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RIVERSIDE TRANSMISSION RELIABILITY PROJECT

Aesthetics and Visual Resources Technical Report

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Aesthetics and Visual Resources Technical Report

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1.0 INTRODUCTION

In response to comments received from the CPUC, this technical report was updated to reflect land use changes that have occurred along the proposed 230 kV transmission corridor. New aerial photography (October 2015) was obtained and utilized to identify land use changes since 2010. In addition to updating current land uses, the analysis was also updated to reflect development projects that are entitled and under construction in proximity to the project. As discussed further in Section 2.0, this was accomplished by contacting each local jurisdiction and researching new or revised development proposals that have emerged since 2010. Modifications to relevant policies and guidelines were also identified.

Following completion of an updated inventory of current and planned land uses, the same methodology applied in the 2010 study was utilized to develop an updated analysis of effects to aesthetic and visual resources. In addition to accounting for land use changes that have occurred since 2010, the analysis was revised to address minor adjustments to the proposed 230 kV transmission line alignment that occurred following completion of the 2010 technical report consistent with the Draft Environmental Impact Report (DEIR). As described in Sections 6.0 and 7.0, and Appendices B and E, land use changes since 2010 and development projects that are entitled and under construction increase the potential for visual impacts from the proposed project. In order to maintain continuity and provide an understanding of the overall study approach, those sections of the report that have not changed since 2010 remain intact in this update and are noted parenthetically (2010).

Updated findings do not exceed the impact significance thresholds as disclosed in the DEIR and Final Environmental Impact Report (FEIR).

1.1 Project Overview

In 2004, pursuant to Southern California Edison's (SCE) Federal Energy Regulatory Commission (FERC)-approved Transmission Owner (TO) Tariff, Riverside Public Utilities (RPU) submitted a request for SCE to provide additional transmission capacity to meet projected load growth and to provide for system reliability. SCE determined that in order to meet RPU's request, SCE should expand its regional electrical system to provide RPU a second source of transmission capacity to import bulk electric power. This would be accomplished by creation of a new SCE 230 kilovolts (kV) transmission interconnection, the construction of a new SCE substation, the construction of a new RPU substation, and the expansion of the RPU 69 kV subtransmission system. The proposed Project, called the Riverside Transmission Reliability Project (RTRP), would provide RPU with long-term system capacity for load growth, and needed system reliability and flexibility.

The additional transmission capacity to RPU would be available through the proposed SCE Wildlife Substation at 230 kV and then transformed to 69 kV for integration into the RPU electrical system serving the City of Riverside (City). The transformation or "stepping down" of power from 230 kV to 69 kV would take place at the proposed RPU Wilderness Substation. Wilderness and Wildlife Substations would be located adjacent to each other on property that is presently owned by and within the City.

In order to integrate the additional transmission capacity into RPU's electric system, RPU's 69 kV system would be expanded and divided into eastern and western systems. The existing source of energy from Vista Substation would continue to supply the eastern system, while the western system would be supplied through the proposed Wilderness Substation. Creating two separate 69 kV subsystems is necessary for prudent electric utility operation and would also help provide the required level of emergency back-up service, particularly in the event of an interruption to either 230/69 kV substation

source.

Several new double-circuit 69 kV subtransmission lines would need to be constructed between 69 kV substations within the City. To accommodate these new subtransmission lines, upgrades would be required at four existing RPU 69 kV substations. The upgrades would take place within the existing boundaries of each substation.

New fiber optic communications would also be required for system control of Wilderness and Wildlife Substations and associated 69 kV and 230 kV transmission lines. The 69 kV communication facilities would be incorporated into the existing RPU fiber optic network. The 230 kV communications would meet SCE's reliability standards.

1.2 Visual Resources Overview

This technical report was developed as a supporting document to the DEIR and FEIR required under the California Environmental Quality Act (CEQA) for the Proposed Project. It includes analysis of environmental impacts associated with both the Proposed Project (sometimes referred to as the I-15 Route or Build Option B) and the 230 kV Van Buren Offset Route alternative (sometimes referred to as Build Option A). The 2010 report was completed prior to refinement of the Proposed Project and may contain outdated component identification information (e.g., segment, line, link identifiers) that may differ in description in the DEIR. In response to public comments on the DEIR and to avoid significant impacts of the Proposed Project, RPU and SCE made modifications to the Proposed Project as described in Chapter 2, Proposed Project Description, of Volume II. This revised visual assessment addresses these modifications to the Proposed Project.

The purpose of this report is to inventory the existing landscape of the built and natural environment of the area, inventory entitled and under development and recreational projects, and evaluate the visual impacts from construction, operation, and long-term presence of the proposed Project. The potential impacts to aesthetic values, landscape resources, and human visual experience have been evaluated for the Project's visual study area. Visual resources were inventoried along study corridors centered along the Project's alternative route links for the 230 kV and 69 kV Project components. A 3.0-mile wide study corridor (1.5 miles on each side of route centerline) was used for the 230 kV component and a 2.0-mile wide study corridor (1.0 mile on each side of route centerline) for the 69 kV alternative links were studied for scenic quality and visual integrity, sensitive views and viewers, land use, regional and local trails, recreation opportunities, eligible and designated state and local scenic and special status roadways, agency planning goals and objectives, and residential development.

While there are no established guidelines or regulatory framework for the evaluation of visual resources in the State of California or local jurisdictions in the Project area, the study is modeled on the U.S. Department of the Interior (USDI) Bureau of Land Management's (BLM) Visual Resource Management System (VRM) for the aesthetic inventory and contrast analysis (BLM, 1986). The methodology used in this study integrates the current BLM VRM system but is modified to better address the culturally dominated landscapes of the visual study area. This inventory and contrast rating approach is carried out in conformance with the California Environmental Quality Act (CEQA) guidelines and requirements for assessing visual resources.

1.3 Project Location

The Project area is located in the western and northern sections of the City of Riverside and extends north into unincorporated areas of western Riverside County. The Project area is bordered to the north by State Route 60 (SR-60) and the existing Mira Loma to Vista SCE Transmission Lines to the west by Interstate 15, and to the south and east by State Route 91 (SR-91). The Santa Ana River roughly divides the Project area into northern and southern halves.

The natural topography of the Project area is valley lowland intersected by a sinuous river corridor, isolated bluffs, and rolling hills, and surrounded by mountain ranges. Elevations within the Project area range from 680 to above 1900 feet above mean sea level (MSL); however, Project components would be located in relatively level portions within this area. The Project area is almost entirely developed; the only remaining large areas of native habitats occur along the Santa Ana River and in the nearby Jurupa Mountains.

The Project area is characterized by rural, urban, and suburban development intermixed with agriculture and undeveloped lands. Extensive areas in the central portion of the Project area (Santa Ana River floodplain) are preserved open space, set aside for recreation, wildlife, and protected species. Rapid population growth in the Project area has resulted in increased development with accompanying changes in land use.

1.4 Project Components

The RTRP project components would be located within Riverside County. Overall, the proposed RTRP would require approximately one year (with workers working 10-hour days, five days a week) to construct. The proposed RTRP includes the following:

1. Construction of approximately 10 miles of new double-circuit 230 kV transmission line from the existing Mira Loma – Vista #1 Transmission Line to the proposed Wildlife Substation;
2. Construction of approximately 11 miles of new 69 kV subtransmission lines between 69 kV substations and other existing subtransmission lines within the City of Riverside:
 - Wilderness – Jurupa double-circuit subtransmission lines
 - RERC – Harvey Lynn/Freeman single- and double-circuit subtransmission lines
 - Wilderness – Mountain View double-circuit subtransmission line
3. Construction of two new substations (Wilderness and Wildlife);
4. Upgrade of two 230 kV substations to replace line protection relays (within existing control houses): Mira Loma and Vista;
5. Upgrade of four substations to conduct minor pole re-alignments: Harvey Lynn, Mountain View, Freeman, and RERC; and
6. New fiber optic communications for system control of Wildlife and Wilderness substations and associated 230 kV transmission and 69 kV subtransmission lines.

The Proposed Project adds a new source of transmission capacity to the City by construction of a new double-circuit 230 kV transmission line that would extend from the existing Mira Loma – Vista #1 230 kV Transmission Line to the proposed Wildlife Substation. This new double-circuit 230 kV transmission line would provide additional capacity to the City by interconnecting at the proposed Wildlife Substation, which would be constructed, owned and operated by SCE. To transfer increased capacity to the City, the proposed RPU-owned Wilderness Substation would be constructed immediately adjacent to Wildlife Substation and would transform or “step down” power from 230 kV to 69 kV.

With SCE providing a second point of delivery for bulk power to the City of Riverside’s electrical system, RPU would split its 69 kV subtransmission system into an eastern system served from the existing Vista Substation and a western system served from Wilderness Substation. To facilitate this, several 69 kV subtransmission lines would be constructed within the City by adding circuits to existing routes or through the construction of new lines. Upgrades would be made at various existing RPU substations, as well.

1.4.1 Construction of New 69 kV Subtransmission Lines

The proposed Project would include construction of approximately 11 miles of 69 kV sub-transmission

lines located in three discrete sections of RPU's subtransmission system. Within two of these system sections, new lines would consist of multiple subtransmission lines in some segments or would be installed on shared subtransmission poles in others. The proposed new lines include Wilderness – Jurupa Avenue (Segments A and B); RERC – Harvey Lynn/Freeman (Segments A, B, and C); and Wilderness – Mountain View. Construction of the 69 kV subtransmission line component of the Project would require the following tasks:

- Surveying;
- Setting up Marshalling Yards;
- Construction Inspection;
- Foundations;
- Steel (Hauling, Assembly, and Erection);
- Wreck-Out (Conductors and Structures);
- Guard Poles;
- Conductor Installation;
- Transfer Existing Facilities;
- Possible Underground Activities (RERC – Harvey Lynn/Freeman segment only);
- Transmission Pole Installation Activities;
- Conductor Installation; and
- Clean-Up

Most sections of the new 69kV subtransmission lines would be installed on existing ROW and would not require new access road construction, although many of the existing structures would be replaced as part of construction. Subtransmission line steel poles would be a mix of direct-embedded poles and poles requiring foundation construction.

Wilderness – Jurupa Avenue

Segments A and B

Segments A and B are proposed to consist of a double-circuit 69 kV subtransmission line constructed from the proposed Wilderness Substation to the existing double-circuit 69 kV subtransmission line located along Jurupa Ave. and originating from RERC Substation. The double-circuit lines would exit Wilderness Substation to the south and would be constructed along both sides of Wilderness Ave. within public rights-of-way. Segment A would be located on the west side of Wilderness Ave. to Jurupa Ave. and Segment B would be located on the east side of Wilderness Ave. to Jurupa Ave. Both lines would then interconnect to the existing 69 kV double-circuit line. Total length of Segment A would be 1,647 feet, and Segment B 1,588 feet.

RERC – Harvey Lynn/Freeman

Subtransmission lines would be needed as part of the Project to connect the RERC Substation to both Harvey Lynn and Freeman Substations. The subtransmission lines would be single-circuit connections between the substations but would be constructed utilizing both double-circuit and single-circuit poles. The descriptions of these subtransmission lines are described below within Segments A, B, and C.

Segment A

Segment A would be constructed with double-circuit 69 kV poles that would carry both the RERC – Harvey Lynn and RERC – Freeman 69 kV subtransmission lines. From RERC Substation, Segment A would cross over the southern perimeter of the Riverside Water Quality Control Plant. At the intersection of Jurupa Ave. and Van Buren Blvd., Segment A would continue south along Doolittle Ave. and then Van Buren Blvd. to Arlington Ave, where it would head west for approximately one mile. At the intersection

of Arlington Ave. and Rutland Ave., Segment A would turn south and then west on Cypress Ave. to Crest Ave. continuing south along Crest Ave. At the intersection of Crest and Wells Avenues, the line would follow Wells to the intersection of Wells Ave. and Tomlinson Ave., following Tomlinson for a short distance before turning southwest onto Mull Ave. and continuing to the intersection with Tyler St. At this intersection, Segment A ends by “splitting” the circuits into two separate single-circuit subtransmission lines (Segments B and C as described below). The total length of the RERC-Harvey Lynn/Freeman Segment A would be 4.4 miles.

Segment B

Segment B consists of a single-circuit 69 kV subtransmission line beginning from the intersection of Mull Ave. and Tyler St. Segment B would continue southwest along Mull Ave., then south along Jones Ave. At the intersection of Jones Ave. and Cook Ave., Segment B would join an existing single-circuit 69 kV subtransmission line and would be placed on double-circuit poles continuing Hiers Ave., where it would leave the existing 69 kV line, and then rejoin it along Minnier Ave., continuing to Harvey Lynn Substation. This segment would have a length of 1.5 miles.

Segment C

Segment C would begin at the same intersection as Segment B (Mull Ave. and Tyler St.). The single-circuit subtransmission line would continue south along Tyler St. on single-circuit poles to the intersection of Tyler St. and Magnolia Ave. From this location, Segment C would join with an existing 69 kV subtransmission line onto new double-circuit poles. Segment C would then continue south along Tyler St. and then east along Indiana Ave. into Freeman Substation. To extend from the end of Segment A to Freeman Substation, Segment C would have a length of 3.2 miles.

Wilderness – Mountain View

One double-circuit 69 kV subtransmission line would be constructed from the proposed Wilderness Substation to an existing 69 kV line adjacent to Mountain View Substation. The new double-circuit line would exit Wilderness Substation and parallel the Santa Ana River eastward for approximately 1,000 feet, and then travel along Industrial Avenue to the west side of the Union Pacific railroad corridor and near Martha McLean Anza Narrows Park. The line would then head southeast, parallel to but outside of the railroad right-of-way, and then east parallel to Jurupa Ave., to the connection point with the existing 69 kV subtransmission line near Mountain View Substation. This new 69 kV subtransmission line would have a length of 1.4 miles.

1.4.2 Construction of New 230 kV Double-Circuit Transmission Line

The proposed Project would include construction of approximately 10 miles of 230 kV transmission line. The 230 kV transmission line component of the Project would require the following construction tasks:

- Surveying;
- Setting up Marshalling Yards;
- Right-of-Way Clearing;
- Road and Landing Work;
- Guard Structure Installation;
- Install Tubular Steel Pole (TSPs) Foundations;
- TSP - Hauling, Assembly, and Erection;
- Install Lattice Steel Towers (LSTs);
- LST - Hauling, Assembly, and Erection;
- Conductor Installation;
- Guard Structure Removal; and

- Restoration

Under the Proposed Project, new double-circuit 230 kV transmission line would be constructed that would “loop” the existing Mira Loma – Vista #1 230 kV Transmission Line into the proposed Wildlife Substation. The “loop” would be created by connecting each of the new circuits into the existing single-circuit line between Mira Loma and Vista Substations. The interconnection would occur at approximately the point where the Mira Loma – Vista #1 Transmission Line crosses Wineville Avenue, east of Interstate 15. From here, the new double-circuit line would run south and then west to roughly follow I-15 south, cutting east at 68th Street to a Santa Ana River crossing point within Goose Creek Golf Course. It would then continue east within the City of Riverside and parallel to the Santa Ana River, crossing over Van Buren Boulevard, and then through the City of Riverside Water Quality Control Plant, before reaching the proposed Wildlife Substation on the south side of the Santa Ana River east of Wilderness Avenue.

Project modifications described in Chapter 2.3.1, Proposed Project Description, of the DEIR (Volume II of this FEIR) resulted in a slightly shorter 230 kV transmission line, fewer severe angles in the transmission line centerline, fewer total overhead structures, and fewer lattice towers. Specifically, the 230 kV transmission line route has been modified to avoid the Vernola Marketplace parking lot by following I-15 roughly south and to the east of the California Department of Transportation’s right-of-way. Additionally, the route along the Goose Creek Golf Club and Santa Ana River crossing has been slightly modified to utilize one double-circuit structure on each side of the river, instead of the previously presented two single-circuit structures. Finally, the route’s path through the city of Riverside Water Quality Control Plant has been shifted to the north side of the plant property to reduce potential conflicts with current operations and possible future development at the plant.

Temporary marshalling yards would be needed along or near the proposed transmission lines for construction crews to store materials and vehicles. Access to structure sites for construction and maintenance would be required at several locations along the corridors. Access to work area which take place primarily within the ROW would consist of making improvements to existing roads, constructing new roads, and constructing spurs to individual structure sites.

Most new permanent access roads would be constructed on previously disturbed areas. Any temporary roads constructed would be removed and the ground would be restored to its original contour when the line is completed. Land rights, usually easements, for access roads would be acquired from property owners as necessary. After the line is built, access roads would also be used for line maintenance. To maintain safety and reliability, SCE required permanent access roads be constructed so all-weather/all-season access to its facilities is supported.

The ROW would not be de-vegetated; however, limited cutting of trees and tall brush in the ROW may occur if they interfere with the construction, operation, and maintenance of the transmission line. Trees would be cut outside the ROW only if, due to their height and condition, they may pose a threat to the transmission line. All potential tree cutting within the City of Riverside would require approval by the City’s Public Works Department.

Steel structures for the 230 kV transmission lines would be anchored to the ground with concrete footings. Typically, the footing site is excavated, a steel cage and anchor plates or bolts are positioned, and the excavated site is filled with formed concrete. Structures are assembled at the site and lifted into place by a large crane. The structures are bolted to the footings after they are set in place. After transmission structures are in place, conductors are strung from structure to structure through pulleys.

TABLE 1. ELECTRICAL DESIGN CHARACTERISTICS OF PROPOSED RTRP TRANSMISSION LINES

Feature	230 kV Transmission Line	69 kV Subtransmission Lines
Line Length	9.7 miles	11 miles
Type of Structure	59 Tubular Steel Poles 16 Lattice Steel Towers	Single Wood / Steel Pole
Structure Height	90-170 feet (TSPs) 113-180 feet (LSTs)	65-90 feet
Span Length	600-800 feet typical Up to 2,025 feet	150-300 feet
Number of Structures per Mile	7-8	20-30
Transmission Line ROW	100 feet	Up to 40 feet
Pulling/Tension Sites	100 x 400 feet	100 x 25 feet
Circuit Configuration	Double-circuit	Double-circuit & Single-circuit
Conductor Size	Double Bundle 1,590 kcmil ACSR ¹ 45/7 "Lapwing"	954 kcmil ACSR

1: Aluminum conductor, steel-reinforced

Note: all estimates above are preliminary and are subject to change upon final engineering.

1.4.3 Construction of New Substations

The proposed Project would also include construction of one 230/69 kV substation (Wilderness Substation) and one 230 kV switching station (Wildlife Substation). The proposed substations would require the following construction tasks:

- Surveying;
- Setting up Marshalling Yards; Grading;
- Civil Engineering Activities;
- Electrical Engineering Activities;
- Transformer Activities (69 kV only);
- Paving Activities;
- Fencing Activities; and
- Testing Activities

Wilderness Substation

The new RPU 230/69 kV Wilderness Substation would be located on 6.4 acres adjacent to the southern end of SCE's Wildlife Substation. Wilderness Substation would be connected to the SCE Wildlife Substation via two short 230 kV transmission line spans over a separating fence between the two substations. The voltage would be transformed to 69 kV through two transformers located within the Wilderness Substation. Electricity would be delivered to the RPU electrical system and ultimately City customers via 69 kV subtransmission lines exiting the substation. As described above, Wilderness Substation would be separated from the Wildlife Substation by a minimum eight-foot chain link fence. The outside perimeter of the substation would be built with a 10-foot block wall. The anticipated construction duration for the 230/69 kV Wilderness Substation is approximately 125 working days (6.3 months).

Wildlife Substation

The SCE Wildlife Substation would be constructed on three acres of land currently owned by RPU and located near the northeast corner of Wilderness Avenue and Ed Perkie Street. This area is within the City limits. If the Project is approved, SCE would purchase property from RPU to accommodate the new Wildlife Substation. The proposed substation would connect to the SCE system via the proposed double-circuit 230 kV transmission line described above, and would also connect into RPU's proposed adjacent Wilderness Substation. The proposed substation would be enclosed on three sides by a ten-foot high perimeter wall typically constructed of light-colored decorative blocks, with the fourth side being the shared chain-link fence separating Wildlife Substation from Wilderness Substation.

1.4.4 69 kV Substation Upgrades

To accommodate the new subtransmission lines to be added to the RPU 69 kV system, upgrades would be required at four existing RPU 69 kV substations. Upgrades would include minor structure (pole) re-alignments outside of substations to accommodate modifications of substation layout. All other upgrades would take place within the existing boundaries of each substation.

The four existing 69 kV substations within the City that would require upgrades are Harvey Lynn, Mountain View, Freeman, and RERC. The upgrades consist of the addition of new 69 kV power circuit breakers and associated disconnect switches and busing at RERC and Harvey Lynn Substations, as well as protective relay and control modifications to all four substations. All substation upgrades and equipment installations would occur within the existing footprint.

- **Harvey Lynn Substation.** The substation would be upgraded to include a new 69 kV circuit breaker and associated equipment to form a new line position for relocation of the existing Freeman line. The existing Freeman line position would be reconfigured to terminate a new line to RERC Substation. New line protection would be installed for both the new and reconfigured lines. A new Substation Automation System (SAS) and digital fault recorder would be integrated into the new and existing equipment.
- **Mountain View Substation.** The substation would be reconfigured to add two new lines to Wilderness Substation. One line would terminate in the existing Riverside line position and the other in the existing Freeman line position. New line protective relaying would be included for the two new Wilderness lines.
- **Freeman Substation.** The substation modifications would include changing the existing Mountain View line into the new Wilderness line and adding a new line to the RERC switchyard. A line bypass switch would be installed to directly connect the Orangecrest and Riverside lines and bypass the Freeman Substation. The Orangecrest line termination would be disconnected and the new RERC line would be terminated in its place. New line protection would be added for the relocated line and the one new line. A new SAS and digital fault recorder would be integrated into the new and existing equipment.
- **RERC Substation.** Two new lines would be installed and connected to Harvey Lynn Substation and Freeman Substation. The two existing lines connected to Mountain View and Riverside Substations would be reconnected to Wilderness Substation.

