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October 31, 2011

VIA EMAIL & HAND DELIVERY

Mr. Eric Solorio, Siting Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Pio Pico Energy Center Project (II-AFC-01)
Applicant's Responses to Data Requests #72 - 73

Dear Mr. Solorio:

On September 30, 2011, California Energy Commission Staff requested additional data relating to Transmission System Engineering as such relates to Pio Pico Energy Center, LLC's Application for Certification for the Pio Pico Energy Center Project. To that end, please find enclosed herewith Applicant's responses to Staff's Data Requests numbers 72 and 73.

Please note that a disk containing the AFC refinement will be served on all parties identified on the proof of service list. Should you determine additional paper copies are required beyond those you have requested, please let our office know.

Respectfully submitted,

Melissa A. Foster

MAF:jmw
cc: See Proof of Service List

Pio Pico Energy Center (11-AFC-01)

Transmission System Upgrade Analysis
Response to CEC Data Requests 72 and 73

Submitted to the

California Energy Commission

October 2011

Submitted by

Pio Pico Energy Center, LLC

With support from

URS

2020 East First Street, Suite 400
Santa Ana, California 92705

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SECTION 1.0
INTRODUCTION AND PURPOSE

This Supplemental Filing on behalf of the Pio Pico Energy Center (PPEC) Application for Certification (AFC) (CEC Docket 11-AFC-01) responds to California Energy Commission (CEC) Staff Data Requests #72 and 73. These data requests seek an environmental analysis of the potential effects of upgrading three transmission and sub-transmission line segments as a result of the PPEC interconnecting with the California Independent System Operator (CAISO) electrical grid.

Pio Pico Energy Center, LLC (Applicant) submitted a request to the CAISO for interconnecting the PPEC to the CAISO-controlled grid in November 2010. CAISO subsequently completed a Phase II Interconnection Study (CAISO 2011) to determine the impacts of the PPEC along with other electric generation projects on CAISO system facilities. Under the Federal Energy Regulatory Commission-approved Large Generator Interconnection Procedures, interconnection requests are now processed together in clusters. A total of twelve proposed generation projects were grouped together in Cluster 1, Cluster 2, and Small Generator Transition Cluster projects (C1C2 Projects), totaling a maximum net-output-to-grid of 1,716.5 megawatts (MW), including 308 MW for PPEC. Their transmission system impacts were assessed as a group, but with the relative contribution of each proposed project in the cluster assigned a percentage weight.

The Transition Cluster Phase II Interconnection Study identified potential overloads on the downstream transmission facilities that could occur with the addition of all twelve projects, including PPEC, in the cluster. In order to eliminate the identified overloads, preferred mitigation options identified in the Phase II Study include reconductoring of the overloaded lines with higher capacity conductors, extending undergrounded existing lines, reconductoring older lines with in-kind conductors, and replacing substation equipment.

CEC Staff issued the PPEC Data Request #72 and #73 on September 30, 2011, requesting that PPEC provide information about the potential environmental impacts of upgrading segments for which the Phase II Study identified the PPEC project as having a portion of cost responsibility, which include the following:

1) Escondido – Palomar 230 kilovolt (kV) #1 and #2 Lines (refer to Figure 1)

   - Reconductor Escondido – Palomar 230-kV #1 and #2 lines (approximately 1,200 circuit feet, or less than 0.25 mile)
   - Relocate two overhead 69-kV (sub-transmission) circuits underground (approximately 600 feet, or 0.1 mile)

2) Friars – Doublet Tap 138-kV Line (refer to Figure 2): Reconductor 10,500 feet (less than 2 miles) for the Friars – Doublet Tap 138-kV Line with 636-kcmil aluminum-conductor steel-reinforced (ACSR) cable

The CEC's direct jurisdiction extends to the first point of interconnection with the electrical transmission system at the SDG&E Otay Mesa Switchyard. The PPEC February 2011 AFC included an analysis of all PPEC project facilities to that point. The transmission network upgrade program will be permitted specifically under the jurisdiction of the California Public Utilities Commission (CPUC), and CPUC will be responsible for preparing the appropriate California Environmental Quality Act (CEQA) documents with specific mitigation requirements as needed when issuing its authorization for SDG&E to implement the program.

As noted above, the CAISO's Phase II Study for the Transition Cluster (C1C2 Projects) identifies transmission system upgrades that are predicted to be needed to accommodate the interconnection of all of the 12 projects in the cluster. The predicted upgrades reflect the total of 1,716.5 MW of new capacity, including 308 MW for the PPEC project. The transmission network upgrades identified by the Phase II Study are not solely caused by the PPEC. Nevertheless, the following analysis was prepared to assist CEC Staff in disclosing the potential environmental effects due to the identified transmission upgrades.

