1.0 PROJECT DESCRIPTION

1.1 PROJECT TITLE

Kimball Substation

1.2 PROJECT SPONSOR'S NAME AND ADDRESS

Southern California Edison Company (SCE)
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770

1.3 LEAD AGENCY NAME AND ADDRESS

California Public Utilities Commission (CPUC)
Director, Energy Division
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

1.4 LEAD AGENCY CONTACT PERSON AND PHONE NUMBER

Michael Rosauer
California Public Utilities Commission
(415) 703-2579

1.5 PROJECT OVERVIEW

The Kimball Substation Project (proposed project) contains the following components:

- Construction of a new 66/12 kilovolt (kV) substation. The proposed substation would be constructed on an approximately 2-acre site in the City of Chino, California. The proposed substation would be an unmanned, automated, low-profile, 56 megavolt-ampere (MVA) 66/12 kV substation. The proposed substation would include 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 the public road.
- Modification of approximately 6.7 miles of the existing Chino-Corona-Pedley 66 kV subtransmission line and the construction of 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 existing LWS poles. 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 along an existing telecommunications line to connect the proposed Kimball Substation to SCE's existing telecommunication system.

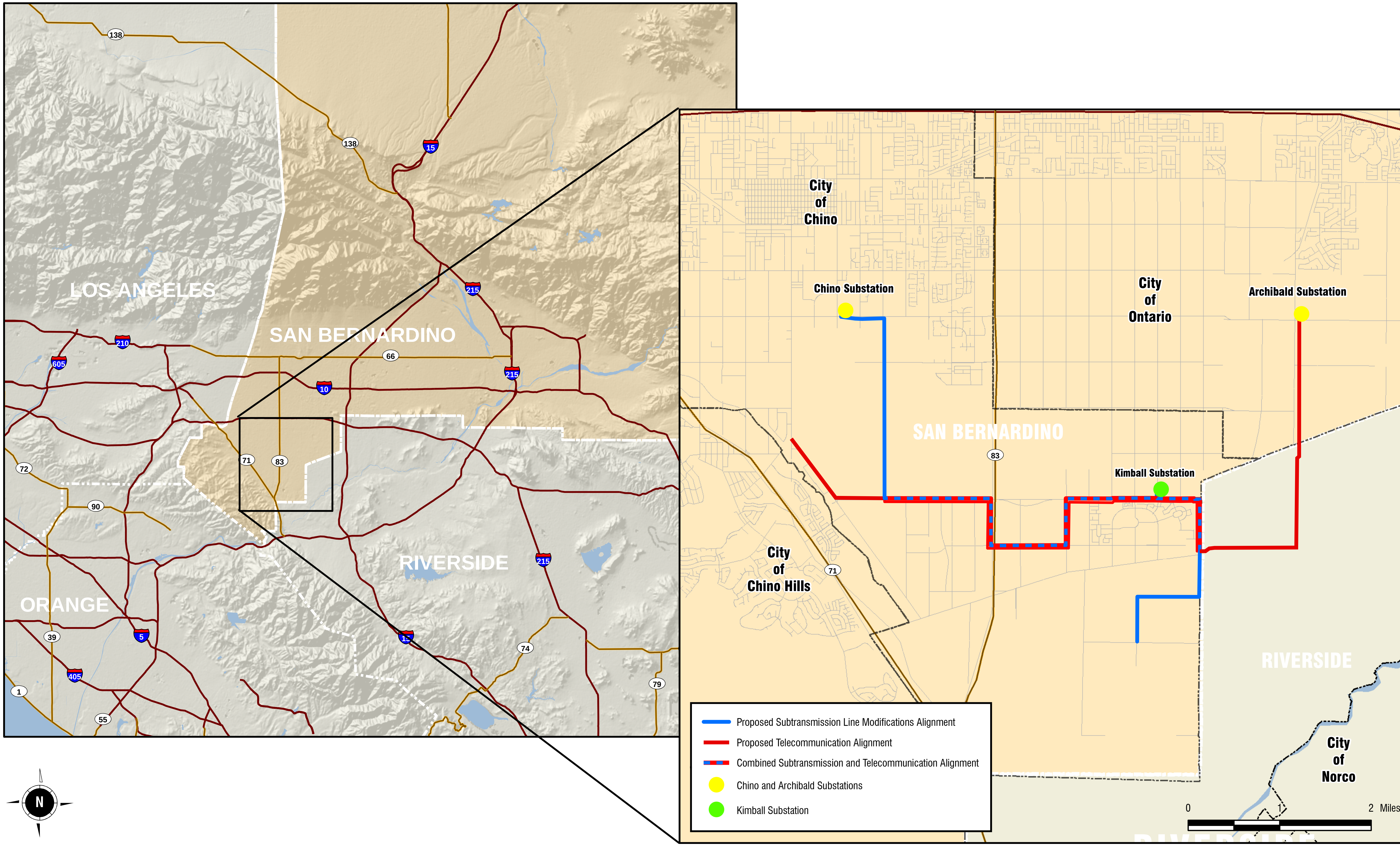
1.6 PROJECT LOCATION

The proposed project is located within the western area portion of the "Inland Empire" (a collective term for San Bernardino and Riverside counties) in Southern California (Figure 1.6-1, Regional and Vicinity Map). The project is being proposed by SCE to improve the reliability of its electric system in the cities of Chino and Ontario and adjacent unincorporated areas in western Riverside County and southwestern San Bernardino County. The modification of subtransmission lines would take place entirely within the boundaries of the City of Chino, while the installation of telecommunication infrastructure would extend from the City of Chino to the west into unincorporated Riverside County and the City of Ontario to the east and north. The majority of the following environmental analysis (Section 3.0) focuses on a one-mile radius surrounding the proposed project (Figure 1.6-2, Project Area).

1.7 SURROUNDING LAND USES AND SETTING

Historically a center for dairy faming, Chino developed from a mainly rural community into a small suburban city in the 1970s. As well as expanding industrial and commercial areas within its boundaries, substantial recent residential development has occurred within southern and eastern portions of Chino. While the agricultural character of the area remains evident, primarily in southern portions of the city, the transition from primarily agricultural to residential and industrial uses is visibly underway within the project area. Land uses that surround the proposed project are varied, ranging from industrial and agricultural (crops and dairy), to residential and recreational. The proposed project is also adjacent to Chino Airport and passes through the boundaries of the California Institution for Men (a California state prison), two of the largest individual land uses within the City.

The proposed subtransmission line route begins at the Chino Substation, which is located on Edison Avenue, between Central Avenue and Mountain Avenue, in the City of Chino. Industrial and commercial areas surround the substation to the north, east and west. Ruben Ayala Park is located to the south of substation, along Edison Avenue. The proposed subtransmission line route passes through agricultural lands within the western boundaries of the California Institution for Men and adjacent to recently constructed industrial and commercial developments east of Euclid Avenue. To the west of Euclid Avenue, the route is adjacent to agricultural lands, primarily older, smaller dairy farms before passing through the newer residential areas of "The Preserve," a large, partially-complete master planned community currently under construction and primarily south of Kimball Avenue. Chino Airport, with a variety of associated industrial areas, is located to the north of Kimball Avenue. Land uses surrounding the proposed Kimball Substation site are currently agricultural (primarily dairy), but planned to be light industrial, commercial, and residential uses.



