAL IMPACT ASSESSMENT

This section examines the potential environmental impacts of the Proposed Project and alternatives. 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 CEQA Guidelines) that may be affected by the Proposed Project. The effects of the Proposed Project are defined as changes to the environmental setting that are attributable to project construction and operation.

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 means "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project…" If significant impacts are identified, feasible mitigation measures are formulated to eliminate or reduce the level of the impacts and focus on the protection of sensitive resources.

CEQA Guidelines Section 15126.4(a)(3) states that mitigation measures are not required for effects which are not found to be significant. Therefore, where an impact is less than significant no mitigation measures have been proposed. In addition, compliance with laws, regulations, ordinances, and standards designed to reduce impacts to less than significant levels are not considered mitigation measures under CEQA. Where potentially adverse impacts may occur, SCE has proposed measures to minimize the environmental impacts (SCE Proposed Measures).

4.1 Aesthetics

This section describes the potential aesthetic impacts of the Proposed Project. Proposed mitigation measures and alternatives are also discussed.

4.1.1 Environmental Setting

The visual character associated with the area surrounding the Proposed Project can be described as predominantly agricultural with some industrial influences. The character of the area is primarily defined by dairy facilities including shade structures and small agricultural fields physically bounded by tamarisk and eucalyptus trees. Land parcels are connected by primarily unpaved and single lane rural-type roads, although major arterial roads exist throughout the area. South of Kimball Avenue, several dairies are being replaced by residential development resulting in a suburban/urban character.

Industrial facilities present in the area include prison facilities and the Chino Airport. There is a utility corridor containing two 500 kV transmission lines and two 220 kV transmission lines that traverses northeast-southwest across the southern portion of the Proposed Project.

There are no identified scenic vistas or scenic state highways in the area of the Proposed Project.

4.1.2 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; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

4.1.3 Impact Analysis

The Proposed Project substation site consists of a flat vacant lot bounded on the north and west by a row of mature tamarisk trees and a residence to the south. The site is used as a storage yard for scattered objects ranging from cars to rusted sheds. Immediately surrounding the site is the Chino Airport to the west, Kimball Avenue to the south, and dairy facilities to the north and east. A simulation showing the proposed substation site is included as Figure 4.1-1, Simulation of Proposed Kimball Substation.

Existing Condition

Photograph looking northeast

Viewpoint located north of Kimball Avenue on Walker Avenue

Proposed Kimball Substation showing landscape concept illustration (roadway not shown to scale)

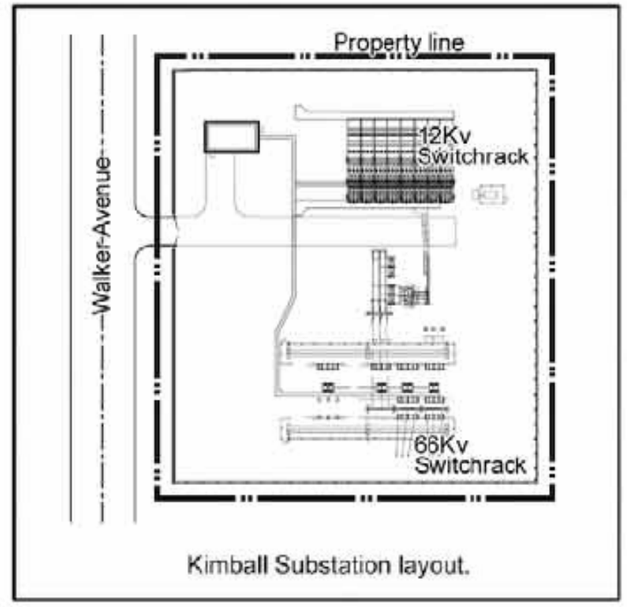

Figure 4.1-1

Simulation of Proposed Project Substation Site

The area surrounding the Proposed Project is undergoing a transition from dairy and agricultural use to residential and commercial/light industrial development. This transition has resulted in ongoing construction activities in the area. The Proposed Project substation would have a low-profile design. The perimeter wall and surrounding landscaping would screen the substation facilities from casual view.

The proposed substation would have access and maintenance lighting. The access light would be low-intensity and controlled by photo sensors. Maintenance lights would consist of high-pressure sodium lights located in the switchracks, around the transformer banks, and in areas of the substation where maintenance activity may take place. Maintenance lights would be used only when required for maintenance outages or emergency repairs occurring at night. Maintenance lights would be controlled by a manual switch and would normally be in the off position. The lights would be directed downward and shielded to reduce glare outside the facility.

The subtransmission line modifications associated with the Proposed Project are located in the right-of-way of existing roadways. A simulation of the proposed subtransmission modifications appears in Figure 4.1-2, Simulation of Proposed Project Subtransmission Modifications Viewing North at Hellman Avenue, and Figure 4.1-3, Simulation of Proposed Project Subtransmission Modifications Viewing West at Kimball Avenue.

The Proposed Project would not have a substantial adverse effect on scenic vistas, would not substantially damage a scenic resource, would not substantially degrade the existing visual character or quality of the site or its surroundings, and would not create a new source of substantial light or glare. The Proposed Project substation site would not significantly modify the visual character of the area. As a result, impacts to aesthetics would be less than significant.

4.1.4 Mitigation

Since the Proposed Project as described above would result in less than significant impacts, aesthetic mitigation would not be required for the Proposed Project.

4.1.5 Alternative B

Conditions associated with Alternative B are similar to those of the Proposed Project. As a result, the construction and operation of the proposed substation at the Alternative B site would have similar impacts to the aesthetics of the area as the Proposed Project. Impacts would be less than significant.

4.1.6 Alternative C

According to Tract Map 31309 filed in the County of Riverside, the Alternative C substation site would be located within a proposed park adjacent to the 500 kV transmission line corridor. As a result, the construction and operation of the proposed substation at the Alternative C site would have more impact to the aesthetics of the area as the Proposed Project. However, the substation would not contrast with the surrounding land use and the aesthetic impacts would be less than significant.

4.1.7 References

Riverside County. 2003. General Plan. [online] http://www.rctlma.org/generalplan/index.html. [cited August 2006].

State of California. 2006. Officially Designated State Scenic Highways and Historic Parkways. [online] http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm. [cited August 2006].

Existing Condition: Viewing north along Hellman Avenue

Simulated Condition: Proposed 66 kV subtransmission with future road buildout

PHOTO LOCATION MAP

Photo Information:

Date and Time: June 13, 2006 12:38pm
Location: Chino, California

Tower Type:
66 kV Tangent Tower

Figure 4.1-2

Simulation of Proposed Project Subtransmission Line Modifications
Viewing North on Hellman Avenue

Existing Condition: Viewing west along Kimball Avenue

Simulated Condition: Proposed 66 kV subtransmission line replacement structures on north side of Kimball Avenue.

PHOTO LOCATION

Photo Information:

Date and Time: June 16, 2006 1:25pm
Location: Chino, California

Tower Type:
66 kV Tangent
Tower

Figure 4.1-3

Simulation of Proposed Project Subtransmission Modifications Viewing West on Kimball Avenue

4.2 Agricultural Resources

This section describes the agricultural resources in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.2.1 Environmental Setting

The Proposed Project is located in a region predominantly used for agricultural purposes, including crops, fallow land, pasture, and dairies. However, the area surrounding the Proposed Project is undergoing a transition from dairy and agricultural use to residential and commercial/light industrial development.

4.2.2 Significance Criteria

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

- Convert prime farmland, unique farmland, or farmland of statewide importance, to nonagricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to nonagricultural use.

4.2.3 Impact Analysis

The Proposed Project substation site is not currently used for agriculture, nor is it subject to a Williamson Act contract. The proposed substation site is zoned by the City of Chino as Airport Development, that allows use for office, manufacturing, business parks, and other uses compatible with the Chino Airport. The Proposed Project substation site would not be constructed within an area zoned for agricultural use. Subtransmission line replacement and construction would occur in existing utility rights-of-way and along public street rights-of-way, and would not convert farmland to nonagricultural use. Therefore, the Proposed Project would have no impact to agriculture.

4.2.4 Mitigation

Because the Proposed Project would result in no impacts to agricultural resources, no mitigation measures are required.

4.2.5 Alternative B

The Alternative B substation site is currently vacant and is designated for light industrial uses. Construction of the proposed substation on Alternative B would have no impact to agricultural resources.

4.2.6 Alternative C

The Alternative C substation site is located in unincorporated Riverside County, in the Eastvale area, and is designated for urban mixed use and office development. Construction of the proposed substation on Alternative C would have no impact to agricultural resources.

4.2.7 References

City of Chino. 1981. General Plan.

California Department of Conservation (CDC). 2006. 2000-2002 Regional and Statewide Conversion Summary. [online] http://www.conservation.ca.gov/DLRP/fmmp/regional_statewide_info_results.asp [cited August 2006].

CDC. 2005. San Bernardino County Important Farmland Data.

Natural Resources Conservation Service (NRCS). Soil Data Mart. “Prime and other Important Farmlands” Report Description. Website: http://soildatamart.nrcs.usda.gov.

Riverside County. 2003. General Plan. [online] http://www.rctlma.org/generalplan/index.html. [cited August 2006].

4.3 Air Quality

This section describes the ambient air quality in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.3.1 Environmental Setting

The Proposed Project is within the South Coast Air Basin (SCAB), an air basin that is approximately 10,750 square miles in size and includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The South Coast Air Basin is both a federal Air Quality Control Region, an area established by the Clean Air Act (CAA) as a regional air basin, and a state regional air basin, designated by the California Air Resources Board (CARB). The SCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

The CAA of 1970 required the United States Environmental Protection Agency (USEPA) to adopt ambient air quality standards. The National Ambient Air Quality Standards (NAAQS) are the maximum levels, given a margin of safety, of background pollution that is considered safe for public health and welfare. Air quality standards developed by individual states must be at least as stringent as those set forth by the USEPA. The California Air Resources Board (CARB) has developed California Ambient Air Quality Standards (CAAQS).

Areas that fail to meet federal NAAQS (and CAAQS in California) are identified as nonattainment areas. When an area is designated as nonattainment, regional air quality management agencies are required to develop detailed plans that will lower the emissions of pollutants in order to reach attainment, and sources of pollutants are typically subject to more stringent air permitting requirements than similar sources in attainment areas.

Presently, the ambient air in the area of the Proposed Project is classified by the CARB as nonattainment for ozone (O_3), suspended particulate matter measuring less than 10 microns (PM_{10}), and suspended particulate matter measuring less than 2.5 microns ($PM_{2.5}$). The ambient air in the area is either unclassified or classified as attainment for all other State regulated air pollutants (CARB, 2006). The attainment status of each CAAQS and NAAQS pollutant is shown in Table 4.3-1, Federal and California Ambient Air Quality Standards and South Coast Air Basin Attainment Status.

The SCAQMD has developed three different emission threshold standards of significance for the construction and operation of projects emitting regulated air contaminants. The first significance measure is based on daily mass of contaminants as a result of project activities. The thresholds of significance for construction emissions are listed in Table 4.3-2, Construction Emission Thresholds of Significance.

The second series of criteria established by the SCAQMD to determine significance of emissions associated with a project is based on the toxicity of pollutants. The SCAQMD rules associated with toxic air contaminants apply to stationary source emissions. Emissions from internal combustion engines are regulated by the USEPA for equipment crossing state lines and CARB for intrastate equipment.

Table 4.3-1 Federal and California Ambient Air Quality Standards and South Coast Air Basin Attainment Status

Air Pollutant	State Standard Averaging Time and Concentration	South Coast Air Basin Attainment Status State	Federal Primary Standard Averaging Time and Concentration	South Coast Air Basin Attainment Status Federal
Ozone (O_3)	8-hr avg. 0.070 ppm (137 µg/m^3)	Nonattainment/ Extreme	8-hr avg. 0.08 ppm (157 µg/m^3)	Nonattainment/ Severe
	1-hr. avg. 0.09 ppm (180 µg/m^3)	Nonattainment/ Extreme	None	Nonattainment/ Extreme
Carbon Monoxide (CO) [Portion of SCAB including area of Proposed Project]	8-hr avg. 9.0 ppm (10 mg/m^3)	Attainment	8-hr avg. 9 ppm (10 mg/m^3)	Nonattainment[1]
	1-hr avg. 20 ppm (23 mg/m^3)	Attainment	1-hr avg. 35 ppm (40 mg/m^3)	Nonattainment[1]
Nitrogen Dioxide (NO_2)	1-hr avg. 0.25 ppm (470 µg/m^3)	Attainment	Annual arithmetic mean 0.053 ppm (100 µg/m^3)	Unclassified
Sulfur Dioxide (SO_2)	24-hr avg. 0.04 ppm (105 µg/m^3)	Attainment	Annual arithmetic mean 0.030 ppm (80 µg/m^3)	Attainment
	1-hr. avg. 0.25 ppm (655 µg/m^3)	Attainment	24-hr avg. 0.14 ppm (365 µg/m^3)	Attainment

Air Pollutant	State Standard Averaging Time and Concentration	South Coast Air Basin Attainment Status State	Federal Primary Standard Averaging Time and Concentration	South Coast Air Basin Attainment Status Federal
Suspended Particulate Matter (PM_{10})	Annual arithmetic mean 20 µg/m^3	Nonattainment	Annual arithmetic mean 50 µg/m^3	Nonattainment/ Serious
	24-hr avg. 50 µg/m^3	Nonattainment	24-hr avg. 150 µg/m^3	Nonattainment/ Serious
Particulate Matter ($PM_{2.5}$)	annual arithmetic mean 12 µg/m^3	Nonattainment	Annual arithmetic mean 15 µg/m^3	Nonattainment
			24-hr avg. 65 µg/m^3	Nonattainment
Sulfates	24-hr avg. 25 µg/m^3	Attainment	None	Not Applicable
Lead	30-day avg. 1.5 µg/m^3	Attainment	Calendar quarter 1.5 µg/m^3	No data
Hydrogen Sulfide (H_2S)	1-hr. avg. 0.03 ppm (42 µg/m^3)	Unclassified	None	Not Applicable
Visibility-Reducing Particles	See (2) below	Unclassified	None	Not Applicable

Source: CARB, 2006

[1]Although SCAB is classified nonattainment for carbon monoxide, the air quality meets national CO standards (CARB, 2004).

[2]State criterion for nonattainment of visibility-reducing particles is the amount of particles present to produce an extinction coefficient of 0.23 per kilometer when relative humidity is less than 70 percent.

µg/m^3 = microgram per cubic meter
mg/m^3 = milligram per cubic meter
ppm = parts per million

Table 4.3-2 South Coast Air Quality Management District Construction Emission Thresholds of Significance

Pollutant		Construction Emission Threshold
O_3 Precursors	NOx	100 pounds per day
	VOC	75 pounds per day
PM_{10}		150 pounds per day
SOx		150 pounds per day
CO		550 pounds per day
Lead		3 pounds per day

Source: SCAQMD, 2006.

CO = Carbon monoxide NOx = Nitrogen oxides SOx = Sulfur oxides O_3 = ozone
PM_{10} = Particulate matter less than 10 microns VOC = Volatile organic compound

The third series of criteria used to determine the significance of emissions associated with construction and operation of a project are based on the impact to ambient air concentration of State and federal regulated contaminants. These criteria are listed in Table 4.3-3, Ambient Air Concentration Thresholds of Significance.

In addition to the construction threshold criteria, the SCAQMD has established a series of rules that apply to all construction projects. The rules that apply to the Proposed Project include:

Rule 401 Visible Emissions

Rule 402 Nuisance

Rule 403 Fugitive Dust

Table 4.3-3 South Coast Air Quality Management District Ambient Air Quality Thresholds of Significance

Criteria Pollutant	Ambient Air Concentration Threshold of Significance
NO_2	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:
1-hour average annual average	0.25 ppm (State) 0.053 ppm (federal)
PM_{10} 24-hour average	10.4 $\mu g/m^3$ (recommended for construction) 2.5 $\mu g/m^3$ (operation)
annual geometric average annual arithmetic mean	1.0 $\mu g/m^3$ 20 $\mu g/m^3$
Sulfate 24-hour average	 25 $\mu g/m^3$
CO	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:
1-hour average 8-hour average	20 ppm (State) 9.0 ppm (State/federal)

Source: SCAQMD, 2006.

CO = Carbon monoxide NO_2 = Nitrogen dioxide
PM_{10} = Particulate matter less than 10 microns

4.3.2 Significance Criteria

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

- 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;
- 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);
- Expose sensitive receptors to substantial pollutant concentrations; or

- Create objectionable odors affecting a substantial number of people.

4.3.3 Impact Analysis

The daily combustion emissions would vary throughout the construction period based on the equipment used on any particular day. Emissions rates for equipment have been estimated using emission factors published by the SCAQMD and URBEMIS7G air quality modeling software. SCE has assigned each construction activity listed in the Project Description in Tables 3.2 through 3.5 to occur in one of two phases. The construction emissions calculated for the Phase I construction are listed in Table 4.3-4, Estimated Emissions During Phase I of Proposed Project Construction, and air emissions for the Phase II construction are listed in Table 4.3-5, Estimated Emissions During Phase II of Proposed Project Construction. Detailed construction emissions calculations are presented in Appendix F. None of the construction emissions are estimated to exceed the SCAQMD construction thresholds of significance.

To evaluate the localized effects of emissions on ambient air quality during the construction of small projects, the SCQAMD has established tables of emissions significance thresholds for 1, 2, and 5 acre sites. For a 2 acre construction site with the nearest receptor at 50 meters (164 feet), the maximum daily emissions estimated to be below the ambient air threshold standards are as follows:

NOx: 242 pounds per day

CO: 872 pounds per day

PM_{10}: 18 pounds per day

Emissions from the Proposed Project would not exceed ambient air quality standards at the residence 250 feet south of the substation site.

The surface disturbance for pole replacement is not expected to exceed a 10 foot by 10 foot area for each pole site. This area is less than that quantified by the SCAQMD for ambient air concentration thresholds.