This analysis describes the process of network upgrades (i.e., reconductoring and underground relocation) and the types of environmental impacts that might occur as a result. Project-specific details regarding the locations of the pull and tensioning sites and staging areas, and the specific techniques that would be used for each span, however, will not be available until the upgrade project is designed by SDG&E. In general, however, the upgrade activities would use historic stringing sites, existing easements, and SDG&E property. The upgrades, if implemented, could be accomplished with no significant environmental impacts, if appropriate best management practices (BMPs), and mitigation measures are applied.

Because the segments to be upgraded lie beyond the first point of interconnection with the grid and because they will be carried out by a separate entity (SDG&E) at a future time and under the permitting jurisdiction of a separate authorizing agency (the CPUC), the information provided herein gives an overview of potential indirect impacts associated with transmission system upgrades that may result from the PPEC project.

It is also important to note that because the upgrade project owner will be SDG&E and not the Applicant, this analysis cannot commit the project to specific BMPs or mitigation measures that would or must be carried out by SDG&E. SDG&E, however, is a regulated public utility that has developed standard operating procedures that include BMPs recognized by regulatory agencies and the electric power industry as effective measures to avoid, mitigate, or minimize adverse environmental impacts during network upgrade operations. In

this analysis, it is assumed that SDG&E would apply BMPs that are standard requirements for similar projects. Final mitigation planning would take place through the CPUC's regulatory process.

SECTION 2.0
PROJECT DESCRIPTION

2.1 INTRODUCTION

This section identifies the specific transmission (and sub-transmission) line segments that may be upgraded and provides a general level overview of the upgrade process applicable to the reconductored portions and underground relocating portions. A basic description of the work involved in the respective upgrading activity is presented below.

2.2 PROJECT LOCATION

The Phase II Study for the C1C2 transition cluster predicts that SDG&E may need to upgrade portions of two transmission line systems, relocate portions of two overhead 69-kV lines underground, and replace substation equipment within its electrical grid. Refer to Figure 1 and Figure 2, which show the locations of the upgrade improvements on recent aerial photography from 2010, and Figure 3 and Figure 4, which show the upgrade improvements on the respective USGS topographic quadrangle. The transmission line reconductoring consists of two line segments: approximately 1,200 feet of the Escondido-Palomar 230-kV #1 and #2 Lines, which were installed in 2005; and approximately 10,500 feet of the Friars-Doublet Tap 138-kV Line, which was constructed in 1957. Refer to Figure 1 and Figure 2, respectively. The total length of lines to be reconductored crosses approximately 11,700 feet, or 2.2 miles. Additionally, the network upgrade includes relocating approximately 600 feet of two 69-kV lines, which were installed in 2005, into one underground ductbank just south of Escondido Substation (Figure 1). Additionally, the transmission and sub-transmission line upgrades may include upgrades and/or replacement in-kind of switches and breakers at the Escondido Substation and Friars Substation for the respective line upgrades. Based on consultation with SDG&E, the equipment replacement would occur within the fenced-in structures of the substations, and would not involve below-grade work or soil disturbance.

The approximately 1,200-foot portion of the Escondido-Palomar 230-kV line and 600-foot portion of the 69-kV lines to be upgraded are located in the existing SDG&E right-of-way (ROW) within the western portion of the City of Escondido. The lines begin at the Escondido Substation located approximately 350 feet south of SR-78/Ronald Packard Parkway. The 69-kV lines terminate just north of the Palomar Power Project, and the 230-kV lines continue to Palomar Substation.

The portions of the lines identified for potential upgrade cross an existing parking lot and undeveloped area, and are both located on parcels owned by SDG&E. The 230-kV and 69-kV lines cross the cul-de-sac of Commercial Street. Additionally, the 230-kV lines also cross Auto Park Way, which is a City collector road. Uses along the upgrade project corridor include industrial, including a power plant, light industrial, and commercial uses.

The Friars-Doublet Tap 138-kV line is located in the City of San Diego, and extends south and west approximately 10,500 feet from the Friars Substation towards the Old Town Substation. Friars Substation, where the reconductoring begins, is located approximately 1,600 feet east of SR-163, and approximately 1 mile north of Interstate 8. The reconductoring project is located within an approximately 110-foot-wide ROW, which runs generally parallel to Friars Road, and crosses urban/developed and open areas. Approximately one-half of the corridor is located on SDG&E-owned parcels. The reconductoring crosses several County roads and State Route (SR)-163/Cabrillo Freeway.