Source: US Census, Tiger Line data, 2006, Alignments: Southern California Edison, 2005 | G:\Projects\384033_CPUC\59678_Kimball_Substation\map_docs\mxd\ISMND\Regional_Vicinity.mxd | Last Updated: 12-12-08

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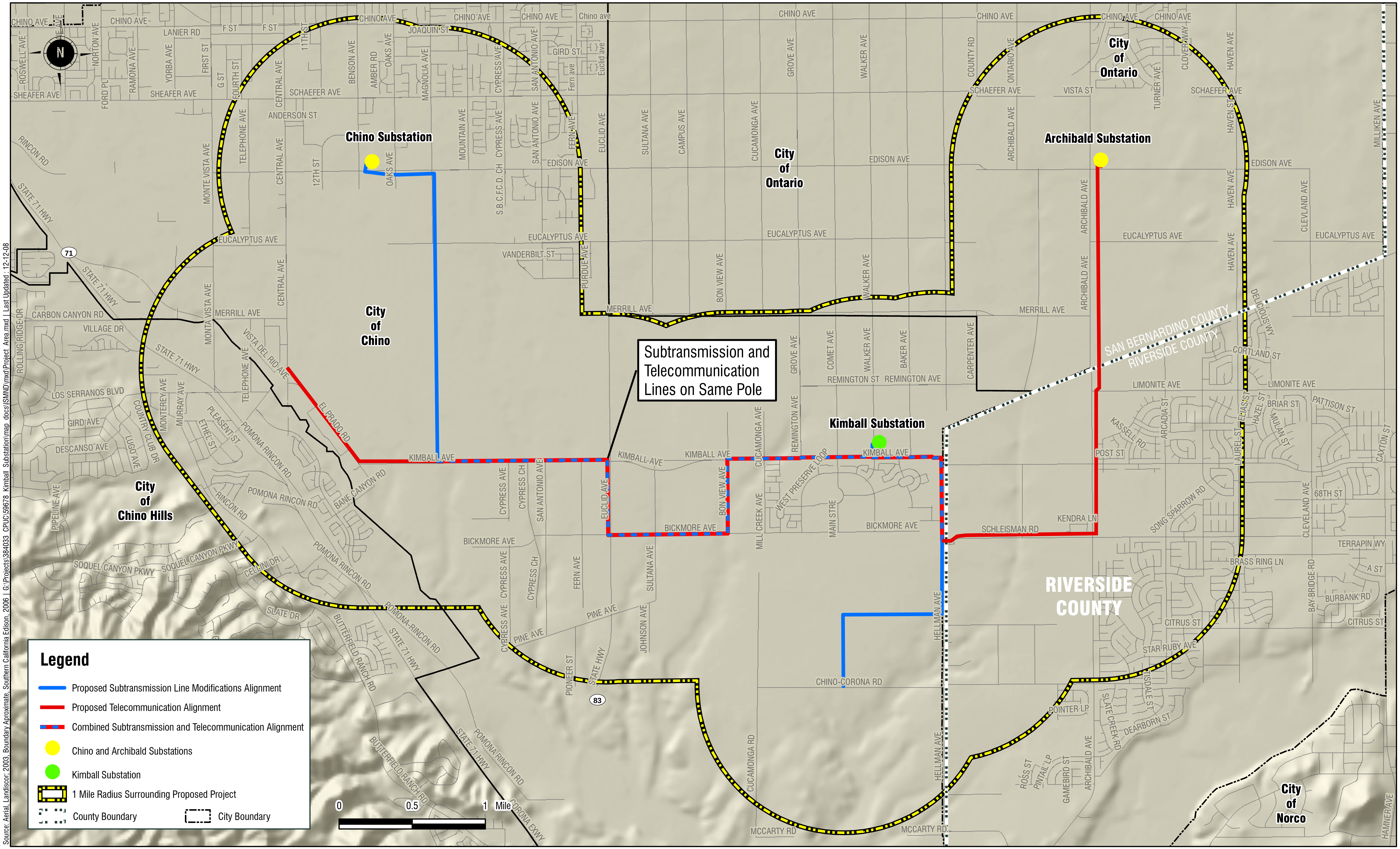
Regional / Vicinity Map

FIGURE 1.6-1



Project Area

FIGURE 1.6-2

Kimball Substation | California Public Utilities Commision | Initial Study / Mitigated Negative Declaration

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1.8 PURPOSE AND NEED

According to SCE, the electrical needs of the Cities of Chino and Ontario, as well as the surrounding unincorporated areas of western Riverside County and southwestern San Bernardino County, define the Electrical Needs Area (ENA), which is shown in Figure 1.8-1, Electrical Needs Area. The distribution lines that serve the ENA originate from other SCE-operated substations (e.g., Archibald, Chino, Soquel, and Mira Loma) within the region. The distribution lines from these substations to the ENA range in length from 5 to 7 miles, and can adequately provide electrical service to land primarily used for dairy operations and agriculture. However, the ENA is currently in a transitional phase. An SCE review of general plans and specific plans affecting the ENA indicates 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 in addition to the substantial amount of existing residential, commercial, and industrial development in the area.

While the existing distribution lines were able to accommodate the electrical demand of the primarily agricultural ENA, some areas of the ENA, such as Eastvale, has been partially developed and the equipment serving this newly developed area has been exposed to distribution circuit overloads and significant low voltages have been experienced during the peak period on sections at the end of the distribution circuits as a result of long distribution lines between the Edison and Archibald substations. Additionally, future electrical demand within the ENA is expected to increase as indicated above, and the existing SCE distribution system would not be able to handle the load projected by 2025.

In order to accommodate this projected increase in electrical demand, additional transformer capacity at a substation is needed to serve the ENA, the length of the distribution lines between the Edison and Archibald substations needs to be shortened, and improved telecommunications infrastructure is needed to facilitate operating and monitoring new substation and subtransmission line equipment.

The installation Kimball Substation at the proposed location and shortened distribution lines would provide a new source of power to handle the additional load projected within the ENA by 2025 and prevent low voltage conditions during peak period as mentioned above, thereby providing more flexibility to the electrical system as well as reliability during both normal and abnormal conditions.

According to SCE, sections of the ENA are presently experiencing low voltage conditions caused by long distribution lines between the Edison and Archibald Substations. SCE has proposed a plan to correct the existing low voltage conditions for the present rate of electrical demand in the ENA, but as demand continues to grow and the sources of demand move further from the existing substations, SCE has stated it will be difficult to maintain CPUC-mandated voltage levels. Therefore, SCE is proposing a project to be operational on December 31, 2009, to ensure the electrical distribution system has sufficient capacity and capability to provide safe and reliable electric service to customers in the ENA.

In summary, the objectives of the proposed project, as defined by SCE are:

- To serve projected electrical demand requirements in the ENA beginning in 2010;
- To improve electrical system reliability within the ENA;
- To enhance operational flexibility by providing the ability to transfer load between distribution lines and substations within the ENA;
- To prevent existing electrical equipment from overloading during high demand periods;
- To meet projected need while minimizing environmental impact;

- To meet project need in a cost-effective manner; and
- To correct present and projected low voltage conditions experienced by long distribution lines within the ENA by constructing a new substation between the existing Edison and Archibald substations.