1.4.5 230 kV Substation Upgrades

Line protection relays would be replaced at both Mira Loma and Vista Substations as part of the Proposed Project. The relay replacements would be placed within existing control houses within each substation.

1.4.6 New Telecommunication Facilities

New fiber optic communications would be required for system control of Wildlife and Wilderness Substations and associated 230 kV transmission and 69 kV subtransmission lines. Communication facilities supporting RTRP 69 kV subtransmission components would be incorporated into the existing RPU fiber optic network. The communications facilities that would support the 230 kV transmission line would meet SCE's reliability standards and connect to the existing SCE network at multiple locations. The 230 kV communication facilities would require construction of diverse communication paths for operation and monitoring of the substation and transmission line equipment. The diverse paths would connect Wildlife Substation to Mira Loma Substation, and Wildlife Substation to Vista Substation. New telecommunication infrastructure would be installed to provide protective relay circuit, Supervisory Control and Data Acquisition (SCADA) circuit, data, and telephone services to Wildlife Substation. For the 69 kV portion of the Proposed Project, telecommunications lines would be installed on new or existing 69 kV subtransmission poles.

SCE Fiber Optic Lines

The Proposed Project would include three diverse fiber optic communication paths to connect to the existing SCE fiber optic network. These three paths would be required for the protective relay circuit between the proposed Wildlife Substation and Mira Loma Substation, for the protective relay circuit between the proposed Wildlife Substation and Vista Substation, and the fiber optic communication path that would provide the SCADA circuit, data, and telephone services to the proposed Wildlife Substation. Approximately 3,900 total feet of telecommunications line would be installed in underground conduit.

Path 1: The first fiber optic path is OPGW (Optical Ground Wire) that is proposed for installation on the new 230 kV transmission line towers proposed for the Project and described above. This OPGW line would intercept and connect to the existing fiber wrap cable on OHGW (Over Head Ground Wire) on the Mira Loma – Vista 230 kV Transmission Line tower.

Path 2: A new ADSS (All Dielectric Self Supporting) fiber optic communication cable is proposed for installation on the existing SCE distribution structures between the existing Pedley Substation and the new Wildlife Substation, with a path length of approximately six miles. This new line would tie into the existing Mira Loma to Corona fiber optic communication line. A preliminary survey conducted in 2006 of the approximate 100 distribution poles in the existing ADSS fiber route between Pedley substation and the Wildlife site determined that no new poles would need to be added, and that no existing poles would need to be replaced. However, a final determination of the need for pole replacement will not be made until final engineering is completed. The fiber optic cable would enter into the Pedley and Wildlife Substations in an underground conduit that would be installed to the fence line of the substations for fiber optic cable entry. This construction method allows ADSS cables on the distribution line poles to be brought into the substations. The approximate length of the underground conduit would be 200 feet at Pedley Substation and 500 feet at Wildlife Substation. In addition, because of the proximity of the proposed new 230 kV transmission line to the existing SCE distribution line, three fiber optic cable path intersection locations would need to be placed underground for cable path reliability.

- The first proposed fiber cable crossing location would be located approximately 0.25 miles west of the Harrell Street and Etiwanda Avenue intersection under the existing Mira Loma – Vista 230 kV transmission line. The two cables at the crossing location would be: 1) the existing ADSS cable on the distribution line poles, and 2) the existing fiber wrap cable on Mira Loma – Vista 230 kV transmission line OHGW. An approximately 900-foot section of the existing ADSS fiber cable needs to be placed underground. For this diverse path, both (crossed) fiber cables would carry protection circuit to protect against the unlikely event that the circuit would fail as a result of the crossed fiber cables failing concurrently.

- The second proposed fiber cable crossing location would be located in an area south of the Santa Ana Regional Park, adjacent to residential areas along the proposed 230 kV transmission line route. The two intersecting fiber cables would be: 1) the proposed new Path 2 ADSS fiber route between Pedley Substation and new Wildlife substation, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 1,000-foot section of the proposed ADSS fiber cable would need to be placed underground in order to prevent single point failure for the circuit as a result of the crossing fiber cables.
- The third proposed fiber cable crossing location would be located in an area west of the proposed Wildlife Substation between Wilderness Avenue and Payton Avenue along the existing distribution line north of Jurupa Avenue. The two intersecting fiber cables would be: 1) the proposed new Path 2 ADSS fiber route between Pedley Substation and the new Wildlife substation, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 600-foot section of the proposed ADSS fiber cable would need to be placed underground in order to prevent single point failure for the circuit as a result of the crossing fiber cables.
- The fourth proposed fiber cable crossing location would be located approximately 500 feet southwest of Pedley Substation, close to Pedley Substation Rd. The two cables at the crossing location would be: 1) the existing ADSS cable on the 12 kV pole line, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 400-foot section of the proposed ADSS fiber cable would need to be placed underground in order to prevent single point failure.
- The fifth proposed fiber cable crossing location would be located approximately 1000 feet west of Pedley Substation on the Lab 12 kV distribution pole line. The two cables at the crossing location would be: 1) the existing ADSS cable on the 12 kV pole line, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 300-foot section of the proposed ADSS fiber cable would need to be placed underground in order to prevent single point failure.

Path 3: The third SCE fiber optic line associated with the 230 kV portion of the Proposed Project would connect the new Wildlife Substation and a fiber demarcation point to the Vista Substation to meet the telecommunication diverse path requirements. SCE would lease fiber strands within the RPU fiber optic network to create this third telecommunication path. Existing and available fiber is in place for most of this pathway between Wildlife and Vista Substations. The new portion of this path would utilize planned RPU telecommunication fiber to be installed along proposed 69 kV subtransmission lines as described below.

RPU Fiber Optic Lines

As part of the proposed Project, the existing RPU fiber optic network would be extended approximately 2,000 feet from the intersection of Jurupa Avenue and Wilderness Avenue to the proposed Wilderness Substation. The new fiber optic cable would be installed on the new 69 kV subtransmission line poles described above that would be constructed along both sides of Wilderness Avenue (Wilderness – Jurupa Ave., Segments A and B). This new fiber optic line would connect the proposed Wilderness Substation to RPU's existing communication system. Additionally, a new fiber optic line would be included as part of the new Wilderness – Mountain View subtransmission line construction.

1.4.7 Construction Work Force and Schedule

The following section provides a detailed description of the construction and operation of the Proposed Project. Construction of the 230 kV components of the Project is scheduled to begin after the issuance to

SCE of a Certificate of Public Convenience and Necessity (CPCN) by the California Public Utilities Commission (CPUC). The CPUC review of SCE's CPCN application, which would include the Final EIR, is expected to be completed within 12 months following the City of Riverside's CEQA Lead Agency determination for the Project. Construction activities associated with the Proposed Project consist of new 230 kV transmission line and 69 kV subtransmission line construction, building two new substations (Wildlife and Wilderness), and upgrading four existing 69 kV substations.

Project components would likely be constructed using a variety of construction crews. These would consist of successful competitively bid contractor(s) and subcontractors, SCE crews (230 kV transmission line, telecommunications, and Wildlife Substation only) or RPU crews (69 kV subtransmission lines, telecommunications, Wilderness Substation, 69 kV substation upgrades). RPU and SCE would be responsible to provide quality assurance, environmental protection oversight, and final design approval. All construction work would be performed with conventional construction techniques in accordance with SCE and RPU construction specifications and other industry-specific standards. Construction crews would be required to work within the stipulations of documents governing compliance with regional environmental, storm water pollution prevention, and fire prevention criteria, as well as owner/operator best management practices, standardized environmental protection elements, and those additional mitigation measures identified within the DEIR.

The workforce necessary for construction of the proposed Project is anticipated to range from approximately 10 to 100 persons, with an estimated average daily workforce of 50 persons. Summaries of the labor force requirements and primary equipment associated with the various Project construction activities can be found in Chapter 2, Proposed Project, of the DEIR.

1.5 Construction Schedule

The preliminary schedule would reflect a construction start date for the 69 kV subtransmission lines, Wilderness Substation, and substation upgrades in October 2019 and completion in fall 2020. SCE would begin work on the new 230 kV transmission line and Wildlife Substation following the CPUC approval of the CPCN. Construction for the 230 kV transmission line would begin after CPUC approval, final engineering, procurement of equipment, and acquisition of land rights. Following these activities, the proposed 230 kV component of the Project has a construction duration of approximately 15 months. Construction duration for the new Wildlife substation is approximately 12 months after CPUC approval, final engineering, procurement, and any required land acquisition.

In general, construction efforts would occur in accordance with accepted construction industry and SCE/RPU standards. Construction activities would generally be scheduled during daylight hours, more specifically 6:00 a.m. to 6:00 p.m. (June to September) and 7:00 a.m. to 6:00 p.m. (October to May), Monday through Friday. In the event construction activities need to occur on different days or hours, variances would be obtained as necessary from appropriate jurisdictions where the work would take place. All materials associated with construction efforts would be delivered by truck to established marshall yards. Delivery activities requiring major street use would be scheduled to occur during off-peak traffic hours.

1.6 Study Personnel

The 2010 visual resource study team was comprised of several landscape architects and visual analysts of POWER Engineers, Inc. (POWER). The 2016 revision was completed by landscape architects and visual analysts of Logan Simpson. Both teams worked with analysts and planners from RPU and SCE to collect and interpret data.

Mr. John Paez, MLA, was the principle investigator and visual resource analyst for POWER. He oversaw the resource documentation, inventory, impact analysis, and development of the visual simulations. Mr.

Paez has been involved in visual impact assessment of transmission lines and energy facilities at POWER and has over twenty years experience in visual analysis for urban design, infrastructure, and land development projects.

Ms. Gina Fegler was an analyst for the visual resource study. Her responsibilities included data inventory, input, and review. Ms. Fegler is a registered Landscape Architect in Idaho and has been involved in visual impact assessment of transmission lines and other energy-related projects at POWER.

Mr. Charlie Koenig of POWER was the design technician responsible for the computer modeling and detailing of the visual simulations. Mr. Koenig worked closely with Project engineers at POWER, RPU and SCE to develop accurate Computer-Aided Design/Geographic Information System (CAD/GIS)-based photorealistic built-Project visual representations.

Mr. Jeremy Call, MLA, was the principal investigator and visual resource analyst for Logan Simpson. Mr. Call has been engaged in visual resource inventory and analysis for nearly 15 years and has experience with a variety of energy generation and transmission facilities. He is a registered Landscape Architect in Utah and AICP planner.

2.0 REGULATORY FRAMEWORK

The visual study area falls in several local jurisdictions that regulate aesthetics and visual quality through local planning documents. Local general plans may have land use, circulation, open space, utilities, and/or scenic highway elements that relate to transmission line siting and visual resource management. The visual resources study area reaches into five jurisdictions: the City of Riverside, the City of Jurupa Valley, the City of Fontana, the City of Norco, the City of Ontario, and Riverside County. There are no State of California or federal lands in the visual study area.

City of Riverside - The 69 kV subtransmission line alternatives are located within the City of Riverside, and a portion of the 230 kV routing alternatives are located in the City of Riverside. The City of Riverside's General Plan 2025 is currently in place. The City utilizes area plans (specific plans and community plans) as part of its general plan to refine policies to specific or special concern areas as expressed by the public through the planning process.

In the visual study area, there are eight community and specific plans currently in place:

- Arlanza/La Sierra Community Plan
- Arlington Heights Community Plan
- Arlington Community Plan La Sierra Specific Plan
- La Sierra University Specific Plan
- Magnolia Center Community Plan
- Rancho La Sierra Specific Plan
- Riverside Auto Center Specific Plan

Many of these documents are available at the City of Riverside Planning Department or online at the city's website (<http://www.riversideca.gov/planning/cityplans.asp>).

The City of Riverside established five themes that guided the General Plan 2025 and the vision to represent the entire community for the next 20 years. The objectives and policies related to the management of visual resources within the General Plan's Open Space and Conservation Element include the following:

- Objective OS-1 was established to “Preserve and expand open space areas and linkages throughout the City and sphere of influence to protect the natural and visual character of the community and to provide for appropriate active and passive recreational uses.” Policies for the implementation of Objective OS-1 include Policy OS-1.15 to “Recognize the value of major institutional passive open spaces, particularly cemeteries, as important components of the total open space systems and protect their visual character.
- Objective OS-2 serves to “Minimize the extent of urban development in the hillsides, and mitigate any significant adverse consequences associated with urbanization.” This objective is reinforced with the Policy OS-2.4 to “Recognize the value of ridgelines, hillsides and arroyos as significant natural and visual resources and strengthen their role as features which define the character of the City and its individual neighborhoods.”

The General Plan’s Land Use and Urban Design Element section also addresses visual management issues. There are three sections that directly relate to visual resources: City Parkways, City Gateways, and the City’s Linear Aerial Utility Facilities.

- Objective LU-11 states the desire to “Create a network of parkways to establish stronger linkages between Riverside’s neighborhoods, major elements of its natural environment and neighborhood parks and schools.” This objective and its policies describe the city circulation as potential for strong visual connections and values. There are a number of specific highways that are named as significant to this objective.
- Objective LU-15 Recognizes “Van Buren Boulevard as a significant parkway, linking neighborhoods along its path to the Santa Ana River, the Arlington Heights Greenbelt, Victoria Avenue and the California Citrus State Historic Park.” For example, Policy LU-15.1 supports this with the goal to “Utilize the intersection of Van Buren Boulevard and Victoria Avenue as a highly landscaped, visual gateway into the City.” Within the Project visual study area, Arlington Avenue, Van Buren Boulevard, and La Sierra Avenue are mapped as city parkways.
- The City seeks to maintain and strengthen the identity of the community. To this end, the City has identified gateways to define the City at its perimeter or key locations where people enter the City. Objective LU-21 strives to “Attractively develop the City’s major gateways to create a stronger sense of City identity.” Within the Project visual study area, Van Buren Boulevard at the Santa Ana River is mapped as a regional gateway at the City’s northern border. On the western border, Arlington Avenue is also identified as a regional gateway into the City. Local gateways are designated along State Highway 91 at La Sierra Avenue, Van Buren Boulevard, and Adams Street.
- The General Plan’s Linear Aerial Utility Facilities section defines some goals with regards to electric power, telephone service, and cable television lines. The section states that, “Cellular and other technologies that depend upon above-ground antenna has created challenges to enhancing the overall City aesthetic. To complement the City’s urban goals of enhancing the appearance of Riverside and re-establishing its parkways, a major effort will be pursued to replace existing unsightly overhead utility lines with underground facilities and to minimize the visual impact of above-ground telecommunication facilities.” Objective LU-29 is to simply “Minimize the visual impact of aerial facilities on the City’s landscape.” The policies of LU-29 expand on the promotion of, and to investigate feasibility and funding sources for, the undergrounding of existing City-owned utility facilities.

City of Jurupa Valley - In conjunction with its incorporation on July 1, 2011, the City of Jurupa Valley adopted the County of Riverside’s General Plan. See the discussion under Riverside County, below. City

staff has begun reviewing the existing General Plan policies from the County of Riverside General Plan to prepare an Interim General Plan. No completion date for the Interim General Plan is available. Therefore, designated Parkways, Gateways, and Scenic Corridors considered in this analysis are the same as those in the 2010 Visual Report.

City of Fontana - The City of Fontana General Plan (2003) has no specific goals regarding major transmission line siting or visual quality management applicable to the Project routing alternatives.

City of Norco - The City of Norco General Plan is not currently available, but the General Plan reviewed in 2010 contained no specific goals regarding major transmission line siting or visual quality management applicable to the Project routing alternatives. Although the General Plan's Land Use Element refers to vista points and visual corridors in the city, no vista points or visual corridors have been identified or established by the city.

- Policy 2.4.1d. The City shall identify prominent vista points and visual corridors for the purpose of preserving these vital elements of the community's character.

City of Ontario - The City of Ontario General Plan is currently being updated. The City published a Draft Environmental Impact Report in April 2009 called The Ontario Plan which serves as a comprehensive update to the City General Plan. The Ontario Plan has no specific goals regarding major transmission line siting but does mention aesthetics quality and management goals related to infrastructure facilities in the Land Use Element (LU) of The Ontario Plan.

- LU2-6 Infrastructure Compatibility. We require infrastructure to be aesthetically pleasing and in context with the community.
- LU2-7 Inter-jurisdictional Coordination. We maintain an ongoing liaison with LAWA [Los Angeles World Airports], Caltrans, Public Utilities Commission, the railroads, and other agencies to help minimize impacts and improve the operations and aesthetics of their facilities.

Riverside County - The Riverside County General Plan (adopted October 2003) is applicable to all unincorporated lands within Riverside County, generally located north of the City of Riverside, and south of San Bernardino County. The 2003 General Plan identifies "Area Plans" specific to geographic boundaries, and includes a Land Use Element, Circulation Element, Multipurpose Open Space Element, Safety Element, Noise Element, Housing Element, Air Quality Element, and Administration Element (see Chapter 4.X of the Environmental Impact Report, Land Use and Planning). In 2008, baseline General Plan documents were created, but never formally adopted, as prelude to the General Plan Amendment No. 960 update project. Citations below were reviewed and updated to reflect all adopted General Plan Amendments as of December 9, 2014.

A large portion of the study area is under the jurisdiction of Riverside County. The 230 kV transmission line alternatives are located primarily in unincorporated areas of Riverside County. Area Plans that focus on geographical units are identified in the General Plan. Area Plans applicable to the Project area include only the Jurupa Area Plan. There are specific "policy areas" identified in these plans that contain special or unique characteristics that merit focused policies. The Jurupa Area Plan has ten policy areas (see Land Use Report).

Countywide policies that seek to preserve visual quality are located in the Land Use Element (LU), Open Space Element (OS), and Circulation Element (C) of the General Plan, and include:

- LU 13.1 “Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.”
- LU 13.5 Requires “new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.”
- LU 25.5 Requires that “public facilities be designed to consider their surroundings and visually enhance, not degrade the character of the surrounding area.”
- LU 25.6 “Ensure that development and conservation land uses do not infringe upon existing public utility corridors, including fee owned rights-of-way and permanent easements, whose true land use is that of Public Facilities.”
- OS 20.1 “Require that structures be designed to maintain the environmental character in which they are located.”
- C 25.2 “Locate new and relocated utilities underground when possible. All remaining utilities shall be located or screened in a manner that minimizes their visibility by the public.”

The Jurupa Area Plan addresses eight policy areas that merit specific and focused policies to guide development within the areas. One of these policy areas is the Santa Ana River Corridor Policy Area which contains relevant policies for visual resources as follows:

- JURAP 7.2 Requires development, where allowable, to be “set back an appropriate distance from the top of bluffs, in order to protect the natural and recreational values of the river and to avoid public responsibility for property damage that could result from soil erosion or future floods.”
- JURAP 7.3 Encourages future development that “borders the Policy Area to design for common access and views to and from the Santa Ana River.”
- JURAP 7.13 Discourages utility lines within the river corridor. “If approved, the lines shall be placed underground where feasible and shall be located in a manner to harmonize with the natural environment and amenity of the river.”

3.0 INVENTORY METHODS

The assessment of visual resources and impacts of the proposed Project are modeled on the Bureau of Land Management's Visual Resource Management System, or VRM, as detailed in the 8400 Series Manuals (BLM 1986, 1986a). CEQA guidelines were incorporated into the methodology to properly establish baseline environmental conditions and assess the significance of environmental impacts.

In order to satisfy CEQA guidelines and to assess the current condition of visual resources and aesthetics in the study area, existing visual resource data were gathered in order to ultimately estimate the significance of expected impacts caused as a result of the construction of the proposed 230 kV and 69 kV transmission lines. The data gathered and components of the inventory phase of the study include:

- The definition of the detailed study area
- An inventory of agency visual management goals and objectives
- An inventory of the existing regional visual setting
- Identification of landscape character types
- An inventory of scenic quality and visual integrity
- Identification of existing land uses
- Visual sensitivity analysis
- Determination of visibility thresholds and distance zones
- Identification of key observation points in the study area

3.1 Definition of Detailed Study Area

A study area was determined for each Project component (69 kV subtransmission lines, 230 kV transmission lines, and the new and upgraded substations) based on potential for significant impacts. A 1.5-mile area on each side (total of a three-mile-wide study corridor) of the centerline for the 230 kV transmission lines and a 1.0-mile area on each side (total of a two-mile-wide study corridor) of the centerline for the 69 kV subtransmission lines were inventoried for scenic quality, views, viewer sensitivity and land uses.

3.2 Inventory of Agency Visual Management Goals and Objectives

Planning documents from the county, municipalities, and local jurisdictions crossed by the Project were studied for relevance in transmission line siting and visual resource management. Documentation on existing and proposed scenic highways and roadways was reviewed. Planning personnel at each local government jurisdiction were consulted as needed during the process. The construction of high-voltage transmission lines may, at times, conflict with the goals and objectives stated in these planning documents.

3.3 Inventory of Existing Visual Setting

Existing regional landform, vegetation, and water features were identified by aerial photography interpretation, Project area field reconnaissance, and study of existing regional physiography documentation. Documentation of existing regional physiography was reviewed to determine broad landscape patterns in terms of mountain and hill formations, characteristics of river valleys and drainage patterns, topography, and other regionally significant natural features.