2.3 CONSTRUCTION METHODS

The Escondido-Palomar 230-kV Lines #1 and #2 are 230-kV double-circuit lines with three conductors mounted on existing tubular steel poles (between 50 to 125 feet in height) in the existing SDG&E right-of-way. Reconductoring the approximately 1,200-foot segment of the double circuit lines with 900 kcmil ACSS/AW conductors would require replacement of two cross arms on one transmission pole. No excavation work and no other pole modifications are anticipated at this time.

Underground construction of approximately 600 feet of two 69-kV sub-transmission lines will also occur at the Escondido Substation. Currently, the two 69-kV lines consist of single-circuits with three conductors mounted on tubular steel monopoles approximately 60 feet east of the Escondido-Palomar 230-kV lines, in the existing right of way. The network upgrade consists of undergrounding the two lines into one underground ductbank from the Escondido Substation extending approximately 600 feet south. Undergrounding the two 69-kV lines also involves removing two existing poles.

The Friars-Doublet Tap 138-kV line is a single-circuit, three conductor line mounted on existing tubular steel monopoles in the SDG&E ROW corridor. The transmission system upgrades for this line would consist of reconductoring approximately 10,500 feet with 636-kcmil ACSR/AW conductor. Based on consultation with SDG&E, no modifications to the existing poles are expected.

Prior to commencement of the overall network upgrade activities, SDG&E would coordinate with the CAISO for permission to take the existing line out of service. This action would ensure that adequate power is redistributed to substations and customers when the line is out of service. The project upgrades would be constructed using historic stringing sites in existing easements. No new access roads are anticipated. The project upgrades also include replacing several substation components associated with the transmission and sub-transmission line disconnects and getaways. As described above, all substation work (i.e., at the Escondido Substation and Friars Substation) will take place aboveground inside the existing substation fenceline. No below-grade work is required that would disturb any soil.

2.3.1 Reconductoring

In general, reconductoring is accomplished by disconnecting the old conductor and using it like a rope to pull the new conductor through temporary pulleys, called "travelers" or "sheave blocks," mounted on each pole, until it reaches the other end. Workers access each pole by truck, then climb the pole or use a truck-mounted aerial bucket to access the pole, place the travelers on the pole arms, disconnect the conductors from their insulators, and place them on the travelers. Once this has been accomplished, the old line is connected to a winch and spool at the pulling site. As a winch pulls the old conductor through the travelers and off of the poles on one end of a work segment, new conductor is spooled from the tensioning spooling truck positioned at the other end of the work segment, and is pulled into place on the travelers by the old conductor as it is spooled off. The tensioning crew keeps the conductors taut, preventing them from sagging to the ground or other objects in the right-of-way. Workers then revisit each pole in the segment and move the new conductor off of the travelers and connect it with the insulator strings. Work crews set up temporary structures across roads and other potentially inhabited areas to protect those areas in the unlikely event that a conductor breaks and falls to the ground. If the old conductor is not in good enough condition to be used to pull in the new line, it is be used to pull a carrier cable, or "sock line," through the pulleys to the end of the segment to be replaced; the sock line is then used to pull in the new conductor. Each pull station and tensioning station requires a construction staging area of approximately one acre.

Throughout the reconductoring project, temporary staging areas would be required for equipment and materials storage. The reconductoring project may require several staging yards, each about one acre in size, located near each end of the transmission line segments. Although it is not known at this time where the staging areas would be located, it is likely they would be located at existing storage areas near or at the substations during the construction period.

The existing transmission corridor would be accessed by trucks, all-terrain vehicles, and/or by foot. Based on consultation with SDG&E, access would be over existing roads, and no new access roads are anticipated. As shown on Figures 1 and 2, the construction areas would be located near existing roads and in existing ROWs. BMPs would be implemented during construction. Any disturbed areas would be restored to original conditions after project completion. In developed areas, access to poles would be from public roads or through developed private property or commercial lots. No new access roads would be constructed through drainages or wetlands. Helicopters may be used to string the lines. Helicopter reconductoring methods have proven highly effective where the terrain makes access difficult or there is a need to avoid disturbance to sensitive resources.

It is anticipated that all reconductoring work would be done within the existing SDG&E ROW along the existing transmission lines and within the footprint of the existing

substations. Temporary construction areas (approximately 2 to 5 acres) would include material storage and laydown areas, temporary construction yards, and helicopter landing areas. These areas would be selected by engineering and construction personnel during the design phase, and are anticipated to be located on SDG&E-owned properties at the substations and along the transmission line routes. Work crews will have a great deal of flexibility in choosing the locations of the pull and tension sites and temporary staging areas; crews can generally select sites that avoid many environmental impacts.