1.9 DESCRIPTION OF INDIVIDUAL PROJECT COMPONENTS

1.9.1 Substation

1.9.1.1 Facilities

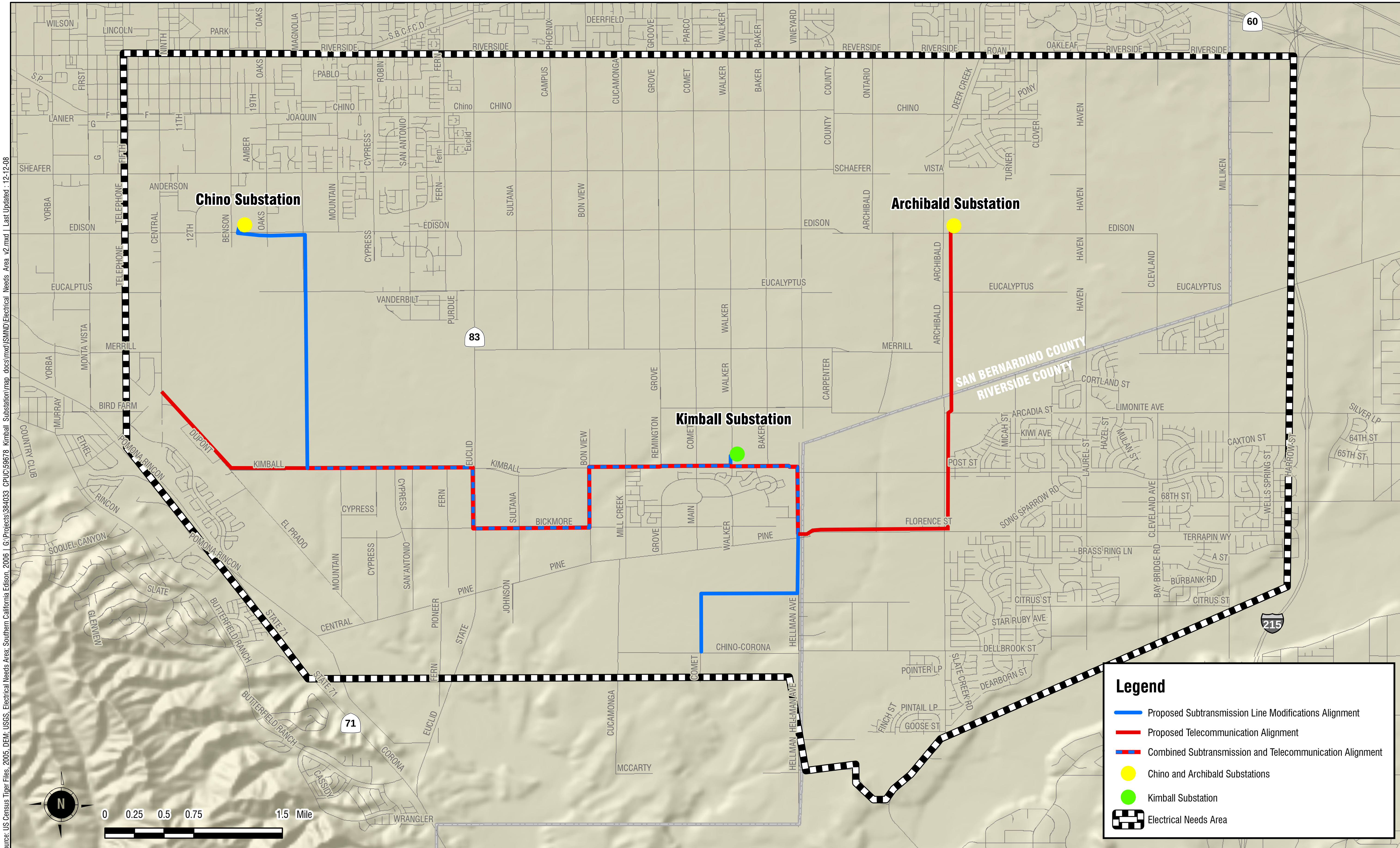
The proposed substation would be an unmanned, automated, 56 MVA, 66/12 kV low-profile substation containing a 66 kV switchrack, two 28 MVA 66/12 kV transformers, two 4.8 MVAR 12 kV capacitor banks, and a 12 kV switchrack. The proposed substation would also include underground distribution circuits leaving 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 the public road (Figure 1.9-1, Site Plan). The substation footprint (area contained within the substation perimeter wall) would be approximately 1.4 acres. The total area of the substation including a buffer area (area outside the substation perimeter wall) would be 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 above ground level.

The substation would be connected to the modified subtransmission line along Kimball Avenue via two underground 66 kV subtransmission source lines. Six 12 kV distribution circuits would be installed underneath the substation, and would extend from the substation to Kimball Avenue. These new circuits are electrically connected to the developer's electrical system. At this time, the exact location and routing of these proposed circuits have yet to be determined due to the uncertainty of future electrical demand, specifically, the location of future development. All equipment and structures at the proposed substation would be electrically grounded in accordance with SCE and industry standards. Grounding calculations would be based on soil resistivity measurements.

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. The 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 proposed 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.

To screen the proposed substation from the public and to secure the facility, the substation would be enclosed on all four sides by an 8-foot high perimeter wall that would be consistent with community standards. A metal access gate approximately 20 feet wide and 8 feet high would be installed along the western perimeter wall facing Flight Street. The perimeter wall and gate would be fitted with barbed wire for increased security. The barbed wire would not be visible from outside the perimeter wall.



Source: US Census Tiger Files, 2005, DEM: USGS, Electrical Needs Area: Southern California Edison, 2006 | G:\Projects\384033_CPUC\59678_Kimball_Substation\map_docs\mxd\ISMND\Electrical_Needs_Area_v2.mxd | Last Updated: 12-12-08