3.4 Identification of Landscape Character Types

Using topographic maps, aerial photography, and site reconnaissance, areas of similar visual character were identified along the alternative routes. These were used as a basis for assessing scenic quality and visual integrity. Landscape Character Types (LCTs) are landscapes where similar natural and cultural

patterns occur within the study area. In developed areas, LCTs do not correlate with broader physiographic patterns as well as more natural, undeveloped landscapes. LCTs in developed areas are more dependent on settlement patterns, socio-economic factors, local planning and zoning, architectural styles, and numerous other culturally influenced factors.

3.5 Inventory of Scenic Quality and Visual Integrity

Relatively homogeneous landscape units were delineated and evaluated for scenic quality (naturally dominated areas) and visual integrity (development dominated areas) and rated as being Class A (unique), Class B (above average), or Class C (common) landscapes. Scenic quality criteria are provided in Table 3. An area's scenic quality class was determined by assigning a numeric rating to landscape components such as vegetation, water, color, landform and landscape pattern, and other factors that influence the quality of the visual landscape (See Table 4). The final score determines scenic quality class designation for units within the visual study area (See Table 7). For visual integrity classes determination see Tables 5, 6 and 7.

3.6 Identification of Existing Land Uses

Study area land use was determined to identify potential sensitive viewers, viewpoints, and corridors to be evaluated during the sensitivity analysis phase. The location of existing parks and recreation areas, travel corridors, and residences was determined through aerial photography, planning documents, agency contacts, and study area field reconnaissance in 2010. A review of aerial photography, planning documents, and agency contacts was conducted again in November 2015.

3.7 Visual Sensitivity Analysis

Viewer sensitivity was determined by estimating overall use levels, user attitudes towards change in the landscape, and duration of views from potentially sensitive viewpoints and corridors identified in the land use study portion of the Project. For example, use level or use volume would be expected to be higher along an interstate highway and lower along a local street. Similarly, a neighborhood park would typically have fewer visitors and lower use volume than a regional park that serves the broader community and has amenities such as hiking trails, extensive natural and wildlife areas, and other features not typically otherwise available at the neighborhood level.

The visual sensitivity criteria used for aesthetic impact analysis are shown in Table 8. Final visual sensitivity level (Table 9) is derived from the comparison of user attitude, view duration, and use volume. This determination is subsequently used in the visual analysis and as a component in formulating initial impact levels.

3.8 Visibility and Distance Zones

After review of previous studies in similar geographical, topographical, and environmental settings, visibility thresholds for the 230 kV transmission and 69 kV subtransmission lines were evaluated (Jones & Jones, 1976). From these thresholds, visibility zones were determined for both of the Project components (230 kV transmission and 69 kV subtransmission lines). The impact model was adjusted for the influence of smog and pollution on visibility. The urban setting of the Project was also taken into account in establishing visibility thresholds.

Distance thresholds or zones identified in the BLM VRM methodology are as follows:

- **Foreground-Middleground Zone (0 to 3-5 Miles)** – This is the area where management activities might be viewed in detail. The outer boundary of this distance zone is defined as the point where the texture and form of individual plants are no longer apparent in the landscape. In some areas, atmospheric conditions can reduce visibility and shorten the distance normally covered by each zone.
- **Background (3-5 to 15 Miles)** – This is the remaining area which can be seen. Areas which are so far distant that the only thing discernible is the form or outline are not included in this zone. Background zone includes vegetation that is visible at least as patterns of light and dark.
- **Seldom Seen** – These are areas that are not visible within the foreground-middleground and background zones, and areas beyond the background zones.

Distance zones for this Project were based on the BLM VRM framework and modified to reflect the Project's perception thresholds, the scale and nature of the objects being viewed, and the viewing environment. Table 2 provides the visibility thresholds and distance zones used for the 69 kV and 230 kV components of the Project.

TABLE 2. VISIBILITY THRESHOLDS USED IN VISUAL ANALYSIS

Visibility Threshold	Project Component	
	<i>69 kV Subtransmission Line</i>	<i>230 kV Transmission Line</i>
Immediate Foreground	0 to 300'	0 to 500'
Foreground	300' to 1500'	500' - ½ mile
Middleground	1500' to ½ mile	½ mile to 1½ mile
Background/Seldom Seen	Beyond ½ mile	Beyond 1½ mile

TABLE 3. SCENIC QUALITY RATING CRITERIA

Landform	Topography becomes more interesting as it gets steeper, more massive, or more severely or universally sculptured. Outstanding landforms may be monumental, such as the Grand Canyon in Arizona or the Rocky Mountains of the Western United States. Alternatively, landforms may be intricate and subtle, such as certain badlands, pinnacles, arches, and other formations.
Vegetation	Primary consideration is given to the variety of patterns, forms and textures created by plant life. Short-lived displays should be considered when they are known to be recurring or spectacular such as the color change from green to red-orange to gold displayed by contiguous groves of western aspen trees or eastern maple trees. Smaller-scale vegetation features may add striking and intriguing detail to the landscape.
Water	Water can add movement, serenity, and strong lighting contrasts to a scene. The degree to which water features have the capacity to unify, diversify, or dominate the scene is the primary consideration.
Color	Overall colors are observed for the basic components of the landscape, such as soil, rocks, and vegetation as they appear during seasons or periods of high use. Key factors to use when rating "color" are variety, contrast, and harmony.
Adjacent Scenery	What is under consideration is the degree to which scenery outside the unit being rated enhances the overall impression of the scenery within the unit. The distance over which adjacent scenery will influence a unit will normally range from zero to five miles, depending upon the relief of the topography, vegetation cover, sun angles, and viewer orientation. This component is generally applied to units that would normally rate very low in score, but the influence of the adjacent unit enhances the visual quality, thereby raising the rating score.
Scarcity	This component provides an opportunity to elevate the importance of one or all scenic features within one physiographic region that appear to be unique or relatively rare within the surroundings.
Intactness	What is recorded for this component is evidence of discordant elements or deviations from the existing landscape character, thereby altering, diminishing or minimizing the indigenous aesthetic appeal for which the said landscape would primarily have been valued as a scenic resource. This component is also used to describe the condition of the ecosystem.
Cultural Modifications	Of primary concern are the impacts of man-made changes on the visual quality of the characteristic landscape. Cultural modifications to landform, water, and vegetation, as well as the addition of structures to the landscape, may all detract from the scenery by presenting negative intrusions to the viewer. Conversely, these additions or modifications to the landscape might actually complement or improve the scenic quality of a unit.
Ephemeral & Non-Visual Conditions	This component considers short-lived but recurrent visual effects, such as wildlife sightings and non-visual effects, such as the sound of running water, which are experientially related to the landscape being viewed.

TABLE 4. SCENIC QUALITY INVENTORY AND EVALUATION CHART

Key Factors	Rating Criteria and Score		
Landforms	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops; or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing, such as glaciers.	Sleep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional.	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.
Landform Score	5	3	1
Vegetation	A variety of vegetative types as expressed in interesting forms, texture, and patterns.	Some variety of vegetation, but only one or two major types.	Little or no variety or contrast in vegetation
Vegetation Score	5	3	1
Water	Clear and clean appearing, still or cascading white water, any of which are a dominant factor in the landscape.	Flowing, or still, but not dominant in the landscape.	Absent, or present, but not noticeable.
Water Score	5	3	0
Color	Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water or snowfields.	Some intensity or variety in colors and contrast of soil, rock, and vegetation, but not a dominant scenic element.	Subtle color variations, contrast, or interest; generally mute tones.
Color Score	5	3	1
Adjacent Scenery	Adjacent scenery greatly enhances visual quality.	Adjacent scenery moderately enhances overall visual quality.	Adjacent scenery has little or no influence on over all visual quality.
Adjacent Scenery Score	5	3	0
Scarcity	One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc.	Distinctive, though somewhat similar to others within the region.	Interesting within its setting, but fairly common within the region.
Scarcity Score	5	3	0
Intactness	Entire character not compromised by external intrusions.	Some deviations from existing character.	Many discordant elements present. Aesthetic appeal is compromised
Intactness Score	5	3	1
Cultural Modifications	Modifications add favorably to visual variety while promoting visual harmony.	Modifications add little or no visual variety to the area, and introduce few discordant elements.	Modifications add variety but are very discordant and promote strong disharmony.
Cultural Modifications Score	2	0	-4
Ephemeral & Non-Visual Conditions	Frequent wildlife sightings, many natural sounds present.	Occasional wildlife sighting and natural sounds present.	Both wildlife and natural sounds are not present. Some distant urban noise.
Ephemeral & Non-Visual Score	5	3	1

TABLE 5. VISUAL INTEGRITY RATING CRITERIA

Landscape Pattern	An interrelationship of land uses and their typical visual appearance is the primary focus. The secondary focus of landscape pattern is the spatial relationships between structural and functional elements of the land. Any type of landscape at any scale can be described as a mosaic: a background of matrix and patches connected by corridors. For instance, a matrix can be uniform to fragmented, continuous to perforated, and aggregated to dispersed. Patches can vary from large to small, elongated to round, and convoluted to smooth. Corridors vary from wide to narrow, and meandering to straight. The edges that separate these spatial elements also vary widely in shape and dimension.
Vegetation	Primary consideration is given to the variety of patterns, forms, and textures created by plant life. Short-lived displays should be considered when they are known to be recurring or spectacular, such as the color change from green to red-orange to gold displayed by contiguous groves of western aspen trees or eastern maple trees. Smaller-scale vegetation features may add striking and intriguing detail to the landscape.
Water	Water can add movement, serenity, and strong lighting contrasts to a scene. The degree to which water features have the capacity to unify, diversify, or dominate the scene is the primary consideration.
Color	Overall colors are observed for the basic components of the landscape, such as soil, rocks, and vegetation as they appear during seasons or periods of high use. Key factors to use when rating "color" are variety, contrast, and harmony.
Adjacent Scenery	What is under consideration is the degree to which scenery outside the unit being rated enhances the overall impression of the scenery within the unit. The distance over which adjacent scenery will influence a unit will normally range from zero to five miles, depending upon the relief of the topography, vegetation cover, sun angles, and viewer orientation. This component is generally applied to units that would normally rate very low in score, but the influence of the adjacent unit enhances the visual quality, thereby raising the rating score.
Scarcity	This component provides an opportunity to elevate the importance of one or of all visual integrity features within one physiographic region that appear to be unique or relatively rare within the surroundings.
Intactness	What is recorded for this component is evidence of discordant elements or deviations from the existing landscape character, thereby altering, diminishing or minimizing the indigenous aesthetic appeal for which the said landscape would primarily have been valued as a scenic resource. This component is also used to describe the condition of the ecosystem.
Architectural Elements	Architectural elements describe the form, structure, and interrelationships among the building-block elements of the system. The condition of the building system is also considered.
Ephemeral & Non-Visual Conditions	This component considers short-lived but recurrent visual effects, e.g., intense human activity centers, and non-visual effects, such as the sound of running water, which are experientially related to the landscape being viewed.

TABLE 6. VISUAL INTEGRITY INVENTORY AND EVALUATION CHART

Key Factors		Rating Criteria and Score	
Land Use / Development Pattern	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops; or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing, such as glaciers.	Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional.	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.
Landform Score	5	3	1
Vegetation	A variety of vegetative types as expressed in interesting forms, texture, and patterns.	Some variety of vegetation, but only one or two major types.	Little or no variety or contrast in vegetation
Vegetation Score	5	3	1
Water	Clear and clean appearing, still or cascading white water, any of which are a dominant factor in the landscape.	Flowing, or still, but not dominant in the landscape.	Absent, or present, but not noticeable
Water Score	5	3	0
Color	Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water, or snowfields.	Some intensity or variety in colors and contrast of soil, rock, and vegetation, but not a dominant scenic element.	Subtle color variations, contrast, or interest; generally mute tones.
Color Score	5	3	1
Adjacent Scenery	Adjacent scenery greatly enhances visual quality.	Adjacent scenery moderately enhances overall visual quality.	Adjacent scenery has little or no influence on over all visual quality.
Adjacent Scenery Score	5	3	0
Scarcity	One of a kind; or unusually memorable, or very rare within region.	Distinctive, though somewhat similar to other areas or neighborhoods within the region.	Interesting within its setting, but fairly common within the region.
Scarcity Score	5	3	1
Intactness	Entire character uncompromised by external intrusions.	Some deviations from existing character.	Many discordant elements present. Aesthetic appeal is compromised
Intactness Score	5	3	0
Architectural & Landscape Elements	Architecture, landscaping, development, and land uses add favorably to visual variety while promoting visual harmony.	Land uses and developed areas add little or no visual variety to the area, and introduce some discordant elements.	Land uses and developed areas are discordant and promote strong disharmony.
Architectural & Landscape Elements Score	5	3	1
Ephemeral & Non-Visual Conditions	Sights and sounds of the community or area add to the character of the area.	Sights and sounds somewhat detract from the character of the area.	Sights and sounds detract strongly and promote disharmony.
Ephemeral & Non-Visual Conditions Score	5	3	1

TABLE 7. SCENIC QUALITY / VISUAL INTEGRITY DEFINITIONS

Scenic Quality	Visual Integrity
Class A or Distinctive - Outstanding areas where characteristic features of landform, rock, water, and vegetation are distinctive or unique in the context of the surrounding areas. These features exhibit considerable variety in form, line, color, and texture and have strong positive attributes of unity and intactness. A score of 25 points or more, as tallied on an individual field inventory sheet, resulted in a distinctive rating.	Class A or Unique / Cohesive - Developed areas where the landscape appears intact, interesting, and cohesive. The characteristic elements of line, form, color, and texture hold the developed features and landscape together into distinctive areas, landscapes, or neighborhoods. Colors and textures are often seen repeated in these landscapes. Developments and land uses do not contrast with each other or with the landscape.
Class B or Above Average - Above average areas in which features provide variety in form, line, color, and texture. Although the landscape elements may not be rare in the region, they provide sufficient visual diversity to be considered moderately distinctive. These features exhibit more common variety in form, line, color, texture, and have positive, yet more common, attributes of unity and intactness. The score of 18 to 24 points, as tallied from an individual field inventory sheet, resulted in an Above Average rating.	Class B or Above Average - Developed areas where the landscape is less unique, interesting, and cohesive. Patterns of land use and materials used in structures are varied and different colors. The sense of a cohesive place or neighborhood is not as strong in these landscapes. Colors and textures are not often seen repeated in these areas.
Class C or Common - Common to minimal areas are those where characteristic features have moderate to little variety in form, line, color, and texture in relation to the surrounding region. The score of 17 points or less, as tallied from an individual field inventory sheet, resulted in a Common rating.	Class C or Common / Developed areas that appear heavily altered, do not form a sense of place or neighborhood, and are not visually cohesive. The elements of line, form, color, and texture are not often repeated in a cohesive manner. Developments and land uses are diverse and contrast with each other and with the landscape.

TABLE 8. VISUAL SENSITIVITY CRITERIA

Criteria	Criteria Intensity		
	High	Moderate	Low
<i>Use Volume</i>	High level of use, relatively many occupants, visitors or travelers	Moderate level of use	Low level of use, relatively few occupants, visitors or travelers
<i>User Attitude</i>	High expectations for maintaining existing landscape conditions. Often occurs in relatively natural or architecturally styled areas. The visual condition is highly regarded or sought after	Users are concerned with landscape conditions, but they are not the primary focus of their experiences	Areas where the public has low expectations for maintaining the visual landscape. Generally commercial or industrial areas where human-caused modifications already exist in the landscape
<i>Duration of View</i>	Long, fixed, or continuous views.	Intermediate views (e.g., open highway views)	Short, brief or intermittent views (e.g., highway views in rolling landscapes)

TABLE 9. VISUAL SENSITIVITY MATRIX

User Attitude	Duration of View	Use Volume	<i>Visual Sensitivity Level</i>
High	Long	High	<i>High</i>
High	Long	Moderate	<i>High</i>
High	Moderate	Moderate	<i>High</i>
High	Moderate	Low	<i>High</i>
High	Long	Low	<i>Moderate</i>
High	Short	High	<i>High</i>
Moderate	Long	Moderate	<i>Moderate</i>
Moderate	Moderate	High	<i>Moderate</i>
Moderate	Moderate	Moderate	<i>Moderate</i>
Moderate	Short	Low	<i>Low</i>
Moderate	Long	Low	<i>Moderate</i>
Low	Moderate	Moderate	<i>Moderate</i>
Low	Short	High	<i>Moderate</i>
Low	Short	Low	<i>Low</i>
Low	Long	Low	<i>Low</i>
Low	Moderate	Low	<i>Low</i>

4.0 INVENTORY RESULTS

4.1 Visual Setting and Landscape Character

The Project is located in the Los Angeles Range Section of the Pacific Border Physiographic Province. The region is characterized by narrow ranges and broad fault blocks and alluviated lowlands (Fenneman 1931). The Project is located between the San Bernardino Mountains to the northeast, the San Gabriel Mountains to the northwest, the Santa Ana Mountains to the southwest, and the San Jacinto Mountains to the southeast. The San Jacinto Valley lies to the southeast of the Project. The Project area is located in a valley area occupied by the Santa Ana River, generally centered in the Jurupa Valley. The study area contains a variety of scenic resources such as hills and mountains, river valleys, and rock outcroppings.

Throughout this physiographic region, isolated hills and groups of hills arise from smooth, sloping alluvial plains. These hills are the higher elevations of older mountains that are gradually being filled in and inundated by the alluvial washes. Defined live stream channels are typically confined to mountainous areas that are the source of the sand washes forming the alluvial washes in the dry plains. Larger streams are often “interrupted” in the plains, with alternating flowing water over relatively impermeable substrate and dry channels in porous areas. Native vegetation characteristic of the region is dominated by flat-topped buckwheat, bush penstemon, brittle-brush, white and black sage, and California sagebrush in the form of low, widely spaced shrubs and forbs. Most of the Project area, however, is disturbed or developed in some way.

The Project is located in the “Inland Empire” of Southern California in the generally heavily developed area of northwestern Riverside County. Development in the area is a mix of industrial, residential, commercial, parkland, and open space. The most natural areas are limited to the Santa Ana River corridor, which roughly bisects the Project study area.

Views of the surrounding hills and mountains (Pedley Hills, Jurupa Mountains, Mount Rubidoux) and Santa Ana River Valley provide the most significant scenic vistas and backdrops in the study area.

A total of 14 Landscape Character Types were identified along the 230 kV transmission and 69 kV subtransmission line alternatives. These include:

- I. Forested Riparian Corridor – This landscape type is the most natural of those found in the area. See Figure 1 for a representative view of this Landscape Character Type.
- II. Open Riparian Corridor – This landscape type is primarily located along the northern and eastern sections of the Project area within the Santa Ana River corridor where riparian vegetation is very limited and where the riparian river bed is exposed. See Figure 2 for a representative view of this Landscape Character Type.
- III. Transitional Open River – This landscape occurs adjacent to the Santa Ana River where disturbance has visually disconnected the area from the river characteristics but it is still within the floodplain of the river. See Figure 3 for a representative view of this Landscape Character Type.
- IV. Developed Park – These are developed landscapes that are dominated by grassy fields dotted with non-native shade trees and specimen trees. Passive and active recreation may be taking place in the landscapes. See Figure 4 for a representative view of this Landscape Character Type.
- V. Undeveloped Foothill – These landscapes are not developed other than occasional trails, and are typically covered with low-growing grasses and shrubs. Vertical relief in these landscapes is much more pronounced than in valley areas. See Figure 5 for a representative view of this Landscape Character Type.

- VI. Open Field/Remnant Agriculture – These areas are often open, sparsely vegetated landscapes that have not been developed for housing, commercial, or other uses, and may serve some remnant agricultural purpose. See Figure 6.
- VII. Medium Density Unplanned Neighborhood – These areas have a wide variety of architectural styles and development patterns, with secondary structures, such as garages and barns, or occasional small commercial operations are sometimes present. See Figure 7.
- VIII. High Density Planned Neighborhood – These landscapes have houses that are uniformly spaced and set back from the street, and have similar architectural styles, colors and building materials.
- IX. High Density Multi-Unit Neighborhood – These are areas where large, multi-story buildings dominate. Typically these are apartment blocks or complexes.
- X. Mixed Industrial – These landscapes have a variety of industrial and large commercial buildings with associated transportation infrastructure, ancillary structures and operations, and surface storage areas. The buildings are typically single story, and vary widely in terms of architectural treatments and lot configurations. See Figure 8.
- XI. Strip Commercial/Office – These areas are dominated by large, street-facing parking lots and abundant signage of various styles and sizes. See Figure 9.
- XII. High Density Neighborhood – These areas have various architectural styles and shallow setbacks, and typically occupy areas within the City of Riverside. A variety of historical and architectural styles are represented in this landscape. See Figure 10.
- XIII. Mixed Use (Residential/Commercial/Institutional/Industrial) – These are areas that have a wide variety of land uses, visual quality, and architectural styles. Schools, churches, and houses are present with some small retail stores occasionally present. See Figure 11.
- XIV. Low Density Mixed Use Neighborhood – This character type is visually varied and diverse, with a mix of residential, commercial, and institutional uses.



FIGURE 1. FORESTED RIPARIAN CORRIDOR



FIGURE 2. OPEN RIPARIAN CORRIDOR



FIGURE 3. TRANSITIONAL OPEN RIVER



FIGURE 4. DEVELOPED PARK



FIGURE 5. UNDEVELOPED FOOTHILL



FIGURE 6. OPEN FIELD/REMNANT AGRICULTURE



FIGURE 7. MEDIUM DENSITY UNPLANNED NEIGHBORHOOD



FIGURE 8. MIXED INDUSTRIAL



FIGURE 9. STRIP COMMERCIAL/OFFICE



FIGURE 10. HIGH DENSITY NEIGHBORHOOD



FIGURE 11. MIXED USE (RESIDENTIAL/COMMERCIAL/INSTITUTIONAL/INDUSTRIAL)

4.2 Scenic Quality and Visual Integrity

In the Project study area, cultural modifications and development dominate. Industrial, commercial, residential, and recreational areas are located throughout the visual study area. The Project area is in a developed urban area with the most “natural” areas located along the Santa Ana River corridor. Development along the Santa Ana River corridor is composed of paved and unpaved trails, transmission and distribution utility lines, bridges, and park amenities.