At the end of construction, all temporary structures will be removed. Construction debris will be removed and hauled away for recycling or disposal. Areas disturbed during construction will be returned to pre-construction conditions, unless otherwise agreed to with the landowner.

2.3.2 Undergrounding

For the Escondido-Palomar line, the approximately 600 feet of 69-kV sub-transmission line would be installed within a standard double-circuit underground ductbank, and may include an underground vault and transition structure, or riser. According to SDG&E, the ductbank would be located within a trench approximately 2.5 feet wide and a minimum of 5 feet deep.

Existing underground utilities would be identified and marked prior to the start of construction. A portion (approximately 60 feet) of the underground work would take place within the public road ROW of Commercial Street. A lane closure would be required and traffic control signage installed.

The ductbank installation would commence with using an excavator to remove the top soil in unpaved areas or the concrete/asphalt in paved areas. Large trucks haul away excavated subsoil materials to approved off-site location for disposal, or if appropriate, reuse. The ductbank is constructed using polyvinyl chloride (PVC) conduits and spacers encased in concrete, with vaults as required for cable pulling. Cable pulling and splicing can occur any time after the ductbanks and vaults are completed. When construction is completed, the parking lot, roadway, and any landscaped areas would be restored to their original condition and topography.

2.4 CONSTRUCTION SCHEDULE AND WORKERS

A schedule for the network upgrades has not been developed at this time. However, it is anticipated that construction associated with the reconductoring and undergrounding project could take approximately 4 to 6 months. Workers would occupy each pull and tension site for about 3 days. The reconductoring work would probably occur during times of relatively low electrical demand to protect system reliability while the lines are out of commission.

The network upgrade activities would involve setting up two work crews (for a total of 20 workers) on each end of a segment that is being replaced. Each crew would consist of approximately 10 workers, two tractor/trailer units, which either feed out the new line or wind in the old line on spools mounted on the trailers, and two or three utility trucks carrying tools, other materials, and workers, for a total of 6 to 8 trucks.

SECTION 3.0
ANALYSIS OF TRANSMISSION NETWORK UPGRADES

3.1 INTRODUCTION

An analysis of each of the environmental areas included in the PPEC AFC is presented below. Additionally, applicable laws, ordinances, regulations, and standards (LORS) have been reviewed to determine the project's consistency with applicable LORS.

3.2 AIR QUALITY

Transmission network upgrade activities include reconductoring two line segments that would require replacement of approximately 2.2 miles of transmission line. Approximately 20 extra workers would be present at any time during the 4 to 6 months of construction activities. The emissions associated with worker commutes would be expected to be very low. Furthermore, because the reconductoring activities would likely not require additional grading or the replacement of the existing transmission poles, the reconductoring activities are not expected to significantly increase the criteria pollutants associated with the quantity of equipment, or the number of deliveries required for construction of PPEC. Additional network upgrades include relocating approximately 600 feet of two 69-kV lines into one underground ductbank. According to SDG&E, the underground conductor would be installed in a standard double-circuit trench approximately 2.5 feet wide and 5 feet deep, which would require minor excavation. Based on the low level of surface disturbance, the undergrounding activities are not expected to result in significant air emissions. Therefore, the reconductoring activities and undergrounding activities are not expected to result in significant adverse air quality impacts.

3.3 GEOLOGIC HAZARDS AND RESOURCES

The geologic units present along the transmission lines are shown on Figures 5 and 6, for the Escondido-Palomar and Friars-Doublet Tap lines, respectively. Although located in an acknowledged seismically active area, the Escondido-Palomar site is not located on a fault trace as designated by mapping shown on Figure 5. Similarly, the Friars-Doublet Tap line does not cross any fault traces, but there are numerous fault traces in the vicinity as shown on Figure 6.

No new facilities, such as electrical transmission towers, are anticipated to be constructed as part of reconductoring along the Escondido-Palomar and Friars-Doublet Tap lines. The majority of ground disturbance would be limited to temporary access roads, temporary construction staging areas and pull and tensioning sites. These sites would not require significant grading or other disturbance of soils at depth. Minor trenching would be required for relocating the 600-foot long portion of the Escondido-Palomar line. If modifications to

poles and foundations are required, these would be designed by a California-registered professional geotechnical engineer to address unstable slopes, if any, and seismic design criteria. The project features would be designed and constructed to meet the seismic requirements of the California Building Code; therefore, construction and operation of the project would not cause significant impacts to geological resources and geological hazards would not adversely affect the transmission line upgrades.

3.4 SOIL AND WATER RESOURCES

The transmission lines are located within existing SDG&E right-of-ways that traverse mostly industrial, commercial and residentially developed lands. Soil types and characteristics vary across this topography as shown on Figures 7 and 8 for the Escondido-Palomar and Friars-Doublet Tap lines, respectively. Several of the existing transmission poles are located within paved parking lots, in particular the poles along the Friars-Doublet Tap line west of SR-163.