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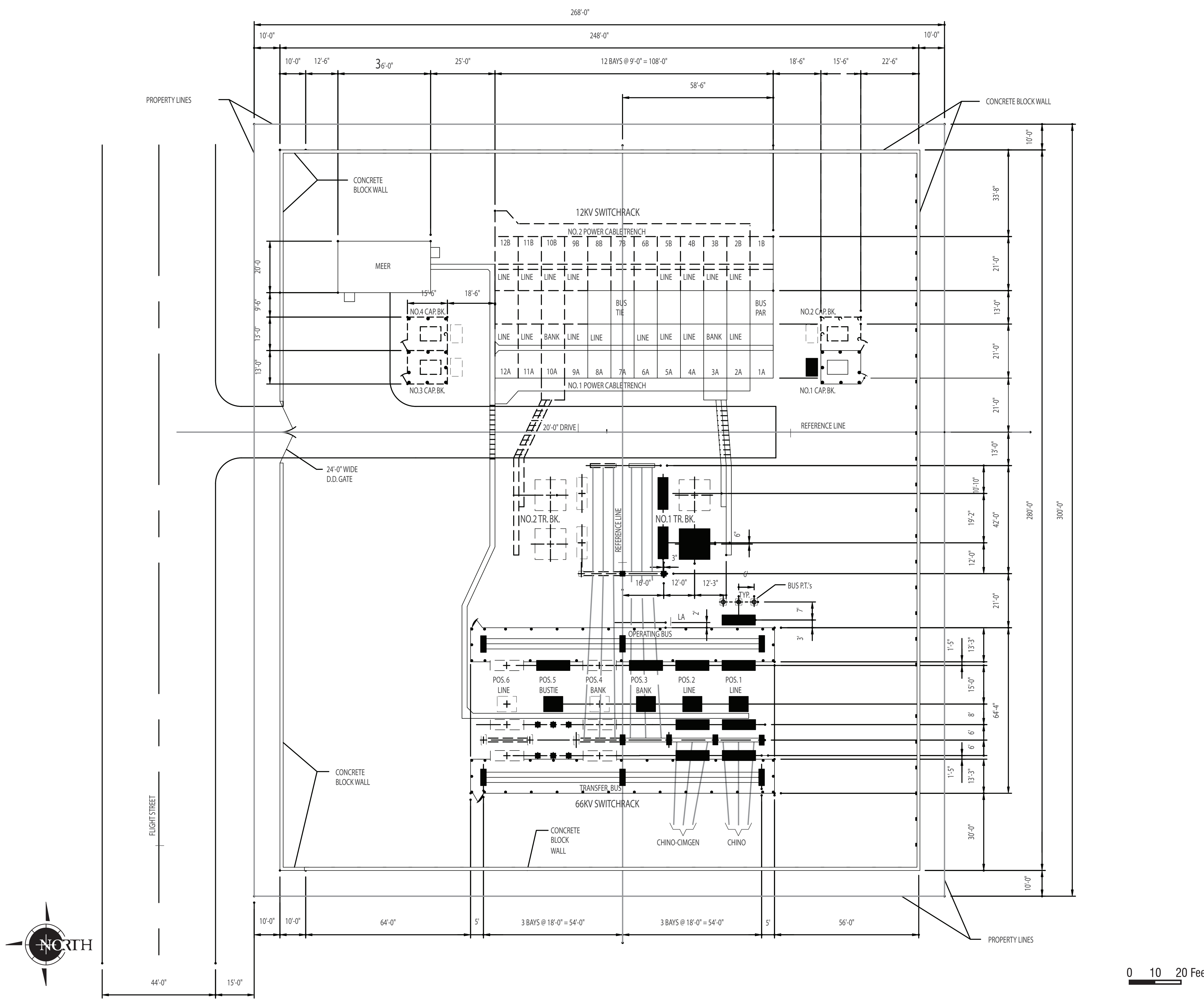
Electrical Needs Area

FIGURE 1.8-1

Kimball Substation | California Public Utilities Commision | Initial Study / Mitigated Negative Declaration



Source: Southern California Edison; 2006 | G:\Projects\384033_CPUC\59678_Kimball_Substation\graphics\docs\SMND\SubstationSitePlan.ai | Last Updated : 12-04-2007

Site Plan

FIGURE 1.9-1

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A 16-foot wide asphalt concrete paved driveway would provide access to the site by connecting the substation's metal access gate to Flight Street. The metal access gate would be a locked gate and would provide two-way traffic access to the substation. Substation construction may pre-date the completion of the Flight Street improvement. In this scenario, SCE would construct a temporary 24-foot wide asphalt-paved access road to the substation from Kimball Avenue within the Flight Street right-of-way.

1.9.1.2 Substation Site Preparation and Construction

Approximately nine small walnut trees within the site would be removed and discarded to the full depth of their root system. The mature trees along the northern and western perimeters of the site, outside of the substation footprint, would be protected during construction and would not be removed by this project.

In addition to the tree waste, the top 6 inches of soil (approximately 1,500 cubic yards) would be removed and replaced with an appropriate fill material. All material removed from the site would be tested for the presence of contaminants, transported off-site, and properly disposed of at a certified landfill.

The existing site topography would be incrementally altered 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 pending final engineering and design plans. It is estimated that approximately 6,000 cubic yards of imported fill would be required to grade the site at a one percent slope. All grading would be conducted in compliance with local ordinances.

Storm water runoff at the proposed substation site would flow from north to south and would be directed towards a 3-foot wide concrete swale located along the southern perimeter wall. The majority of the substation area within the perimeter wall would be covered with a 4-inch thick, pervious, crushed rock surface layer that would provide limited 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 at Flight Street.

In the event that the improvements to Flight Street have not been made 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's 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.

After preparation of the site, a temporary chain-link fence would be erected around the perimeter of the site for the duration of construction. Construction of the foundations and below-ground facilities would be completed, followed by the installation of the above-ground structures and the electrical equipment. Construction of the proposed substation would conclude with the installation of the perimeter wall. Equipment lay down areas for substation construction would be within the substation footprint.

All materials for the proposed 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.

1.9.1.3 Substation Operation and Maintenance

The proposed substation would be unmanned and the electrical equipment within the substation would be monitored and controlled remotely by a power management system from the 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.