Table 4.3-4 Estimated Emissions During Phase I of Proposed Project Construction

Site	Days	Activity	CO	NOx	PM_{10}	SOx	VOC
Substation	40	Grading	14.1	31.6	1.8	4.5	3.1
	45	Survey	0.5	0.0	0.0	0.0	0.1
Overhead Sub-transmission Modifications	60	Overhead subtransmission modifications	1.7	2.1	0.0	0.0	0.2
	75	Wire Replacement	1.6	1.4	0.0	0.0	0.2
	2	Final connection of new lines	1.6	1.4	0.0	0.0	0.2
Underground Sub-transmission Modifications	2	Tubular Steel Pole Footing Installation	6.5	14.6	0.8	2.6	1.2
	6	Construction of 66 kV Duct Bank	3.6	6.4	0.7	0.9	1.0
	4	Install 2 vaults	2.0	5.3	0.1	0.0	0.3
	5	Cable Pulling	4.6	8.2	0.4	1.3	0.8
	5	Cable Splicing/ Terminating	3.0	6.8	0.3	1.0	0.6
Worst-case scenario construction emissions estimated for Phase I			**39.2**	**77.9**	**4.1**	**10.3**	**7.7**
SCAQMD Threshold of Significance for Construction			**550**	**100**	**150**	**150**	**75**
Below SCAQMD Threshold of Significance for construction?			**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Note: All estimated emissions are presented in pounds per day.
CO = Carbon monoxide NOx = Nitrogen oxides SOx = Sulfur oxides
PM_{10} = Particulate matter less than 10 microns VOC = Volatile organic compound

Table 4.3-5 Estimated Emissions During Phase II of Proposed Project Construction

Site	Days	Activity	CO	NOx	PM_{10}	SOx	VOC
Substation	45	Survey	0.5	0.0	0.0	0.0	0.1
	50	Civil	12.4	23.3	1.5	4.5	2.4
	80	Electrical	7.5	15.6	0.8	1.6	1.5
	20	Transformer Setup	4.8	9.3	0.6	1.2	1.1
	40	Test	0.2	0.3	0.0	0.0	0.0
	5	Paving contractor	11.6	21.9	1.5	3.2	2.7
	7	Fence contractor	2.7	4.8	0.4	0.0	0.7
Telecom	24	Substation	0.5	0.0	0.0	0.0	0.1
	24	Overhead	0.7	1.3	0.0	0.0	0.1
	7	Trenching	3.7	8.3	0.7	0.9	1.0
	5	Boring	4.1	10.7	0.4	2.6	0.5
	6	Underground	0.7	1.3	0.0	0.0	0.1
Worst-case scenario construction emissions estimated for Phase II			**50.6**	**97.3**	**6.0**	**13.9**	**10.4**
SCAQMD Threshold of Significance for construction			**550**	**100**	**150**	**150**	**75**
Below SCAQMD Threshold of Significance for construction?			**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Note: All emissions are presented in pounds per day.
CO = Carbon monoxide NOx = Nitrogen oxides SOx = Sulfur oxides
PM_{10} = Particulate matter less than 10 microns VOC = Volatile organic compound

To further reduce the impact from construction emissions, SCE has proposed the following measures:

SCE Proposed Measures

- *Schedule deliveries outside of peak hours.* All material deliveries to the construction sites will be scheduled to occur outside of peak "rush hour" traffic hours (7:00 to 10:00 a.m. and 4:00 to 7:00 pm) to the extent feasible, and other truck trips during peak traffic hours will be minimized to the extent feasible.

- *Restrict engine idling.* Engine idle time will be restricted to no more than 10 minutes in duration.

- *Use on-road vehicles that meet California on-road standards.* All on-road construction vehicles working within California will meet all applicable California on-road emission standards and will be licensed in the State of California. This does not apply to construction worker personal vehicles.

- *Use lower emitting off-road gasoline-fueled equipment.* All off-road stationary and portable gasoline powered equipment will have USEPA Phase 1/Phase 2 compliant engines, where the specific engine requirement will be based on the new engine standard in effect two years prior to initiating project construction.

With the implementation of phased construction activities and SCE Proposed Measures, the construction of the Proposed Project would not conflict with the SCAQMD air quality plan or result in a considerable net increase of any criteria pollutant. Construction of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations or create objectionable odors. As a result, impacts to air quality as a result of the Proposed Project would be less than significant.

Operation of the proposed substation would produce minimal air emissions and represents no impact to air quality. Two to three maintenance visits per week would be performed and the related emissions do not pose an impact to the limits set by the SCAQMD. Operational emissions resulting from the Proposed Project would not impact air quality.

4.3.4 Mitigation

Because the Proposed Project would result in less than significant impacts to air quality, no mitigation measures are required.

4.3.5 Alternative B

The Alternative B substation site is located in the same air basin as the Proposed Project, and construction and operation of the substation at the Alternative B site would have similar effects to regional air quality. However, a visual inspection of the Alternative B substation site indicates it has been used as a settling pond for an adjacent dairy. As a result, the construction of Alternative B would require more grading than the Proposed Project. Impacts to air quality would be more than the Proposed Project. However, impacts to air quality would remain less than significant.

4.3.6 Alternative C

The Alternative C substation site is located in the same air basin as the Proposed Project, and construction and operation of the project at the Alternative C site would have similar effects to regional air quality as the Proposed Project. However, the Alternative C substation site presently has an earthen berm traversing the site, requiring more grading than the Proposed Project. Impacts to air quality would be more than the Proposed Project. However, impacts to air quality would remain less than significant.

4.3.7 References

California Air Resources Board (CARB). 2006. [online] Area Designation Maps State and Federal. http://www.arb.ca.gov/desig/adm/adm.htm. [accessed August 2006].

CARB. 2004. Staff Report: Initial Statement of Reasons for Proposed Rulemaking, December 3, 2004.

South Coast Air Quality Management District (SCAQMD). 2006. CEQA Handbook. [online] http://www.aqmd.gov/ceqa/hdbk.html. [cited August 2006].

URBEMIS, 2002 for Windows with Enhanced Construction Module Version 8.7 Emissions Estimation for Land Use Development Projects. Software User's Guide: Appendix H Construction Equipment Emission Factors. http://www.urbemis.com/software/URBEMIS2002%20User's%20Manual.pdf

4.4 Biological Resources

This section describes the biological resources in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.4.1 Environmental Setting

Historically, land use in the vicinity of the Proposed Project was predominantly agricultural, including many active dairy operations in the surrounding area. As a result, the biological habitat in the area has been severely degraded by development and is in the process of being developed for additional residential housing. The area in the vicinity of the Proposed Project includes the following vegetation:

> *Agricultural.* In areas traditionally used for agriculture, the land does not support any natural vegetation or sensitive species habitats. A few scattered walnut trees (*Juglans* sp.), salt grass (*Distichlis spicata*), grasses (*Bromus* spp.), and weedy vegetation dominate the agricultural areas.
>
> *Ruderal.* Ruderal (disturbed) areas are dominated by weedy non-native species including introduced grass species (*Bromus* spp.), black mustard (*Brassica nigra*), composite (*Aster* sp.), tree tobacco (*Nicotiana glauca*), spurge (*Euphorbia lathyris*), russian thistle (*Salsola tragus*), rattlesnake weed (*Chamaesyce albomarginata*), and tamarisk trees (*Tamarix ramosissima*).

Wildlife in the area is minimal and predominantly consists of invertebrates, reptiles, and small rodents.

Literature Search

Prior to field surveys, records from the California Natural Diversity Database (CNDDB) were reviewed to determine the potential occurrence of any sensitive or special status species and/or habitats within the vicinity of the Proposed Project and the Alternative B and C substation sites. Special status species include plants and animals that are either listed as endangered or threatened under the Federal or California Endangered Species Acts, listed as rare under the California Native Plant Protection Act, or considered to be rare (but not formally listed) by resource agencies, professional organizations (e.g. Audubon Society, California Native Plant Society), and the scientific community. The Corona North United States Geological Survey (USGS) 7.5 minute quadrangle was used to conduct the search with the CNDDB occurrence records for “sensitive” species and habitats. A review of current published literature pertaining to listed species was also used to determine possible species found in this area.

Survey Methodology

Biological surveys in the area of the Proposed Project were conducted during the summer of 2005 and spring of 2006. Initial surveys were focused on identifying habitats for special status species of plants and animals, which could potentially occur in the area surrounding the Proposed Project and the Alternative B and C substation sites. Locations with potentially suitable habitat for special status species were noted so that more focused surveys could be conducted prior to construction.

4.4.2 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 California Department of Fish and Game or US Fish and Wildlife Service;

- 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 California Department of Fish and Game or US Fish and Wildlife Service;

- 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, coastal, etc.) 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; or

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.4.3 Impact Analysis

The results from a review of current published literature pertaining to listed species in the area of the Proposed Project, including the CNDDB maintained by the California Department of Fish and Game, were used as a guide during site surveys that were conducted on July 22, 2005, and May 23, 2006. The habitat for each special status species was evaluated during the site surveys using the following criteria:

No: Habitat is not suitable to support this species;

Marginal: Habitat has the potential to support this species; and

Yes: Habitat is desirable to this species.

In addition, each of special status species was evaluated during the site surveys based on its potential to occur using the following criteria:

Low: This species is unlikely to be found in the area. No historical record exists for this species and the habitat and environmental conditions within the area (an approximate 5 mile radius) and the area is not suitable, and is unlikely, to support this species.

Moderate: Based on local environmental conditions found, there is potential for this species to exist in the area. Although no historical record exists for this species, the habitat in the area (an approximate 5 mile radius) is suitable to support this species.

High: The environment for this species is ideal and favorable to that species. The chances of finding the species in this region are likely based on CNDDB review and field surveys. A historical record for this species exists in the area (an approximate 5 mile radius) and environmental conditions associated with this area are suitable for this species.

The results of the site surveys are summarized in Table 4.5, Special Status Species Potentially Occurring in the Area of the Proposed Project and Alternative B and C Substation Sites, and are detailed below.

The initial biological survey was conducted on July 22, 2005 for the Proposed Project substation site. All of the site reconnaissance concentrated on wildlife and botanical observations. Wildlife surveys included field observations of birds and other wildlife species.

The Proposed Project substation site is bordered on the north and west by mature tamarisk (*Tamarix aphylla*). Walnut trees and tree tobacco are scattered with Russian thistle predominant throughout the site. A barbed-wire fence, running north-south, presently divides the site into an eastern and western portion. The eastern portion contains old cars, miscellaneous farm equipment, and other materials, while the western portion consists of non-native grasses (*Bromus* spp.), black mustard (*Brassica nigra*), composite (*Aster* sp.), tree tobacco (*Nicotiana glauca*), spurge (*Euphorbia lathyris*), rattlesnake weed (*Euphorbia albomarginata*), and other weedy non-native plant species.

The Proposed Project substation site was evaluated by a permitted entomologist during the July 22, 2005 survey to determine whether any habitat for the Delhi sands flower-loving fly (DSF) was present. None of the plants that the DSF is associated with, such as telegraph weed (*Heterotheca grandiflora*), California croton (*Croton californicus*), or buckwheat (*Eriogonum* sp.) were present at the site. The nearest known habitat for the DSF is 5 miles from the Proposed Project substation site. (Faulkner, 2005).

The only other special status species that has the potential to occur in the area of the Proposed Project is the burrowing owl (*Athene cunicularia*), a State Species of Special Concern. A second site reconnaissance was completed on August 9, 2005 in which potential burrowing owl burrows were not found.

Trees at the Proposed Project substation site provide roosting and potential nesting habitat for some bird species. A barn owl (*Tyto alba*) was observed in a tamarisk tree on the Proposed Project substation site during the July 22, 2005 reconnaissance. All nesting native birds are protected under the Migratory Bird Treaty Act. If construction activities occur during the nesting season (February through August), a preconstruction survey would be conducted to be certain that no legally-protected nests are active at the construction site.

The subtransmission segments to be modified were surveyed for potential biological sensitivities on May 23, 2006. The immediate area of the segments of the subtransmission line modifications consist of bare ground and disturbed, non-native

ruderal vegetation. No native vegetative communities were found in proximity to the subtransmission lines surveyed.

The subtransmission line segment from Chino Substation to Kimball Avenue contains potential burrowing owl habitat. Burrowing owls (*Athene cunicularia*) have been known to occur in the general area of the Chino Substation. During the May 23, 2006 survey, the vegetative cover along the segment was nearly 100 percent, consisting of non-native annual plant species dominated by black mustard. There is a potential for this area to be suitable foraging habitat for burrowing owls if the ground cover is reduced as a result of seasonal variations. Surveys for burrowing owls would be conducted prior to construction along this segment. No other sensitive species were found along any of the other segments of the subtransmission line modifications.

Table 4.5 Special Status Species Potentially Occurring in the Area of the Proposed Project and Alternative B and C Substation Sites

Scientific Name	Common Name	Listing Status	Habitat In Survey Area	Occurrence Potential	Observed in Field
PLANTS					
Abronia villosa var. aurita	Chaparral sand-verbena	CNPS 1B	No	Low	No
Chorizanthe parryi var. parryi	Parry's spineflower	CNPS 3	No	Low	No
Senecio aphanactis	Rayless ragwort	CNPS 2	No	Low	No
INVERTEBRATES					
Rhaphiomidas terminatus abdominalis	Delhi sands flower-loving fly	FE	No (Marginal for substation sites)	Low	No
FISH					
Catostomus santaanae	Santa Ana sucker	FT, SC	No	Low	No
Gila orcutti	Arroyo chub	SC	No	Low	No
REPTILES					
Aspidoscelis hyperythrus	Orange-throated whiptail	SC	No	Low	No
Crotalus exsul	Northern red-diamond rattlesnake	SC	No	Low	No

Scientific Name	Common Name	Listing Status	Habitat In Survey Area	Occurrence Potential	Observed in Field
BIRDS					
Agelaius tricolor	Tri-colored blackbird	SC	No	Low	No
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	SC	No	Low	No
Amphispiza belli belli	Bell's sage sparrow	SC	No	Low	No
Athene cunicularia	Burrowing owl	SC	Marginal	Moderate	No
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	SE	No	Low	No
Dendroica petechia brewsteri	Yellow warbler	SC	No	Low	No
Empidonax traillii extimus	Southwestern willow flycatcher	FE, SE	No	Low	No
Icteria virens	Yellow-breasted chat	SC	No	Low	No
Polioptila californica californica	Coastal California gnatcatcher	FT, SC	No	Low	No
Vireo bellii pusillus	Least bell's vireo	FE, SE	No	Low	No
MAMMALS					
Dipodomys stephensi	Stephens' kangaroo rat	FE, ST	No	Low	No
Eumops perotis californicus	Western (California) mastiff bat	SC	No	Low	No

Status Codes:

Federal
FT = Federal Threatened
FE = Federal Endangered
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FSC = Federal Species of Concern

State
ST = State Threatened
SE = State Endangered
SR = State Rare

California Native Plant Society
1A = Presumed Extinct in California
1B = Rare, Threatened or Endangered in California and elsewhere
2 = Rare, Threatened or Endangered in California but more common elsewhere
3 = More information needed (usually taxonomically problematic)
4 = "Watch list." Limited distribution

Botanical surveys focused on all sensitive plant species with the potential to occur within the vicinity of the Proposed Project. The entire area is composed of weedy non-native vegetation and observations found a low potential for all of the listed or special-status plant species to occur within these areas. None of these listed or special-status plant species were observed during the reconnaissance site visits conducted during the July 22, 2005, or May 23, 2006.

The species listed in the CNDDB were found to have a low potential to occur in the area of the Proposed Project, and no special status species of any kind were observed during the surveys. The Proposed Project would not interfere with any migratory wildlife corridors or nursery sites, nor would it conflict with any local policies, ordinances, or other conservation plans protecting biological resources. As a result, construction and operation of the Proposed Project would have less than significant impacts to sensitive wildlife species.

Although the impacts to biological resources are expected to be less than significant, SCE has incorporated the following measures into the Proposed Project to avoid and/or minimize impacts to biological resources:

General SCE Proposed Measures

- *Minimization of Ground Disturbance*. Clearing of vegetation would be confined to the minimal area needed to conduct the construction activities.

- *Trash Removal*. To reduce the potential for attracting wildlife species to the area, all trash would be promptly disposed in covered containers and properly removed from the project site.

- *Nesting Survey*. A preconstruction survey will be performed by a qualified biologist at least one week prior to commencement of construction during the nesting season to determine the presence/absence of nesting activity at the construction site. If a legally-protected nest is found, the nest area will be avoided with an appropriate buffer as determined by a qualified biologist. If avoidance is not feasible, the qualified biologist will consult with the proper agencies (US Fish and Wildlife Service and California Department of Fish and Game) on nest/chick relocation measures.

- *Burrowing Owl Survey*. A preconstruction survey will be conducted no more than 30 days prior to ground disturbing activities to determine if any burrows are actively being used by burrowing owls. If burrowing owls are found in the project vicinity, proper distances will be kept from all occupied burrows, such as 50 feet from non-breeding dens and 100 feet from breeding dens and a qualified biological monitor would be present during construction activities. If burrowing owls cannot be avoided, consultation with California Department of Fish and Game and/or US Fish and Wildlife Service would be required.

- *Raptor Safe Structure Design*. All new structures will be designed to be raptor safe whenever feasible in accordance with current standards and guidelines (Avian Power Line Interaction Committee, 1996).

4.4.4 Mitigation

Because the Proposed Project would have a less than significant impact to sensitive vegetation or wildlife, no mitigation is required for biological resources.

4.4.5 Alternative B

The Alternative B substation site was evaluated and surveyed at the same level of detail as the Proposed Project, and the analysis resulted in the same conclusions. Impacts to vegetation and wildlife for Alternative B would be similar to those for Proposed Project. Impacts to biological resources would be less than significant.

4.4.6 Alternative C

The Alternative C substation site was evaluated and surveyed at the same level of detail as the Proposed Project, and the analysis resulted in similar conclusions. There is a potential for the burrowing owl to be present at the Alternative C substation site. An earthen berm located on the southern portion of the site could provide burrowing habitat and the adjacent fields provide potential foraging habitat. However, no burrows were observed during the August 9, 2005 reconnaissance survey.

In addition, because the Alternative C substation site is located in Riverside County, it is subject to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP was developed by the Regional Conservation Authority of Riverside County to provide "take" authorization to entities requiring discretionary permits within Western Riverside County. SCE would be required to participate in the MSHCP when applying for a discretionary permit from the County.

Although biological impacts would be more for Alternative C than for the Proposed Project, biological impacts would remain less than significant.

4.4.7 References

Avian Power Line Interaction Committee. 1996. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996.