The transmission lines do not cross any waterbodies. Escondido Creek is approximately 1,400 feet southwest of the Escondido-Palomar line as shown on Figures 1 and 3. The San Diego River runs parallel to and south of the Friars-Doublet line and is about 1,000 feet from the transmission line, as shown on Figures 2 and 4. Murray Canyon, a tributary to the San Diego River, is about 500 feet west of the Friars-Doublet line.

3.4.1 Transmission Network Upgrade Impacts

The transmission lines do not cross water conveyance features and construction activities for pole modifications would not occur within any watercourses, impacts to hydrology and water quality for construction and operation of the transmission lines would be less than significant.

For most of the transmission system upgrade work, ground disturbing activities would be limited to temporary access roads, temporary construction staging areas and pull and tensioning sites. If existing poles are used or reinforced without construction of new foundations and footings, the potential for impacts to soils and water resources would be significantly reduced. Work sites using larger truck-mounted equipment and temporary construction staging areas can be selected to reduce potential impacts.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for areas crossed by the transmission lines (FEMA 1997) were reviewed. The FIRMs show that the portion of the Escondido-Palomar transmission line that would be upgraded does not pass over a FEMA-designated 100-year floodplain area (i.e., FEMA-designated Zone A, which is the flood insurance rate zone that corresponds to areas within the 100-year floodplain zone). Approximately 132 feet of the 10,500-foot-long Friars-Doublet line crosses the FEMA-designated 100-year floodplain associated with Murray Canyon and the San Diego River just west of SR-163.

Until surveys and design are completed, it is unknown whether the nearby poles are located within the floodplain area, and whether they require modification. Impacts to floodplains during construction would be less than significant because construction activities would be temporary and would not require extensive grading. Changes to pole foundations would not be expected to substantially alter the floodplain; therefore, permanent impacts would be considered less than significant.

If existing poles are used or reinforced without construction of new foundations and footings, the potential for impacts to soils and water resources would be significantly reduced. Work sites using larger truck-mounted equipment and temporary construction staging areas can be selected to reduce potential impacts. Standard construction BMPs are also expected be implemented to reduce erosion potential.

3.4.2 Mitigation

The project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (SWRCB 2010), which would require implementation of standard construction BMPs required for any ground-disturbing activities. Standard construction BMPs include performing construction in accordance with an Erosion and Sediment Control Plan, adherence to the requirements of a Storm Water Pollution Prevention Plan (SWPPP), revegetating construction areas and restore them to pre-project condition, reliance on sediment trapping devices, limiting the amount of exposed areas at a given time, restabilizing disturbed areas, etc. The project's compliance with the storm water quality LORS would ensure that overall impacts related to erosion and water quality would be less than significant. No mitigation measures would be expected.

3.4.3 Conclusion

Impacts to soils and water resources from the system upgrades are anticipated to be less than significant due to required implementation of standard construction BMPs associated with the project NPDES permit. As a result, no mitigation would be expected.

3.5 BIOLOGICAL RESOURCES

This section documents the findings of an evaluation of biological resources[1] for the proposed reconductoring of transmission lines associated with the network upgrade project. For the purposes of this section, the "study area" includes the project's proposed transmission

[1] For the purposes of this analysis, "biological resources" refers to the plants, wildlife, and habitats that occur, or have the potential to occur, within the Project's study area.

line ROW (project footprint) and a 500-foot buffer, to the maximum extent practical[2]. Potential impacts to biological resources could result at construction work sites during upgrade activities. These sites include, but are not limited to, pull and tensioning sites where new conductors will be placed on existing poles, underground conduits, poles that may require modification, staging areas, laydown yards, and temporary access roads. Impacts may include disturbance, injury or death of wildlife species or their nests, temporary ground or habitat disturbance, or temporary visual, wind, or noise disturbances. Avoidance and minimization measures are proposed to avoid, eliminate, and reduce these impacts to a less-than-significant level, or compensate for any impacts. The upgrade project will be subject to approval by the CPUC, and may incorporate additional avoidance and minimization measures or BMPs as required by the CPUC.