1.9.2 Subtransmission Line Modifications

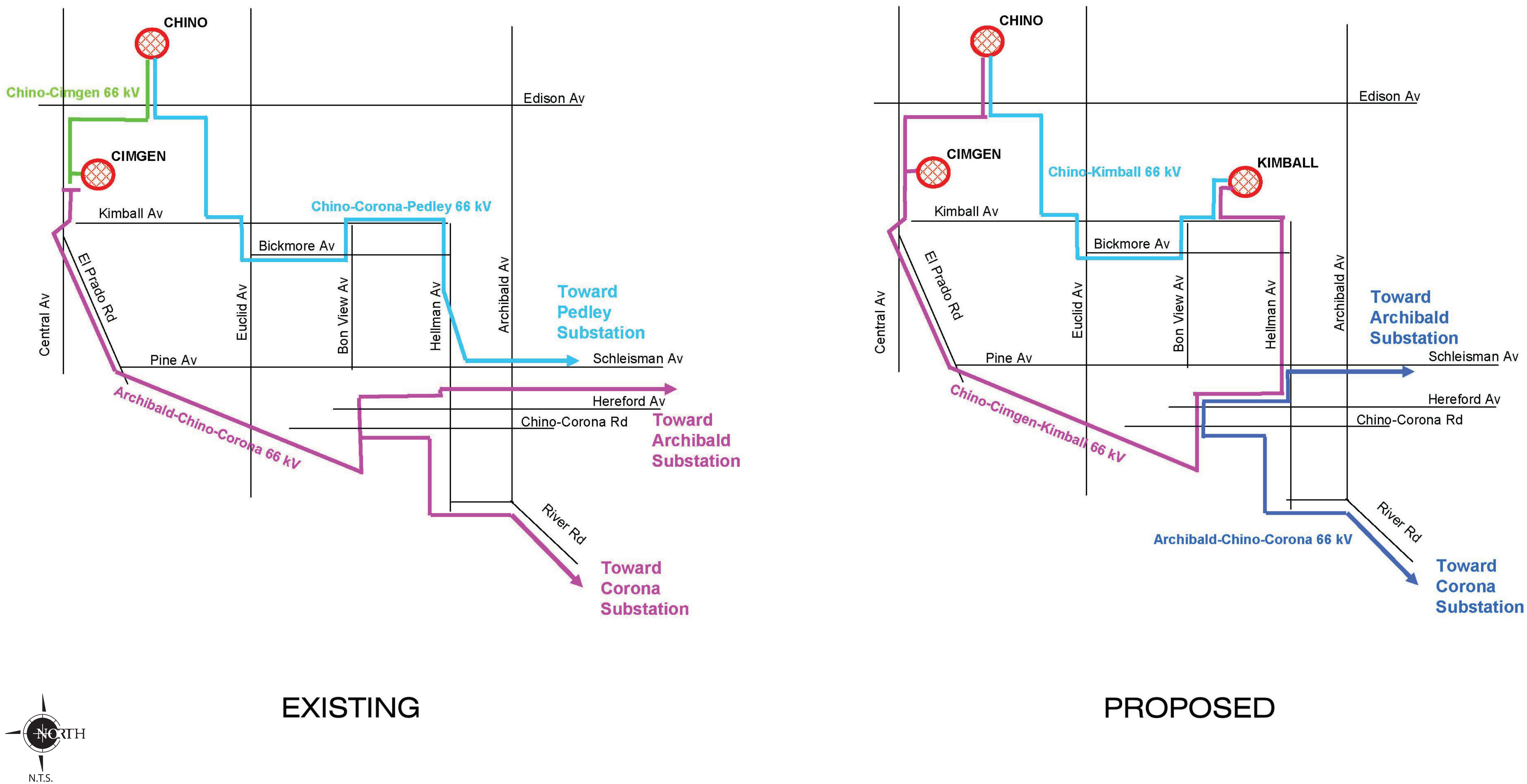
1.9.2.1 Facilities

The existing Chino-Corona-Pedley 66 kV subtransmission line would be the source line for the proposed substation. In order to connect the proposed substation to the existing Chino-Corona-Pedley line (and close the loop), two new 66 kV line segments, approximately 340 feet each, would be constructed underground, from the intersection of Kimball Avenue and Flight Street to the proposed 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, as shown in Figure 1.9-2, Existing and Proposed Subtransmission Line Arrangements. To accomplish the loop-in, the following modifications to existing 66 kV subtransmission lines would be necessary:

- Modification of approximately 6.7 miles of the Chino-Corona-Pedley 66 kV subtransmission line by replacing the existing wood poles with LWS poles and replacing the existing conductor[1] with 954-one thousand circular mils (kcmil) stranded aluminum conductor (SAC). The phase would also include the modification of an additional 1.1 mile of the line by replacing the conductor with 954 SAC.
- Construction of 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.
- Construction of an approximately 0.4-mile long 66 kV subtransmission line segment using LWS poles and 954 SAC.
- Addition of a second 66 kV subtransmission line approximately 0.9-mile long to existing structures using 954 SAC.

The locations of the subtransmission line modifications are shown in Figure 1.9-3, Proposed Subtransmission Line Modifications. Specific modifications to be made to the subtransmission line are included in Table 1.9-1.

[1] The term ‘conductor’ refers to the path through which a current of electricity flows, in this case, a wire.



Source: Southern California Edison; 2006 | G:\Projects\384033 CPUC\5 9678 Kimball Substation\graphics\docs\ISMND\LineArrangements.ai | Last Updated : 03-06-2008

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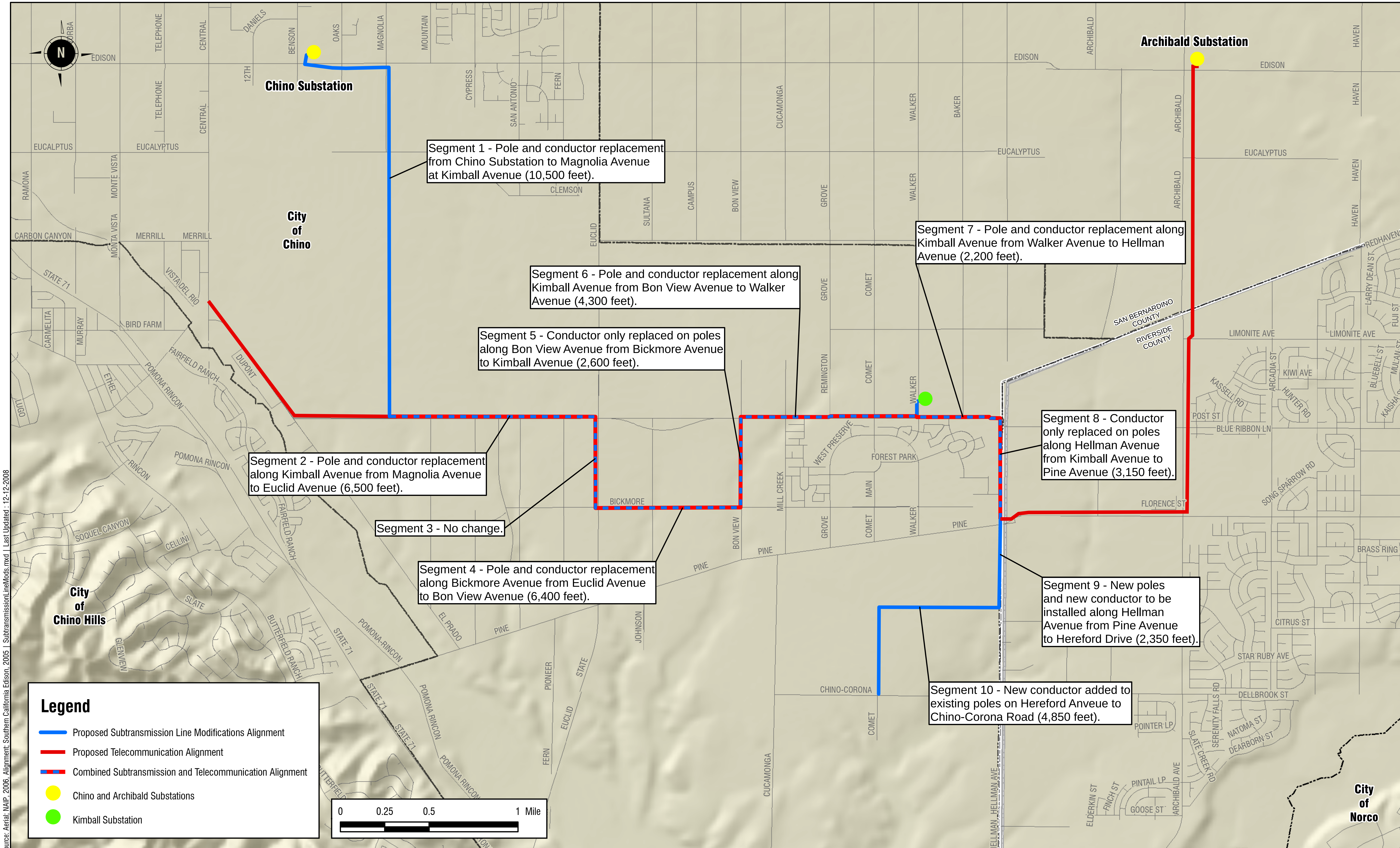
Existing and Proposed Subtransmission Line Arrangements