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4.5 Cultural Resources

For purposes of this discussion, the term “cultural resources” is used as a general heading covering environmental elements labeled ethnographic (Native American) resources, archaeological (prehistoric) resources, historical-period (post-European contact) resources, and paleontological (fossil plant and animal) resources. Each of these topics is discussed individually below with regard to the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.5.1 Environmental Setting

Cultural Resources

The area of the Proposed Project is situated within the traditional territory of the Gabrielino, and has also been occupied by Serrano, Cahuilla, and Luiseño individuals and families during the historical period. The traditional territories of the latter groups are to the north, east, and south, respectively. The Gabrielino traditionally occupied an area with a complex topography, ranging from the high peaks of the San Gabriel Mountains to the Pacific Coast and islands offshore (Bean and Smith, 1978; McCawley, 1996). Gabrielino territory centered on the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers (Bright, 1975 as cited in Bean and Smith, 1978). Their territory was bordered to the north by the Transverse Ranges and to the south by the Santa Ana Mountains. The Gabrielino homeland, most of which was below 1,000 feet in elevation, covered more than 1,500 square miles of coastal and inland southern California (McCawley, 1996).

The Gabrielino language belongs to the Takic subfamily of the Uto-Aztecan language family, which includes a wide variety of language groups extending from the Great Basin southward to the Valley of Mexico (Bean and Smith, 1978). Aboriginally the Gabrielino were hunters and gatherers who utilized both large and small game, as well as numerous plant resources, for food. Large animals such as deer and pronghorn were hunted with bow and arrow, while smaller animals such as rabbits, hares, and various rodents were taken with throwing sticks, nets, and snares.

The ethnohistoric settlement pattern consisted of permanent villages located in proximity to reliable sources of water, and within range of a variety of floral and faunal food resources, which were exploited from temporary camp locations surrounding the main village. Each village of 50 to 200 or more people was occupied by one or more patrilineal clans (McCawley, 1996). Ethnohistoric village locations have been mapped with varying degrees of precision by Johnston (1962), Kroeber (1925), and McCawley (1996), among others. According to information recorded by John Peabody Harrington, two Gabrielino villages, Wapijanga and Pashiinonga, were located in the Chino area (McCawley, 1996). An Indian ranchería of unknown cultural affiliation is shown on an 1871 map of the Yorba Rancho, two miles southwest of the Proposed Project (Stoll, 2005).

The accepted chronology for Southern California prehistoric times as proposed by William Wallace (1955) and Claude Warren (1968) is as follows:

> **Early Horizon.** Predating 6000 BC; is characterized by the presence of large projectile points and scrapers, suggesting a reliance on hunting rather than gathering.

Milling Stone Horizon. 6000 BC to 1000 BC; characterized by the presence of handstones, milling stones, choppers, and scraper planes; tools associated with seed gathering and shell fish processing with limited hunting activities; evidence of a major shift in the exploitation of natural resources.

Intermediate Horizon. 1000 BC to 750 AD; reflects the transitional period between the Milling Stone and the Late Prehistoric Horizons; little is known of this time period, but evidence suggests interactions with outside groups and a shift in material culture reflecting this contact.

Late Prehistoric Horizon. 750 AD to European contact; characterized by the presence of small projectile points; use of the bow and arrow; steatite containers and trade items, asphaltum; cremations; gravegoods; mortars and pestles; and bedrock mortars.

Prehistoric archaeological resources, although potentially present anywhere within San Bernardino Valley, are more closely associated with vegetation ecotones for their diversity of plant and wildlife resources, and permanent fresh-water sources. In the San Bernardino Valley area, these places are typically in valley interface zones and along the major watercourses.

Mission San Gabriel was founded in 1771 and the surrounding area fell within its influence. Following the secularization of the missions in 1834, the mission lands were granted to local Californians as ranchos. The land of the Chino Valley had been a rancho of San Gabriel Mission in the early 1800s and was used for grazing mission horses and cattle. In 1810, Don Antonio Maria Lugo began accumulating land and in 1849 was granted rights to the land that would become Rancho Santa Ana del Chino (Saint Anne of the Fair Hair) as part of the Spanish land-grants. This started the rich agricultural history of the Chino Valley. The area specialized in orchards, row crops, and dairy farming. The area of Rancho Santa Ana del Chino was purchased by Richard Gird, in 1881, and was subdivided into small ranches and the town site of Chino (City of Chino, 2005; Greenwood and Foster, 1990; Stoll, 2005).

Record searches were conducted on July 27, 2005, at the California Historical Resources Information System (CHRIS) San Bernardino County Archeological Information Center, San Bernardino County Museum in Redlands, and the CHRIS Eastern Information Center, Department of Anthropology, University of California, Riverside. The records search covered an area of a one mile radius around each proposed substation location and included a review of previously recorded cultural resources and surveyed areas; historical maps and documents; and local, State, and federal lists of recognized archeological and historical resources.

An archeological survey of each proposed substation location was conducted on July 28, 2005. The vegetation at each site was minimal and visibility during the field surveys was excellent. Survey transects for the Proposed Project substation site and Alternative C were spaced 15 meters apart. There was no access to Alternative B site; as a result, the survey was limited to viewing the parcel from an adjacent driveway.

Paleontological

Paleontological resources, which are defined as plant and animal remains greater than 10,000 years old, may include bones, teeth, shells, tracks, trails, casts, and fossils. According to the Santa Ana Sheet geologic map, the proposed and alternate sites lay on

recent alluvium (Rogers, 1965). This type of soil has a low sensitivity for paleontological resources.

4.5.2 Significance Criteria

The significance criteria for assessing the impacts to cultural and paleontological 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;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

4.5.3 Impact Analysis

Cultural Resources

The records search indicated no known cultural resources within the areas surveyed for the Proposed Project, and no prehistoric or historical period cultural resources were identified during the archeological field survey (Pollock, 2005).

As a result, less than significant impacts to cultural resources are expected to occur. However, if previously unidentified archaeological resources are unearthed during construction activities, construction would be halted in that area and directed away from the discovery until a qualified archaeologist assesses the significance of the resource. The archaeologist would recommend appropriate measures to record, preserve or recover the resources.

If human remains are encountered during construction or any other phase of development, work in the area of the discovery must be halted in that area and directed away from the discovery. No further disturbance would occur until the county coroner makes the necessary findings as to origin pursuant to Public Resources Code 5097.98-99, Health and Safety Code 7050.5. If the remains are determined to be Native American, then the Native American Heritage Commission (NAHC) would be notified within 24 hours as required by Public Resources Code 5097. The NAHC would notify the designated Most Likely Descendants who would provide recommendations for the treatment of the remains within 24 hours. The NAHC mediates any disputes regarding treatment of remains.

Paleontology

According to the Santa Ana Sheet geologic map, the Proposed Project lies on recent alluvium from granitic rock sources (Rogers, 1965). This type of soil has a low sensitivity

for paleontological resources. As a result, less than significant impacts to paleontological resources are expected to occur.

4.5.4 Mitigation

Because the Proposed Project would result in no impacts to cultural resources, no mitigation is required.

4.5.5 Alternative B

The results of the records search and field surveys for Alternative B was the same as for the Proposed Project and the impacts are expected to be similar to those of the Proposed Project. No impacts to cultural resources are expected to occur if Alternative B is constructed.

4.5.6 Alternative C

The results of the records search and field surveys for Alternative C was the same as for the Proposed Project and the impacts are expected to be similar to those of the Proposed Project. No impacts to cultural resources are expected to occur if Alternative C is constructed.

4.5.7 References

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4.6 Geology and Soils

This section describes the geologic resources, geologic hazards, and soils in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.6.1 Environmental Setting

The geology underlying the Proposed Project was predominantly formed by the deposition of rock material washed out from the side canyons of the San Gabriel Mountains, located approximately 10 miles to the north. Depth to groundwater in the area varies, but has been found at approximately 95 feet below ground surface (GeoTrans, 2005) and generally flows to the south (DWR, 2006).

The sediment from slope failure at the San Gabriel Mountains was deposited in channels of alluvial fans underlying the Proposed Project (Morton, 2002). This medium- to fine-grained Holocene alluvium is comprised of unconsolidated deposits of fine- to coarse-grained sand with some interbedded layers of gravel and silt. The soil types found in the vicinity of the Proposed Project are shown on Figure 4.6-1, Soils Map. Surface topography in the area of the Proposed Project is generally flat, slightly sloping to the south.

The Proposed Project is located on the Perris Block, a relatively stable region between the Elsinore fault zone and the San Jacinto fault zone (Morton, 2002). The Proposed Project is not located within an area delineated by the California State Geologist as a fault rupture hazard zone. Fault traces found in the region estimated to have occurred during the Quaternary Period are delineated on Figure 4.6-2, Regional Fault Map.

4.6.2 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; or

- 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.

4.6.3 Impact Analysis

The Proposed Project is not located within an area delineated by the California State Geologist as a fault rupture hazard zone (CDC, 2006). However, there is a potential for an earthquake in the area, and as a result, the substation electrical equipment would be constructed in accordance with the IEEE 693 "Recommended Practices for Seismic Design of Substations". Due to the deep groundwater depth at the Proposed Project substation site, there is a very low potential for liquefaction of soils during ground shaking events.

The Proposed Project substation site is located on a relatively flat area. Given the site topography, there is negligible potential for landslides or other slope stability concerns from the construction of the Proposed Project. Furthermore, the substation and subtransmission line modifications would not involve extensive excavation, grade or elevation changes. Therefore, impacts associated with slope stability and substantial soil erosion are not anticipated.

Soil expansion is a phenomenon by which clay-rich soils expand when they are wet and shrink upon drying. In the vicinity of the Proposed Project substation site, clay content is low and soils have a low shrink-swell potential. Therefore, potential hazards associated with expansive soils are less than significant.

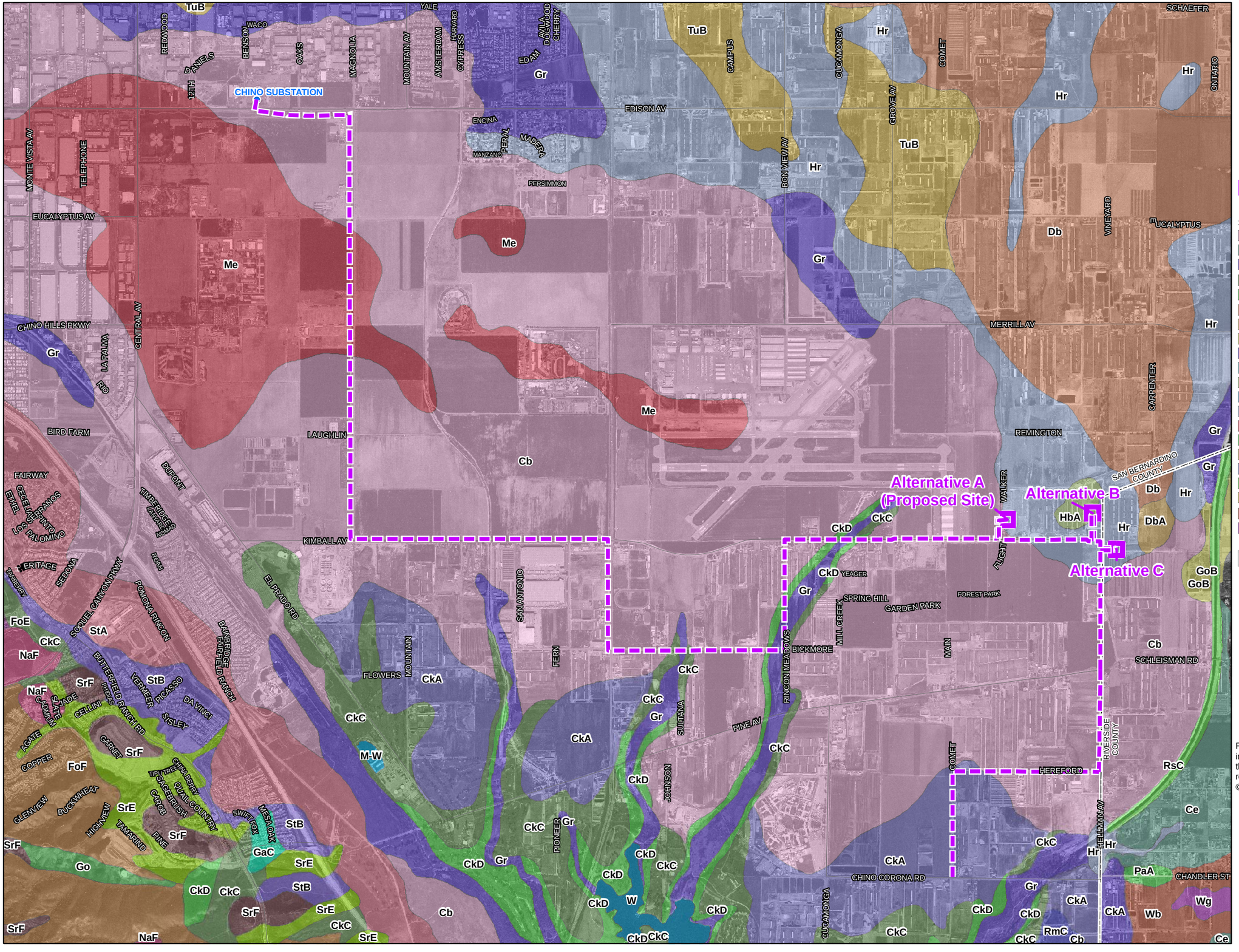
The properties of soil types that would affect substation construction are summarized in Table 4.6, Soil Types Occurring at the Proposed and Alternative Substation Sites.

Table 4.6 Soil Types Occurring at the Proposed and Alternative Substation Sites

Soil	Runoff Potential	Erosion Hazard
Chino Silt Loam	Slow to very slow. Potential for ponding	Slight
Hanford Sandy Loam	Slow	Slight
Hilmar Loamy Fine Sand	Slow	Slight

Source: NRCS, 2006

Figure 4.6-1
Proposed Kimball Substation
Soils Map



- Proposed Subtransmission Line Upgrades (SCE, 2005)
- Proposed Substation Sites (SCE, 2005)
- Exisiting Substations (SCE, 2006)

Soil Classifications (USDA, 2005)

- Cb--Chino Silt Loam
- Ce--Chino Sile Loam, drained
- CkA--Chualar Clay Loam, 0 to 2% Slope
- CkC--Chualar Clay Loam, 2 to 9% Slope
- CkD-Chualar Clay Loam, 9 to 15% Slope
- Db--Delhi Fine Sand
- DbA-- Delhi Loamy Sand, 0 to 2% Slope
- GoB--Orangeville Loamy Fine Sand, 0 to 5% Slope
- Gr--Grangeville Fine Sandy Loam
- HIA -- Hilmar Loamy Very Fine Sand, 0 to 2% Slope
- HbA--Handford Sandy Loam, 0 to 2% Slope
- HhA2--Hilmar Loamy Sand, 0 to 2% Slope, Eroded
- Hr--Hilmar Loamy Fine Sand
- Me-- Merril Silt Loam
- PaA--Pachappa Fine Sandy Loam, 0 to 2% Slope
- RmC--Ramona Sandy Loam, 0 to 2 % Slope
- RaB3--Ramona Sandy Loam, 0 to 5 % Slope, Severely Eroded
- RsC--Riverwash
- TuB--Tujunga Loamy Sand, 0 to 5% Slope
- Wb--Waukena Fine Sandy Loam, Saline-Alkali
- Wg--Waukena Fine Sandy Loam, Stronly Saline-Alkali

County Boundaries (TBM, 2006)

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

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Feet

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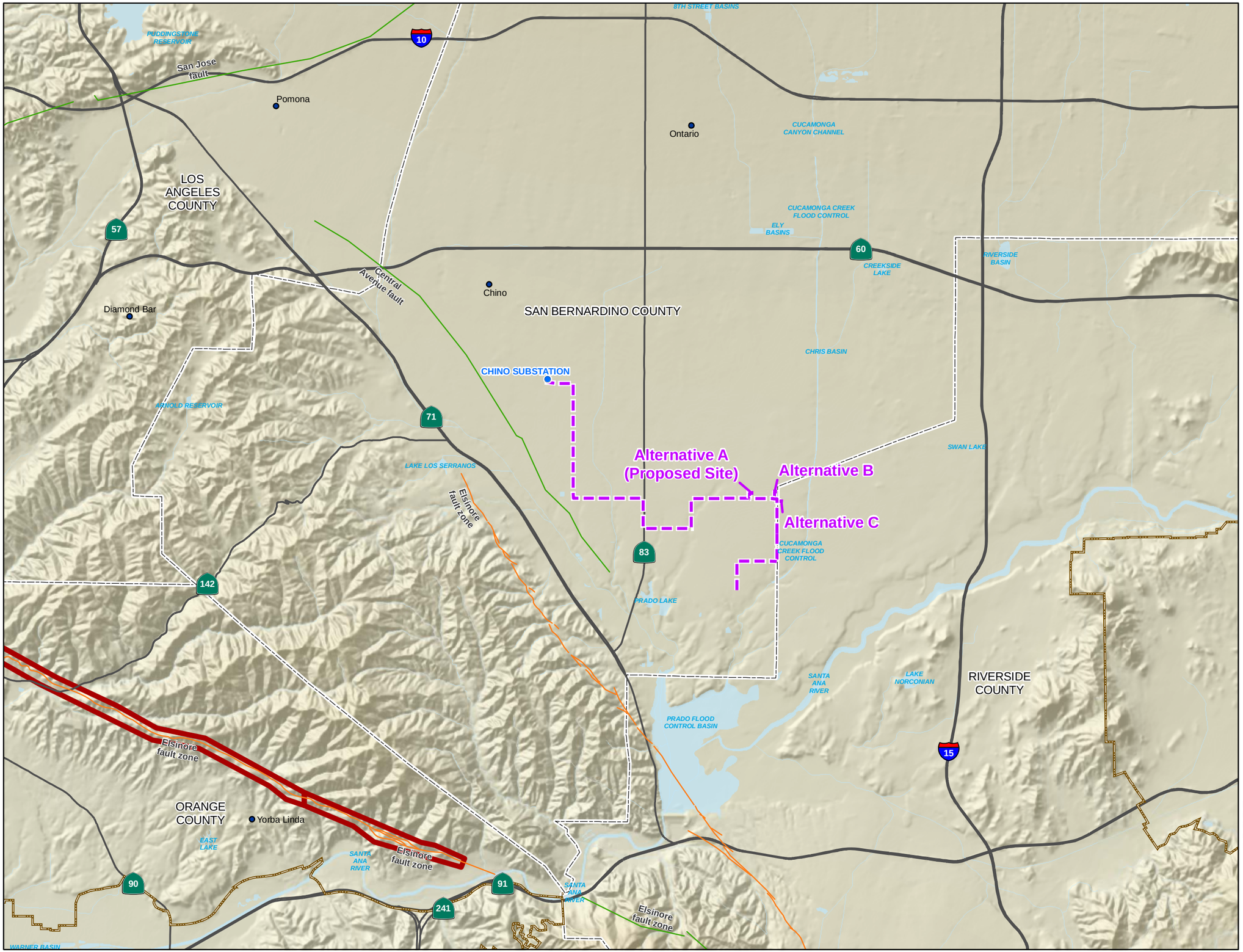
Figure 4.6-2
Proposed Kimball Substation
Regional Fault Map



- Proposed Subtransmission Line Upgrades (SCE, 2005)

Quaternary Faults (CGS, 2005)

Recency of Movement

- Holocene, < 11,000 years
- Late Quaternary, < 750,000 years
- Proposed Substation Sites (SCE, 2005)
- Exisiting Substations (SCE, 2005)
- Cities (ESRI, 2005)

Alquist-Priolo (CDC, 2002)

- Earthquake Fault Zone
- County Boundaries (TBM, 2006)
- SCE Service Territory (SCE, 2003)

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

N W E S

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Miles

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During construction, erosion control measures would be implemented, utilizing best management practices, to avoid or minimize soil erosion and off-site deposition. Because soil surface disturbance for the Proposed Project is estimated to be greater than one acre, specific erosion control measures would be identified as part of the NPDES permit and Storm Water Pollution Prevention Plan (SWPPP) required for construction of the Proposed Project.