Prior to field surveys, available information from resource management plans and relevant documents were reviewed to determine the locations and types of biological resources that have the potential to exist within and adjacent to the project area; resources were evaluated within one mile of the project pursuant to the CEC evaluation guidelines. The materials reviewed included, but were not limited to, the following:

- County of San Diego in Conjunction with the United States Fish and Wildlife Service (USFWS). Multiple Species Conservation Program (1997)
- USFWS Critical Habitat Mapper and File Data (USFWS 2011a)
- USFWS Carlsbad Field Office Species List for San Diego County (2011b)
- The California Natural Diversity Database (CDFG 2011)
- California Native Plant Society Electronic Inventory (CNPS 2011)
- Aerial Photographs (Digital Globe 2009)

Pedestrian-based reconnaissance field surveys were then performed within the study area to assess general and dominant vegetation community types, habitat types, and species present within vegetation communities. Community type descriptions were generally based on observed dominant vegetation composition based on the criteria and definitions of widely accepted vegetation classification systems (Holland 1986; Sawyer, Keeler-Wolf, and Evens 2009). Plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Hickman 1993). Scientific and common species names were recorded according to Hickman (1993). The presence of a wildlife species was based on direct observation, and wildlife sign (e.g., tracks, burrows,

[2] Where 100 percent pedestrian coverage of the study area was not possible due to limited access (e.g., fenced areas where access to private property or other physical barriers [vegetative cover, health and safety concerns, etc.]), field observations were made from the nearest appropriate vantage points via public right-of-ways with binoculars and/or via aerial photographic interpretation.

nests, scat, or vocalization). Field data compiled for wildlife species included scientific name, common name, and evidence of sign when no direct observations were made. Wildlife of uncertain identity was documented and subsequently identified from specialized field guides and related literature (Burt and Grossenheider 1980; Halfpenny 2000; Sibley 2000; Elbroch 2003; and Stebbins 2003).

3.5.1 Transmission Network Upgrade Impacts

Potential impacts to biological resources during the project could occur at the pull and tensioning sites, the pole locations, and the temporary staging or laydown yard locations, which specific locations and sizes of have not yet been determined. Impacts would most likely occur at the angle poles where conductor pull and tension sites and pole modification activities are required. Large trucks and other vehicles employed to perform the work could potentially damage, injure, or kill plant or animal species, damage vegetation community types, destroy nests, introduce non-native species, and lead to soil erosion and sedimentation. Additionally, indirect impacts such as noise and visual disturbances could affect sensitive species during construction activities.

Although an in-depth field investigation was not conducted as part of this preliminary evaluation, aerial photograph interpretation and reconnaissance-level field surveys indicate that the primary vegetation community/land use types present within the study area include ornamental landscaping, developed/disturbed, and coastal sage scrub. Ornamental and developed/disturbed land use areas occur throughout the urban project surroundings and are generally dominated by non-native plants including annual grasses, forbs, shrubs and trees, or are devoid of vegetation. Patches of fragmented, but relatively undisturbed, Coastal Sage Scrub also occur in portions of the study area and consist of mature, native vegetation. Although these habitats are fragmented and surrounded by dense, urban developments, they may support a variety of commonly-occurring birds, mammals, reptiles, amphibians, and invertebrates and also have the potential to support some special-status species.

In addition, transmission lines may cross ditches, culverts, detention basins, and other special aquatic resource areas[3] within the study area; however, no work is expected to occur within these resources and no impacts are expected.

A review of the California Natural Diversity Database (CNDDB) (California Department of Fish and Game 2011) indicates that several historic occurrences of special-status species have been reported within 1 mile of the project area (see Figures 9 and 10). Based on habitat

[3] For the purposes of this analysis, "special aquatic resource areas" are defined as potential: United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA); Regional Water Quality Control Board (RWQCB) legal authority in accordance with Section 401 of the CWA and as defined within Section 13050(e) (et seq.) of the California Water Code (CWC) via the Porter-Cologne Water Quality Control Act (Porter-Cologne); and California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 (et seq.) of the California Fish and Game Code (CFG Code).

observed within the project area, the potential for each species to occur in the work area was evaluated. In total, 7 species have a moderate potential to occur within the study area because suitable habitat is present for these species and there are occurrences in the vicinity of the project (Appendix A).

Direct and indirect impacts to wildlife and plant species may occur from a variety of construction activities such as clearing of the project site and staging areas, movement of equipment, or walking around the construction site. Potential impacts include noise, wind (if a helicopter is used), vegetation removal, crushing of plants and animals including ground-nesting birds, introduction of invasive species, disruption of food sources, release of liquids, and visual disturbance.