Industrial activities and low density commercial land uses are found in the northwest portions of the visual study area around the Mira Loma substation and along the I-15 and highway 60 corridors. Other heavily industrial and commercial areas are located around Belltown along the Van Buren-Union Pacific (UP) Railroad corridor north of the City of Riverside and around the Riverside Airport, especially to the north of the airport.

Commercial areas are located throughout the study area, but are concentrated along Arlington Avenue, Hole Avenue, La Sierra Avenue, southern Tyler Street, Doolittle Avenue, eastern Jurupa Avenue, Wilderness Avenue, and Columbus Avenue in the City of Riverside.

A total of 44 homogeneous rating units were delineated for scenic quality/visual integrity evaluation. Ratings for most of the units were Class C. However, several units were rated as Class B and Class A. These occurred primarily in parks and units located along the Santa Ana River corridor. A summary of rating units and the associated scores are presented in Table 10.

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TABLE 10. SCENIC QUALITY AND VISUAL INTEGRITY RATINGS

Scenic Quality (Naturally Dominated Areas)											
SQRU #	Scenic Quality Rating Unit Name	Landform	Vegetation	Water	Color	Adjacent Scenery	Scarcity	Intactness	Cultural Modification	Ephemeral and Non-Visual Conditions	Scenic Quality Ratings
											ScoreClass
001	Lower Santa Ana River	2	3	4	3	0	4	3	0	2	21 B
002	Middle Santa Ana River	2	2	3	3	0	4	2	0	2	18 B
003	Wooded Stream	2	3	3	2	0	2	2	0	2	16 C
004	Golden Park Hills	3	3	0	3	0	3	3	0	2	17 C
005	North Hills	3	3	0	3	0	3	3	0	2	17 C
006	Boulder Hill Park	2	2	0	3	0	3	2	0	1	13 C
007	Golf Street	2	3	0	2	0	2	2	0	1	12 C
008	Savi Ranch Park	3	2	1	3	1	3	2	0	1	16 C
040	Anza Narrows Park	2	4	0	3	3	3	3	2	3	23 B

Visual Integrity (Development Dominated Areas)											
VIRU #	Visual Integrity Rating Unit Name	Landscape Pattern	Vegetation	Water	Color	Adjacent Scenery	Scarcity/Intactness	Architectural Elements	Ephemeral and Non-Visual Conditions	Visual Integrity Ratings	
										Score	Class
009	Mira Loma Ag.	1	2	0	2	0	2	3	2	1	13 C
010	Swan Lake neighborhood	2	3	3	2	0	1	1	2	1	15 C
011	Limonite/Hammer Commercial	1	1	0	1	0	1	2	1	1	8 C
012	68 th and Hammer neighborhood	1	2	0	1	0	1	2	2	1	10 C
013	Citrus Street Ag.	2	3	0	2	3	1	3	1	2	17 C
014	Rancho Mira Loma Neighborhood	2	3	0	3	3	1	3	3	1	19 C
015	Norco	2	3	0	2	2	1	3	3	1	17 C
016	68 th Street Ag.	2	2	0	1	3	1	2	2	1	14 C
017	Goose Creek Golf Course	3	4	3	3	3	3	4	2	3	28 A
018	Mira Loma Neighborhood	2	3	0	3	2	2	2	2	1	17 C
019	Limonite/Ontario Ag.	1	2	0	2	0	2	3	2	1	13 C
020	Bellevue/Ontario Ag.	3	3	0	2	0	3	3	2	3	19 C
021	Van Buren/Pomona Industrial/Com.	1	1	0	2	0	1	1	1	1	8 C
022	Country Village Golf Course	3	3	0	3	3	2	3	2	1	20 B

Visual Integrity (Development Dominated Areas)												
VIRU #	Visual Integrity Rating Unit Name	Landscape Pattern	Vegetation	Water	Color	Adjacent Scenery	Scarcity	Intactness	Architectural Elements	Ephemeral and Non-Visual Conditions	Visual Integrity Ratings	
											Score	Class
023	Bellevue/Van Buren Open Space	1	2	0	2	0	1	1	0	1	8	C
024	Big League Dream Sports Park	1	2	0	2	0	3	3	2	1	14	C
025	Rohr Neighborhood	2	2	0	3	3	2	3	2	1	18	C
026	Pedley Neighborhood	2	2	0	3	3	2	3	2	1	18	C
027	Galena St. Com./Ind.	1	1	0	2	0	1	2	1	1	9	C
028	RERC/Airport Mixed	1	1	0	1	0	1	0	1	1	6	C
029	Glen Avon Neighborhood	2	2	0	2	1	2	3	2	1	15	C
030	Paradise Knolls Golf Course	3	4	0	4	3	3	4	2	4	27	A
031	Jurupa Neighborhood	2	3	0	2	1	2	2	2	1	15	C
032	Indian Hills Golf Course	3	4	2	4	1	3	4	2	2	25	B
033	Live Oak Drive Neighborhood	2	2	0	3	4	2	3	2	2	20	B
034	Jurupa Hills Country Club	3	4	2	4	3	2	4	3	2	27	A
035	Challen Hill Park	2	2	0	3	1	2	3	2	1	16	C
036	Victoria Ave. Ag.	3	4	0	3	1	3	3	2	2	21	B
037	Skylinks Golf Course	3	4	0	4	0	2	4	3	2	22	B
038	Limonite and Camino Neighborhood	2	3	0	2	2	1	3	2	1	16	C
039	Limonite/Van Buren Commercial	1	1	0	1	0	1	1	1	1	9	C
041	Van Buren/Jurupa Park	3	3	3	2	3	2	2	0	2	20	B
042	I-15 and Pomona Industrial/Com.	1	1	0	1	0	1	1	1	1	7	C
043	Limonite/Peralta Neighborhood	2	2	0	2	3	2	2	2	1	16	C
044	I-15 and 60 Industrial	3	3	0	2	1	2	3	3	1	16	C

4.3 Sensitivity Analysis

Visual sensitivity is a measure of viewer concern for change to the landscape. Sensitive viewers and potentially critical viewpoints that may have visibility of the 230 kV and 69 kV components of the Project were identified and inventoried. Typically, these include recreation areas, travel routes, and residences. All major roads, recreational areas, occupied residences, and similar areas were identified and assessed from land use data and site reconnaissance. In November 2015, all cities, parks and recreation districts, and Riverside County potentially affected by the project were contacted to identify subdivisions or parks constructed, entitled or planned since 2010.

4.3.1 Residential and Commercial Developments

Residences that existed prior to 2010 were analyzed in the 2010 assessment. Residences constructed between 2010 and 2015 were analyzed through a review of aerial imagery. Residences entitled and under construction were identified through research of approved plans, agency contacts, and aerial imagery.

CITY OF RIVERSIDE

Through a review of the Riverside planning documents, one development has been entitled and is under construction within 1.5 miles of the project since the 2010 assessment. Tract Map 28987 was approved in June 2014 for 114 housing units on 48 acres along Jurupa Avenue between Crest Avenue and Rutland Avenue. Site grading is ongoing.

CITY OF JURUPA VALLEY

Through a review of the City of Jurupa Valley website (Jurupa Valley 2015), six developments have been entitled and are under construction within 1.5 miles of the project since the 2010 assessment, according to the most current document dates below:

1. Stratham Homes/SEC at Wineville/Cantu-Galleano Road; Tract Map # 36692, dated December 2014. Site grading is ongoing.
2. Lennar Homes/Rancho Del Sol at Cantu-Galleano Road to Bellegrave Ave., midway between Wineville and Etiwanda; Tract Map # 33461, dated February 2014. Construction is ongoing.
3. William Lyon/Turnleaf/Hillcrest Homes at northeast corner of Wineville/Bellegrave Ave.; Tract Map # 31778, dated July 2014. Residential construction is ongoing.
4. D.R. Horton Homes/Vintage development at Cantu-Galleano Road and Brett Court, dated November 2014. Site grading is ongoing.
5. APV Investments #1 and #2, or I-15 Corridor Specific Plan/Limonite Master Plan/Harvest Villages between Pats Ranch Road and Wineville; Tract Map # 33428. Dated June 2014. Residential construction is ongoing.
6. Lennar Homes/Riverbend; Tract Map # 36391, dated October 2013. Site grading is ongoing.

Three development applications had been approved since the 2010 but no other progress has been documented through research of approved plans, agency contacts, and aerial imagery:

1. Thoroughbred Farms Business Park; Specific Plan 376, dated November 2012. No construction activities have occurred.
2. Vernola Marketplace Apartments, dated December 2014. No construction activities have occurred.
3. Paradise Knolls Specific Plan, dated June 2015. No construction activities have occurred.

EASTVALE

Through a review of the Eastvale City website and consultation with city staff, three developments have been proposed or constructed since the original analysis was performed in 2010. The following developments are located west of I-25 within the SCE RTRP study area:

1. Goodman Commerce Center & Goodman Business Center (between Bellegrave and Cantu-Galleano Road)
2. Panera Bread (Eastvale Gateway South; Shops 2)
3. William-Lyons Homes/Nexus Residential Development (behind the 24-hour Fitness Center in the Eastvale Gateway South retail center)

4.3.2 Trails

There are numerous existing and planned local and regional trails found throughout the study area. Most of these trails are located in urbanized areas. For purposes of impact analysis, only the Santa Ana River National Recreation Trail (SART) was considered. This multi-purpose trail is located on the south side of the Santa Ana River in the visual study area.

4.3.3 Parkways, Gateways and Scenic Corridors

There are no designated or eligible State of California scenic highways in the visual study area. However, there are many visually sensitive roadways identified in local plans.

The following designated parkways and gateways were identified in the City of Riverside General Plan 2025 for the visual study area:

- Arlington Avenue – City of Riverside Parkway and Gateway
- La Sierra Avenue – City of Riverside Parkway and Gateway
- Magnolia Avenue/Market Street – City of Riverside Parkway
- Pierce Street – City of Riverside Parkway
- Riverwalk Parkway – City of Riverside Parkway
- Van Buren Boulevard – City of Riverside Parkway and Gateway
- Victoria Avenue – City of Riverside Parkway
- California State Routes 91 & 60 – City of Riverside Gateway

4.3.4 Parks and Recreation Areas

The Land Use technical report identifies parks and recreation areas in the study area, including enclosed sporting facilities. The 2010 report did not identify parks that were planned or under construction. In November 2015, all cities, parks and recreation districts, and Riverside County potentially affected by the project were contacted to identify parks constructed or planned since 2010.

For this study, parks and recreation areas where passive recreational activities, such as picnicking, hiking, wildlife observation and similar activities, occur were considered uniquely for visual impact assessment. Other more active recreation facilities, such as sports complexes, soccer fields, skating arenas, etc., are identified but not considered as visually sensitive as passive areas.

The most extensive park area in the study area is the Hidden Valley Wildlife Preserve/Wetlands Mitigation Bank/Martha McLean Anza Narrows Park complex located along the Santa Ana River. The area is comprised of over 25 miles of hiking, biking and horseback riding trails as well as picnicking, wildlife watching, and scenic overlook areas.

Two existing parks were not fully identified in the 2010 assessment. Vernola Family Park and Limonite Park, were included on Figure 1 and the sensitivity analysis in the 2010 assessment but were omitted from the list below.

Five park sites were identified through approved plans, agency contacts, and aerial imagery as designed

and/or under construction within 1.5 miles of the project. These were not anticipated in the 2010 assessment.

1. Eastvale Community Park is under construction by Jurupa Community Services District within 1.5 miles of the project, at Hammer Avenue and Citrus Street. It offers trails, restrooms, and sports fields.
2. Turnleaf Community Park, part of William Lyon/Turnleaf/Hillcrest Homes near I-15 and Bellegrave Avenue. Under construction.
3. Esplande Park (Phase 1), part of Lennar Homes/Rancho Del Sol near I-15 and Bellegrave Avenue. Under construction.
4. Village Park, part of PV Investments #1 and #2/Limonite Master Plan/Harvest Villages, near I-15 and Wineville Avenue. Under construction.
5. Unnamed 10-acre park, part of Lennar Homes/Riverbend, south of 68th and Smith Streets. Under design.

The following parks and recreation sites were identified in the study area and carried forward for sensitivity analysis:

- Agate Park
- Arlington Park
- Boulder Hill Park
- Challen Hill Park
- Clark Memorial Park
- Clay Park
- Collett Park
- Country Village Golf Course
- Don Derr Park
- Don Jones Park
- Don Lorenzi Sports Complex
- Eastvale Community Park
- El Dorado Open Space Park
- Esplande Park
- Galleano Winery
- George Ingalls Equestrian Event Center
- Golden Park
- Goose Creek Golf Club
- Harada Heritage Park
- Harrison Park
- Hidden Valley Wildlife Area, Visitor Center and Overlooks
- Hole Park
- Hunt Park
- Indian Hills Country Club
- John Bryant Park
- Jurupa Hills Country Club
- Jurupa Valley Sports Park
- Knowles Park
- La Sierra Park
- Laramore Park
- Lennar Homes/Riverbend Park
- Limonite Meadows Park
- Louis Rubidoux Nature Center
- Martha McLean Anza Narrows Park
- Mountain View Park
- Myra Linn Park
- Nichols Park
- Norco Community Center Park
- Paradise Knolls Golf Course
- Pikes Peak Park
- Rancho Mira Loma Park
- River Trails Park
- Rutland Park
- Santa Ana River Regional Park
- Savi Ranch Park
- Skylinks Golf Course
- Turnleaf Community Park
- Vernola Family Park
- Victoria Cross Park
- Village Park

4.3.5 City of Riverside Cemeteries

The City of Riverside, as detailed in the General Plan, identifies cemeteries as sensitive scenic areas. The following cemetery is the only one located in the Project area, and is within the City of Riverside:

- Crestlawn Memorial Park and Mortuary

The results of the visual sensitivity analysis (See Table 11) in the Project area were determined by evaluating use volumes, user attitudes towards change, and view durations for visually sensitive receptors identified in the Project area.

TABLE 11. VISUAL SENSITIVITY ANALYSIS RESULTS

	Criteria			Results
Viewpoints	User Attitude	View Duration	Use Volume	Sensitivity
Residences	High	Long	Low	<i>High</i>
Roadways				
State Highway 91, State Highway 60, Interstate 15	Low-Moderate	Short	High	<i>Moderate</i>
Jurupa Ave., Victoria Ave., Central Ave.	High	Long	Moderate	<i>High</i>
Arlington Ave., Van Buren Blvd., Arlington Ave., Pierce St.	Low-Moderate	Long	Moderate	<i>Moderate</i>
Magnolia Ave., La Sierra Ave.	Moderate-High	Long	Moderate	<i>High</i>
Hidden Valley Wildlife Preserve Recreation Destination Route	High	Long	Low	<i>High</i>
Parks & Recreation, Cemeteries				
Arroyo Park, Boulder Hill Park, Challen Hill Park, Clay Park, Collett Park, Crestlawn Memorial Park and Mortuary, Harrison Park, John Bryant Park, Limonite Meadows Park, Myra Linn Park, , Rutland Park, Nichols Park, Savi Ranch Park, Wineville Park	High	Long	Low	<i>High</i>
Agate Park, Arlington Park, Clark Memorial Park, Collett Park, Eastvale Community Park, Don Derr Park, Don Jones Park, Don Lorenzi Sports Park, El Dorado Open Space Park, Esplande Park, Galleano Winery, Golden Park, Knowles Park, Hole Park, Hunt Park, Jurupa Valley Sports Park, Laramore Park, La Sierra Park, Mountain View Park, Rancho Mira Loma Park, Turnleaf Community Park, Vernola Family Park, Victoria Cross Park, Village Park,	Low-Moderate	Long	Moderate	<i>Moderate</i>
George Ingalls Equestrian Event Center, Harada Heritage Park, Hidden Valley Wildlife Area, Hidden Valley Visitor Center, Hidden Valley Wildlife Viewing Area, Other Park District Lands (a.k.a. Santa Ana River Regional Park), Lennar Homes/Riverbend Park, Louis Rubidoux Nature Center, Martha McLean Anza Narrows Park, Norco Community Center Park, River Trails Park, Pikes Peak Park	High	Long	Moderate	<i>High</i>
Golf Courses & Country Clubs				
Indian Hills County Club, Paradise Knolls Golf Course, Goose Creek Golf Club, County Village Golf Course, Jurupa Hills County Club	Moderate-High	Long	Low	<i>Moderate</i>
Skylinks Golf Course	Low	Long	Low	<i>Moderate</i>
Trails				

	Criteria			Results
Viewpoints	User Attitude	View Duration	Use Volume	Sensitivity
Santa Ana River National Recreational Trail	High	Long	Low	<i>High</i>

4.4 230 kV Transmission Line Corridors

Scenic quality/visual integrity along most of the Project is Class C. There are a few areas where higher scenic quality or visual integrity exists. These areas occur in the following locations:

- Link AX East = Milepost (MP) 0.0 - 0.4: **Class B**
- Link NO = MP 0.0 – 0.9: **Class C**
- Link AX West = MP 0.0 – 0.7: **Class B**
- Link BX = MP 0.0 – 1.7: **Class B**
- Link D = MP 0.0 – 2.1: **Class B**
- Link JA = MP 0.1 – 0.4: **Class B**; MP 0.4 – 0.5: **Class A**
- Link JB = MP 0.0 – 0.2: **Class A**
- Link JC = MP 0.0 – 0.3: **Class A**
- Link K = MP 0.0 – 0.8: **Class B**; MP 0.8 – 1.4 **Class A**
- Link T = MP 0.0 – 0.3: **Class B**
- Link U = MP 0.0 – 0.4: **Class B**

Existing transmission lines occur parallel to or in close proximity to the proposed Project alternatives. These lines occur along the following links:

- Link AX = All
- Link AX West = All
- Link BX = Milepost (MP) 0.0 – 0.1
- Link D = All
- Link I = All
- Link JA = All
- Link JB = MP 0.0 – 0.1, 0.4 – 1.1
- Link JD = MP 0.0 – 0.9, 3.3 – 3.4
- Link R = MP 2.6 – 2.9

The affected environment was studied along all links considered prior to route selection and alternative development. Links noted as 2010 are the routes at the time this visual assessment was originally published and are shown on Figure 1. The Proposed Project evaluated in 2015-2016 is shown in Figures 2 and 3. The total number of residences within 500 feet of the 230 kV transmission line, regardless of potential Project visibility, were totaled for each link. Brief descriptions of existing conditions for all links are provided below.

Link AX (2010)

This segment leaves the proposed Wilderness Substation heading predominately west from the substation on the south side of the Santa Ana River. Industrial uses are immediately adjacent to the east, west and

south sides as the line leaves the substation. An existing SCE 69 kV subtransmission line crosses at the east end of this link and continues adjacent to the Santa Ana River to the north. This portion of the link is also adjacent to the City's RERC power plant and the City's water treatment facility as it heads west. The industrial character dominates until Van Buren Boulevard to the west. West of Van Buren Boulevard, this link travels through open space and adjacent to the Santa Ana River and Santa Ana River Trail. The far

western portion of the link again becomes parallel to an existing SCE 69 kV subtransmission line. Primary sensitive viewers in the area are trail users. On the west end of this alignment there will be foreground views from the adjacent residential neighborhoods to the south that include Rutland Ave., Bradford St., and Rossini Ct. Scenic quality/visual integrity for the link is a Class B landscape to the west of Van Buren Boulevard and Class C to the east of Van Buren Boulevard. There are 72 residences located within 500 feet of this link.

Link AX East

This short segment leaves the proposed Wilderness Substation heading predominately west from the substation on the south side of the Santa Ana River. Industrial uses are immediately adjacent to the south as the line leaves the substation. An existing SCE 69 kV subtransmission line crosses at the east end of this link and continues adjacent to the Santa Ana River to the north. This portion of the link is also adjacent to the City's RERC power plant and the City's water treatment facility as it heads west. The Santa Ana River Trail and Parkway is located immediately to the north. Primary sensitive viewers in the area are trail users.

Link NO

Link NO parallels through industrial uses, including the City's water treatment facility adjacent to the Santa Ana River. The Santa Ana River Trail and Parkway is located immediately to the north. Primary sensitive viewers in the area are trail users. The parkway and industrial uses extend all the way to Van Buren Boulevard near the west end of the link.

Link AX West

West of Van Buren Boulevard, this link travels through open space and adjacent to the Santa Ana River and Santa Ana River Trail. The far western portion of the link again becomes parallel to an existing SCE 69 kV subtransmission line. Primary sensitive viewers in the area are trail users. On the west end of this alignment there will be immediate foreground views from the adjacent residential neighborhoods to the south that include Rutland Ave., Bradford St., and Rossini Ct. Scenic quality/visual integrity for the link is a Class B landscape to the west of Van Buren Boulevard and Class C to the east of Van Buren Boulevard. There are 74 residences located within 500 feet of this link.

Link BX (2010)

This segment heads north upon leaving the proposed Wilderness Substation. The line crosses an existing SCE 69 kV line, the Santa Ana River Trail, and the Santa Ana River, and then turns west on the north side of the river. The character is relatively undeveloped within the river corridor, but the surrounding industrial use also defines the area. The current land use of the substation area is open irrigated turf plots used as a Toro Company irrigation testing site. Primary sensitive viewers in the area are trail users on both sides of the river. Scenic quality/visual integrity for the link is a Class B landscape. There is one residence located within 500 feet of this link.