Because the substation would not be equipped with an on-site wastewater disposal system, there would be no impact to soils as a result of using a septic tank drainfield.

Therefore, impacts due to geologic hazards and impacts to soils as a result of construction and operation of the Proposed Project would be less than significant.

4.6.4 Mitigation

Because the Proposed Project would result in less than significant impacts to geology and soils, no mitigation measures are required.

4.6.5 Alternative B

The geologic and soil conditions of Alternative B are similar to those for the Proposed Project. Construction and operation of Alternative B would have less than significant impacts to geology and soils.

4.6.6 Alternative C

The geologic and soil conditions of Alternative C are similar to those for the Proposed Project. Construction and operation of Alternative C would have less than significant impacts to geology and soils.

4.6.7 References

California Department of Conservation (CDC). 2006. Index to Official Maps of Earthquake Fault Zones [online] http://www.consrv.ca.gov/CGS/rghm/ap/Map_index/F4E.htm [cited August 14, 2006].

Department of Water Resources (DWR). 2006. 2003 Groundwater Bulletin 118 Chino Basin Description. Updated January 20, 2006.

GeoTrans. 2005. Phase I Environmental Site Assessment Southern California Edison Kimball Substation Chino, California. Final October 31, 2005.

Hart, Earl W. and William A. Bryant. Special Publication 42. 1997. Fault-Rupture Hazard Zones in California.

Morton, DM and CH Gray. 2002. *Geologic Map of the Corona North 7.5' Quadrangle, Riverside and San Bernardino Counties, California, version 1.0*. US Geological Survey Open-File Report 02-22.

Natural Resources Conservation Service (NRCS). 2006. National Cooperative Soil Survey Web Soil Survey. [online] http://websoilsurvey.nrcs.usda.gov/app/ [cited August 14, 2006] United States Department of Agriculture.

4.7 Hazards and Hazardous Materials

This section describes the potential hazards associated with construction and operation of the Proposed Project, excluding the geological hazards discussed in Section 4.6, Geology and Soils, but including use of hazardous materials during construction, the likelihood of encountering historical contamination during grading, and fire hazards. The potential impacts to hazards and hazardous materials, proposed mitigation measures, and alternatives are also discussed.

4.7.1 Environmental Setting

A Phase I Environmental Site Assessment (ESA) was conducted in May 2005 to identify recognized environmental conditions (RECs) and areas of potential environmental concerns (AOPCs) at the Proposed Project substation site. A summary of Phase I ESA (GeoTrans, 2005a) is provided below.

- Eleven 55-gallon drums were present at the site. The prior property owner indicated the drums had been at the site since 1965 and originally contained gasoline. On the day of the site visit, the drums were either unsealed and exposed to the environment, or covered and partially filled with rainwater. There was a possibility the fuel that was originally contained in the drums was released into the surrounding soil.

- The substation site was used as a walnut grove prior to 1948. As a result, there was a possibility for pesticides and metals associated with pesticides to be present in surface soil and shallow subsurface at the site.

- Livestock was present at the site approximately 30 years ago. There was a possibility that ammonium from animal waste could have oxidized to nitrate, a drinking water contaminant.

- The Lewis Investment Company (owner of the Preserve, a 5,435 acre residential development presently under construction south of Kimball Avenue) has entered into a voluntary cleanup program with the State for a site less than 0.5 miles from the Proposed Project; however, there was no defined area for the site or specific chemical contaminants targeted for cleanup.

As indicated above, there was enough evidence of a potential environmental concern to follow the Phase I ESA with a limited Phase II ESA consisting of a soil and groundwater investigation. Soil and groundwater sampling at the Proposed Project substation site and adjacent parcel was performed on March 11, 2005. The laboratory results indicate the following (GeoTrans, 2005b):

- The soil beneath the drums had not impacted by fuel or fuel-related metals.

- The soil had not been impacted by the use of pesticides.

- Of the 31 soil samples analyzed, arsenic was detected in 7 subsurface soil samples at concentrations ranging from 0.91 milligrams per kilogram (mg/kg) to 2.87 mg/kg. The average concentration of arsenic in soil for the State of California is 3.5 mg/kg (Kearney Foundation of Soil Science, 1996). Waste

material containing a concentration of arsenic greater than 500 mg/kg is classified as hazardous by the State of California.

- The groundwater sample collected from a well on the adjacent property showed a detection of nitrate at a concentration above the USEPA maximum contaminant level (MCL) for drinking water. The concentration detected in the sample, 28.2 milligrams per liter (mg/L) nitrate as nitrogen, is above the MCL concentration of 10 mg/L nitrate as nitrogen. The presence of nitrate in groundwater has been a regional problem in the Chino Basin. In 2000, samples from more than 40 percent of the 164 municipal supply drinking water wells tested in the Chino Basin exceeded the MCL for nitrate (DWR, 2006). See Section 4.8, Hydrology and Water Quality for more detail on groundwater quality in the vicinity of the Proposed Project.

- No other analyte in the groundwater sample was detected above the MCL.

The Chino Airport is located near the Proposed Project and is operated by the County of San Bernardino. In addition to serving the County, the airport is designated to provide congestion relief to larger, air carrier-class airports such as John Wayne Airport and Ontario Airport.

There is a public school presently under construction in The Preserve community development within one-quarter mile of the Chino-Corona-Pedley 66 kV subtransmission line modifications.

There are no wildlands in the area of the Proposed Project.

4.7.2 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 one-quarter mile 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 it 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 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;

- 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.

4.7.3 Impact Analysis

Hazardous materials to be used during the construction of the Proposed Project include fuels, oil, and lubricants. There are no feasible alternatives to these materials for operation of construction vehicles and equipment and best management practices would be implemented during construction to reduce the potential for or exposure to accidental spills or fires involving the use of hazardous materials.

Due to the low volume and low toxicity of the hazardous materials to be used during the construction of the Proposed Project, the potential for environmental impacts from hazardous material incidents is less than significant. The most likely incidents involving these hazardous materials are associated with minor spills or drips. Impacts from such incidents would be avoided by thoroughly cleaning up minor spills as soon as they occur. A site-specific Construction Storm Water Pollution Prevention Plan (see Section 4.8, Hydrology and Water Quality for more detail) would be followed to ensure quick response to minor spills and minimal impacts to the environment.

As required by the federal Occupational Safety and Health Administration, construction personnel handling 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 construction foreman would ensure that all health and safety guidelines and regulations involving hazardous materials handling are followed during the construction phase of the Proposed Project.

The Proposed Project substation site is not located on a list of hazardous materials sites. In the event that contaminated soil is encountered during excavation activities at the substation site or along the subtransmission line route, the soil would be segregated, sampled, and tested to determine appropriate disposal/treatment options. If the soil is classified as hazardous (using federal or State standards, whichever is more stringent), the soil would be properly profiled, manifested and transported to a Class I Landfill or other appropriate soil treatment or recycling facility.

The wood poles that would be removed as part of the subtransmission line modifications would be either returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a RWQCB-approved municipal landfill. Except for the replacement of the wood poles and conductor along the Chino-Corona-Pedley 66 kV subtransmission line, there would be no construction activities associated with the Proposed Project within one-quarter mile of an existing or proposed school.

Operation of the Proposed Project would not require the routine transport, use, or disposal of hazardous materials, nor would it impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan. The Proposed Project would not expose people or structures to wildland fires.

The proximity of Proposed Project to an airport will not result in a safety hazard to people working or residing in the area.

The proposed transformer banks 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, the design of the substation would provide containment and/or diversionary structures or equipment to prevent discharge of an oil spill as described in the Spill Prevention Control and Countermeasure (SPCC) requirements (40 CFR Part 112.1 through Part 112.7). An SPCC Plan would be prepared by SCE before any oil-containing equipment is brought to the substation site.

Impacts to hazards and hazardous materials as a result of the construction and operation of the Proposed Project are expected to be less than significant.

4.7.4 Mitigation

Because the Proposed Project would result in less than significant impacts to hazards or hazardous materials, no mitigation measures are required.

4.7.5 Alternative B

Prior to construction of Alternative B, a limited soil investigation would be conducted at the substation site to ensure there are no chemicals at hazardous concentrations present in shallow soil from the use of the site as a settling pond. However, if such chemicals are present, they would likely occur in the uppermost 10 feet of soil and would be excavated and disposed of appropriately prior to the start of construction. As a result, impacts resulting from hazards and hazardous materials would be greater than those for the Proposed Project. However, impacts resulting from hazards and hazardous materials would remain less than significant.

4.7.6 Alternative C

Alternative C uses similar hazardous materials as those used during construction and operation of the Proposed Project. Therefore, the impacts resulting from hazards and hazardous materials would be similar as those for the Proposed Project. Impacts to hazards and hazardous materials would be less than significant.

4.7.7 References

Department of Water Resources (DWR). 2006. 2003 Groundwater Bulletin 118 Chino Basin Description. Updated January 20, 2006.

GeoTrans. 2005a. Phase I Environmental Site Assessment Southern California Edison Kimball Substation Chino, California. Final October 31, 2005.

GeoTrans. 2005b. Phase II Soil and Groundwater Investigation Kimball Substation Site.

Kearney Foundation of Soil Science. 1996. Background concentrations of trace and major elements in California soils. Division of Agriculture and Natural Resources, University of California Davis.

4.8 Hydrology and Water Quality

This section describes the groundwater and surface water resources in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also described in this section.

4.8.1 Environmental Setting

The Project Area is located within the Chino Basin Watershed Management Area and is under the jurisdiction of the Santa Ana Regional Water Quality Control Board (SRWQCB). The surface water in the vicinity of the Proposed Project consists of three flood control channels (San Antonio Channel, Cypress Channel, and Cucamonga Creek), and Prado Lake, a retention basin. All surface water runoff in the area is directed to the Santa Ana River.

The Federal Emergency Management Agency (FEMA) has determined floodplain boundaries for portions of San Bernardino and Riverside Counties. The floodplain boundaries in the area of the Proposed Project are shown on Figure 4.8, Hydrology and FEMA Floodplain Boundaries in the Area of the Proposed Project.

Groundwater beneath the Proposed Project is part of the Chino Groundwater Basin, an aquifer system that extends from the San Gabriel Mountains south to the Santa Ana River. Groundwater in the Basin is used as a source for drinking water; however, since 1983, several operators of public water systems using Basin groundwater have had to modify their management efforts to account for high concentrations of total dissolved solids (salts), nitrate, and/or solvents (SRWQCB, 2004).

The Proposed Project is located within the Chino Valley, an area that is drained through the Prado Dam, a flood control structure that is presently discharging at rates up to 9,000 cubic feet per second. There are plans to raise the height of the dam 30 feet and increase the discharge rate to 30,000 cubic feet per second (USACE, 2006).

The Proposed Project is approximately 30 miles from the Pacific Ocean and approximately 10 miles downgradient of the San Gabriel Mountains.

4.8.2 Significance Criteria

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

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete of groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table 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 of 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 storm water 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; or

- Inundation by seiche, tsunami, or mudflow.

4.8.3 Impact Analysis

For administering the NPDES, the SRWQCB requires a General Construction Activity Storm Water Permit for storm water discharges associated with any construction activity including clearing, grading, excavation, reconstruction, and dredge and fill activities that results in the disturbance of at least one acre of total land area. Because the Proposed Project would disturb more than one acre, a Storm Water Pollution Prevention Plan would be required for compliance.

There are no streams or rivers that cross, or come into contact with the Proposed Project, thus no stream or river would be altered in a manner that results in substantial erosion or siltation, on- or off-site.

During final engineering design, the site drainage would be developed to control surface runoff. If no local storm drain system is available at the time of construction, storm water runoff from the substation would be discharged into an on-site fenced retention basin. When a local storm system in the area becomes functional, the storm water runoff from the substation may or may not be tied into the future local system. Dependent upon future storm water system availability, the retention basin may be utilized as the permanent surface runoff control measure.

Once in operation, the Proposed Project would comply with all of the SRWQCB water quality standards and/or drainage discharge requirements. No groundwater or surface water resources would be impacted nor would any subsequent structures be placed on site or result in activities that could adversely impact or be impacted by the area hydrology.

The proposed Kimball Substation would not be constructed within the 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map. However, several of the 66 kV subtransmission line segments to be modified as part of the Proposed Project are located in the 100-year or 500-year floodplain (FEMA, 1995). The 66 kV subtransmission line poles would not impede or redirect flood flows.

Because the Proposed Project is approximately one mile from Prado Lake and 30 miles from the Pacific Ocean, there would be no impacts to people or structures associated with the Proposed Project if a seiche or tsunami event occurs. Nor would the Proposed Project put people or structures at risk as a result of a mudflow from the San Gabriel Mountains.

Therefore, impacts to hydrology and water quality as a result of construction and operation of the Proposed Project would be less than significant.

4.8.4 Mitigation

Because impacts to hydrology and water quality as a result of construction and operation of the Proposed Project are anticipated to be less than significant, no mitigation measures are offered.

4.8.5 Alternative B

Hydrologic and water quality factors for Alternative B are similar to those for the Proposed Project. Impacts to hydrology and water quality would be less than significant.

4.8.6 Alternative C

Hydrologic and water quality factors for Alternative C are similar to those for the Proposed Project. Impacts to hydrology and water quality would be less than significant.

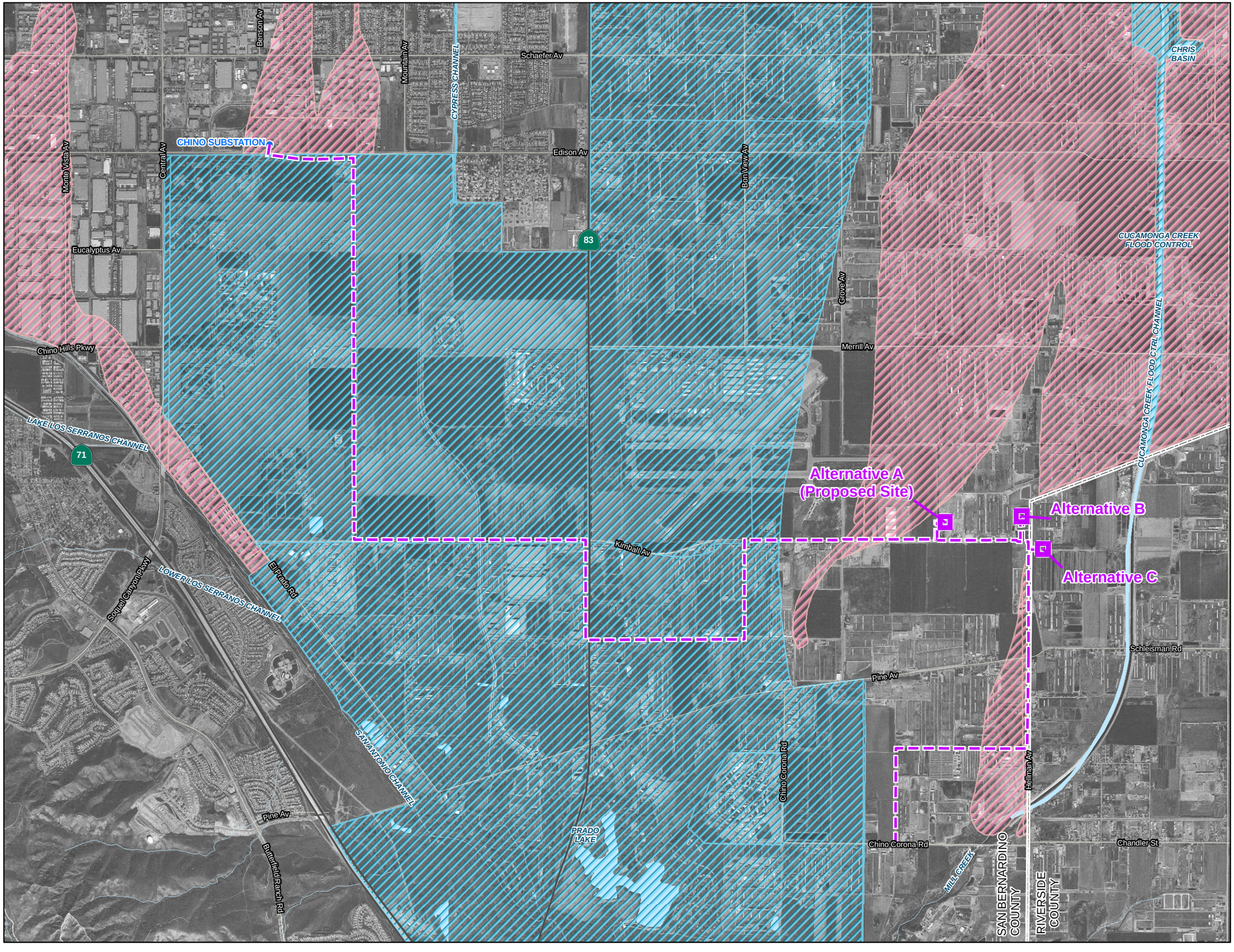
4.8.7 References

Federal Emergency Management Agency (FEMA). 1996. Q3 Flood Data, SAN BERNARDINO, CA (map). Washington, DC.