3.5.2 Mitigation

Similar to avoidance, minimization, and mitigation measures provided in the PPEC February 2011 AFC, the following avoidance and minimization measures may be implemented to reduce impacts from transmission network upgrade activities:

- The project owner will assign a Designated Biologist to the project.
- Establish boundaries for staging and construction areas.
- Delineate and identify all Environmental Sensitive Areas, including habitats of sensitive species and wetlands and other waters (streams) of the United States.
- Use existing roadways to the maximum extent possible.
- Clean construction equipment with a pressure washer to minimize the potential spread invasive and non-native plants.
- If federally protected species are identified within the proposed ground disturbance footprint, the applicant will comply with the state and federal Endangered Species Acts will ensure that impacts to special-status species would be less than significant with mitigation.
- In order to comply with the Migratory Bird Treaty Act and relevant sections of the CDFG Code (e.g., 3503, 3503.4, 3504, 3505, et seq.), any vegetation clearing would take place outside of the typical avian nesting season (i.e., March 1st – August 31st), to the maximum extent practical. If this is not possible, prior to ground-disturbing activities, construction, or other activities within the project area, a qualified biologist will conduct and submit a migratory nesting bird and raptor survey report. A qualified biologist is an individual with sufficient education and field experience in local California ecology and biology to adequately identify local plant and wildlife species. The survey shall occur not more than 72 hours prior to initiation of project activities and any occupied passerines and/or raptor nests occurring within or adjacent to the Action Area will be delineated. To

the maximum extent practicable, a minimum buffer zone from occupied nests will be maintained during physical ground-disturbing activities. Once nesting has ceased, the buffer may be removed.

3.5.3 Conclusion

The majority of the study area has been previously disturbed and the region includes developed areas containing commercial and public infrastructure with fragmented native habitats. The study area also includes documentation of historic occurrences of special-status species; however, construction activities will only temporarily and incrementally increase habitat fragmentation on a regional level. Some breeding potential could be lost during construction activities for species that may breed in close proximity to the project and other areas proposed for disturbance. This loss of productivity would be limited to one season, and breeding individuals would be expected to reoccupy adjacent habitats following completion of construction activities. Construction will also not likely impact any special aquatic resource areas. The implementation of the proposed avoidance and minimization measures will ensure the potential impacts to sensitive species associated with the project are reduced to less than significant.

3.6 CULTURAL RESOURCES

On October 24, 2011, a literature search was commissioned from the staff of the South Coastal Information Center (SCIC) at San Diego State University for the transmission network upgrade areas and a quarter mile search buffer on either side of the linear corridors and on October 25, 2011 a Sacred Lands File search was requested from the Native American Heritage Commission (NAHC). In addition, local repositories such as the University of California – San Diego Geisel Library and the San Diego History Center were consulted for historical information regarding the project areas. The results of the literature search and NAHC consultation will be provided under separate cover.

3.6.1 Transmission Network Upgrade Impacts

Potential impacts to archaeological resources caused by the identified reconductoring and undergrounding projects could occur where ground-disturbing activities are necessary. Areas of disturbance include the pull and tensioning sites, where cable is drawn across the ground surface between poles, the transmission poles and substation requiring upgrade, within the confines of temporary access routes and temporary construction areas, and within the approximately 600-ft long underground trenching areas.

Modification and/or replacement of the transmission poles and substations, if they are historical resources, could result in an impact to cultural resources associated with the built environment.

3.6.2 Mitigation

It is recommended that once SDG&E develops a work plan for the reconductoring work, including the identification of the temporary construction staging areas, access routes and extent of pole and substation modification, additional cultural resource surveys be conducted. A California Historical Resources Information System (CHRIS) record search that encompasses all of the areas that might be affected by reconductoring activities as well as surveys of the transmission corridors to identify cultural resources (including structures greater than 45 years old) should be conducted prior to construction activities.

Should resources be identified by either the record search or the site reconnaissance survey, measures should be implemented to protect the resources. This includes evaluating the resources' eligibility for the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) and whether the aspects of the cultural resource that makes it significant will be impacted by the project. Work crews will have flexibility in determining staging areas and pull and tensioning sites and can locate these activities to avoid identified cultural resources.

It is recommended that ground disturbance at archaeologically sensitive pull site locations or other areas where key project activities are occurring be monitored for cultural resource exposure. If cultural material is identified, ground disturbance should halt until the find can be evaluated. Additional mitigation measures would include formal site recordation, evaluation, and, if appropriate, data recovery and curation. Previously identified archaeological sites should be evaluated and if they meet the criteria for eligibility to either register and they cannot be avoided, data recovery should be conducted as a mitigation measure.

An impact to a historical resource is significant if the impact results in the material impairment of its significance. Whether actions of a project constitute a significant impact depends upon which criteria are applicable to the cultural resource. To ensure that there will not be a significant impact to a cultural resource, it is necessary to evaluate the potential resource according to criteria for eligibility to either the NRHP or the CRHR. It is appropriate to consider potential cultural resources that may be older than 45 years or exceptional for eligibility to the NRHP or the CRHR. After it is determined whether potential cultural resources meet the criteria for eligibility to the NRHP or the CRHR, then it is necessary to consider whether physical alteration may be an impact. Whether the resource has unique features may or may not play a role in whether it meets the criteria for eligibility to either register and is not a valid criterion for deciding whether or not to evaluate the resource.