Link D

Link D is a long segment of over two miles that generally parallels the Santa Ana River on an east/west orientation. This alignment, on the south side of the river, will have foreground views from the adjacent residential neighborhoods that include Julian Dr., Idyllwild Ln., Macy Ct., and Hershey Way. Scenic quality/visual integrity is a Class B landscape, as the character of the river corridor to the north and the open space to the south are the predominant features of the landscape. Nearby sensitive viewers are trail users, residences, and users of the Hidden Valley Wildlife Area, Agricultural Park, and Savi Ranch Park, who all have immediate foreground views of the Project. There are 47 residences located

within 500 feet of this link.

Link H

Link H is located in undeveloped and open space lands. The terrain change of this link is significant as it traverses Rancho La Sierra and parallels Arlington Avenue, a visually sensitive highway that is a designated city gateway and parkway. Running along Arlington Avenue for approximately 0.4 miles, the link crosses the entrance to the Hidden Valley Wildlife Area / Santa Ana River Regional Park and is also adjacent to Crestlawn Memorial Park and Mortuary on the south side of Arlington Avenue. Sensitive viewers would be users entering the Hidden Valley Wildlife Area, visitors to Crestlawn Memorial Park and Mortuary, and travelers using Arlington Avenue. The scenic quality/visual integrity rating for this landscape is Class C. There are 11 residences located within 500 feet of this link.

Link I

Link I is a short segment (approximately 0.7 miles) that is an alternative to Link H and shares its two terminus points with those of Link H. It travels generally north of Link H in an east-west orientation. Link I is also located in undeveloped and open space lands as it passes through Rancho La Sierra, Savi Ranch Park, and an existing nursery. Sensitive viewers would be users of the Hidden Valley Wildlife Area and Savi Ranch Park. The scenic quality/visual integrity rating for this landscape is Class C. There are 5 residences located within 500 feet of this link.

Link JA

Link JA is a short link at approximately 0.5 miles. The link is comprised of two lattice structures on each side of the Santa Ana River to span the river and wetlands. Traveling in southeast to northwest orientation, the link has its southern terminus in an open space parcel and its northern terminus in the Goose Creek Golf Club. Sensitive viewers would be from residential, with immediate foreground views from Grulla Ct. and Viceroy Ave., and the recreation viewers at Goose Creek Golf Club. Foreground viewers would be from Hidden Valley Wildlife Area trails. Scenic quality/visual integrity rating for this short link would include Class A, B and C landscapes. The southern side of the river is Class C, the golf course on the north side is Class A, and the link spans the Santa Ana River area which is Class B. There are 11 residences located within 500 feet of this link.

Link JB

Link JB heads northwest through Goose Creek Golf Club and undeveloped lands until reaching 68th Street. The line travels west adjacent to 68th Street on the south side through a residential subdivision currently under construction. Sensitive views would be from recreational users of the golf club and the residences on the north side of 68th Street. The scenic quality/visual integrity rating for this link is mostly Class C, with the golf course being Class A. The link crosses an existing 69 kV line that runs through the golf course. There are 26 existing residences currently located within 500 feet of this link. Upon build-out of planned development south of 68th Avenue, which is currently underway, an additional 112 residences will be located within 500 feet.

Link JC (2010)

Link JC heads west through Goose Creek Golf Club and a residential subdivision currently under construction until turning north approximately 300 feet east of the I-15 freeway right-of-way. The line then travels north adjacent to the freeway in undeveloped lands, terminating just south of 68th Street. Sensitive views would be from recreational users of the golf club as the link crosses two holes of play. The scenic quality/visual integrity rating for this link is mostly Class C, along with the golf course being Class A. There are no existing residences located within 500 feet of this link. However, this link passes through a residential subdivision currently under construction south of 68th Avenue that is crossed by Link JB and would be seen in the immediate foreground.

Link JD

Link JD is a long link, approximately 3.4 miles, that traverses a variety of landscapes. The link generally runs in a north-south orientation adjacent to the I-15 freeway on the east side of the freeway. The link intersects Link JB near 68th Street at its southern terminus and travels north parallel to the freeway for approximately 0.4 miles. This portion of the link crosses an existing 69 kV line at 68th Street and then runs parallel to this 69 kV line as it turns north, also running adjacent to the I-15 freeway. Link JD continues north then northeast at the I-15 / Limonite Avenue interchange where it follows the western property boundary of Vernola Marketplace before the line turns west to return to the freeway-adjacent alignment north of the shopping center. The link continues north parallel and adjacent to the freeway through undeveloped lands, crossing Bellegrave Avenue until reaching Landon Drive. The line turns east on Landon Drive until reaching Wineville Avenue where the line turns north. There are 97 residences within 500 feet of the link, but approximately 60 of those are on the west side of the freeway and naturally orientate to the west and away from the freeway and the link to the east of the freeway. There are approximately 30 residences east of Vernola Marketplace on Ruby Crest Way and Tigers Eye Court that could be moderately sensitive, but they too are oriented with backyard views to the west away and from the shopping center and the freeway.

Since completion of the visual analysis in 2010, development activity has increased substantially and new development is underway at several locations along the alignment. These include a subdivision south of 68th Street and several subdivisions near the northern terminus of the project between Bellegrave Avenue and Cantu Galleano Ranch Road. Upon build-out of these projects, approximately 112 additional single-family homes will be located within 500 feet of the alignment. Build-out of the planned Vernola Apartment complex adjacent to I-15 will add to the total number of residences located within 500 feet.

The scenic quality/visual integrity rating for the landscapes of this link is Class C.

Link K (2010)

Link K is a long link, approximately 4.3 miles, that traverses a variety of landscapes but can be generally described in two components: an east-west section along the Santa Ana River and a north-south section that follows Bain Street. The southern terminus of the link is approximately 0.5 miles west of the Van Buren Avenue bridge over the Santa Ana River. The east-west orientation of this section of the link runs parallel to the Santa Ana River on its north side for approximately 1.9 miles. This portion travels adjacent to the river through rural residential, Paradise Knolls Golf Course, and industrial development. This section follows the borders between the river's Class B landscape and the Class C landscapes of the residential and industrial areas, and also borders the Class A landscape of the golf course.

Heading north along Bain Street from the intersection of Bain Street and Limonite Avenue, the northern portion of Link K (approximately 2.4 miles) exhibits a strong north-south orientation. The Bain Street area is dominated by residential neighborhoods that are within immediate foreground viewing of the link. The route is also in the immediate foreground of Mira Loma Middle School where the school fields are adjacent to the San Sevaine Flood Control Channel. The route crosses Bellegrave Avenue and Van Buren Blvd. remaining channel-adjacent and bordering developed and undeveloped industrial areas. Most of this link is in immediate foreground view of high-sensitivity viewers. Residences fronting on Kennedy Street and Bain Street areas will have immediate foreground views of the Project, as will the recreation users in the golf course and the trails on the north side of the river. Santa Ana River Trail viewers will also have the Project in foreground view from the south side of the river. The scenic quality/visual integrity rating for this link north of Limonite Avenue is Class C. There are 217 residences located within 500 feet of this link.

Link L (2010)

Link L is a short link of about ¼ mile. From the northern edge of the Santa Ana River near Lakeview Avenue, the link extends north between the Northwest Riverside County/City Animal Shelter and an existing rural residential area. The route crosses Van Buren Blvd. southeast of Pedley Road and terminates into an undeveloped industrial area. The residential viewers in immediate foreground are from Pedley Road and Lakeview Avenue. The scenic quality/visual integrity of the area is Class C. There are eight residences within 500 feet of this link.

Link M (2010)

Link M is a north-south oriented link that is predominately characterized as rural residential. It is a large lot residential area that allows equestrian and semi-industrial uses. The area is rated Class C visual integrity. The route crosses Limonite Avenue at its northern end into undeveloped open space. There are 43 residences within 500 feet of this link.

Link N (2010)

Link N is primarily located through industrial, commercial, and undeveloped open space areas. The area is rated Class C visual integrity. The route crosses Limonite Avenue at Baldwin Avenue from commercial development into undeveloped open space, but is in the immediate foreground of residences along Yearling Way and Pedley Road. There are 47 residences within 500 feet of this link.

Link P (2010)

Link P is located through a rural residential area and the Pedley Metrolink Station parking lot adjacent to the Union Pacific Railroad and Van Buren Boulevard. The visual integrity of the landscape has a Class C rating, and existing transmission lines are typically not present in this area. There are 24 residences located within 500 feet of this link. Many of these residences have open, unobstructed views south and of the Jurupa Mountains to the north.

Link Q (2010)

Link Q is located in undeveloped open space and a rural residential area. The primary sensitive viewers are nearby residences that would have the Project in immediate foreground views from Yearling Way, Grey Mare Drive, and Pedley Road. Many of these residences have open, unobstructed views south and of the Jurupa Mountains to the north. The visual integrity of the landscape has a Class C rating, and existing transmission lines are typically not present throughout this area. There are 23 residences located within 500 feet of this link.

Link R (2010)

Link R is a long link, approximately 3.3 miles, that traverses a variety of landscapes. This link is generally located in undeveloped, industrial, or commercial landscapes generally paralleling the Union Pacific Railroad which is adjacent to and on the east side of Van Buren Boulevard. Near the northern end, the route is parallel to Bellegrave Avenue for approximately 0.25 miles and crosses Bellegrave Avenue east of Van Buren Boulevard. The primary sensitive viewers are nearby residences that would have the Project in foreground view. Some of these residences have open, unobstructed views of the Jurupa Mountains to the east. The scenic quality/visual integrity of the landscape has a Class C rating, and existing transmission lines are typically not present in the area. There are 42 residences located within 500 feet of this link.

Link S (2010)

Link S is located essentially between Bain Street and the existing tap lines to the north along the San Sevaïne Channel corridor in an industrial and undeveloped landscape of Class C visual integrity. The link

spans the Pomona Freeway (State Highway 60). Sensitive viewers are limited to the multi-family residences at the Country Village Golf Course development north of the 60 freeway at the northern end of the link. There are 32 residences located within 500 feet of this link.



FIGURE 12. VIEW LOOKING SOUTH ON VAN BUREN BOULEVARD NORTH OF RIVER



FIGURE 13. VIEW LOOKING NORTH FROM BIKE TRAIL NORTH OF JURUPA TRAILHEAD



FIGURE 14. VIEW LOOKING SOUTH FROM RESIDENCE AT TRAILHEAD OFF KENNEDY STREET



FIGURE 15. VIEW LOOKING SOUTHWEST FROM 64TH STREET EAST OF DOWNEY STREET



FIGURE 16. VIEW LOOKING SOUTH FROM LIMONITE AVENUE & BAIN STREET



FIGURE 17. VIEW LOOKING NORTH FROM BELLEGRAVE AVENUE & DODD STREET

4.5 69 kV Subtransmission Line Corridors

The affected environment was studied along all links considered prior to route selection and alternative development. The total number of residences within 300 feet of the 69 kV subtransmission line, regardless of potential Project visibility, were totaled for each link. Brief descriptions of existing conditions for all links are provided below.

4.5.1 Wilderness to Mountain View

Link 2

This short segment is located adjacent to the new substation, and is within in a highly developed industrial area. Views of the line by sensitive receptors will be very limited due to the presence of the new substation. Visual integrity of the area is Class C. There are no existing transmission or subtransmission lines currently installed in this location, and there are no residences located within 300 feet of this link.

Link 3

This segment heads north from the proposed Wilderness Substation. Before reaching the Santa Ana River Trail, the link turns east until reaching Jasmine Street where the link heads south. The link then travels east on Industrial Avenue through the industrial area west of the Union Pacific railroad tracks and south of the river. The line roughly parallels the railroad tracks north of Jurupa Avenue. The landscape is highly developed, and has a Class C visual integrity rating. Nearby sensitive viewers include those in the Martha McLean-Anza Narrows Park and Santa Ana River Trail. Existing 69 kV subtransmission lines occur along the 1,300 foot length of the east-west portion of this link that parallels the trail. There are two residences located within 300 feet of this link.

Link 4

Link 4 heads south from Wilderness Substation and generally stretches east through a commercial/industrial area along Ed Perkic Street, Gage Street, and Columbus Avenue. Visual integrity is low along all of Link 4 and is a Class C landscape rating. The nearest sensitive viewers are residential viewers located on Mountain View Avenue, Fremont Street, Essex Street, and Jurupa Avenue. Distribution lines currently exist along portions of Columbus Avenue. There are 11 residences located within 300 feet of this link.

Link 5

Link 5 is located primarily in a residential area of common Class C visual integrity. Residential viewers will have immediate foreground views of the Project along this entire link. An abundance of overhead distribution lines along this link will make visual contrasts generally moderate to weak. There are 46 residences located within 300 feet of this link.

Link 6

This link, located along Chester Street, is also in a residential area with a visual integrity Class C landscape. There is currently no overhead distribution along this link, and contrasts will be moderate to strong. There are 59 residences located within 300 feet of this link.

Link 7

Link 7 is also located in a residential area of common visual integrity and a Class C rating. Residential viewers will have immediate foreground views of the Project along this entire link along Mountain View Avenue. An abundance of overhead distribution lines along this link will make visual contrasts generally moderate to weak. There are 79 residences located within 300 feet of this link.

Link 8

Link 8 is located along Florence Street in a residential area. Residential viewers will get immediate foreground views of the Project along this entire link. Visual integrity is common, and existing overhead distribution occurs along the west side of the street along the entire length of this link. There are 67 residences located within 300 feet of this link.

Link 9

Link 9 is located along Jurupa Avenue spanning the entrance to Martha McLean Anza Narrows Park. Nearby sensitive viewers would be park recreation viewers and residences located on Jurupa Avenue and Tucson Court. Contrasts will be strong due to vegetation removal and lack of existing transmission line infrastructure along this link. There are six residences located within 300 feet of this link.

Link 10

Link 10 is a short link that crosses Jurupa Avenue just west of the railroad underpass in a Class C landscape. Sensitive viewers in the area are located in the Martha McLean Anza Narrows Park and nearby residences. Existing lines are located on the south side of Jurupa Avenue. There are seven residences located within 300 feet of this link.

Link 11

Link 11 is located in a Class C residential landscape. Residences fronting Anita Place and Sheppard Place would have immediate foreground views of the Project. There are existing overhead electrical distribution lines along this link. There are 36 residences located within 300 feet of this link.

Link 12

Link 12 is located in a residential area of common, Class C visual integrity. Residential viewers will have immediate foreground views of the Project along this entire link. An abundance of overhead distribution lines along this link will make visual contrasts generally moderate to weak. There are 78 residences located within 300 feet of this link.

4.5.2 Wilderness to Jurupa Avenue

This portion of the Project consists of two lines originating at the new Wilderness Substation and following Wilderness Avenue south to the existing line located along Jurupa Avenue. These subtransmission lines would be located in a highly developed industrial/commercial area. The nearest sensitive receptors are viewers located along the Santa Ana River Trail, approximately 1,000 feet to the north. Viewers from the trail will only get limited and short duration views of this link due to terrain and screening from existing development. The area is a Class C landscape of common visual integrity. Contrasts will be weak due to the presence of the new substation and the existing lines along Jurupa Avenue. There are no residences located within 300 feet of this link.

4.5.3 RERC-Harvey Lynn and Freeman

Link 1

This short link leaves the RERC power plant and heads west to Acorn Street. The link is adjacent to the Riverside Wastewater Treatment Plant to the west in a highly developed industrial area of common, Class C visual integrity. There are no nearby sensitive visual receptors that would have visibility of the line. There are no residences within 300 feet of this link.

Link 2

Link 2 is located in an industrial/commercial landscape as the link travels south on Acorn Street to Jurupa Avenue. The link continues east along Jurupa Avenue until reaching Van Buren Boulevard. There are no nearby sensitive receptors, although the end of this link would be in foreground view of travelers along Van Buren Boulevard. There are existing transmission line structures along most of the link. Visual integrity in this area is common, Class C. There are no residences within 300 feet of this link.

Link 3

Link 3 is located in the industrialized area of the RERC, the water treatment plant, and mixed industrial/commercial area to the south. There are no nearby sensitive receptors, although the end of this link would be in foreground view of travelers along Van Buren Boulevard. Visual integrity is common, Class C rating along this route. There are no residences within 300 feet of this link.

Link 4

Link 4 crosses Van Buren Boulevard at Jurupa Avenue and heads south to the northern end of Doolittle Avenue. The link continues south on Doolittle Avenue through industrial/commercial development and the Skylinks Golf Course. Nearby sensitive receptors include travelers along Van Buren Boulevard at the northern end of the link, recreational viewers using the Skylinks Golf Course, and a multi-family residential development at the southern end of the link where Doolittle Avenue terminates at Van Buren Boulevard. This link is located primarily in a commercial/industrial area. Existing distribution lines are currently located along Doolittle Avenue. Visual integrity is common and a Class C rating along this link. There are 13 residences within 300 feet of this link.

Link 5

Link 5 is located along Jurupa Avenue crossing Van Buren Boulevard and heading west through an undeveloped but highly disturbed area west of Van Buren Boulevard. The proposed subtransmission line would be located parallel to existing 33 kV electrical lines servicing the primarily residential area in and around Rutland Park. Residences located along Bradford Street and recreational viewers located in Rutland Park would have foreground views of the proposed transmission line in this area. Visual integrity along this link is common and a Class C landscape. There are two residences within 300 feet of this link.

Link 6

Link 6 is located along the Jurupa Avenue alignment from east of Bradford Street to Crest Avenue. The primary sensitive receptors along this link are residential viewers located on Jurupa Avenue and recreational viewers using Rutland Park, both of whom would have immediate foreground views of the Project. The western portion of the link passes through undeveloped but heavily disturbed open space. There are currently no overhead electrical lines along this link, so new subtransmission construction here would result in structure contrasts. Visual integrity is above average along the east portion of this link and common through the undeveloped lands on the west portion of Link 6. There are 54 residences within 300 feet of this link.

Link 7

The eastern terminus of Link 7 terminus is on Jurupa Avenue east of Bradford Street and travels northeast along Bradford Street and follows an existing 33 kV line for approximately ½ of a mile. This portion of the link would have immediate foreground views from Bradford Street and the Santa Ana River Trail. The link would cross the trail twice within approximately 600 feet. The link turns south from near the intersection of Crest Avenue and Julian Drive and travels south on Crest Avenue until reaching Jurupa Avenue. Sensitive receptors would be located along the Santa Ana River Trail and residences located primarily on Bradford Street, Rutland Avenue, and the streets connecting to Crest Avenue, which

would have immediate foreground views of the Project. Visual integrity is above average and Class B along most of this link but rated Class C through the eastern residential portion. There are 95 residences within 300 feet of this link.

Link 8

This link would follow Crest Avenue from Jurupa Avenue south to Arlington Avenue. The primary sensitive receptors along this link are the residential viewers who would have immediate foreground views of the Project. The link would also be adjacent to Norte Vista High School along its eastern side. There is no overhead transmission currently existing along Crest Avenue in this area. Visual integrity is common, Class C landscape. There are 200 residences within 300 feet of this link.

Link 9

This link is located in and around the corner off Arlington Avenue and Van Buren Boulevard in a highly developed, primarily commercial/industrial area. The link travels south on Van Buren Boulevard and turns west on Arlington Avenue. Sensitive viewers are primarily viewers traveling along Van Buren Boulevard. There are numerous existing overhead transmission and distribution lines in the area. Visual integrity is common and a Class C landscape along this link. There are two residences within 300 feet of this link.

Link 10

Link 10 is located in a mixed high density residential and commercial/industrial area of Class C visual integrity. Nearby sensitive viewers are located in the multi-family development located on the north and west sides of the link, and travelers using Van Buren Boulevard and Arlington Avenue. These viewers would have immediate foreground views of the Project. Existing distribution lines are currently installed in the Arlington and Van Buren corridors. There are 16 residences within 300 feet of this link.

Link 11

Link 11 travels west on Arlington Avenue from approximately Harold Street to Rutland Avenue. This link is located in a mixed use commercial landscape of common, Class C visual integrity. The primary sensitive viewers along this route would be Arlington Avenue travelers and a few residential viewers on the west end of the link near Rutland Avenue, who would have the Project in immediate foreground view. Existing distribution poles are currently installed along this portion of Arlington Avenue. There are 53 residences within 300 feet of this link.

Link 12

Link 12 crosses Arlington Avenue and heads south on Rutland Avenue through a mixed commercial area. The link then turns west on Cypress Avenue along a primarily residential neighborhood. These areas are both rated as Class C landscape and are common for visual integrity. The residences along Cypress Avenue would have the Project in the immediate foreground. Existing overhead distribution is located along Rutland Avenue, but not Cypress Avenue. There are 71 residences within 300 feet of this link.



FIGURE 18. VIEW FROM RESIDENTIAL AREA AT JULIAN DRIVE AND CREST AVENUE

Link 13

Link 13 is located along Arlington Avenue between Rutland Avenue and Crest Avenue. Sensitive receptors would be travelers along Arlington Avenue and the multi-family residential development on the north side of Arlington Avenue, which would have the link in immediate foreground viewing. Existing distribution structures are located on the north side of Arlington Avenue in this section. There are 90 residences within 300 feet of this link.

Link 14

Link 14 is located along Crest Avenue between Arlington Avenue and Cypress Avenue. This area along Crest Avenue is a mix of mostly residential and commercial uses, and is an area of common, Class C visual integrity. Some existing distribution lines are currently located along the west side of Crest Avenue. Sensitive viewers would be the residential viewers in the area, who will have immediate foreground views of the Project. There are 52 residences within 300 feet of this link.

Link 15A

Link 15A travels south along Crest Avenue from Cypress to Wells Avenue. The link turns southwest at Wells Avenue until reaching Tomlinson Avenue as its southern terminus. The link is located through residential areas of common, Class C visual integrity. Existing overhead distribution occurs along most of the route. Residential viewers will have immediate foreground views of the Project along this approximately one-mile-long link. There are 187 residences within 300 feet of this link.