Santa Ana Regional Water Quality Control Board (SRWQCB). 2004. Water Management Initiative Region 8. Revised November 2004.

United States Army Corps of Engineers (USACE). 2006. [online] Projects and Studies, Prado Dam, Corona, California. http://www.spl.usace.army.mil/cms/index.php?option=com_content&task=view&id=14&Itemid=31 [accessed September 2006]

Figure 4.8
Proposed Kimball Substation Hydrology and FEMA Floodplain Boundaries



- Proposed Substation Sites (SCE, 2005)
- Proposed Subtransmission Line Upgrades (SCE, 2005)
- Exisiting Substations (SCE, 2006)

Flood Zones (FEMA, 1995)

- 100-Year Flood Boundary
- 500-Year Flood Boundary
- Water Features (TBM, 2006)
- County Boundaries (TBM, 2006)

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

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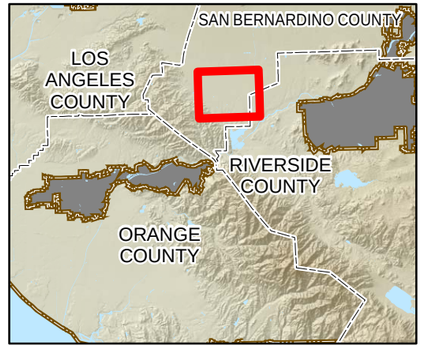

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4.9 Land Use and Planning

This section discusses the existing land use and land use policy within the vicinity of the Proposed Project. Projects to maintain electrical facilities are generally exempt from local land use and zoning regulations, CPUC General Order No. 131-D, Section III. C requires "the utility to communicate with, and obtain the input of, local authorities regarding land use matters and obtain any non-discretionary local permits". Although the Proposed Project is exempt from local land use requirements, SCE has considered local and State land use plans as part of the current environmental review and Proposed Project design process.

4.9.1 Environmental Setting

The Proposed Project is located near the shared boundaries of the City of Chino, the City of Ontario, and unincorporated Riverside County (Figure 4.5, Land Jurisdiction). This area of California has been historically used for agriculture and dairy operations, however, new residential and commercial/light industrial development is transforming the area. The land use in the area is shown on Figure 4.6, Existing Land Use.

The City of Chino, the City of Ontario, and the County of Riverside outline their long-term development strategy through the use of General Plans and Specific Plans. The General Plans provide broad policies and objectives to guide development, and Specific Plans provide detailed policies and site development standards for planning areas. Those general and specific plan elements pertaining to the area of the Proposed Project are defined below. Land use in the area as outlined in General Plans is shown on Figure 4.4, Planned Land Use.

The Chino General Plan was last amended in 1992. The Preserve Specific Plan, adopted in 2003, supersedes the General Plan for Subarea 2: The Preserve. The Preserve encompasses an area of approximately 5,435 acres located south of Kimball Avenue, north of Chino-Corona Road, west of Hellman Avenue, and east of Euclid Avenue. The Preserve consists of former and existing agricultural and dairy uses. About one-half of the Preserve is planned for residential, commercial, industrial, and airport-related development, while the other half is planned for open spaces, primarily for recreation and agriculture.

East of the Proposed Project is part of the Eastvale area of unincorporated Riverside County. The Riverside County General Plan indicates that the Eastvale area is planned for light industrial and medium density residential uses. Light industrial uses include activities such as warehousing and distributing, assembly and light manufacturing, repair facilities, and supporting retail services. A medium density residential designation allows two to five dwellings per acre, limited agriculture and animal keeping.

The Chino Airport is located within the vicinity of the Proposed Project and is operated by the County of San Bernardino. In addition to serving the County, the airport is designated to provide congestion relief to larger, air carrier-class airports such as John Wayne Airport and Ontario Airport.

Immediately east of the Proposed Project is land in Riverside County. Riverside County has implemented a program for developers called the Multi- Species Habitat

Conservation Plan (MSHCP). See Section 4.4.6, Biological Resources, for more detail on the requirements of this program.

4.9.2 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 an applicable environmental plan, policy, or regulation of an agency with jurisdiction over the project (including, 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; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.9.3 Impact Analysis

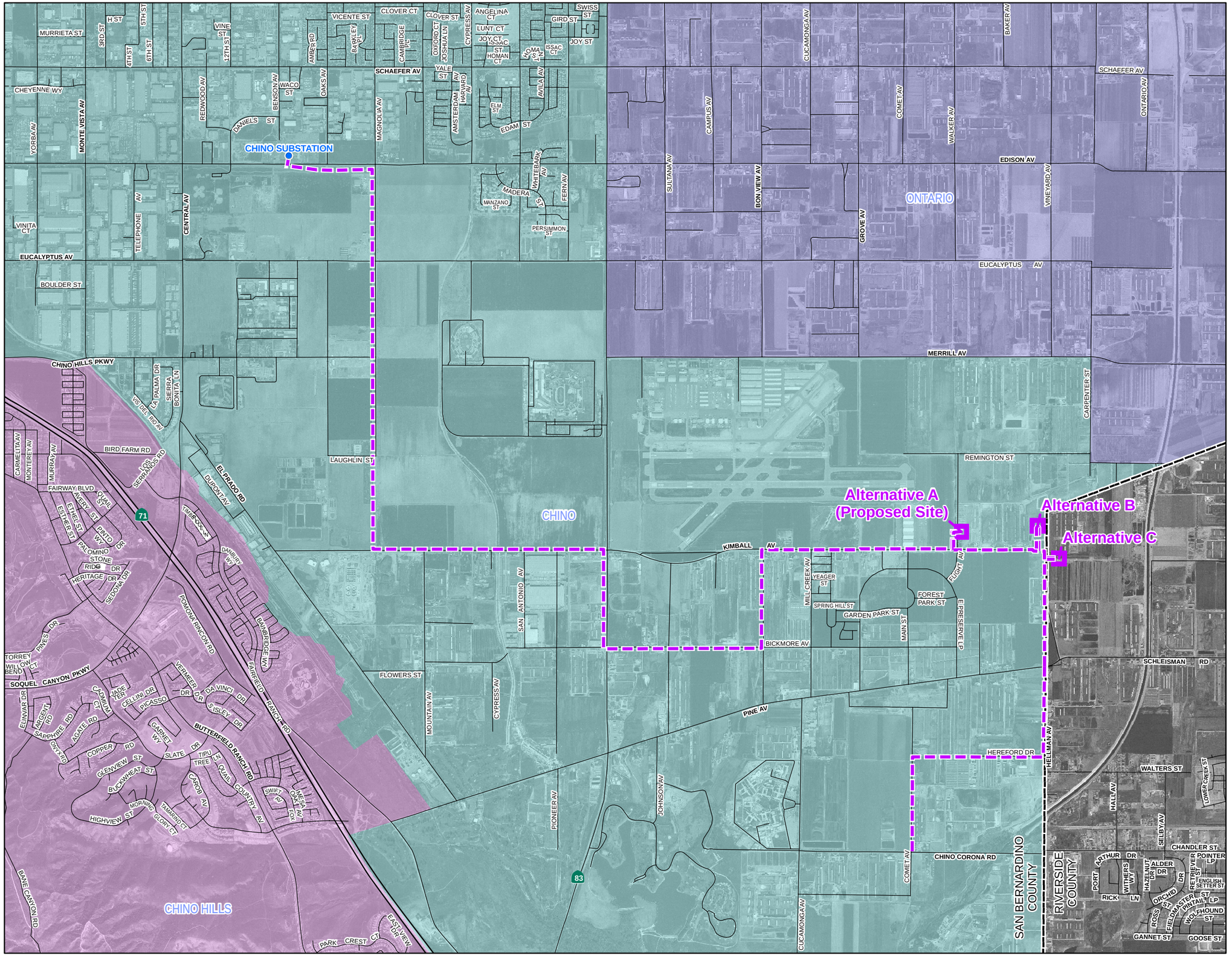
The Proposed Project substation site is located approximately 3,700 feet east of the Chino Airport runway and east of Walker Avenue, and is designated by the City of Chino for airport-related use. Airport-related uses include office, manufacturing, business parks, and other uses compatible with the Chino Airport.

A study by Stoner Associates (2005) was conducted to determine if all elements of the Proposed Project would be compatible with the Chino Airport. The study found "no material airport or aviation related factors that would affect the feasibility of establishing an electrical power distribution substation on the proposed site." The proposed site is slightly impacted by the Transitional Surface criteria in Federal Aviation Regulations (FAR) Part 77, which is made more restrictive by the Chino Airport Comprehensive Airport Land Use Plan's prohibition on structures entering into an imaginary planar surface created by extending one vertical foot for every 100 horizontal feet in the 20,000-foot radius surrounding the edge of each runway. As a result, any structure at the Proposed Project substation site, temporary or permanent, exceeding 20 feet in height would be noticed to the Federal Aviation Administration (FAA). The use of structures exceeding 20 feet in height is expected to occur during construction only. The low-profile design of the substation limits the height of permanent structures to less than 20 feet.

Poles to be installed as part of the subtransmission line modifications that enter into the imaginary planar surface described above would also be noticed to the FAA.

Land immediately south of the proposed site is planned for low and medium density residential. Adjacent land to the north of the proposed substation site is planned for light industrial, airport-related, and public facility uses.

Figure 4.9-1
Proposed Kimball Substation
Land Jurisdiction



Proposed Subtransmission Line Upgrades (SCE, 2005)

Proposed Substation Sites (SCE, 2005)

Exisiting Substations (SCE, 2006)

County Boundaries (TBM, 2006)

Cities (TBM, 2006)

Chino

Chino Hills

Ontario

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

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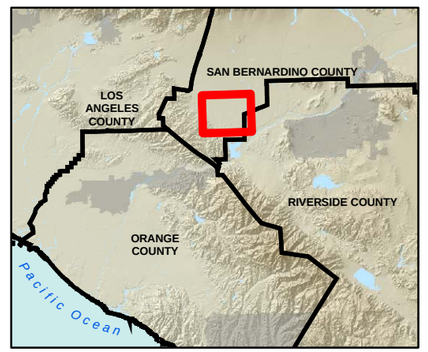

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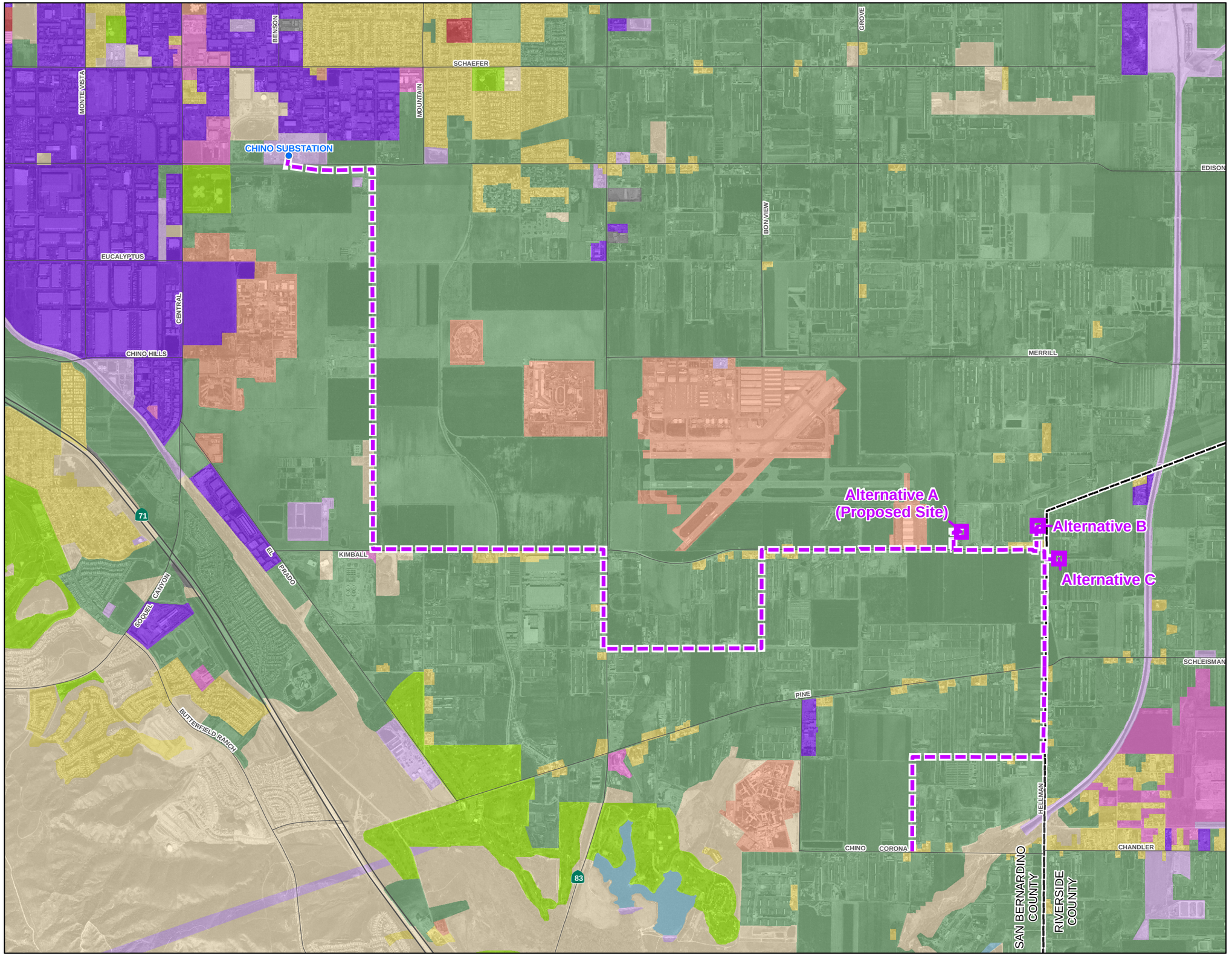
Figure 4.9-2
Proposed Kimball Substation
Existing Land Use



Proposed Subtransmission Line Upgrades (SCE, 2005)

Proposed Substation Sites (SCE, 2005)

Exisiting Substations (SCE, 2006)

Land Use (SCAG, 2001)

- **Agriculture**
- **Commercial**
- **Utilties**
- **Parks and Open Spaces**
- **Schools**
- **Industrial**
- **Residential**
- **Transportation**
- **Vacant**
- **Water**
- **All Other Categories**

County Boundaries (TBM, 2006)

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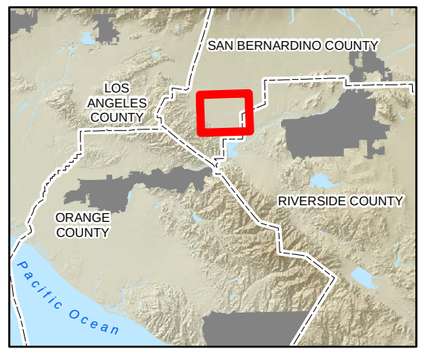

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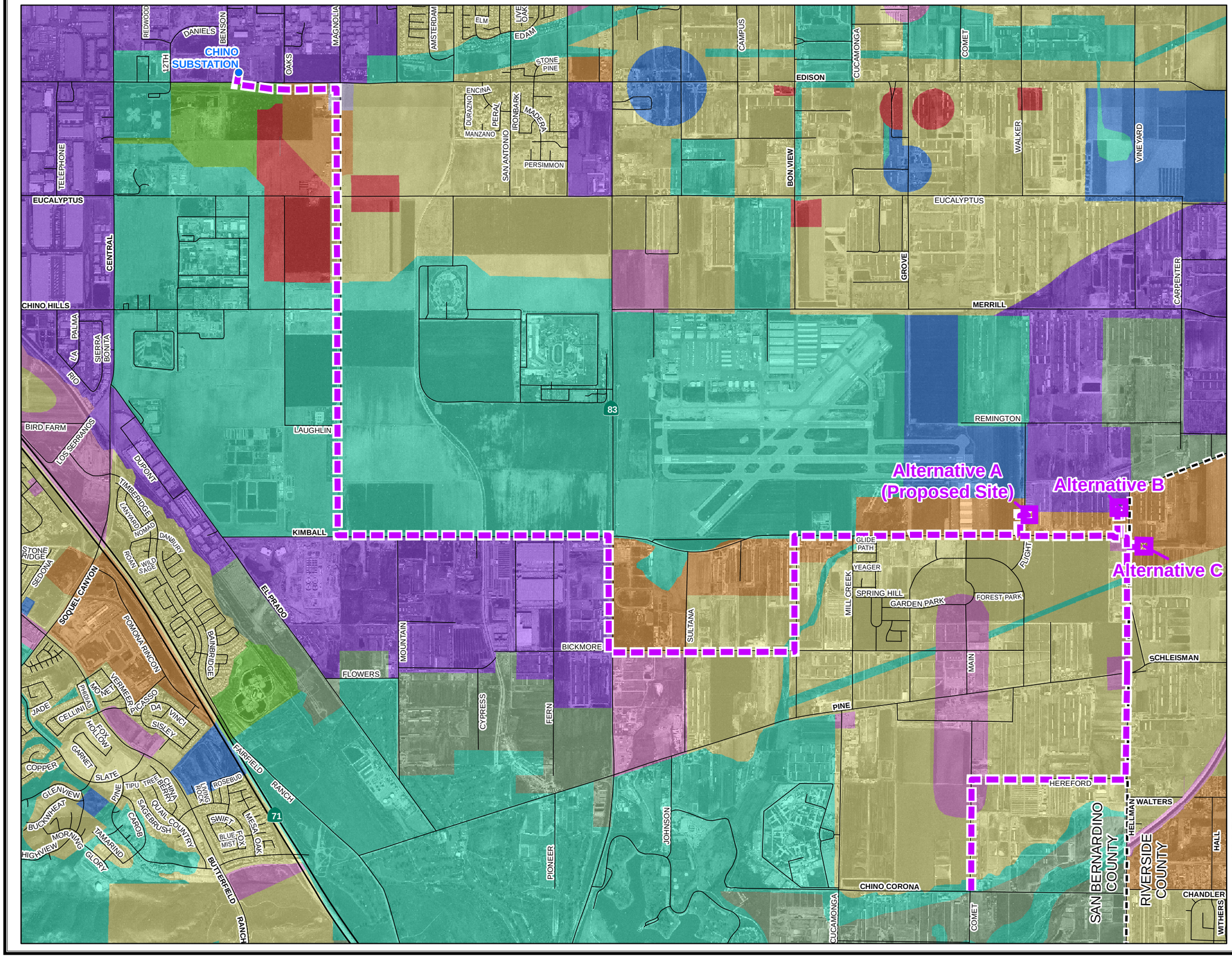
Figure 4.9-3
Proposed Kimball Substation
Planned Land Use



- Proposed Subtransmission Line Upgrades (SCE 2006)
- Proposed Substation Sites (SCE, 2005)
- Exisiting Substations (SCE, 2006)

General Plan (SCAG, 2004)

- Agriculture
- Commercial and Retail
- Industrial
- Institutions/Government
- Open Non-Developable
- Parks and Golf Courses
- Residential
- Schools (K-12) and Colleges
- Transportation
- Urban Mixed Use and Office
- Utilities
- County Boundaries (TBM, 2006)

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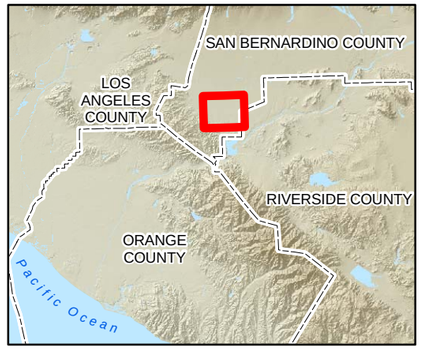

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Most individual residences within the area surrounding the Proposed Project are located on agricultural parcels associated with dairy operations. There is one residence located approximately 250 feet south of the Proposed Project substation site property boundary.