FIGURE 1.9-2



Source: Aerial: NAIP, 2006, Alignment: Southern California Edison, 2005 | SubtransmissionLineMods.mxd | Last Updated : 12-12-2008

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Proposed Subtransmission Line Modifications

FIGURE1.9-3

Table 1.9-1. Proposed Subtransmission Line Modifications

Segment	Modification(s)
1	Approximately 10,500 feet of conductor and 56 poles would be replaced along this segment.
2	Approximately 6,500 feet of conductor and 30 poles would be replaced along this segment.
3	No modifications.
4	Approximately 6,400 feet of conductor and 10 poles would be replaced along this segment.
5	Approximately 2,600 feet of conductor and 10 poles would be replaced along this segment.
6	Approximately 4,300 feet of conductor and 30 poles would be replaced along this segment. At the intersection of Flight Street and Kimball Avenue a tubular steel pole (TSP) riser would be installed to transition the overhead lines to underground cables. Two new 66 kV underground lines would be extended approximately 600 feet from the TSP riser into proposed substation.
7	Approximately 2,200 feet of conductor and 15 poles would be replaced along this segment.
8	Approximately 3,100 feet of conductor would be installed on poles that will be replaced prior to construction of the proposed project.
9	Approximately 2,300 feet of new conductor and nine new poles would be installed.
10	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 lightweight steel (LWS) poles and 9.1 miles of new 954 kcmil stranded aluminum conductor. One tubular steel pole (TSP)[2] riser would be installed at the intersection of Flight Street and Kimball Avenue to connect the overhead conductor to underground cables. In areas where there are existing SCE distribution lines and/or third-party owned telecommunication and cable television lines attached to the existing wood poles, those lines would either be buried in public streets or transferred to the new LWS poles at approximately the same height above ground level as they currently exist. The new LWS poles would be approximately 10 feet taller than the existing wood poles (Figure 1.9-4, Typical Subtransmission Line Poles).

1.9.2.2 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 construction equipment used for installing and removing poles and for pulling an overhead conductor would be positioned on existing streets directly adjacent to the new and existing lines.

Light Weight Steel Pole Installation. Installation of LWS poles would require excavation to approximately nine 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. No closures are needed on Euclid Avenue (State Route 83). All needed lane closures will be within the City of Chino, and required permits will be secured prior to any closure.

[2] A TSP riser is the structure used to transition between overhead conductors to underground cables.

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 the excavation of the existing poles. The removed poles would be returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a certified municipal landfill.

TSP Riser Installation. 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 excavated hole 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.

Underground Subtransmission Line Construction

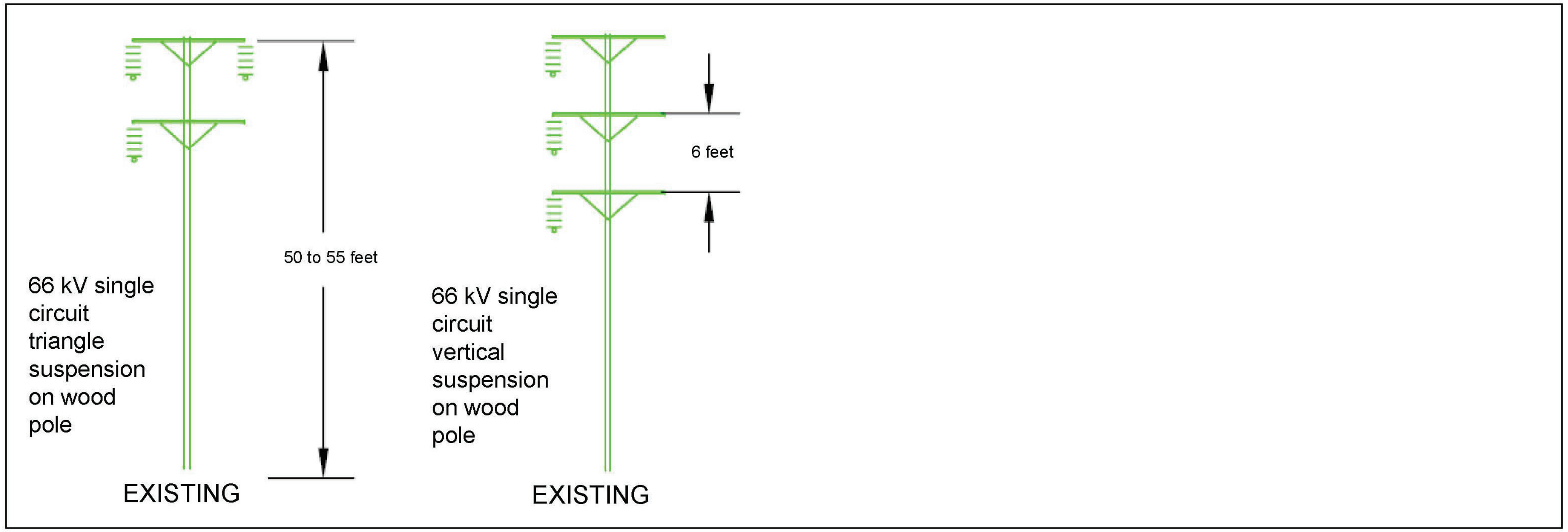
This section describes the installation of the underground subtransmission line segments that would extend the existing Chino-Corona-Pedley 66 kV subtransmission line to the proposed substation. Two new line segments consisting of 3000 kcmil copper cable would be placed in an approximately 340-foot long concrete encased PVC duct bank that would be installed between the substation and the TSP riser.

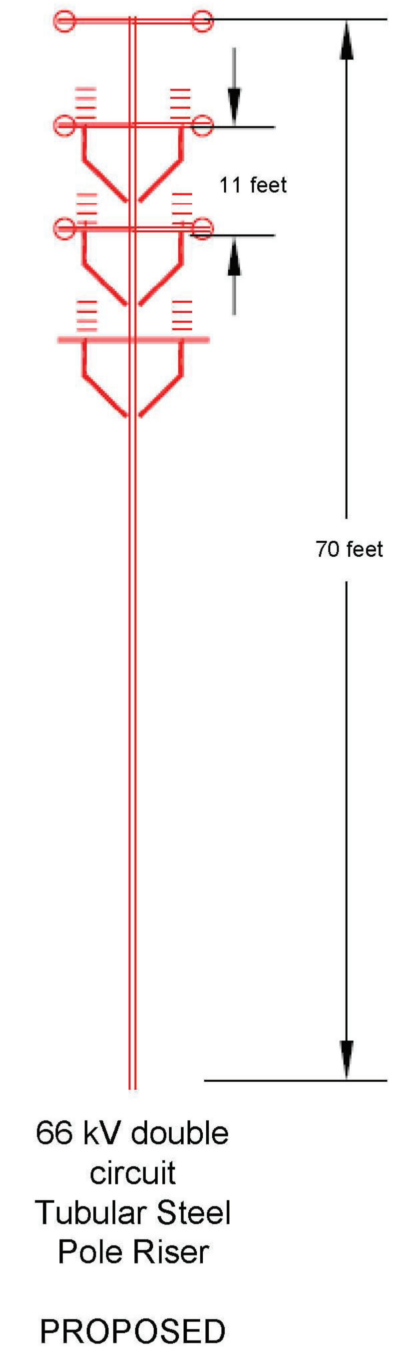
Digging and Trenching. A 24-inch wide by 5-foot deep trench would be required to place the conduits underground. Trenching would be performed with a backhoe and other machinery specifically designed for this purpose. Soils would be tested for the presence of contaminants, and where appropriate, either 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. 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 would be located inside the proposed substation and one vault would be located north of the TSP riser along Flight Street. The top of the vaults would be installed approximately 3 feet below surface and would house equipment and splices for underground lines.