Link 15B

Link 15B travels southwest along Wells Avenue from Tomlinson Avenue to Tyler Street. The link is located through residential areas of common, Class C visual integrity. Residential viewers will have immediate foreground views of the Project along this short link. There are 187 residences within 22 feet of this link.

Link 16

Link 16, located along Cypress Avenue and Tyler Street, travels through residential and mixed land uses of common, Class C visual integrity. Existing distribution lines are located along much of the nearly 1.5 mile link. Residential viewers are the primary sensitive receptors along this link, and will have immediate foreground views on the most of the link. There are 155 residences within 300 feet of this link.

Link 17A

Link 17A is a short link located along Tyler Street between Wells Avenue and Mull Avenue within a residential area of common, Class C visual integrity. Existing distribution lines are currently installed along this link. Residential viewers would have immediate foreground views of the line, and existing distribution poles currently are located on the southwest side of the street. There are 23 residences within 300 feet of this link.

Link 17B

Link 17B is a short link located along Tyler Street between Mull Avenue and Cook Avenue within a residential area of common, Class C visual integrity. Existing distribution lines are currently installed along this link. Residential viewers would have immediate foreground views of the line, and existing distribution poles currently are located on the southwest side of the street. There are 35 residences within 300 feet of this link.

Link N-1

Link N-1 is a short link located along Tomlinson Avenue between Wells Avenue and Mull Avenue within a residential area of common, Class C visual integrity. Residential viewers would have immediate foreground views of the line. There are 29 residences within 300 feet of this link.

Link N-2

Link N-2 is a short link located along Mull Avenue between Tomlinson Avenue and Tyler Street within a residential area of common, Class C visual integrity. Residential viewers would have immediate foreground views of the line. There are 44 residences within 300 feet of this link.

Link N-3

Link N-3 is a link of about ½ mile that is located along Mull Avenue and Jones Avenue. The link runs southwest on Mull Avenue from Tyler Street to Jones Avenue. The route then turns south at Jones Avenue until reaching Cook Avenue. The link is within a residential area of common, Class C visual integrity. Sensitive receptors are residential viewers that would have immediate foreground views of the line. There are 101 residences within 300 feet of this link.

Link N-4

Link N-4 is located along Tomlinson Avenue between Mull Avenue and Cook Avenue. The link is within a residential area of common, Class C visual integrity. Sensitive receptors are the residential viewers that would have immediate foreground views of the line. There are 56 residences within 300 feet of this link.

Link N-5

Link N-5 is located along Tomlinson Avenue between Cook Avenue and Tyler Street. The link is within a residential area of common, Class C visual integrity. Sensitive receptors are the residential viewers that would have immediate foreground views of the line. There is an existing 69 kV subtransmission line along the entire length of the link. There are 40 residences within 300 feet of this link.

Link 18

Link 18 is located along Wells Avenue from Tyler Street to Doane Avenue in a primarily residential neighborhood of common, Class C visual integrity rating. Existing distribution occurs on the southeast side of the street along this link, and residential viewers would have immediate foreground views of the Project for most of the alignment. The line runs almost one mile where there are 129 residences within 300 feet of this link.

Link 19

Link 19 is located along Tyler Street between Cook Avenue and Hole Avenue. This link has a mix of residential and commercial uses on the north end, and primarily commercial uses on the south end. Residential viewers will have immediate foreground views of the Project along most of the alignment. This corridor has common, Class C visual integrity, and existing distribution lines are currently installed along the entire route. There are 111 residences within 300 feet of this link.

Link 20A

This link is located on Cook Avenue between Tyler Street and Jones Avenue. There is an existing 69 kV subtransmission line along the entire link. Nearby sensitive viewers include recreational users of Myra Linn Park and residences fronting Cook Avenue. The area is rated a Class C for visual integrity. There are 85 residences within 300 feet of this link.

Link 20B

This link is located on Jones Avenue between Cook Avenue and Hole Avenue. There is an existing 69 kV subtransmission line along the entire link. Nearby sensitive viewers are the residences fronting Jones Avenue. The area is rated a Class C for visual integrity. There are 41 residences within 300 feet of this link.

Link 21

This short link is located along Doane Avenue between Wells Avenue and Hole Avenue. This area is a mix of commercial and residential uses, and has common, Class C visual integrity. Existing distribution is currently installed on the southwest side of the street in this area. Residential viewers are the primary sensitive receptors along this alignment, and will have immediate foreground views of the Project along this route. There are 11 residences within 300 feet of this link.

Link 22

Link 22 is also a short segment located on Wells Avenue from Doane Avenue, extending approximately 250 feet southwest along Wells Avenue north of the intersection at Hole Avenue. Commercial uses dominate the landscape, and visual integrity is a common Class C. A few residences will have immediate foreground views of the Project in this area. There are nine residences within 300 feet of this link.

Link 23

Link 23 generally follows Hole Avenue between Wells Avenue and Minnier Avenue in a commercial

area of common visual integrity. There are a few residences that would view the Project in immediate foreground viewing condition. Existing distribution lines are currently installed on the south side of Hole Avenue. There are five residences within 300 feet of this link.

Link 24

Link 24 occurs in a commercially dominated landscape around the intersection of La Sierra Avenue and Hole Avenue. The landscape is of common, Class C visual integrity. The link runs for a short distance south on Wells Avenue to Hole Avenue and then travels west until turning south on La Sierra Avenue. La Sierra is a City of Riverside Parkway and Gateway where travelers would have immediate foreground viewing condition of the Project in this area. No existing overhead distribution or transmission lines currently exist except near the Harvey Lynn Substation at the intersection of Minnier Avenue and La Sierra. There are four residences within 300 feet of this link.

Link 25

Link 25 is located on Hole Avenue between Jones Avenue and Tyler Street through a predominately residential area of common, Class C visual integrity. Immediate foreground views of the line from the residences would occur over most of the link. Overhead distribution occurs on the south side of the street along this link. There are 146 residences within 300 feet of this link.

Link 26

Link 26 would occur in a mixed institutional, commercial and residential area of common visual integrity along Hole Avenue. There is an existing 69 kV subtransmission line along the entire length of this link. Residential receptors would have immediate foreground views of the Project. There are 28 residences within 300 feet of this link.

Link 27

Link 27 also occurs along Hole Avenue between Minnier Avenue and connects with the existing 69 kV subtransmission line approximately 500 feet east on Hole Avenue. Existing visual integrity is common, Class C in this predominately commercial area. Sensitive viewers are residential within immediate foreground. There are 11 residences within 300 feet of this link.

Link 28

Link 28 is located in a predominately high-density residential and commercial area along Minnier Avenue where no existing overhead transmission or distribution occur street adjacent. Visual integrity is common, and nearby sensitive viewers from the apartment complex and La Sierra Avenue travelers would have immediate foreground views of the Project. There are 33 residences within 300 feet of this link.

Link 29

Link 29 occurs for a very short distance of approximately 200 feet where an existing 69 kV single-circuit line would become a new double-circuit line in a densely commercial area of common visual quality. Nearby sensitive viewers would primarily be travelers along La Sierra Avenue, who would have immediate foreground views of the Project. There are 10 residences within 300 feet of this link.

Link 30

Link 30 also occurs for a very short distance where an existing 69 kV single-circuit line would be replaced by a new double-circuit line as the line enters the Harvey Lynn Substation. The link crosses La Sierra Avenue on Schuyler Avenue in a commercial area of Class C visual quality. Nearby sensitive viewers would also be travelers along La Sierra Avenue, and residents in the area who would have immediate foreground views of the Project. There are 21 residences within 300 feet of this

link.

Link 31

Link 31 is located between Tyler Street and State Highway 91 along Hole Avenue. The area is a mix of commercial and residential uses. Commercial landscapes dominate on the north side of the link around Magnolia Avenue, and residences front along Artesian Street on the south portion of the link. Existing distribution is currently in place along most of the link, and poles are currently installed in the back yards of residences along Hughes Alley (which are located on Artesian Street). Visual integrity is Class C along this link. Sensitive receptors would be the residential viewers and travelers using Magnolia Avenue (which is a City of Riverside designated Parkway) who would have immediate foreground views of this link. There are 59 residences within 300 feet of this link.

Link 32

Link 32 is located between Hole Avenue and Magnolia Avenue along Tyler Street in a commercial landscape with a Class C rating of visual integrity. Nearby sensitive viewers are limited to travelers using the Magnolia Avenue City, a Riverside Parkway, who would have immediate foreground views of the line. Existing overhead distribution is only at the north end of the alignment near Hole Avenue. There are no residences within 300 feet of this link.

Link 33

Link 33 is located along Tyler Street and Indiana Avenue. The link travels south on Tyler Street from Magnolia Avenue along an existing 69 kV alignment. The link continues to follow the existing line as it crosses State Highway 91 and turns east for approximately one-quarter mile on Indiana Avenue. The Class C visual integrity landscape is commercial on Tyler Street and commercial/light industrial on Indiana Avenue. Nearby sensitive viewers would be limited to travelers on Magnolia Avenue. There are no residences within 300 feet of this link.

Link 34

This short segment of approximately one-third mile generally parallels State Highway 91 on the north side along Diana Avenue in a residential landscape of Class C visual integrity and crosses State Highway 91 at Harrison Street. No existing electrical lines currently exist along this link except at the junction with Harrison Street as it crosses an existing 69 kV line. A short section of the route on the south side of the highway is in a commercial/light industrial landscape. Sensitive viewers include those located on the north side of the highway along Diana Avenue who would have immediate foreground views of the Project. There are 41 residences within 300 feet of this link.

Link 35

Link 35 is a short link of about 400 feet that crosses State Highway 91 from Diana Avenue & Hughes Alley on the north side of the highway to the existing 69 kV subtransmission line on Indiana Avenue. The landscape is commercial/light industrial in character and of common, Class C visual integrity. Nearby sensitive viewers include the residential viewers on the north end of the segment fronting Artesian Street. There are five residences within 300 feet of this link.

Link 36

Link 36 is located along Indiana Avenue upgrading the existing 69 kV that runs the entire length of this link. The link travels along Indiana Avenue from Hughes Alley to Harrison Street in a commercial/light industrial landscape of common, Class C visual integrity with few sensitive receptors. There are two residences within 300 feet of this link.

Link 37

Link 37 intersects an existing 69 kV line on Indiana Avenue, travels south through commercial/light industrial properties, and then turns east to follow the railroad adjacent to a residential and commercial/light industrial landscape of common visual integrity. The entire link would have immediate foreground viewing conditions by residences in proximity of Rhinelander Drive. There currently are no existing overhead electrical lines along this link. There are 38 residences within 300 feet of this link.

Link 38

Link 38 is located primarily along Indiana Avenue between Harrison Street and Gibson Street. The link continues a short distance south on Gibson Street from Indiana Avenue for about 150 feet. An existing 69 kV line extends the entire length of this link. This link is a mix of commercial, light industrial, and residential along Indiana Avenue of common, Class C visual integrity. There are 53 residences within 300 feet of this link.

Link 39

This is a short segment located along Harrison Avenue from Indiana Avenue to the railroad tracks on the south of State Highway 91. The primary sensitive viewers in this area are the residences on the southern end of the link in the vicinity of Rhinelander Drive. Existing overhead distribution is currently installed in this commercial/light industrial landscape of common visual integrity. There are seven residences within 300 feet of this link.

Link 40

Link 40 generally follows the railroad from Harrison Avenue northeast to an existing 69 kV subtransmission line located west of the Freeman Substation. The route is located in a predominantly commercial/industrial area, although some high-density residences are located along Rudicill Street and Indiana Avenue off of Van Buren Boulevard, which would have foreground and immediate foreground visibility of the line. Visual integrity in this landscape is Class C. Sensitive receptors would include Van Buren Boulevard travelers, as the link crosses the City-designated Parkway and Gateway. There are some single family residences near Harrison Street and the intersection of Indiana Avenue and Van Buren Boulevard that would also have immediate foreground views of the link. There are 30 residences within 300 feet of this link.

Link 41

Link 41 is a very short link of about 300 feet that has an existing 69 kV subtransmission line. The link is located on Gibson Street from just north of the railroad, running south and crossing the railroad into a commercial/light industrial landscape of common, Class C visual integrity. Sensitive viewers are primarily residences located at the Indiana Avenue-Gibson Street intersection. There are 10 residences within 300 feet of this link.

Link 42

Link 42 travels from Gibson Street, adjacent to the Freeman Substation, into the Substation approximately 400 feet to the east. Sensitive receptors are the residences south of the Substation. There are 26 residences within 300 feet of this link.

4.6 Wildlife and Wilderness Substations

The proposed substations are located in an area dominated by commercial and industrial uses. The site is owned by the City of Riverside and is currently used by the Toro Company as an equipment testing site. Visual integrity is Class C. Nearby sensitive viewers are limited to Santa Ana River Trail users to the north. Views from the Santa Ana River Trail are generally oriented towards the river. An existing 33 kV

transmission line is currently located adjacent to the river between the trail and the proposed substations.

4.7 69 kV Substation Upgrades

Upgrades would be required at four existing RPU 69 kV substations. The upgrades would take place within the existing boundaries of each substation: Freeman, Harvey Lynn, Mountain View, and RERC. The upgrades consist of the addition of new 69 kV power circuit breakers and associated disconnect switches and busing at RERC, Harvey Lynn and Riverside Substations, as well as protective relay, control modifications and electrical connections to all stations.

The substations are located in a variety of urban contexts. A summary of existing conditions is as follows:

Freeman Substation: Freeman Substation is located in a primarily commercial area of common visual integrity, with some residences with open views located to the southeast and northwest.

Harvey Lynn Substation: This substation is located at the interface of a commercial and residential area on La Sierra Avenue. Nearby sensitive viewers for the Harvey Lynn Substation include residences located to the south and southwest on Greenhurst Drive, Schuyler Ave, and Riverpoint Drive, which have the substation and proposed lines in their immediate foreground. Travelers using the La Sierra Avenue (City- designated Parkway and Gateway) will also have the substation expansion in the immediate foreground, but the substation is well-screened by block walls and mature landscaping. Visual integrity for the area is common, Class C rated landscape.

Mountain View Substation: Mountain View Substation is located in a primarily residential neighborhood. These residences have views of the substation in the immediate foreground, and visual integrity is common.

RERC Switchyard: This switchyard is located in a commercial and industrial area of common visual integrity. The SART is located about 1,100 feet to the north, but there are no nearby sensitive receptors who can view the switchyard.

5.0 IMPACT METHODS

5.1 Viewshed Analysis

Sensitive viewpoints were modeled in GIS to help determine visibility of the transmission lines. Analysis points included all of those previously described in the sensitivity analysis (inventory) section. Points were centered on travel corridors every 500 feet for trails, moderate- and high-sensitivity roads, gateways, parkways, and scenic boulevards. Analysis points were placed at the parcel perimeter for developed, landscaped parks. Other partially developed parks, such as the Hidden Valley Wildlife Area, were factored into the analysis by placing points along trails, overlooks, picnic shelters, and other developed areas within their boundaries.

For occupied residences, a 300-foot (69 kV) or 500-foot (230 kV) buffer was placed around each alternative link, and all houses within those buffers were digitized into the GIS developed for this project. Multi-family residences were estimated using average expected density for the buildings, and digitizing one point which would account for one dwelling unit. Outside the 300-foot or 500-foot buffers, residential points were placed as necessary to adequately account for all worst-case views of the line. Multi-family structures accounted for the greatest potential error margin for occupied residential counts, but would not substantially affect the visibility model (See Appendix A).

The 300-foot or 500-foot buffers were used to model visibility of the transmission line without accounting for terrain. The other distance zones (foreground, middleground, and background) were modeled based on a Digital Elevation Model, or DEM. Viewer height for each point (residential, recreation, travel corridor, etc.) was set at 5 feet to 9 feet, and structure heights were modeled based on the Project Description (using 75-foot structures for 69 kV lines and 125-foot structures for 230 kV lines). Slightly different approaches were taken to assess visual impacts of the 230 kV and 69 kV Project components. Each methodology is described below.

5.2 230 kV Transmission Corridors

Visual impacts were evaluated in 1/10-mile increments along each alternative link. Three visual contrast models were used and combined to determine an overall contrast level. The overall contrast level was then weighed with other factors to determine initial impact levels. For example, impacts on residential, recreation, and road viewers were dependent on sensitivity level (moderate or high), viewing condition (immediate foreground, foreground, middleground, or background), and overall contrast level. Scenic quality impacts were based on scenic quality/visual integrity class rating and overall contrast level.

After an initial impact was determined, mitigation measures and impact modifiers (viewer orientation, use level, development level, etc.) were evaluated for potential effectiveness, and final residual impact and significance levels were assigned. Residual impact levels were tabulated for each link, and the total cumulative mileage for each impact level could be calculated.

Ground disturbance levels address construction factors such as the extent of new road construction, associated spur road mileage, and land slope. A number of assumptions are used for the assessment of visual impacts associated with the construction of the transmission line portion of RTRP. These ground disturbance assumptions reflect the expected scope of new roadway construction, pulling and tensioning sites, and guard structures. Given the predominant urban setting and flat terrain of the study area, visual impacts due to ground disturbance were expected to be minimal.

Visual contrast is a measure of the degree of physical change in the landscape. Contrast, the measure of actual visual change, is evaluated regardless of how the change is seen by viewers, sensitivity of

viewpoints, or viewing conditions. Contrast is determined by the difference in form, line, color, texture, scale, and the landscape juxtaposition between the proposed Project and its setting. How the visual change is experienced or seen from sensitive viewpoints, or viewer impacts, is addressed in a different part of the analysis. Visual contrast is made up of three separate contrast models: Landform contrast, Vegetation contrast and Structure contrast.

Landform contrast is the change in landform patterns, soil exposure, erosion scars, slumping, and other disturbances that would result in a noticeable and uncharacteristic change in the existing natural or cultural landscape. Overall landform contrast was determined as a function of access level, which affects the potential for ground disturbing activities (see Table 12a).

Vegetation contrast is evaluated by comparing the nature and level of ground disturbance with the type of vegetation encountered in the impact areas. Vegetation contrast is determined by the diversity, scarcity, and complexity of vegetation types and patterns. Three vegetation classes, based on vegetation cover (see Biological Resources technical report), were examined for potential contrasts: Woodlands (e.g., mixed open woodland), Scrub (e.g., Arundo) and Grassland/Agricultural. For transmission lines, a single level of contrast was assigned in riparian forest areas regardless of the ground disturbance level. Grassland and agricultural vegetation contrast will have a broader range of contrast levels due to potential vegetation recoverability and compatibility with the transmission line (see Table 12b).

Structure contrast examines the compatibility of the proposed facilities with the existing landscape. Structure contrast would be greatest where there are no other structures (e.g., buildings, existing overhead utilities) in the landscape. High structure contrast is the result of the introduction of any transmission line structure where there is none currently present and no buildings. Lower levels of structure contrast would be assigned where there are existing 69 kV, 131 kV, 230 kV or 500 kV transmission lines and/or larger massing of buildings (see Table 12c).

An overall level of visual contrast is determined by combining the three levels of contrast to assign a final high, moderate, or low level of contrast (see Table 13). The following describes some of the conditions associated with each visual contrast level, with one or more the following conditions occurring:

Strong Visual Contrast

- Contrast caused by construction of new access roads in steep terrain
- Removal of dense riparian vegetation for right-of-way clearing, tower sites, or access roads
- A landscape with no existing transmission lines or other overhead utilities

Moderate Visual Contrast

- Contrasts caused by blading of existing access roads or construction of new access roads in rolling terrain with occasional short, steep slopes
- Removal of grassland or agricultural vegetation for right-of-way, site, or access road clearing
- A landscape where the proposed Project is smaller in scale to existing nearby or paralleled utility facilities

Weak Visual Contrast

- The use of existing access roads and where there is limited new spur or construction roads
- Minimal removal of vegetation
- A landscape where existing similar transmission line facilities of similar scale would be nearby or paralleled

TABLE 12A. LANDFORM CONTRAST CRITERIA (230 kV)

Contrast Level	Ground Disturbance Level
Strong	Category 5
Moderate	Category 4
Weak	Category 1 through Category 3

TABLE 12B. VEGETATION CONTRAST CRITERIA (230 kV)

Contrast Level	Vegetation Cover
Strong	Southern Cottonwood/Willow, Mixed Open Woodland/Disturbed
Moderate	Riversidian Sage Scrub, Riparian Scrub, Disturbed/Eucalyptus, Arundo, Alluvial Scrub
Weak	Non-Native Grassland, Landscaping, Horse Ranch, Field, Cropland, Disturbed Alluvial, Disturbed/Bare Ground, Developed, Agricultural-Dairy

TABLE 12C. STRUCTURE* CONTRAST CRITERIA (230 kV)

Contrast Level	Structure Similarity
Strong	No existing structures
Moderate	Paralleling different structures or replacing existing different structures
Weak	Paralleling similar structures or replacing existing similar structures, or multiple structure types

*See Figure 19 for existing transmission line structure types in the study area

TABLE 13. OVERALL CONTRAST MATRIX (230 kV)

		Vegetation Contrast								
		S			M			W		
<i>Landform Contrast</i>	S	S	S	S	S	S	M	S	M	M
	M	S	M	M	M	M	M	M	M	W
	W	S	M	M	M	M	W	M	M	W
		S	M	W	S	M	W	S	M	W
		Structure Contrast								

Legend

S = Strong Contrast
M = Moderate Contrast
L = Low Contrast

To determine visual impacts, the overall contrast levels are combined with the visibility and distance zones of sensitive viewpoints (residences, recreation areas, and travel routes) and scenic values (scenic quality and visual integrity) of the landscape. Thus, visual impacts are the result of impacts to sensitive viewers as well as impacts to the inherent visual quality/integrity of the landscape independent of viewers. In both evaluations, visual impacts are based on the result of changes in the landscape in terms of dominance, form, line, color, and texture that occur during construction, operations, and maintenance of the proposed Project.