The land adjacent to the proposed 66 kV subtransmission line modifications is primarily zoned for a mix of residential, airport related, industrial, open space, and light commercial land uses.

Construction of the proposed substation and replacement and construction of the associated subtransmission lines would not cause the physical division of an established community or conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project. The Proposed Project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

As a result, the proposed substation and subtransmission lines would not conflict with adjacent established land uses, and the operation of the Proposed Project would not divide an existing community. Therefore, impacts to land use and planning would be less than significant.

4.9.4 Mitigation

Because the Proposed Project would result in less than significant impacts to land use and planning, no mitigation measures are offered.

4.9.5 Alternative B

The Alternative B substation site is presently vacant agricultural land that is not in active use, and is designated for airport-related and light industrial use. Impacts to land use would be similar to those for the Proposed Project. Impacts would be less than significant.

4.9.6 Alternative C

The Alternative C substation site is presently in an area of agricultural and dairy use, and is designated for light industrial use. Impacts to land use would be similar to those for the Proposed Project. Impacts would be less than significant.

4.9.7 References

City of Chino. 2004a. College Park Specific Plan.

City of Chino. 2004b. Zoning Ordinance of the City of Chino. Chapter 20.10.

City of Chino. 2003. The Preserve Master Plan EIR.

City of Chino. 1981. General Plan.

City of Ontario. 1999. New Model Colony General Plan.

County of Riverside. 2003. County of Riverside General Plan: Eastvale Area Plan.

Stoner Associates. 2005. Site Study for Southern California Edison Company of the Proposed Kimball Substation. November 22, 2005.

4.10 Mineral Resources

This section describes the mineral resources in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also described.

4.10.1 Environmental Setting

The Proposed Project is located in the Chino Basin, an area bounded by the San Gabriel Mountains to the north, Chino Hills to the south and west, and the San Jacinto Mountains to the east. There are three oil fields in the vicinity of the Proposed Project (Chino Soquel, Mahala, and Prado Corona), located primarily in the Santa Ana Mountains/Chino Hills (CDC, 2006a). Mining in the region is predominantly sand, gravel, and stone (CDC, 2006b).

4.10.2 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; or

- Result in loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.10.3 Impact Analysis

The Proposed Project is not designated as a locally important mineral resource recovery site in the City of Chino General Plan, the Preserve Specific Plan, or the County of Riverside General Plan (Eastvale Area). This project will not interfere with any mining operations in the region. Therefore, there will be no impact to mineral resources as a result of this project.

4.10.4 Mitigation

Because the construction and operation of the Proposed Project would result in less than significant impacts to mineral resources, no mitigation is offered.

4.10.5 Alternative B

Alternative B is not located on land delineated as a locally important mineral resource recovery site in the General Plan for the City of Chino. Therefore, the impacts to mineral resources would be similar to those for the Proposed Project. No impact to mineral resources would occur.

4.10.6 Alternative C

Alternative C is not located on land delineated as a locally important mineral resource recovery site in the General Plan for the County of Riverside (Eastvale Area). Therefore,

the impacts to mineral resources would be the similar to those for the Proposed Project. No impact to mineral resources would occur.

4.10.7 References

California Department of Conservation (CDC). 2006a. Oil and Gas Maps: District 1. [online] http://www.consrv.ca.gov/DOG/maps/d1_index_map1.htm [cited: August 2006] State of California.

CDC. 2006b. Map of California Principal Mineral - Producing Localities 1990 - 2000. [online] http://www.consrv.ca.gov/CGS/geologic_resources/mineral_production/index.htm [cited August 2006] State of California.

City of Chino. 2003. The Preserve Master Plan EIR.

City of Chino. 1981. General Plan.

County of Riverside. 2003. County of Riverside General Plan: Eastvale Area Plan.

4.11 Noise

This section describes the noise resources in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.11.1 Environmental Setting

When studying the effects of audible sound on humans it is important to consider the range of response to the human ear. The human ear does not respond equally to all sound frequencies. Sound is measured in decibels (dB) and represents the pressure difference between a sound and a reference pressure (atmospheric), and is reported using a logarithmic scale. However, the effect of sound on humans is typically measured in decibels on the A-weighted scale (dBA). A-weighting is intended to duplicate the human response by reducing the weight of low frequency sounds and slightly increasing the weighting of high frequency sounds.

Existing background ambient noise levels were measured at six locations in the area of the Proposed Project substation site, and are presented in Table 4.11-1, Background Noise Levels.

4.11.2 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:

- 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; or
- 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.

Table 4.11-1 Background Noise Levels

Measurement Location	Existing Condition Measured (dBA)		City of Chino Residential Noise Ordinance Guidelines (dBA)	
	Day	Night	Day	Night
1: Southern boundary of proposed substation site	54.3	41.6	N/A	N/A
2: Eastern boundary of proposed substation site	48.4	41.6	N/A	N/A
3: Northern boundary of proposed substation site	48.4	41.6	N/A	N/A
4: Western boundary of proposed substation site	48.4	41.6	N/A	N/A
R-1: On adjacent dairy farm east of proposed substation site	48.4	41.6	55	50
R-2: South of Kimball Avenue in residential development	48.4	41.6	55	50

Source: Veneklasen, 2005

Note: All sound levels are referenced to the L_{50} (median) statistical noise level.

4.11.3 Impact Analysis

The Proposed Project substation site is located approximately 3,700 feet from the nearest runway at Chino Airport, and the land is designated for airport-related use.

Equipment operation is the primary noise source associated with construction activities for the substation, 66 kV subtransmission line modifications, and telecommunication installation. Noise levels are dependent on several factors including the number of machines operating within an area at a given time and the distance between the source(s) and receptors. Noise generated from construction activities ranges between 80 and 90 dBA at a reference distance of 50 feet from an active construction area, as illustrated by Table 4.11-2, Typical Noise Levels at Construction Sites (Bolt, 1971). The sound levels would be attenuated with distance from the source by a variety of mechanisms, but the most significant of these mechanisms is the dispersion of acoustical energy with distance from the source (attenuation by divergence).

There is one residence in the area surrounding the Proposed Project substation site, located approximately 250 feet south of the substation site. At this distance, noise levels from the Proposed Project construction activities would be attenuated to approximately 66 to 76 dBA (Thumann, 1990). However, obstacles such as trees, existing buildings, and construction equipment in the path of the sound waves would attenuate the levels to an even lower level.

The City of Chino has established limits for construction activities to occur between the hours of 7 am to 8 pm, Monday through Saturday, and construction noise is not to exceed 65 dBA plus the noise limits listed in the exterior noise standards at residential property boundaries. The residential noise ordinance for the City of Chino limits the median noise level to 55 dBA during the day and 50 dBA at night. The acceptable sound levels outlined in the City of Chino noise ordinance for construction activities is shown in Table 4.11-3, City of Chino Noise Ordinance for Construction Activities.

Construction of the substation would adhere to the noise ordinance provisions set by the City of Chino. It may be necessary to work during nighttime hours when electrical demand on the lines is reduced. Should the need arise to plan work outside the time permitted in the local ordinance, SCE would comply with variance procedures required by the City of Chino.

Existing ambient noise levels in this area are 54 dBA during the daytime. Therefore, noise levels in nearby residential areas would increase temporarily during construction, but not significantly. The increased noise is also not considered significant due to the short-term and temporary nature of the construction activities.

Construction to support residential development is currently being conducted in the vicinity of the Proposed Project, and the construction of the substation site and the required subtransmission line is not expected to result in a perceived increase in noise levels over the present construction noise levels.

Veneklasen Associates conducted a study to determine the projected operating equipment noise levels at the nearest residential receiver location for the Proposed Project. The results are shown in Table 4.11-4, Proposed Project Substation Operation Noise Evaluation. The calculations indicate that the transformer noise contribution would be at least 10 dBA below the existing background noise levels at all existing receptor locations (Veneklasen, 2005).

Construction and operation of the Proposed Project would not expose people to excessive groundborne vibration nor would it expose people to excessive noise levels due to the proximity of the Proposed Project to the Chino Airport.

As a result, the construction and operation of the Proposed Project would have a less than significant impact on noise.

Table 4.11-2 Typical Noise Levels at Construction Sites

Construction Phase	Average Noise Level at 50 Feet	
	Minimum Required Off-road Equipment	All Pertinent Equipment Onsite
Clearing	84 dBA	84 dBA
Excavation	78 dBA	88 dBA
Paving	78 dBA	79 dBA

Source: Bolt, Beranek and Newman, 1971.

Table 4.11-3 City of Chino Noise Ordinance for Construction Activities in Residential Areas

Maximum Time of Exposure	Exterior Noise Ordinance at Residential Property Boundary	Construction Noise Limit at Residential Property Boundary
30 minutes per hour	55 dBA	120 dBA
15 minutes per hour	60 dBA	125 dBA
5 minutes per hour	65 dBA	130 dBA
1 minute per hour	70 dBA	135 dBA
Any period of time	75 dBA	140 dBA

Table 4.11-4 Proposed Project Substation Operation Noise Evaluation

Measurement Location	Transformer Contribution Only Calculated (dBA)	City of Chino Noise Ordinance Guidelines (dB)	
	Fan On	Day	Night
1: Southern boundary of proposed substation site	33	N/A	N/A
2: Eastern boundary of proposed substation site	35	N/A	N/A
3: Northern boundary of proposed substation site	31	N/A	N/A
4: Western boundary of proposed substation site	31	N/A	N/A
R-1: On adjacent dairy farm east of proposed substation site	27	55	50
R-2: South of Kimball Avenue in residential development	24	55	50

Source: Veneklasen, 2005

Note: All sound levels are referenced to the L_{50} statistical noise level.

4.11.4 Mitigation

Because the Proposed Project would result in less than significant impacts to noise levels, no mitigation measures are required.

4.11.5 Alternative B

The Alternative B substation site is located in the same area as the Proposed Project and the land is designated for light industrial use. Impacts to noise as a result of Alternative B would be similar to those of the Proposed Project. Impacts to noise would be less than significant.

4.11.6 Alternative C

The Alternative C substation site is located in the same area as the Proposed Project and the land is designated for light industrial use. Riverside County has not codified noise restrictions, but recommends noise at residential property boundaries not exceed 65 dBA during the day and 45 dBA at night.

Impacts to noise as a result of Alternative C would be similar to those of the Proposed Project. Impacts to noise would be less than significant.

4.11.7 References

Bies, David A, CH Hansen. 2003. *Engineering Noise Control, 3rd Ed.* Spon Press, United Kingdom.

Bolt, Beranek and Newman. 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances. Prepared for the United States Environmental Protection Agency.

Veneklasen Associates. 2005. Kimball Substation Pre-Construction Noise Survey.

Thumann, Albert, RK Miller. 1990. *Fundamentals of Noise Control Engineering, 2nd Ed.* Fairmont Press, Lilburn, Georgia.

4.12 Population and Housing

This section describes the population and housing resources in the area of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.12.1 Environmental Setting

The Proposed Project is located near the shared boundaries of the City of Chino, City of Ontario, and Riverside County. The General Plans for Riverside County and for the Cities of Chino and Ontario forecast that by 2025, the surrounding area will have approximately 59,000 new residential units and several new schools. The historic and future population growth data are presented in Table 4.12, Historic and Estimated Future Population Growth.

Table 4.12 Historic and Estimated Future Population Growth

Year	City of Chino	City of Ontario	Riverside County
1980	40,165	89,110	663,172
1990	59,682	133,179	1,170,412
2000	67,299	158,331	1,545,387
2005	75,097	171,154	1,850,231
2010	82,319	180,059	2,085,432
2015	90,563	212,734	2,370,526
2020	98,703	244,977	2,644,278
2025	106,500	275,873	2,900,563

Source: Southern California Association of Governments, 2004

4.12.2 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 (by proposing new homes and businesses) or indirectly (through the extension of new roads or other infrastructure);

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.12.3 Impact Analysis

Impacts associated with construction of the substation and subtransmission line modifications are considered short-term and temporary. Workers would come from the surrounding communities and they would not require housing. If out-of-town workers are used, the peak number of construction workers is not expected to exceed 15. Therefore, the Proposed Project would not require a large temporary workforce that may displace existing housing or people, nor necessitate relocation or construction of replacement housing elsewhere. Construction of the Proposed Project would have no impact to population and housing.

The substation would be unmanned and the electrical equipment within the substation would be remotely monitored and controlled by a power management system from Mira Loma Substation. Due to the substation being operated remotely, SCE personnel would generally visit for electrical switching and routine maintenance, and personnel would generally visit the substation two to three times per week. Therefore, operation of the Proposed Project would not generate a large operations-related workforce from out of the area that would require permanent housing.

In addition, extending electrical infrastructure to meet the demand for electricity is a result of, not a precursor to, development in the region. Therefore, the Proposed Project would not induce substantial population growth in the area. Operation of the Proposed Project would have no impact to population and housing.

4.12.4 Mitigation

Because the Proposed Project would have no impact to population and housing, no mitigation measures are required.

4.12.5 Alternative B

Alternative B is located in the vicinity of the Proposed Project. Impacts to population and housing are expected to be the similar to those for the Proposed Project. As a result, there would be no impact to population and housing.

4.12.6 Alternative C

Alternative C is located in the vicinity of the Proposed Project. Impacts to population and housing are expected to be similar to those for the Proposed Project. As a result, there would be no impact to population and housing.

4.12.7 References

City of Chino. 2004. College Park Specific Plan.

City of Chino. 2003. The Preserve Master Plan EIR.

City of Chino. 1981. General Plan.

City of Ontario. 1999. New Model Colony General Plan.

County of Riverside. 2003. County of Riverside General Plan: Eastvale Area Plan.

Southern California Association of Governments. 2003. Housing and Total Household Table. [online] http://www.scag.ca.gov/forecast/downloads/2004GF.xls [cited August 2006].

4.13 Public Services

This section describes the public service resources in the vicinity of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.13.1 Environmental Setting

For the majority of the area, the City of Chino provides law enforcement services to areas within the city boundary. The Chino Valley Independent Fire District provides firefighting services to the City of Chino. These services include emergency medical, paramedic services, hazardous materials response, and urban search and rescue services. There are two fire stations near Chino Airport, one at the northern boundary of the airport and one at the southern boundary.

In Riverside County, police and firefighting services are provided by the County of Riverside.

There are two existing schools and one school under construction within 1.5 miles of the Proposed Project. They are shown on Figure 4.13, Schools in the Area of the Proposed Project.

4.13.2 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.

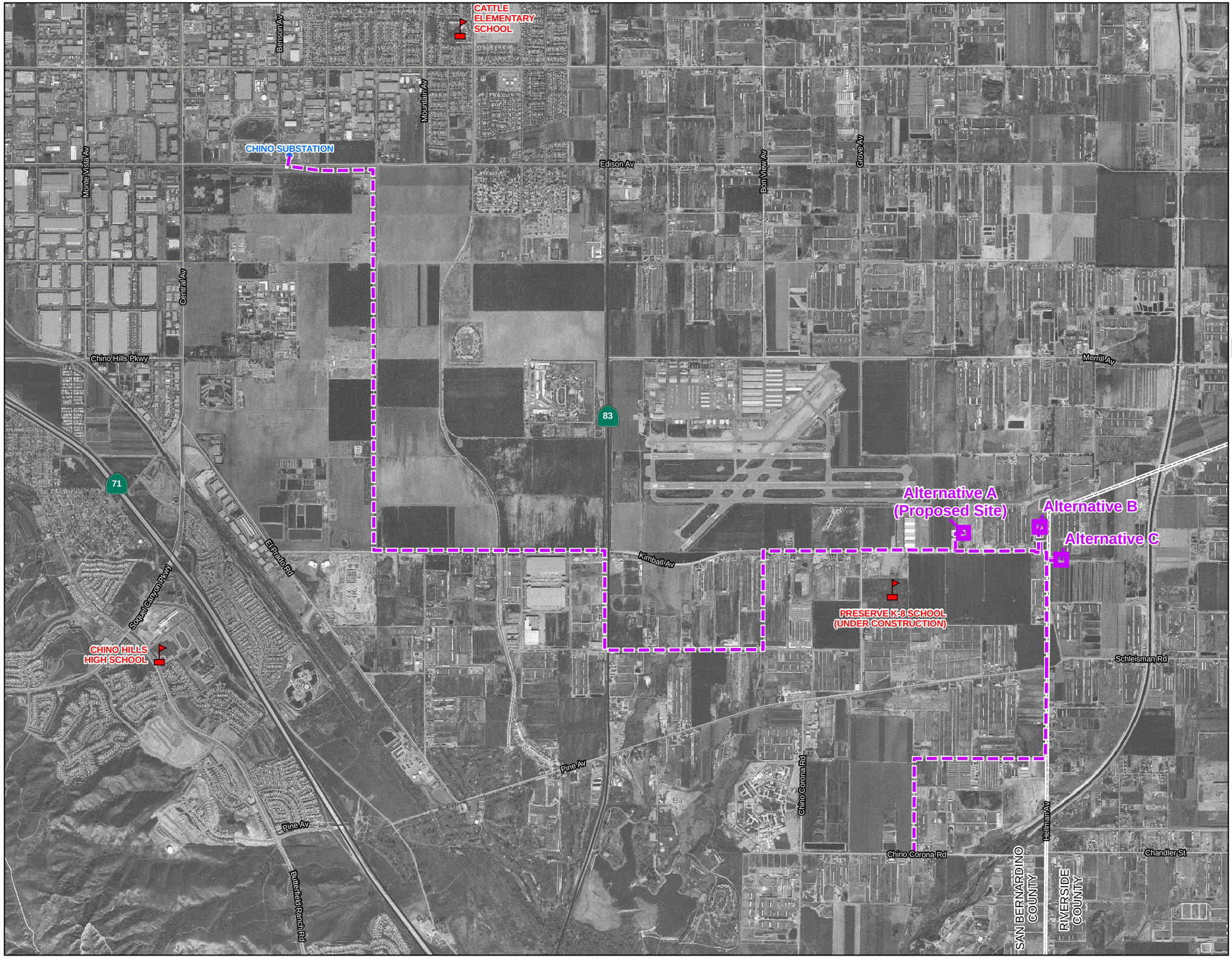
4.13.3 Impact Analysis

Construction and operation of the Proposed Project would not require expansion of fire and police protection, schools or other public facilities. The proposed substation would be unmanned, and its operation would not significantly affect police and fire protection response times or create higher demand for these public services. Therefore, there would be no impacts to public services as a result of the Proposed Project.