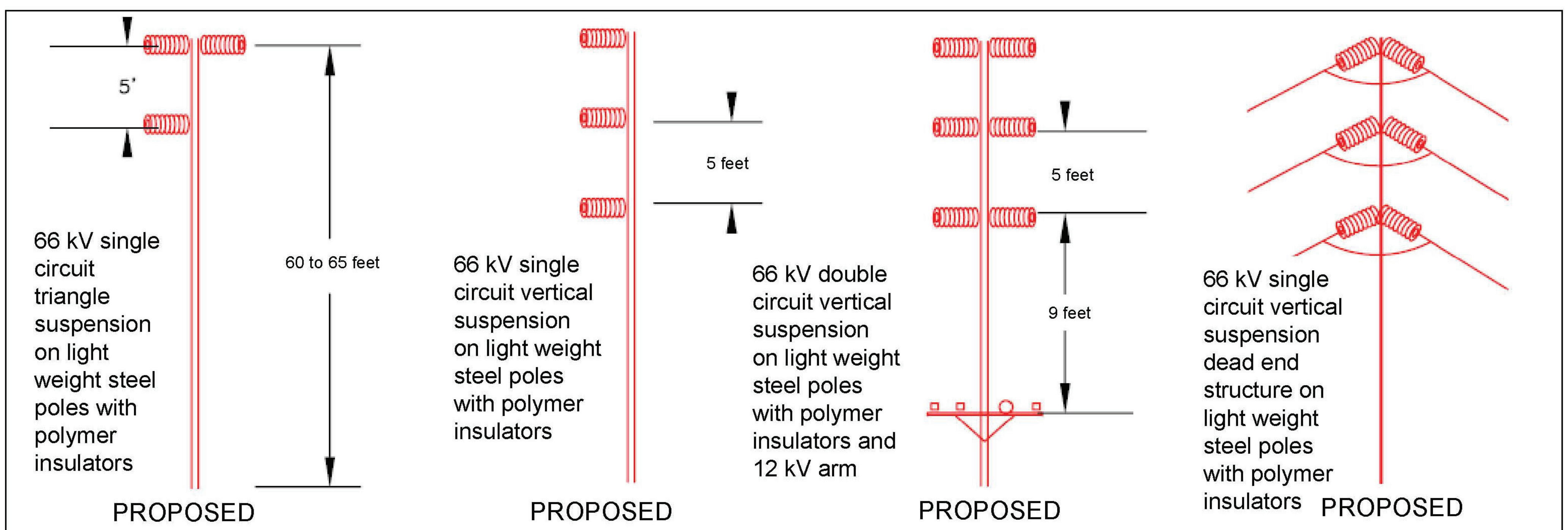
Duct Bank Installation. Five-inch diameter polyvinyl chloride (PVC) conduits are configured and encased in approximately 3 inches of five-sack hardened concrete at a minimum depth of 36 inches. This is known as a duct bank. One duct bank would be installed from the vault within the proposed substation to the vault north of the TSP riser along Flight Street. 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.

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.



Source: Southern California Edison; 2006 |G:\Projects\384033_CPUC\59678_Kimball_Substation\graphics\docs\SMND\LinePoles.ai | Last Updated : 02-01-2008

Typical Subtransmission Line Poles

FIGURE 1.9-4

Backfill Placement. Once the concrete has hardened, 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 would be installed by pulling underground cables from a reel positioned at the vault within the proposed substation to the vault north of the TSP riser along Flight Street. 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.

1.9.2.3 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.

1.9.3 Telecommunication System

1.9.3.1 Description

The proposed project includes the construction of communication infrastructure for the operating and monitoring of the substation and subtransmission line equipment. The new infrastructure would connect the proposed Kimball Substation to the existing Mira Loma Substation via the existing Archibald and Chino Substations (Figure 1.9-5, Proposed Telecommunication Improvements). The following sections describe the telecommunication improvements required for the proposed project.

Telecommunication Improvements

Constructing the proposed telecommunications system improvements for the proposed project would require the installation of fiber-optic cable between the proposed substation and the Archibald Substation, and between the proposed substation and the existing fiber-optic cable located on Central Avenue. A 48-strand fiber-optic cable would be used for both installations. The fiber-optic cable installation route would utilize both overhead and underground facilities. There would be new underground ductbanks installed between the Substation site and Kimball Avenue and along Euclid Avenue between Brickmore Avenue and Kimball Avenue. The rest of the telecommunication route would be in existing conduit or on poles (either on existing poles or poles installed as part of the project).

In addition, new telecommunications equipment would be installed at the proposed substation. An equipment rack installed at the proposed substation Mechanical Electrical Equipment Room (MEER) would house the new telecommunications equipment. The proposed substation would contain conduits that connect to off-site fiber-optic cables. Telecommunications equipment upgrades would also occur at the Cimgen, Chino, Ontario, Firehouse, Milliken, Mira Loma, and Archibald Substations to facilitate the new interconnections.

1.9.3.2 Telecommunications Construction

Overhead Cable Construction. The overhead telecommunications cable would be attached to new LWS poles that would be installed during the proposed subtransmission line modification, and existing wood poles in those areas where the proposed telecommunication line deviates from the proposed subtransmission line modifications (e.g., where the telecommunication line turns east from Hellman Avenue into Riverside County and then north into the City of Ontario). 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 substation and the existing Archibald Substation, as well as in a new borehole that would be installed along a portion of Archibald Avenue where it would cross under the 500 kV transmission line corridor. At the Archibald Substation, a new underground vault and conduits would be installed within the substation site to bring the fiber-optic cable from the substation to the nearest subtransmission line pole.

At the proposed 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.