High and moderate levels of sensitivity, determined from viewer attitude, use volume, and duration of view for specific viewpoints, were evaluated (see Tables 8 and 9). Visual changes associated with transmission lines in the landscape are also evaluated in terms of distance zones. The mapping of distance to the Project from viewpoints helps define the level of visual perception of change that can be expected (see Table 2). To determine sensitive viewer impact levels, the overall contrast levels were overlaid with the visibility and distance zones. Thus, an impact level of high, moderate, or low is derived for moderate and high sensitivity viewpoints using Tables 14 and 15.

Scenic quality and visual integrity impacts are based on the change in quality and quantity of the visual resources inherent in the landscape without regard to how they are seen from viewpoints. Impacts on scenic quality or visual integrity were determined based on overall contrast level compared to the scenic quality/visual integrity class as shown in Table 16.

Potential impacts (low, moderate, or high) were recorded into a data table in 1/10-mile increments along the length of each link. The assigned impact levels were determined by evaluation of the results for scenic values, residential, and sensitive viewpoints. Other variables or impact modifiers, such as viewer orientation, Project location in relation to the viewer, and nature of development context, were also evaluated to obtain the overall impact levels. Where appropriate, impact modifiers were recognized and also incorporated to reflect final impact levels. Impact modifiers would be relevant and applied where specific site conditions were obvious. Modifiers that were considered to reduce impact levels were conditions where: views are fully or partially obscured by buildings and/or structures; views are oriented away from the Project; use levels or view expectations are consistently very low; the development context (commercial, industrial, infrastructure, etc) is compatible with the Project and not degrading. Impacts are defined as follows:

- **Low Impact**– Viewers and/or scenic quality are barely affected by the construction and operation of the Project due to low levels of change, blending with existing features, and weak contrast levels.
- **Moderate Impact**– Viewers and/or scenic quality may be adversely affected by the contrasts created by the Project. Viewers may be close enough to the Project to notice changes in the landscape, though they do not dominate the viewshed.
- **High Impact** – Viewers and/or scenic quality may be significantly affected as a result of Project construction and operation. The Project may dominate views, and is located where no existing infrastructure is currently in place.

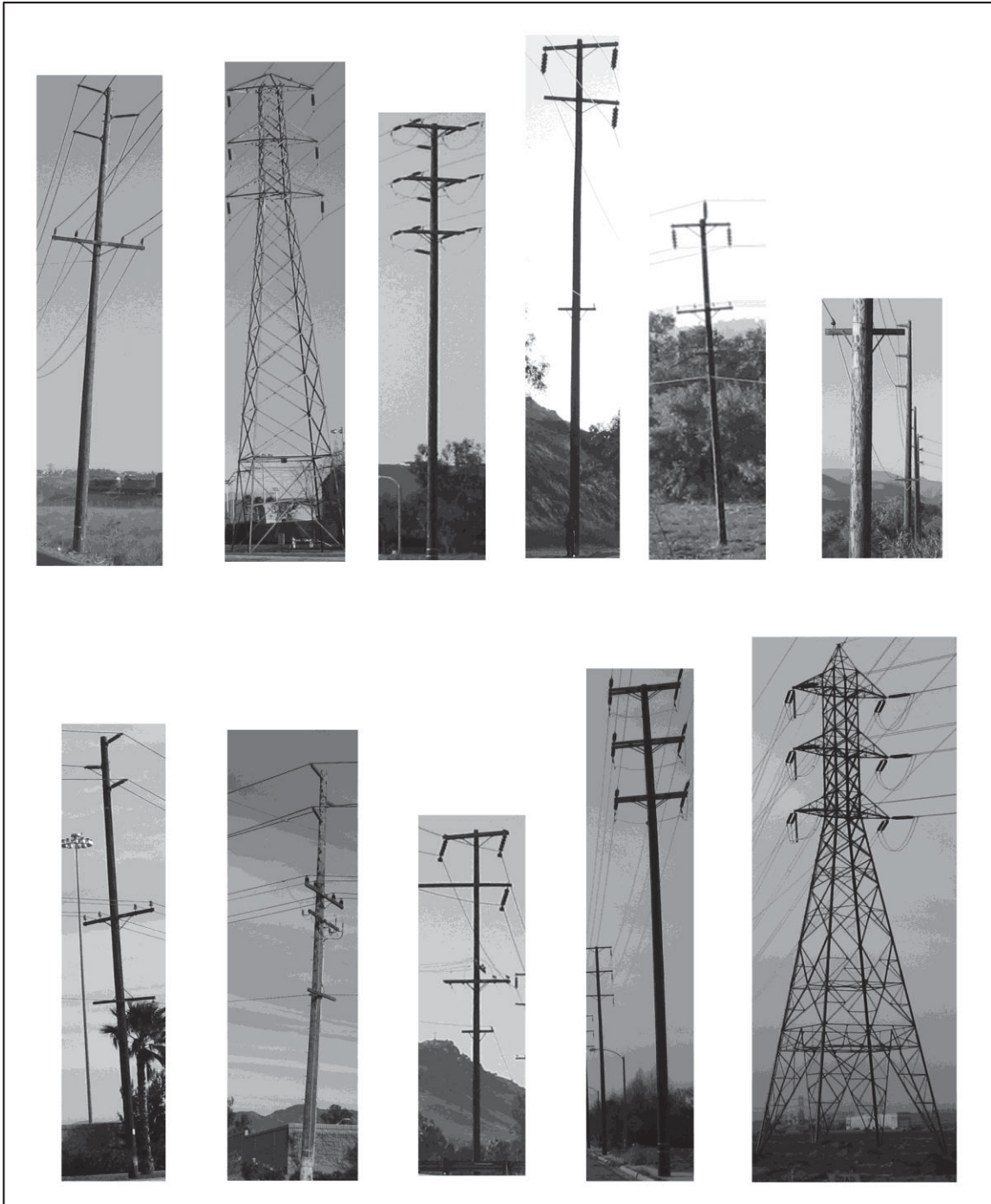


FIGURE 19. EXAMPLES OF EXISTING TRANSMISSION LINE STRUCTURES IN THE STUDY AREA

TABLE 14. HIGH SENSITIVITY VIEWER IMPACT MATRIX

		Overall Visual Contrast		
		Strong	Moderate	Weak
Distance/Visibility Threshold	<i>Immediate Foreground (IFG)</i> 0-300' (69kV) 0-500' (230 kV)	H	H	M
	<i>Foreground (FG)</i> 300' to 1500' (69kV) 500' to ½ mile (230 kV)	H	M	M
	<i>Middleground (MG)</i> 1500' to ½ mile (69 kV) ½ to 1 ½ mile (230 kV)	M	M	L
	<i>Background (BG)</i> Beyond ½ mile (69 kV) Beyond 1½ mile (230 kV)	L	L	L

Legend

H = High
M = Moderate
L = Low

TABLE 15. MODERATE SENSITIVITY VIEWER IMPACT MATRIX

		Overall Visual Contrast		
		Strong	Moderate	Weak
Distance/Visibility Threshold	<i>Immediate Foreground (IFG)</i> 0-300' (69kV) 0-500' (230 kV)	H	M	M
	<i>Foreground (FG)</i> 300' to 1500' (69kV) 500' to ½ mile (230 kV)	M	M	M
	<i>Middleground (MG)</i> 1500' to ½ mile (69 kV) ½ to 1 ½ mile (230 kV)	M	L	L
	<i>Background (BG)</i> Beyond ½ mile (69 kV) Beyond 1½ mile (230 kV)	L	L	L

Legend

H = High
M = Moderate
L = Low

TABLE 16. SCENIC QUALITY/VISUAL INTEGRITY IMPACT MATRIX

		Visual Contrast		
		Strong	Moderate	Weak
Scenic Quality/Visual Integrity Class	Class A	H	M	M
	Class B	M	M	L
	Class C	M	L	L

Legend

H = High
M = Moderate
L = Low

5.3 69 kV Subtransmission Corridors

Impacts created as a result of the 69 kV subtransmission component of the Project were determined in a similar manner as the 230 kV transmission line. Visual contrasts were compared to visibility and scenic quality/visual integrity to determine impact levels.

Visual contrast levels were determined by the presence of existing distribution poles and the potential necessity for street tree removal in the road right-of-way. Under all alternatives for the 69 kV subtransmission component of the Project, existing road rights-of-way would be utilized. Thus landform contrast was not considered given the relatively flat terrain and the urban context of the 69 kV component. For each alternative, tree removal was overlaid with the presence of existing overhead electrical structures that resulted in overall contrast levels (see Tables 17a, 17b and 18).

TABLE 17A. VEGETATION CONTRAST CRITERIA (69 kV)

Contrast Level	Vegetation Cover
Strong	Palm or Deciduous Tree Removal
Weak	No Tree Removal

TABLE 17B. STRUCTURE CONTRAST CRITERIA (69 kV)

Contrast Level	Existing Distribution
Strong	No Overhead Distribution Lines Installed in ROW
Weak	Existing Overhead Distribution, 69 kV, or 33 kV Lines Replaced or Paralleled

TABLE 18. OVERALL CONTRAST MATRIX (69 kV)

		Vegetation Contrast	
		Strong	Weak
Structure Contrast	Strong	S	M
	Weak	M	W

Legend
S = Strong
M = Moderate
W = Weak

5.4 Significance Criteria

The assessment of significant visual impacts is weighed in consideration of CEQA requirements. Visual impact significance on aesthetics was determined by impact levels and observed conditions occurring in the study area. Appendix G of the CEQA guidelines defines the criteria and areas of concern regarding a project's potential impact on visual resources by considering if a project 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; and Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The matrix presented in Table 19 provided general guidance for determining the significance of visual impacts created by the Project. The significance of impacts, as described by CEQA, was determined by comparing initial impact levels (high, moderate, low) through visibility analysis and field investigation, and correlating these impact levels with CEQA guidelines.

For example, under CEQA guidelines, the effects of the Project on scenic vistas must be taken into account. In order for significant, adverse effects on a scenic vista to take place, the affected viewshed must be of above average or better Scenic Quality/Visual Integrity, and/or have notable, open, unobstructed views to rare or unique scenery such as a mountains, river valleys, scenic water features, or other valued landscapes, and the visual impact of the Project would be moderate or high and dominate the viewshed of sensitive viewers. Areas determined to have high impacts were studied in more detail to confirm if there were conditions where significant CEQA defined impacts occur (e.g., scenic vistas, high scenic quality).

TABLE 19. CEQA SIGNIFICANCE THRESHOLDS

		Impact Level		
		Low	Moderate	High
CEQA Criteria Present?	Yes	Adverse but Less Than Significant	Adverse but Less Than Significant	Significant
	No	Not Significant	Adverse but Less Than Significant	Adverse but Less Than Significant

Significant: Will likely cause a substantial long-term and adverse effect on landscape character, scenic quality, or visual integrity of an existing viewshed due to the contrast between the Project and the level of existing scenic conditions.

Adverse but Less Than Significant: Will create a noticeable but not substantial change in landscape character, scenic quality, or visual integrity of existing scenic conditions.

Not Significant: May or may not be perceptible, and is considered a minor alteration in the context of existing landscape characteristics and view opportunity.

5.5 Environmental Protection Elements

Following best management and design practices throughout conception, construction, and implementation of the Project ensures that public safety is paramount and potential environmental impacts are reduced. Table 20 lists the proposed measures to be implemented to enhance environmental protections related to the visual impacts from the Project.

TABLE 20. AESTHETICS AND VISUAL RESOURCES ENVIRONMENTAL PROTECTION ELEMENTS

AES-1	230 kV Transmission Line: Nonreflective/Nonrefractive Transmission Structures Lattice Steel Towers (LSTs) and Tubular Steel Poles (TSPs) with a dulled galvanized grey finish to minimize reflected light would be used.
AES-2	230 kV Transmission Line: Use Nonreflective/Nonrefractive Insulators Insulators that do not reflect or refract light would be used.
AES-3	230 kV Transmission Line: Use Nonreflective/Nonrefractive Conductors Conductors that do not reflect or refract light would be used.

AES-4	Wildlife/Wilderness Substations: Use Low-Reflectivity Finishes on Structures & Equipment Substation equipment and structures would have materials that minimize reflective light.
AES-5	Wildlife/Wilderness Substations: Use Hooded, Nonreflective Exterior Light Fixtures/Standards Exterior light fixtures/standards would be manufactured with hoods and made with nonreflective materials to direct light from spilling off-site as well as skywards while reducing potential effects of glare to the extent feasible.
AES-6	Wildlife/Wilderness Substations: Use Nonreflective Chain link Fencing If chain link fencing is used to surround the outer perimeter of the facility, it would be nonreflective chain link fencing.
AES-7	Wildlife/Wilderness Substations: Low-Profile Substation Equipment Low-profile substation equipment would be used as feasible.
AES-8	230 kV Transmission Lines and 69 kV Subtransmission Lines: Structure Location To the extent feasible, LSTs and TSPs would not be placed in proximity to highly sensitive scenic/visual resources.
AES-9	230 kV Transmission Lines and 69 kV Subtransmission Lines: Placement of Transmission Structures Adjacent to Existing Structures To the extent feasible, transmission structures would be located adjacent to or in proximity of existing structures.
AES-10	Rehabilitation of Storage Areas Rehabilitate pulling, tensioning, and construction storage areas.
AES-11	230 kV Transmission Lines: Nighttime Construction Lighting A Construction Safety Lighting Plan would be submitted to the appropriate local jurisdiction for approval.
AES-12	Staging Areas Staging areas would be kept organized, and litter and debris would be regularly removed within the fenced yard area.

5.6 Photo-Simulations

In 2010, thirteen viewpoints or key observation points (KOPs) for photo-simulation study were selected from throughout the visual study area (Appendix C). In 2015, three additional viewpoints and one conceptual rendering were also developed (Appendix D). The simulations are used to evaluate the accuracy and verify the impacts associated with representative viewer locations. Digital imaging, geographic information systems (GIS), computer-aided design (CAD), and global positioning system (GPS) software assisted in the development of the photo-simulations. The software used in the 2010 photo-simulations includes:

- Autocad 2009 – Used for modeling site and facilities.
- 3D Studio 2009 – Used for lighting, materials and rendering.
- Adobe Photoshop CS3 – Used for photo manipulation and merging.
- Bentley Microstation v8.5 – Used for modeling of site, facilities, transmission structures, photo- matching, material patterning, and rendering.
- Bentley Inroads v8.5 – Used for digital terrain mapping (DTM) and modeling.
- ArcView – Used for geographic information Project data mapping.

The process of photo-simulation began with field photography, documenting viewpoint locations (coordinates) and weather conditions. The photographs are then “matched” with Project terrain models developed using Microstation. Computer models of proposed facilities and existing transmission lines were introduced into the terrain model based on preliminary facility layouts developed in CAD and ArcView. The final image is a composite of the 3-dimensional structure modeling and the original photograph. The process ensures that spatial relationships, perspective, proportions, and similar attributes are accurate and match existing landscape conditions. See Appendix D for an explanation of the 2015 simulation process.

The photographs were taken with a Canon DSLR Rebel XSI 12 megapixel digital camera with an 18mm-

55mm zoom lens. The camera was held by tri-pod at eye-level (approximately five feet, nine inches). The date, time of day, GPS coordinate (latitude/longitude), and weather conditions were documented for each photo location.

The proposed pole types were modeled based on engineering input from POWER, RPU, and SCE engineering staff to represent the best configurations of distribution underbuild, street light affixation, and other visually important features as currently best known. Final engineering on the transmission line has not been completed during the environmental analysis phase of the Project, and actual pole locations and underbuild configurations may deviate from the simulation when constructed.

The seventeen viewpoints selected for visual simulations of the 230 kV transmission and 69 kV subtransmission lines were chosen as representative of the Project's alternative links, design, and environmental context. The simulations were prepared to depict, in a photo-realistic manner, the difference between the existing visual conditions and the proposed simulated visual conditions of RTRP.

The 2010 photo-simulations were done in the following locations (see Appendix C):

- Viewpoint 1: Wildlife/Wilderness Substations and 230/69 kV transmission lines at Wilderness Avenue & Ed Perkie Street looking north
- Viewpoint 2: 230 kV transmission line at Santa Ana River Trail & Rossini Court looking north
- Viewpoint 3: 230 kV transmission line at Santa Ana River Trail & County Parks HQ looking southwest
- Viewpoint 4: 230 kV transmission line at Santa Ana River Trail & Pedley Substation trailhead looking west
- Viewpoint 5: 230 kV transmission line at I-15 Freeway & 68th Street looking northeast
- Viewpoint 6: 230 kV transmission line at Van Buren Boulevard & Clay Street looking south
- Viewpoint 7: 230 kV transmission line at County Regional Trail & Kennedy and 65th Streets looking southeast
- Viewpoint 8: 230 kV transmission line at Paradise Knolls Golf Course adjacent to river looking west
- Viewpoint 9: 230 kV transmission line at Bain Street & 60th Street looking south
- Viewpoint 10: 230 kV transmission line at Bain Street & Jurupa Road looking north
- Viewpoint 11: 230 kV transmission line at Limonite Avenue & Baldwin Avenue looking west
- Viewpoint 12: 230 kV transmission line at Van Buren Boulevard (Felspar Street) & 52nd Street looking east
- Viewpoint 13: 230 kV transmission line at Van Buren Boulevard & 51st Street looking north
- Viewpoint 14: Two 69 kV subtransmission lines at Jurupa Avenue & Wilderness Avenue looking east
- Viewpoint 15: 69 kV subtransmission line at Tyler Street & north of Sinclair Avenue looking south
- Viewpoint 16: 69 kV subtransmission line at Mull Avenue & north of Tyler Street looking southwest
- Viewpoint 17: 69 kV subtransmission line at La Sierra Avenue & Whitford Avenue looking southeast
- Viewpoint 18: 69 kV subtransmission line at Tyler Street & Magnolia Avenue looking southeast

The 2015 photo-simulations were done in the following locations (see Appendix D):

- Viewpoint 1: 230 kV transmission line at Vernola Marketplace Apartments from I-15 and 68th St Bridge looking northwest

- Viewpoint 2: 230 kV transmission line at Riverbend Community from 68th St and Pat's Ranch Rd looking southeast
- Viewpoint 3: 230 kV transmission line at Riverbend Community from 68th St between Wineville Ave and Carnelian St looking southwest
- Conceptual Rendering 1: 230 kV transmission line at Riverbend Communities from proposed interior street looking northwest

6.0 **IMPACT RESULTS**

This section summarizes the Project links' impacts on aesthetics and visual resources based on the methodology as previously described. The descriptions are given for each Low, Moderate or High impact area within each alternative link. Environmental protection elements were applied to reduce Project impacts where appropriate. See Appendix A for the sensitivity viewshed map of the 230 kV transmission Project component. See Appendix B for the detailed tabulation of impact results. Impacts for the Proposed 230 kV subtransmission line links are described and summarized by link in Table 21 and Table 22. See Appendix E for a detailed map set showing aesthetic impact ratings by segment.

6.1 **230 kV Transmission Impacts**

TABLE 21. 230 kV TRANSMISSION IMPACTS SUMMARY, PROPOSED PROJECT

Link / Milepost	Impact	Description
AX East /0.0-0.4	Moderate	From the substation to the Water Quality Control Plant the transmission line would be located in the industrial area adjacent to the Santa Ana River. High sensitivity viewers of the Santa Ana River corridor would be affected by the presence of the transmission line. Because recreation views are directed toward and unimpeded from the SART to the scenic vistas of the Santa Ana River corridor, and away from the Water Quality Control Plant and substation, impacts in this area are reduced to moderate.
NO/0.0-0.9	Moderate	This portion of the link is located on top of the bluff in an industrial area within the immediate foreground of the Santa Ana River Trail. The introduction of new structures into the landscape would degrade visual quality of the river and impact trail users. However, impacts are moderated by the setting of industrial uses and the fact that there is a strong orientation of the trail users to focus to the north and the river scenery. Given the sensitivity of the trail and the proximity of the alignment to the trail, the level of impact is moderate similar to AX East except where it crosses Van Buren Boulevard.
AX West/0.0-0.7	High	This link will have high visual impacts. It will degrade scenic vistas of the Santa Ana River corridor and impact sensitive viewers traveling Van Buren Boulevard (a City-designated Parkway and Gateway), trail users, and residences in the Bradford Street/Julian Drive neighborhoods. This impact rating is consistent with the FEIR.
D	High	The Project would degrade scenic vistas of the Santa Ana River corridor from the Santa Ana River Trail and Hidden Valley Wildlife Area. On the east end of the link, residences in the Idyllwild Lane/Dunn Court neighborhood would have immediate foreground views of the Project. This impact rating is consistent with the FEIR.
I	High	The Project would degrade scenic vistas of the Santa Ana River corridor from the Santa Ana River Trail and Hidden Valley Wildlife Area. On the east end of the link, residences in the Idyllwild Lane/Dunn Court neighborhood would have immediate foreground views of the Project. This impact rating is consistent with the FEIR.
JA	High	The Project would degrade scenic vistas of the Santa Ana River corridor from the Santa Ana River Trail, Hidden Valley Wildlife Area, and Goose Creek Golf Club on the north side of the river. On the south side of the river, there are residences impacted by immediate foreground views in the Grulla Court/Viceroy Avenue neighborhood. This
JB / 0.0-0.1.1	High	The eastern portion of this link crosses the Goose Creek Golf Club and would impact the recreational receptors, VanderMolen Elementary School, and degrade the visual character of the golf course. Upon leaving the golf course, the alignment enters a residential subdivision currently under construction. Upon build-out, more than 200 residences in this development would be located within 500 feet of the alignment. An additional 26 existing homes are located within 500 feet of the alignment along the north side of 68 th Street. Impacts in this area would be high as they would degrade the visual character of the interface of residential and recreational uses. This impact rating is consistent with the FEIR.