4.13.4 Mitigation

Because the Proposed Project would result in no impact to public services, no mitigation measures are required.

Figure 4.13
Proposed Kimball Substation Schools in the Vicinity of the Proposed Project



- Proposed Subtransmission Line Upgrades (SCE, 2005)
- Proposed Substation Sites (SCE, 2005)
- Existing Substations (SCE, 2006)
- Schools (TBM 2006, City of Chino 2006)
- County Boundaries (TBM, 2005)

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

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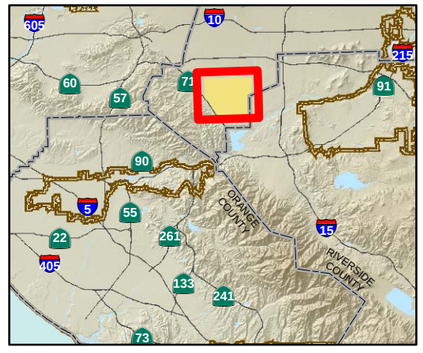

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4.13.5 Alternative B

Alternative B is located in the vicinity of the Proposed Project, and impacts to public services would be similar to those of the Proposed Project. Construction and operation of Alternative B would result in no impact to public services.

4.13.6 Alternative C

Alternative C is located in the vicinity of the Proposed Project, and impacts to public services would be similar to those of the Proposed Project. Construction and operation of Alternative C would result in no impact to public services.

4.13.7 References

Chino Police Department. 2006. Contact Us. [online] http://www.chinopd.org/Contact%20Us%20Pages/Contact%20Us.htm [cited August 2006].

Chino Valley Independent Fire District. 2006. Maps. [online] http://chinovalleyfire.org/Maps.63.0.html [cited August 2006].

San Bernardino County Superintendent of Schools. 2006. District Sites. [online] http://www.sbcss.k12.ca.us/distSite.php [cited August 2006].

Riverside County Office of Education. 2006. School Districts. [online] http://www.rcoe.k12.ca.us/links3.html [cited August 2006].

Riverside County Sheriff's Department. 2006. Station and Facility Directory. [online] http://www.riversidesheriff.org/department/directory.htm [cited August 2006].

4.14 Recreation

This section describes the recreation in the vicinity of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.14.1 Environmental Setting

The City of Chino offers several recreational opportunities to its residents. It has 10 public parks and administers several recreational sport leagues for both children and adults. Riverside County, San Bernardino County, and the State of California also operate parks and maintain open space in the vicinity of the Proposed Project. There is one park, Ayala Park, within 300 feet of the Proposed Project. The public parks in the vicinity of the Proposed Project are shown on Figure 4.14, Parks and Open Spaces in Area of the Proposed Project.

4.14.2 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; or

- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

4.14.3 Impact Analysis

The construction and operation of the Proposed Project would not increase the use of neighborhood and regional parks or other recreational facilities, nor would it include recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impact to recreation as a result of the Proposed Project.

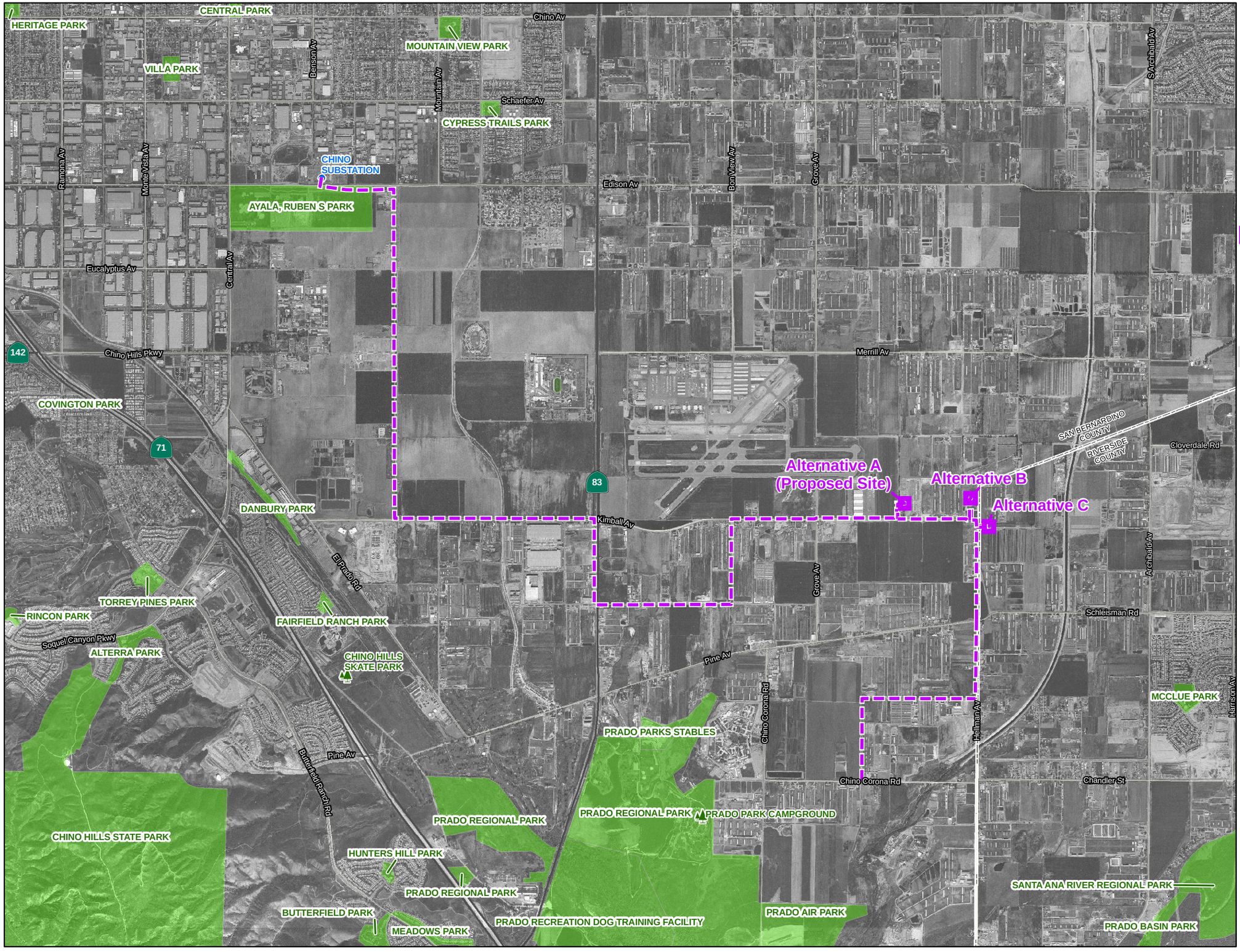
4.14.4 Mitigation

No impacts to recreation are anticipated during construction or operation of the proposed project, proposed site, or alternate sites; therefore, no mitigation measures are proposed.

4.14.5 Alternative B

Alternative B is located in the vicinity of the Proposed Project. Alternative B would not result in the increased use of city parks or other recreational facilities, or cause the deterioration of these facilities. Furthermore, Alternative B would not include or require the construction or expansion of recreational facilities. Therefore, the impacts to recreational resources would be the same as those for the Proposed Project. No impact to recreational resources would occur.

Figure 4.14
Proposed Kimball Substation
Parks and Open Spaces



Proposed Subtransmission Line Upgrades (SCE, 2005)
Proposed Substation Sites (SCE, 2005)
Existing Substations (SCE, 2006)

Cultural Points (TBM, 2006)
Parks/ Open Spaces

Cultural Areas (TBM, 2006)
Parks/ Open Spaces

Ownership Areas (SCE, 2006)
Parks/ Open Spaces
County Boundaries (TBM, 2006)

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

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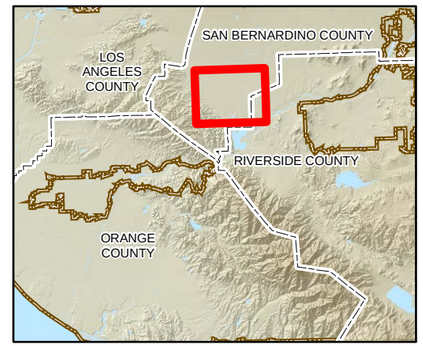

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4.14.6 Alternative C

Alternative C is located in the vicinity of the Proposed Project. Alternative C would not result in the increased use of city parks or other recreational facilities, or cause the deterioration of these facilities. Furthermore, Alternative C would not include or require the construction or expansion of recreational facilities. According to Tract Map 31309 submitted to the County of Riverside, Alternative C would be located within a proposed park site. Therefore, the impacts to recreational resources would be greater than those for the Proposed Project. However, impacts to recreational resources would be less than significant.

4.14.7 References

City of Chino. 2006. Recreation Services. [online] http://www.cityofchino.org/depts/cs/recreation/default.asp [cited August 2006].

County of Riverside. 2006a. Tract Map No. 31309 Submitted to the County of Riverside Building and Safety Department for Permit #BGR050827. Updated June 2006.

County of Riverside. 2006b. Regional Park and Open Space District. [online] http://www.riversidecountyparks.org/parks.asp?page_idno=109 [cited August 2006].

San Bernardino County. 2006. Regional Parks. [online] http://www.sbcounty.gov/parks/justthe.htm [cited August 2006].

State of California. 2006. Find a Park. [online] http://www.parks.ca.gov/parkindex/ [cited August 2006].

4.15 Transportation and Traffic

This section addresses traffic and transportation issues related to the Proposed Project and consistency with associated transportation policies. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.15.1 Environmental Setting

The primary mode of transportation in the area of the Proposed Project is vehicular travel on roadways. Roadways in the vicinity of the Proposed Project include expressways, primary roads, and secondary roads. The City of Chino updated its General Plan for Subarea 2 (The Preserve) in 2003. Included in the specific plan is a comprehensive study of transportation routes in the area.

The efficiency of several roadways in the vicinity of the Proposed Project was evaluated in 2002. The roadways were ranked according to guidelines set forth by the Highway Capacity Manual (1997) that assigns a Level of Service (LOS) rating based on factors such as speed, travel time, ability to maneuver, traffic interruptions, and safety. The highest ranked roadways are designated LOS A, representing free-flow of traffic, and the lowest ranked roadways are designated LOS F, representing forced or broken-down flow. The City of Chino considers roadways operating at a LOS D or better to be generally acceptable (City of Chino, 1992). In conjunction with residential developments in the area, the City of Chino is presently planning to upgrade several underperforming roadways to operate at a higher LOS. However, there are no roadways operating at an LOS less than D in the vicinity of the Proposed Project (City of Chino, 2003).

The cities of Chino and Ontario and Riverside County have each designated specific roadways to be used by trucks carrying extralegal loads, either by size or by weight. Designated truck routes in the area are shown on Figure 4.15, Truck Routes in the Area of the Proposed Project.

4.15.2 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:

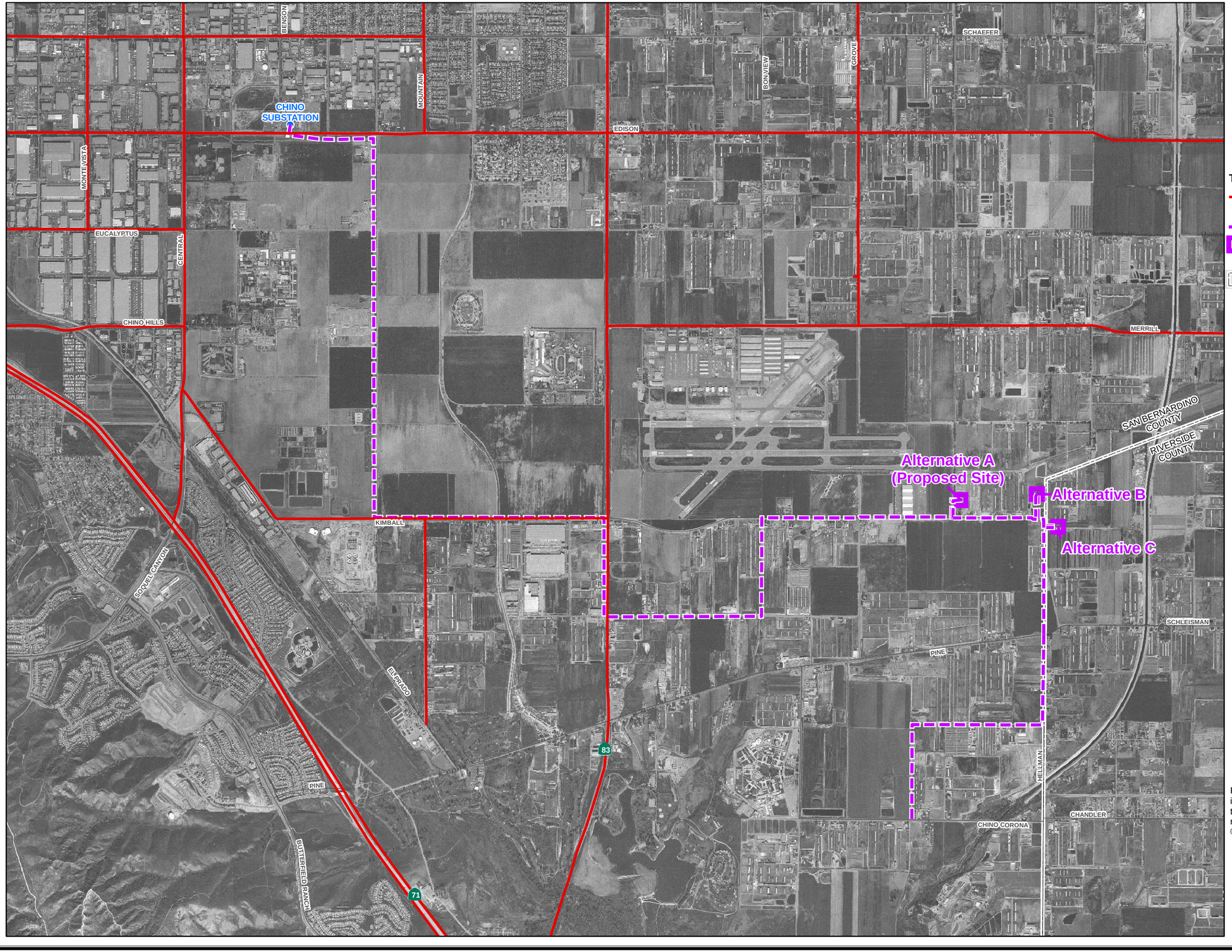
- Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;

- Result in 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);

Figure 4.15
Proposed Kimball Substation
Truck Routes



Truck Routes

(Cities of Chino, Ontario and State of California)

Proposed Subtransmission Line Upgrades (SCE, 2005)

Proposed Substation Sites (SCE, 2005)

Exisiting Substations (SCE, 2006)

County Boundaries (TBM, 2006)

Aerial Photography was flown by Aerial Access, LLC, on February 6, 2003

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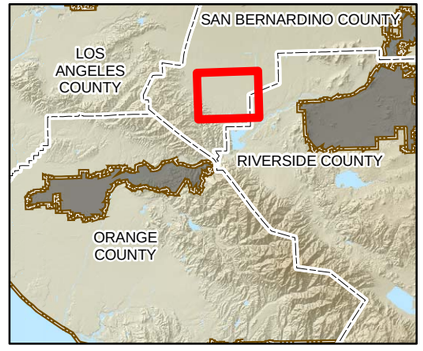

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- Result in inadequate parking capacity; or

- Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

4.15.3 Impact Analysis

Construction traffic to and from the Proposed Project would include construction crews and construction equipment for substation construction, 66 kV subtransmission line construction and telecommunication improvements. Construction activity, crew sizes and equipment to be transported through the City of Chino for the Proposed Project are presented in Table 3.2 through Table 3.5 of the Project Description.

All material for the substation, including the transformers, would be delivered by truck. The majority of the truck traffic would use major streets and would be scheduled during off-peak traffic hours. Cement truck deliveries may need to be made during peak hours when footing work is being performed. The transformers would be delivered by heavy transport vehicles and off-loaded on-site by cranes with support trucks.

The City of Chino requires a city-issued permit for trucks carrying extralegal loads as defined in the California Vehicle Code. The County of Riverside also requires a permit issued by the Road Commissioner for trucks carrying extralegal loads as specified in Chapter 10.08 of the County Code. Construction trucks exceeding these limits would arrive to the area only by designated truck routes. The trucks may use all other streets for access to particular destinations.

During construction for the subtransmission line modifications, periodic single lane closures in the public street right-of-way may be necessary and could have an effect on traffic along these routes. If lane closures are required, SCE would comply with best management practices established by the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control Committee, 1996).

An estimated 300 truck trips would be necessary to import fill material during grading. SCE Proposed Measures include the use of off-peak hours when possible and staggering trips throughout the 5-week grading period. The trucks would use designated truck routes when arriving to and leaving the substation site.

Traffic caused by construction of the Proposed Project would be temporary, short-term and minimal, and would not result in increased hazards due to design features, a loss of adequate emergency access or disturb parking capacity in the vicinity of the Proposed Project. Construction impacts to traffic would be less than significant.