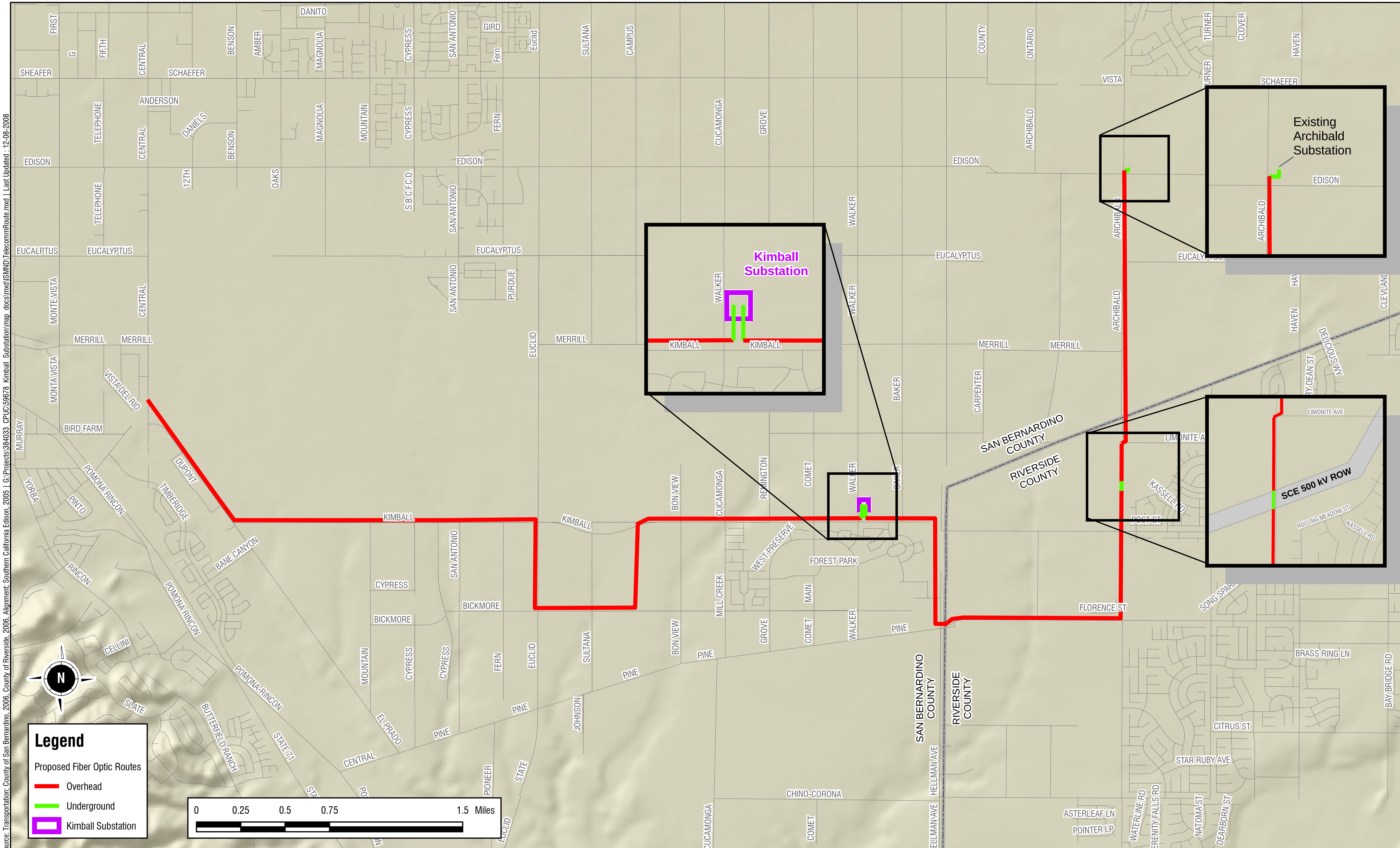
Where the telecommunications route crosses the 500 kV corridor, the underground conduits would be installed using a horizontal boring method. A 7-foot by 10-foot hole would be excavated to a depth of 7 feet at each side of the corridor, and the boring machine would be placed inside one hole and directed 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.

1.9.3.3 Telecommunications 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 new maintenance roads are anticipated at this time. No additional SCE personnel beyond normal staffing levels would be required to operate or maintain the telecommunication system for the substation.

1.9.4 Project Design Considerations/ Applicant Proposed Measures (APMs)

The proposed project incorporates several design measures which would minimize project impacts. Specifically, design measures are provided which would minimize potential aesthetics, air quality, geology and soils, hazards and hazardous materials, transportation and traffic, and noise impacts (see Table 1.9-2).



Source: Transportation: County of San Bernardino, 2006, County of Riverside, 2006, Alignment: Southern California Edison, 2005 | G:\Projects\384033_CPUC\59678_Kimball_Substation\map_docs\mxd\ISMND\TelecommRoute.mxd | Last Updated : 12-08-2008

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Proposed Telecommunications Improvements

FIGURE1.9-5

Table 1.9-2. Project Design Considerations/Applicant Proposed Measures (APMs)

Aesthetics
Structure Height APM Aes1: Structures associated with the proposed substation would incorporate low profile design features that would limit the height of the electrical equipment to approximately 17 feet.
Air Quality
NO_X and CO Emissions APM Air1: Idling time will be limited to a maximum of five minutes when construction equipment is not in use per Section 2449(d)(3) of Title 13, Article 4.8, Chapter 9 of the California Code of Regulations (CCR). Fugitive Dust APM Air2: SCE will prepare and implement specific fugitive dust control measures pursuant to SCAQMD Rule 403. Odor APM Air3: SCE will reduce odors associated with diesel exhaust by the use of either low-sulfur or ultra-low-sulfur fuel.
Geology and Soils
APM Geo1: The electrical equipment associated with the proposed substation would be constructed in accordance with the Institute of Electrical and Electronics Engineers (IEEE) Recommended Practices for Seismic Design of Substations.
Hazards and Hazardous Materials
APM Haz1: Hazardous or flammable materials used during construction would consist primarily of vehicle fuels (gasoline and diesel), oil, grease, and other fluids (hydraulic fluid, antifreeze, and transmission fluid) associated with construction equipment. Liquid concrete would also be used during construction. To avoid the inadvertent release of these materials (and to ensure proper response protocols), SCE would be required to implement environmental training for its field personnel. APM Haz2: During operation, the project subtransmission lines may pose a fire hazard if vegetation or other obstructions come in contact with energized conductor. The proposed project would be constructed and maintained in a manner consistent with CPUC G.O. 95 and CPUC G.O. 165. Consistent with these and other applicable state and federal laws, SCE would maintain an area of cleared brush around the conductor, minimizing the potential for fire. Further, the applicant would work with developers along this route to insure that trees in proximity to the proposed line will not exceed 15 feet in height. The project site is not located in a designated wildland fire hazard zone. To prevent heat or sparks from vehicles or construction equipment from igniting dry vegetation and causing a fire, SCE will be responsible for clearing work areas of flammable vegetation to reduce the potential for fires and to direct workers to park vehicles away from dry vegetation. Incorporation of these construction site best management practices (BMPs) would prevent the proposed project from exposing people or structures to a significant risk of fire.
Noise
APM Noise 1: SCE will comply with noise standards established by local municipalities, including regulations limiting construction hours. If construction must take place outside of normal business hours, SCE will apply for a variance with the appropriate jurisdiction to allow construction noise levels to exceed their established thresholds. SCE will comply with the terms of any variance that may be granted.
Traffic/Transportation
APM Traffic1: In the event that improvements to Flight Street have not been made prior to construction of the substation, a temporary access road will be graded and installed. The temporary access road would be built based on the site's 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.

1.10 PROJECT SCHEDULE AND PERSONNEL REQUIREMENTS

Construction duration for the substation, subtransmission lines, and telecommunication upgrades is estimated to be up to 12 months. According to SCE estimates, construction schedules for the individual components of the proposed project include: 287 days for the proposed substation, 152 days for the subtransmission line modification, and 66 days for the telecommunication improvements. In order to complete construction in 12 months, individual project components would be installed and/or constructed in simultaneous phases.

Construction is scheduled to begin in May 2009, with a projected completion date for the substation and subtransmission line of April 2010. 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 2010.

Construction of the proposed project would require up to a total of 15 crew members during periods of peak construction activity.