Link / Milepost	Impact	Description
JD / 0.0-2.7	Moderate	<p>Link JD is a long link, approximately 3.4 miles, that traverses a variety of landscapes and land uses in the context of a highly urbanized corridor. Moderate impacts from this link are anticipated at some locations because the route is located in undeveloped and developing areas adjacent to the I-15 freeway. Impacts within the immediate foreground of residences would be moderate because the route is primarily associated with the adjacent I-15 freeway to the east. The freeway is not considered a highly sensitive road for travelers as viewing duration would be very brief, viewers' concern for change would be moderate to low, and use volumes would be high.</p> <p>The link passes behind the Vernola Marketplace commercial center south of Limonite Avenue and the industrial developments on the north end of the link. The re-route of the 230 kV portion of the proposed project behind the Vernola Marketplace would shift some of the visual impacts from the commercial development to the area behind the shopping center, adjacent to the I-15 corridor. The re-route would have the effect of reducing visual impacts at the front side of the commercial development. The link spans Limonite Avenue, which would present structural contrast and impact to the travelers on Limonite Avenue. Residential receptors typically reflect a high sensitivity rating, but the residences on the west side of the freeway would be buffered by the freeway corridor and also naturally orientate their viewing behaviors away from the freeway and the proposed link to the east. New residential subdivisions to the east similarly orientate their viewing behaviors away from the freeway.</p>
JD / 2.8-3.4	High	<p>The north end of the link is low to high impact, as the link is located adjacent to a developed industrial complex. Residential development is underway at several sites located east of the industrial uses. Due to the proximity of the alignment to these emerging residential areas, residential sensitivity is high. However, due to the existing, adjacent industrial backdrop, these impacts do not reach the level of significance. Therefore, the impact rating remains consistent with the FEIR.</p>

TABLE 22. 230 kV TRANSMISSION IMPACTS SUMMARY, ALTERNATIVES PREVIOUSLY CONSIDERED

Link / Milepost	Impact	Description
AX / 0.0-0.3	Low	This portion of the link has a low impact, as it heads south from the substation in a highly developed industrial area with no sensitive receptors.
AX / 0.4-0.7	Moderate	This portion of the link is located on top of the bluff within the immediate foreground of the Santa Ana River Trail. The introduction of new structures into the landscape would degrade visual quality of the river and impact trail users. However, impacts are reduced due to the context of the adjacent industrial uses and that there is a strong orientation of the trail users to focus to the north and the river scenery.
AX / 0.8-1.3	Low	This central portion of this link would have low impacts, as the line is within the City water reclamation plant and industrial uses. The link would not degrade the immediate surroundings and has minimal sensitive receptors.
AX / 1.4-2.1	High	The western portion of this link will have high visual impacts. It will degrade scenic vistas of the Santa Ana River corridor and impact sensitive viewers traveling Van Buren Boulevard (a City-designated Parkway and Gateway), trail users, and residences in the Bradford Street/Julian Drive neighborhoods.
H	High	The Project would degrade scenic vistas of the Santa Ana River corridor and for the Hidden Valley Wildlife Area, Savi Park, and Santa Ana River Trail users. Recreation users entering the Hidden Valley Wildlife Area from Arlington Avenue (a City- designated Parkway and Gateway) will cross under the lines and have immediate foreground views of the Project. The link is adjacent to Arlington Avenue at a distance of approximately 0.4 mile.
JC / 0.0-0.4	High	The eastern portion of this link crosses the Goose Creek Golf Club and would impact the recreational receptors and degrade the visual character of the golf course.
JC / 0.5-1.1	High	Though it is located in a landscape of common scenic quality with no recreation, or highway highly sensitive receptors, the majority of this link would have high impacts as a residential subdivision is under construction within the immediate foreground.
BX	High-Moderate Mix	The Project would degrade scenic vistas of the Santa Ana River corridor from the Santa Ana River Trail, a regional trail on the north side of the river, from Van Buren Boulevard (a City-designated Parkway and Gateway). While the link crosses the river, is located within the river corridor, and crosses Van Buren Boulevard (City-designated Parkway and Gateway), the link clearly diminishes the character and results in high impacts to these areas. However, the central portion of the link is considered a mixture of high and moderate impacts as the trail users on the south side of the river are greater than 500 feet from the line (not immediate foreground viewing) and the industrial uses to the north are not considered sensitive receptors.
L	High	This short link would impact the sensitive receptors visiting the Northwest Riverside County/City Animal Shelter south of Van Buren Boulevard. The link also crosses Van Buren Boulevard, which would degrade the highly traveled Van Buren Boulevard.
M	High	The Project would bisect and degrade the residential character of the Pedley Road/63rd Street neighborhood. Generally, no existing transmission lines are installed in this area, and the presence of the new line would incrementally increase the industrial nature of the area.
N	High	The Project would degrade the view opportunities and character of the residences in the area of the Pedley Road/Limonite Avenue/Baldwin Avenue neighborhoods. Although set in undeveloped open space and existing commercial uses, this link will primarily impact the landscape character of the area and the scenic vistas to the south of the residences north of Limonite Avenue. Generally, no existing transmission lines are installed in this area, and the presence of the new line would incrementally increase the industrial nature of the area.
Q	High	Although the link is located in undeveloped open space, it is in the immediate foreground of the residences north of Limonite Avenue and east of Van Buren Boulevard. The Project would degrade views of residences through the length of this link. Generally, no existing transmission lines are installed in this area, and the presence of the new line would incrementally increase the industrial nature of the area.
P	High	Although the link is located in undeveloped open space, it is in the immediate foreground of the residences north of Limonite Avenue and east of Van Buren Boulevard. The Project would degrade views of residences through the length of this link. Generally, no existing transmission lines are installed in this area, and the presence of the new line would

Link / Milepost	Impact	Description
		incrementally increase the industrial nature of the area.
R / 0.0-1.7	High	The southern portion of this link would disturb the viewshed of the residences. Immediate foreground views would be diminished throughout the area, as the character of the residential/open space mix would be altered with the introduction of the Project structures.
R / 1.8-3.2	Low	The northern portion of this link is primarily industrial. There are few residences or other sensitive receptors in this area along the northern portion of this link.
S	Low	This link would have low impacts, as the line is within highly developed industrial areas. The link would not degrade the immediate surroundings and has minimal sensitive receptors.
T	High	This link will have high visual impacts in crossing the Santa Ana River. It will degrade scenic vistas of the Santa Ana River corridor and impact sensitive residential viewers in the Bradford Street/Julian Drive neighborhoods south of the river and the Kennedy Street/Riverdale Place neighborhoods to the north. Recreational receptors impacted would be the users of the Santa Ana River Trail on the south side of the river and the county regional trail on the north.
U	High	This link will have high visual impacts and degrade scenic vistas to recreational users and residences. It will degrade scenic vistas within the Santa Ana River corridor and impact sensitive residential viewers in the Kennedy Street/Riverdale Place/Lakeview Avenue neighborhood. Recreational receptors impacted would be the users of the county regional trail in the immediate foreground.
K	High	Link K is a long link of 4.3 miles that impacts various conditions along its route. On the southern end, the link degrades character and vistas of the Santa Ana River corridor. It impacts the residents along Kennedy Street and the users of the county regional trail. The link will also have a distinct impact on the Paradise Knolls Golf Course and its users. North of Limonite Avenue, the link will be an immediate foreground impact to residences along the length of Bain Street from Limonite Avenue to Bellegrave Avenue. Along Bain Street, the link is located in an existing pedestrian and recreational corridor that will be visually degraded by the Project.

6.2 69 kV Subtransmission Impacts

Impacts for the 69 kV subtransmission line component are summarized and described below by link in Tables 23, 24 and 25. The 69 kV subtransmission component is described in three categories:

- Wilderness Substation to Mountain View Substation
- Wilderness Substation to Jurupa Avenue
- RERC to Harvey Lynn Substation and Freeman Substation

See Appendix A for the sensitivity viewshed map of the 69 kV subtransmission portion of the Project. See Appendix B for the detailed tabulation of impact results. Some links and descriptions are combined for impacts of the 69 kV component to alleviate repetitive description comments. Where landscape character, land use, and impacts are consistent within the same or similar geographical area, impact descriptions are combined to reduce redundancy.

TABLE 23. WILDERNESS SUBSTATION TO MOUNTAIN VIEW SUBSTATION 69 kV SUBTRANSMISSION IMPACTS

Link / Milepost	Impact	Description
1	Low	This short link of 0.3 miles has a low impact, as it heads south from the Wilderness Substation in a highly developed industrial area with no sensitive receptors in the immediate area. The line is located on Wilderness Avenue between the substation and Jurupa Avenue.
2	Low	This short link of 0.1 miles has a low impact, as it heads west from the Wilderness Substation in a highly developed industrial area with no sensitive receptors in the immediate area.

Link / Milepost	Impact	Description
3-4	Low	These links occur within a highly developed industrial area where there are few sensitive receptors. There are some moderate impacts due to the residential area at the eastern end of Link 4 and the trail users at the eastern end of Link 3. Although there are only a few existing electrical lines, these links would not degrade the immediate surroundings.
5-12	High	Impact of these links is predominately high with areas of reduced impact due to the presence of existing distribution structures and lines already in place. These links all occur with the Immediate Foreground views of this residential neighborhood between Jurupa Avenue and Mountain View Avenue west of the Mountain View Substation. The line would generally degrade the existing landscape of a neighborhood that has limited existing electrical lines. Portions of Links 7 and 8 have existing electrical lines where high impacts would be diminished. Link 9 would degrade the entrance to the county park, as the link travels along the north side of Jurupa Avenue and crosses the park entrance. Link 11 is in Immediate Foreground view of residences on Sheppard Street, but impacts are reduced due to existing electrical lines adjacent. The southeastern end of Link 11 would also be reduced due to the existing lines and the presence of the existing Mountain View Substation.
13	Moderate	This link is in the Immediate Foreground of residences on Tucson Court; however, the impact would be reduced due to the existing 69 kV lines on the link. Skirting the park property, the impact is moderate because of the lessened structural contrast with the existing lines in the area.

TABLE 24. WILDERNESS SUBSTATION TO JURUPA AVENUE 69 kV SUBTRANSMISSION IMPACTS

Link / Milepost	Impact	Description
1	Low	This short link of 0.3 miles has a low impact, as it heads south from the Wilderness Substation in a highly developed industrial area with no sensitive receptors in the immediate area. The line is located on Wilderness Avenue between the substation and Jurupa Avenue. Although in proximity to Santa Ana River Trail users, the link would be obscured by elevated terrain and the intervening industrial development.

TABLE 25. RERC TO HARVEY LYNN AND FREEMAN SUBSTATIONS 69 kV SUBTRANSMISSION IMPACTS

Link / Milepost	Impact	Description
1-4	Low	Links 1, 2 and 3 are located within a highly developed industrial area with no sensitive receptors. Jurupa Avenue has existing electrical lines. Link 4 is primarily a low impact link, as it travels within a predominately industrial landscape. The route is adjacent to the public Skylinks Golf Course, but the addition of the Project will not degrade the existing landscape character. Link 4 crosses Van Buren Boulevard but within industrial uses, which reduces the impact to a more moderate condition. The link also will have Immediate Foreground views from apartments along the southern 600 feet of the link, which are also moderated by the surrounding industrial landscape character.
5	Moderate	This link is located in undeveloped open space surrounded by industrial uses. The limited sensitive receptors are found on informal trails and the Santa Ana River Trail at a Foreground distance. The link does cross Van Buren Boulevard but within industrial uses, which diminishes the impact.
6-7	High-Moderate	Links 6 and 7 are a mix of high impacts from residential receptors and moderate impacts where the links are located in degraded open space. As Link 6 travels along Jurupa Avenue adjacent to Alabama Street, these rear residential Immediate Foreground views will be compromised and the immediate neighborhood degraded. Link 7 will also degrade the neighborhood landscape where the link travels down Bradford Street with Immediate Foreground views. However, there is an existing electrical line on Bradford Street that results in some reduction in severity of impact.

Link / Milepost	Impact	Description
8	High	Link 8 is completely within residential Immediate Foreground views along Crest Avenue where there are no existing electrical lines. The structural contrast and loss of vegetation in this neighborhood would degrade the existing character and have high visual impact.
9-11	Moderate	Impacts on Arlington Avenue and Van Buren Boulevard will be reduced due to the common landscape character of the existing mixed industrial, commercial, and multi-family residential uses. Existing overhead distribution is abundant along these corridors and no special landscape treatment or scenic landscapes are evident. The Project will not degrade the existing landscape character of the area.
12	Low-High	This link is located through the industrial area on Rutland Avenue, and also along Cypress Avenue, a residential street. The industrial area has no sensitive receptors and thus a low impact level. Cypress Avenue residences will have a high impact due to Immediate Foreground views and the lack of existing electrical lines, which result in structural contrasts for the street.
13-14	Moderate	These links will not substantially degrade the area by the presence of the project. The impacts are moderated are because of the mix of industrial, commercial, and multi-family residential throughout the area. There are existing electrical lines present through most of the area which reduces the structural contrast from the proposed links.
15, N	Moderate	Theses links (15a, 15b, N-1, N-2, N-3, N-4, and N-5) are all located along single-family residential neighborhoods of common landscape values. The Project would not degrade any existing landscape character or scenic vistas. Portions of Crest Avenue do not have existing electrical overhead lines and thus the Project would result in structural contrasts and higher impact. Existing overhead structures are found throughout the remainder of these neighborhood links, resulting in moderate impacts.
16	High	Link 16 is located on Cypress Avenue and primarily on Tyler Street north of Wells Avenue. The entire length of Tyler Street has no existing overhead electrical lines and the Project would result in strong structural contrast. With the single-family residential in Immediate Foreground, this link has sensitive receptors, moderate contrasts, and thus a high impact rating.
17-18	Moderate	Links 17a, 17b, and 18 are located on residential streets of common landscape values and character. This area, Tyler Street south of Wells Avenue and Wells Avenue south of Tyler Street, have Immediate Foreground views, but there are existing electrical lines throughout the area and reduced structural contrasts. The moderate impacts will not reflect in the degradation of these common landscapes.
19	Moderate	This link is located on Tyler Street between Cook Avenue and Hole Avenue where structural contrast from the link will be reduced because of the abundant existing electrical lines throughout the area. The north portion of the link is primarily residential and transforms into commercial at the southern end. The presence of a new line will not degrade the existing character of this link.
20	Moderate	Links 20a and 20b are located in the residential streets of Cook Avenue and Jones Avenue between Hole Avenue and Tyler Street. The landscape visual integrity is common and the Project will not degrade the existing character of the neighborhood. The users of Myra Linn Park are sensitive receptors, but there are no scenic vistas impacted and there is existing electrical distribution on these portions of Cook and Jones Avenues to lessen the structural contrast from the proposed link. The existing and proposed lines are on the north side of Cook Avenue, not on park property.
21-23	Moderate	These links will not substantially degrade the area through the presence of the Project. The impacts are moderated are because of the mix of industrial, commercial, and residential in the area. There are existing electrical lines present through most of the area, which reduces the structural contrast from the proposed links
24	High	Link 24 is located on La Sierra Avenue which is a city designated Parkway and Gateway. The Immediate Foreground views of travels on La Sierra will be degraded by the presence of the proposed link where there are no existing electrical lines.

Link / Milepost	Impact	Description
25-27	Moderate	These links are located on Hole Avenue west of Tyler Street. The sensitive receptors are the residences, but the landscape visual integrity is common and there are existing electrical lines in the vicinity, reducing structural contrast, and thus the area will not be degraded by the proposed link.
28	High	This link will have a high impact and degrade the existing character of the residential street, including the Immediate Foreground views of the multi-family residential on Minnier Avenue. The curve of the street will add to the structural contrast on the street, which currently has no electrical lines and is visually defined by its street trees.
29-30	Low	These links cross La Sierra Avenue but in the vicinity of the Harvey Lynn Substation where there are existing electrical lines entering the substation. The structural contrast will be reduced in this area, which is characterized by commercial development and the substation. The substation is highly landscaped, which will screen and obscure the proposed link as the lines enter the substation.
31-33	Moderate-Low	These links are located in primarily through commercial land uses. Link 31 has sensitive residential receptors on Hughes Alley and when crossing Magnolia Avenue but the impact and structural contrast would be reduced due to the existing electrical lines that are already in place. Links 32 and 33 are located on Tyler Street along a highly developed commercial corridor and the Tyler Mall. The route crosses Magnolia Avenue (a city designated Parkway) but there are existing electrical lines on Magnolia and the structural contrast would be reduced. The southern end of link 33 crosses State Highway 91 and into industrial land uses where no sensitive receptors are expected.
34	High	This link is in the Immediate Foreground views of residences along Diana Avenue. There are no existing electrical lines, and the introduction of Link 34 would degrade the residential character of the area.
35-42	Low-Moderate	These links are in a predominantly industrial area the vicinity of Indiana Avenue and railroad corridor between Hughes Alley and Freeman Substation. The railroad and industrial character of the area dominate the limited residential along Indiana Avenue, and the introduction of a new electrical line would not degrade the existing landscape character.

6.3 Wildlife and Wilderness Substations

Impacts created by the construction of the new 230 kV and 69 kV substations on the site currently occupied by the Toro Company's irrigation testing fields will be limited to recreation viewers using the Santa Ana River Trail to the north. The site and its surroundings are dominated by industrial buildings and existing utilities, such as the gas pipeline and overhead electrical transmission lines. The construction of the substation will cause an incremental change to the industrial character of the site and surroundings, and the contrasts created will be moderate.

Sensitive viewers using the trail are set back from the site, are in an inferior viewing position (from below), and experience some screening effects of the topography. While the orientation of the viewers using the trail is typically towards the river, the substation would dominate the view of trail users approaching from the east. Impacts would be high, but could be reduced with the installation of landscape screening and introduction of vegetation compatible with the area.

6.4 69 kV Substation Upgrades

Substation upgrades would be contained within the confines of the existing perimeter walls of each facility. Additional ancillary structures would slightly increase the industrial nature of the substations, but would not be noticeable to the casual viewer due to very weak structural contrasts created. The associated 69 kV subtransmission lines emanating from the substations would provide the most substantial changes in the landscape. Impacts to nearby sensitive viewers (primarily residences and road travelers) would be low.

7.0 CONCLUSIONS

The impacts summarized in Table 21 are consistent with the findings described in the FEIR (October 2012).

Those segments located East of Van Buren Boulevard, although located in proximity to the river corridor, skirt the edge of an industrial area that extends the entire distance to the Wildlife Substation. As a result, visual contrasts are reduced at this location and project impacts remain less than significant (FEIR p.3-40). As shown in Table 21, impacts are rated moderate for this segment of the transmission line, an increase from the 2010 technical report due to a realignment that places the line closer to the river corridor. As stated, however, these impacts remain less than significant.

The FEIR states that the “230kV transmission line would degrade the scenic quality of the Santa Ana River Corridor” and that these impacts on undesignated scenic vistas may “be potentially significant” (FEIR p.3-45). This conclusion remains valid and applies to the line segments located west of Van Buren Boulevard. As stated in the FEIR, these impacts result from the fact that “. . . high sensitivity viewers would have scenic vistas of the Santa Ana River corridor affected by the presence of the transmission line” (FEIR p. 3-40). The 2010 Aesthetics and Visual Resources Technical Report as well as the 2016 update support this conclusion and rate impacts in this area as high.

North of the Santa Ana River through the Goose Creek Golf Club and along 68th Street, the route would pass “within the immediate foreground of residential views... and VanderMolen Elementary School” (FEIR p.3-41). “Impacts in this area would be potentially significant and immitigable, as they would degrade the visual character and quality of the interface of residential and recreational uses” (FEIR p. 3-41). New residential construction that may occur prior to construction of the 230 kV component would not generate additional significant visual impact that was not already previously disclosed based on the FEIR conditions. Both the 2010 Aesthetics and Visual Resources Technical Report as well as the 2016 update support this conclusion and rate impacts in this area as high.

Although new residential development has occurred or is underway at some locations north of 68th Street, these effects do not rise to the level of significance (FEIR p.3-41 and 3-42). For most of the distance north of 68th Street, impacts are rated as moderate in both the 2010 Technical Report and in the 2016 update. Impacts between 68th Street and Landon Drive would be less than significant as new residences and viewers would naturally orientate their viewing behaviors away from the six-lane I-15 freeway corridor (FEIR p. 3-42). Further, no development applications could be identified on the parcels immediately adjacent to the I-15 freeway between Limonite Avenue and Bellegrade Avenue. No applicable CEQA significance criteria are present at this location and these impacts therefore do not rise to the level of significance, which is consistent with the conclusion stated in the FEIR.

Due to recent and on-going residential development in proximity to the northernmost 0.6 mile of the proposed 230 kV alignment near Windville Road and Cantu-Galleano Ranch Road, impacts are rated low to moderate for this segment of the project. Impacts for this segment were also rated as moderate in the 2010 Technical Report and “low to moderate” in the 2012 FEIR. Although residential receptors typically reflect a high sensitivity rating, in this case the proposed route is “located within a developed industrial complex” (FEIR p.3-42). Therefore any impact would be less than significant as new residences and viewers would naturally orientate their viewing behaviors away from the industrial area (FEIR p.3-42). No applicable CEQA significance criteria are present at this location and these impacts therefore do not rise to the level of significance, which is consistent with the conclusion stated in the FEIR.

At all other locations not specifically discussed above, impacts remain consistent with and as described in the FEIR.

8.0 REFERENCES

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