The substation would be unmanned and the electrical equipment within the substation would be remotely monitored and controlled by a power management system from Mira Loma Substation. Due to the substation being remotely operated, SCE personnel would generally visit for electrical switching and routine maintenance. These visits are anticipated to occur only two or three times per week, and would have a negligible impact on traffic in the area. Thus, with the exception of periodic site visits by SCE staff or contractors, operational activities at the Proposed Project would have no impact on transportation and traffic in the area. In addition, the Proposed Project would not interfere with the Chino Airport (see Section 4.9, Land Use and Planning). To minimize

and/or avoid any impacts to traffic and transportation during the construction of the Proposed Project, SCE has incorporated the implementation of the following SCE Proposed Measures into the project plan:

SCE Proposed Measures

- To the extent feasible, truck traffic will be scheduled for off-peak hours to reduce impacts during periods of peak traffic.
- To the extent feasible, truck traffic will be staggered throughout the 5-week grading period and site preparation construction phase.
- Truck traffic will use designated truck routes when arriving to and leaving the substation site, the majority of which are designated LOS B.
- If lane closures are required, SCE will comply with Best Management Practices established by the Work Area Protection and Traffic Control Manual (California Joint Utility Traffic Control Committee 1996).

4.15.4 Mitigation

Because the Proposed Project would result in less than significant impacts to traffic and transportation, no mitigation measures are required.

4.15.5 Alternative B

Alternative B is located in the vicinity of the Proposed Project. Because filling the settling pond at the Alternative B substation site would require a greater number of truck trips during site preparation than the Proposed Project, impacts related to transportation and traffic would be greater than those for the Proposed Project. However, impacts to transportation and traffic during construction would remain less than significant. Impacts during operation would be the same as for the Proposed Project. Therefore, impacts to traffic and transportation would be less than significant.

4.15.6 Alternative C

Alternative C is located in the vicinity of the Proposed Project. Because removal of the earthen berm at the Alternative C substation site would require a greater number of truck trips during site preparation than the Proposed Project, impacts related to transportation and traffic would be greater than those for the Proposed Project. However, impacts to transportation and traffic during construction would remain less than significant. Impacts during operation would be the same as for the Proposed Project. Therefore, impacts to traffic and transportation would be less than significant.

4.15.7 References

City of Chino. 2006. [online] http://www.cityofchino.org/ [cited August 2006].

City of Chino. 2003. The Preserve Chino Sphere of Influence – Subarea 2, Final Environmental Impact Report.

City of Chino. 1981. City of Chino General Plan.

4.16 Utilities and Service Systems

This section describes the utilities and service systems in the vicinity of the Proposed Project. The potential impacts, proposed mitigation measures, and alternatives are also discussed.

4.16.1 Environmental Setting

Utility providers in the area include SCE (electricity), Southern California Gas Company (natural gas), and Verizon, Adelphia, and AT&T (telecommunications). For the majority of the area, the City of Chino provides water, wastewater, solid waste, and recycling services for the community.

In Riverside County, water and wastewater services are provided by Jurupa Community Services District, and Riverside County Waste Management provides solid waste, and recycling services.

Permitted landfills in San Bernardino County presently accept more than 50 percent of their annual waste from outside the County (CIWMB, 2006).

4.16.2 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 could cause adverse impacts to the provision of public services or utilities if:

- The project exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- The project 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.
- The project requires or results in the construction of new storm water drainage facilities of expansion of existing facilities, the construction of which could cause significant environmental effects.
- The project needs new or expanded entitlements to serve sufficient water supplies.
- The project has a wastewater treatment provider, which serves or may serve the project that does not have adequate capacity to serve the project's demand in addition to the provider's existing commitments.
- The project is served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

4.16.3 Impact Analysis

Construction and operation of the Proposed Project would not require wastewater disposal, and would not require nor result in the construction of new wastewater

treatment facilities, have discharges exceeding wastewater treatment requirements, nor require the expansion of existing facilities.

Water usage at the substation would be limited to dust suppression during construction. Since the water needed for this activity would be brought to the substation site by truck, no expansion of entitlements for water supplies would be required.

The wood poles to be replaced would be 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.

The amount of waste transported to a municipal landfill during construction and operation of the Proposed Project would be minimal, and is not expected to impact landfill capacity in the area. As a result, the impacts to utilities and public services would be less than significant.

4.16.4 Mitigation

Because the construction and operation of the Proposed Project would have a less than significant impact on utilities or public services, no mitigation measures are offered.

4.16.5 Alternative B

Construction and operation of Alternative B would result in similar impacts to utilities and services as the Proposed Project. Impact to utilities and services would be less than significant.

4.16.6 Alternative C

Construction and operation of Alternative C would result in similar impacts to utilities and services as the Proposed Project. Impact to utilities and services would be less than significant.

4.16.7 References

California Integrated Waste Management Board (CIWMB). 2006. [online] Countywide Profile for San Bernardino County. http://www.ciwmb.ca.gov/Profiles/County/CoProfile1.asp?COID=36. [cited August 2006].

City of Chino. 2006. Information for New Residents. [online] http://www.cityofchino.org/about/new_to_the_city.asp [cited August 16, 2006].

County of Riverside. 2006. General Plan. [online] http://www.rcip.org/general_plan_toc.htm [cited August 16, 2006].

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5.0 COMPARISON OF ALTERNATIVES

This section compares the environmental impacts of the alternatives. 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 Proposed Project.

The Project Objectives, developed in Section 1.4, are as follows:

- Serve projected electrical demand requirements in the Electrical Needs Area beginning in 2009
- Maintain electrical system reliability within the Electrical Needs Area
- Enhance operational flexibility by providing the ability to transfer load between distribution lines and substations within the Electrical Needs Area
- Meet projected need while minimizing environmental impact
- Meet project need in a cost-effective manner

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. All of the alternatives evaluated in the PEA, with the exception of the No Project Alternative, satisfy the project objectives.

General Order No. 131-D requires that an Application for a Permit to Construct 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." Table 5.1, Comparison of Alternatives, compares the Proposed Project, Alternative B, and Alternative C by CEQA resource category.

As described in Chapter 4.0, Environmental Impact Assessment, none of the alternatives have significant impacts, or impacts that cannot be mitigated to less than significant levels. SCE has selected the Proposed Project as the preferred alternative because it satisfies the project objectives with the least environmental impacts.

Table 5.1 Comparison of Alternatives

Section	Proposed Project (PP)	Alternative B	Alternative C
Aesthetics	Less Than Significant Impact	Similar to the PP	More than the PP
Agriculture Resources	No Impact	Similar to the PP	Similar to the PP
Air Quality	Less than Significant Impact	More than the PP	More than the PP
Biological Resources	Less Than Significant Impact	Similar to the PP	More than the PP
Cultural Resources	Less than Significant Impact	Similar to the PP	Similar to the PP
Geology and Soils	Less Than Significant Impact	Similar to the PP	Similar to the PP
Hazards and Hazardous Materials	Less Than Significant Impact	More than the PP	Similar to the PP
Hydrology and Water Quality	Less Than Significant Impact	Similar to the PP	Similar to the PP
Land Use and Planning	Less Than Significant Impact	Similar to the PP	Similar to the PP
Mineral Resources	No Impact	Similar to the PP	Similar to the PP
Noise	Less Than Significant Impact	Similar to the PP	Similar to the PP
Population and Housing	No Impact	Similar to the PP	Similar to the PP
Public Services	No Impact	Similar to the PP	Similar to the PP
Recreation	No Impact	Similar to the PP	More than the PP
Transportation and Traffic	Less Than Significant Impact	More than the PP	More than the PP
Utilities and Service Systems	Less Than Significant Impact	Similar to the PP	Similar to the PP

6.0 MANDATORY FINDINGS OF SIGNIFICANCE

This section discusses broader questions posed by CEQA. These include significant effects that cannot be mitigated to less than significant levels, irreversible/irretrievable commitment of resources, the balance between short- and long-term uses of the environment, growth-inducing impacts, and cumulative impacts.

6.1 Significant Environmental Effects of Proposed Project that Cannot be Mitigated to Insignificance

Effects on all environmental resources were evaluated to determine any impacts that would remain significant after mitigation. The Proposed Project would have either no impact or a less than significant impact for all environmental resource categories.

6.2 Irreversible/Irretrievable Commitment of Resources; Short-term and Long-term Uses of the Environment

The CEQA Guidelines (Section 15126.2(c)) require that an environmental document identify significant irreversible environmental changes that would be caused by the project. Construction of the Proposed Project would require fossil fuels, a nonrenewable resource, to power construction vehicles. The operation phase of the Proposed Project would allow for the transmission of electricity produced by both renewable and non-renewable resources, although the Proposed Project itself would not utilize significant amounts of non-renewable resources. While the Proposed Project would facilitate the delivery of non-renewable resources, these resources would be exploited and expended now and in the near future regardless of the Proposed Project. Additional resources that could be irretrievably lost could include soils (resulting from water and wind erosion in disturbed areas) and water (used for dust control).

The Proposed Project would provide a reliable source of electricity to the portions of the City of Chino, the City of Ontario, and unincorporated Riverside County that comprise the Electrical Needs Area. Its construction and operation would be consistent with federal and State policies for reliability. For these reasons, limited irreversible and irretrievable resource commitments are acceptable.

6.3 Growth Inducing Effects/Indirect Effects

The CEQA Guidelines require the consideration and discussion of growth-inducing impacts of a project in an environmental document. As specified in Sections 15126.2(d) of the CEQA Guidelines, an environmental document should:

> Discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion if a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause

> significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The following six criteria are used as a guide in evaluating the growth-inducing potential of the Proposed Project:

(1) Would the Project foster growth or remove obstacles to economic or population growth?

The Proposed Project has been developed based upon a demonstrated need for enhanced electrical capacity and delivery in this portion of the City of Chino, the City of Ontario, and Riverside County. Section 1.0, Introduction, and Figure 6.1, Location of Projects for Cumulative Impact Analysis, describe this in greater detail. The demand for electricity is a result of, not a precursor to, development in the region. Although the Proposed Project would increase the efficiency with which electricity is made available, the project objective is not to provide a new source of electricity.

(2) Would the Project provide new employment?

The Proposed Project would provide temporary employment for up to 15 workers during peak construction. No new permanent positions would result from operation of the Proposed Project.

(3) Would the Project provide new access to undeveloped or under developed areas?

The Proposed Project does not involve the creation of any new permanent roads. The Project would use only existing utility rights-of-way and public street rights-of-way for construction and operation activities. The Proposed Project does not provide new access to undeveloped or under developed areas.

(4) Would the Project extend public services to an area previously not served?

The Proposed Project would not extend public service to an area presently not served by electricity. The Proposed Project is responding to existing growth and demand trends.

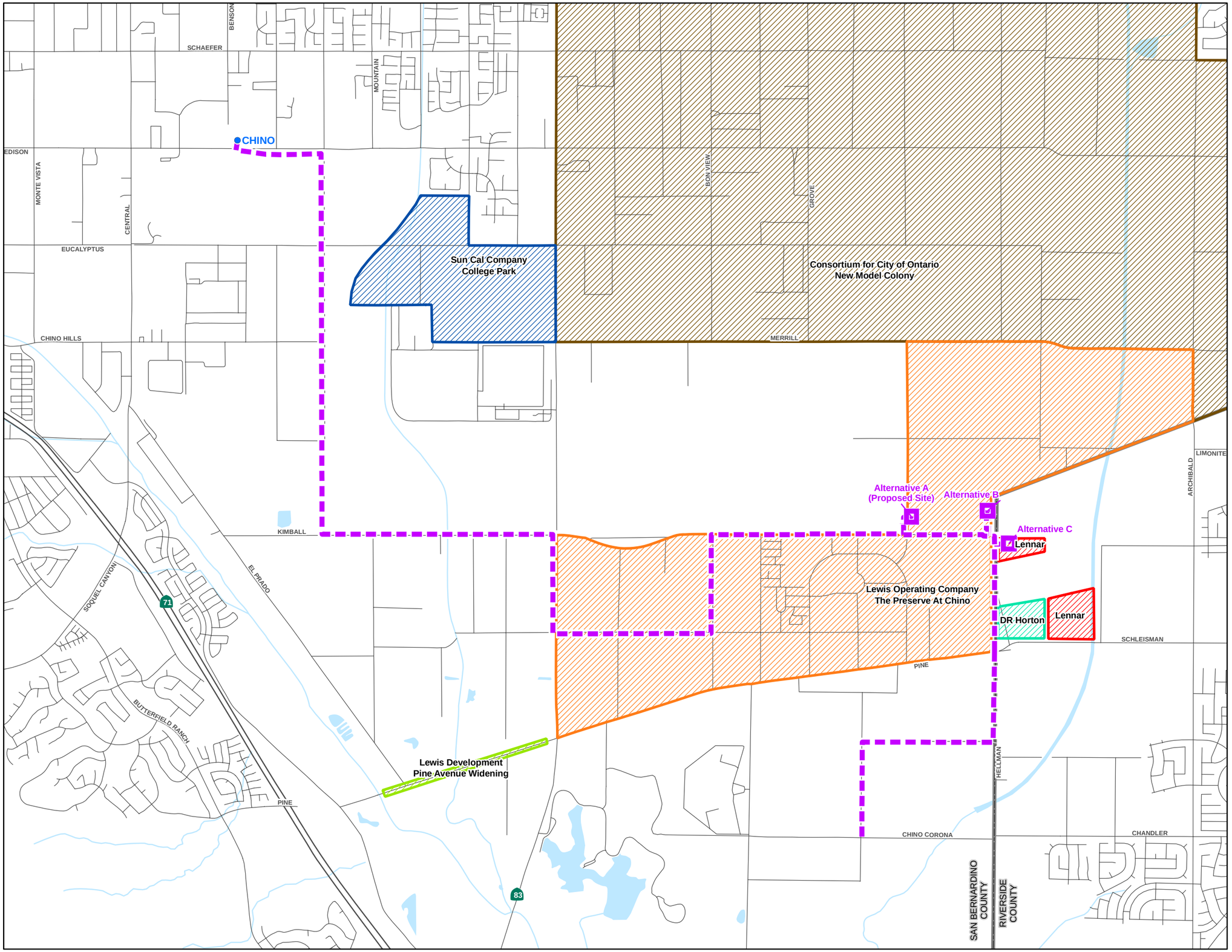
(5) Would the Project tax existing community services?

The amount of temporary, non-local workers would be minimal compared to present populations in the area of the Proposed Project. Additionally, the local community has adequate infrastructure and services to meet the need of temporary workers associated with the Proposed Project.

(6) Would the Project cause development elsewhere?

The Proposed Project would not extend public service to an area presently not served by electricity. The Proposed Project is responding to existing growth and demand trends.

Figure 6.1
Proposed Kimball Substation
Location of Projects for
Cumulative Impact Analysis



- Proposed Subtransmission Line Upgrades (SCE, 2005)
- Proposed Substation Sites (SCE, 2005)
- Exisiting Substations (SCE, 2005)

Development Areas (SCE, 2005)

Developer, Development Name

- Consortium for City of Ontario
- DR Horton
- Lennar
- Lewis Development
- Lewis Operating Company
- Sun Cal Company
- County Boundaries (TBM, 2006)

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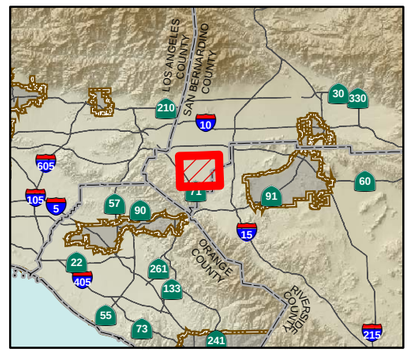

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6.4 Indirect Effects

The CEQA Guidelines (Section 15358(a)(2)) require discussion of potential indirect effects of a project. Indirect effects, also referred to as secondary impacts, are impacts caused by a project that occur later in time or are farther removed in distance, but are still reasonably foreseeable.

The previous section concludes that the Proposed Project would not have growth-inducing impacts. The Proposed Project is not anticipated to induce growth rather, it would allow SCE to provide reliable electrical service, as required by the CPUC, to current and future consumers in the Electrical Needs Area. Growth and development in the City of Chino, the City of Ontario, and unincorporated Riverside County, is managed at the local and county level and is anticipated to occur consistent with general and specific plans prepared and approved by each jurisdiction with appropriate CEQA review. Thus, to ensure adequate electrical capacity is available to serve planned development, the Proposed Project would be considered an essential utility.

The Proposed Project could be considered growth-inducing if growth resulted from the direct and indirect employment needed to construct, operate, and maintain the Proposed Project, and/or if growth resulted from the additional electrical power that would be transmitted by the Proposed Project.

As documented in the project description (Section 3.0), the construction and operation of the Proposed Project would not affect employment in the area. SCE anticipates that SCE personnel or contract workers would construct the Proposed Project. If contract workers were employed, they would not cause growth in the area due to the short-term and temporary nature of their employment. The substation for the Proposed Project is unmanned and therefore would require no full-time personnel. Due to the substation being remotely operated, SCE personnel would generally visit for electrical switching and routine maintenance. Routine maintenance would include equipment testing, equipment monitoring and repair, as well as emergency and routine procedures for service continuity, and preventive maintenance. SCE personnel would generally visit the substation two to three times per week.

The Proposed Project would not induce this growth, but follow it. No long-term indirect changes or growth can be attributed to the Proposed Project. Therefore, approval of the Proposed Project would not have indirect effects.

6.5 Cumulative Impact Analysis

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.

Projects Analyzed for Cumulative Impacts

In conducting a cumulative impacts analysis, impacts are referenced to the temporal span and spatial areas in which the Proposed Project would cause impacts. Additionally, a discussion of cumulative impacts must include either: (1) a list of past, present, and reasonably 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)). "Probable future project" includes 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)).

Planning staff at the City of Chino were contacted to compile a list of projects that could be used to evaluate cumulative impacts of the Proposed Project. Appendix I, Proposed Projects in the Vicinity of the Proposed Project, includes a list of these projects. This list also includes other projects identified by SCE.

The Proposed Project has less than significant impacts to all environmental resource categories. However, incremental impacts of the Proposed Project when added to the other past, present or reasonably foreseeable future projects could result in cumulatively significant temporary impacts to air quality.

To ensure that the Proposed Project would not result in a cumulatively significant impact, SCE would comply with regional plans for this resource to ensure cumulative impacts remain less than significant.