Recordation may serve as mitigation for some impacts to NRHP- or CRHR-eligible historic resources.

3.6.3 Conclusion

Contingent on the outcome of the record search and the surveys, some of the proposed reconductoring routes could contain sensitive archaeological resources. Depending on the level of construction and ground-disturbing activities associated with the reconductoring project, such as whether it would include new foundations or raising the height of some poles, there is a potential for cultural resources to be adversely affected as a result of the reconductoring effort. In general, after all cultural resources are identified and a determination is made regarding whether they meet the criteria for eligibility to either the NRHP or the CRHR, except in cases where a cultural resource is demolished, mitigation will be accomplished through avoidance, recordation, or data recovery.

3.7 PALEONTOLOGICAL RESOURCES

Underlying rock units in the network upgrade study areas include Mesozoic granite, sandstone, and alluvium. The region has been assigned a high sensitivity rating for their potential to contain paleontological resources.

3.7.1 Transmission Network Upgrade Impacts

No new facilities, including electrical transmission poles, are anticipated to be constructed as part of network upgrades. Impacts to paleontological resources are typically limited to areas of potential ground disturbance. Areas of project ground disturbance include undergrounding the 69-kV lines, use of project area access routes, temporary construction staging areas, and pull and tensioning sites. However, because these areas have been previously disturbed, and the project earth disturbance involves shallow excavations (i.e., depths of 5 feet below the surface), the project area would be considered to be unlikely to contain paleontological resources. As a result, impacts to paleontological resources would be anticipated to be less than significant.

3.7.2 Mitigation

The project would result in less than significant impacts; therefore, no mitigation is expected. While not anticipated for the network upgrade activities, there is a potential to uncover paleontological resources during any ground-disturbing activities. Therefore, the following BMPs are expected to be implemented for work that includes excavation:

- Prior to construction, a qualified paleontologist should be retained to both design a monitoring and mitigation program and implement the program during all project-related ground-disturbance. The paleontological resource monitoring and mitigation program should include:
    - Preconstruction coordination

  - Construction monitoring
  - Emergency discovery procedures
  - Sampling and data recovery, if needed
  - Preparation, identification, and analysis of the significance of fossil specimens salvaged, if any
  - Museum storage of any specimens and data recovered
  - Reporting

- Earthmoving construction activities should be monitored wherever these activities will disturb previously undisturbed sediment. Monitoring will not need to be conducted in areas where sediments have been previously disturbed or in areas where exposed sediments will be buried but not otherwise disturbed.
- Pre-construction meetings will be held with key construction personnel to provide brief discussions pertaining to paleontological resource significance, visual identification, and fossil discovery notification procedures. A qualified paleontologist will consult with the project geologist and project engineer on a periodic basis regarding the scheduling and extent of subsurface excavations, particularly where undisturbed areas may be encountered.
- Prior to the start of construction, construction personnel involved with earth-moving activities should be informed that fossils may be discovered during excavating; that these fossils are protected by laws; on the appearance of common fossils; and on proper notification procedures. This worker training should be prepared and presented by a qualified paleontologist.

3.7.3 Conclusion

Impacts associated with paleontological resources would be expected to be less than significant for the transmission network upgrade activities, and would be further ameliorated with the implementation of the BMPs described above.

3.8 LAND USE

The project involves network upgrades to existing SDG&E transmission, sub-transmission, and substation facilities located in largely developed urbanized areas. The upgrade areas, which include the Escondido Substation, Escondido-Palomar 230-kV #1 and #2 lines, and 69-kV lines are located within the western portion of the City of Escondido (Figure 1). The electrical facilities are located in existing easements and SDG&E-owned property. The upgrade portions are designated with Utility, Institution, and Undeveloped land use designations (refer to Figure 11). Existing nearby uses include industrial (including a power

plant), light industrial, commercial, and undeveloped uses. The Friars-Doublet Tap 138-kV line upgrade project area is located in unincorporated San Diego County, as shown on Figure 2. The transmission line upgrade segments are located in existing SDG&E ROWs, and approximately one-half of the route is located on SDG&E-owned property. The upgrade portions are designated with Utility, Commercial, Light Industry, and Open Space land use designations (refer to Figure 12). Existing nearby uses include residential, and commercial uses.

3.8.1 Transmission Network Upgrade Impacts

The upgrade project does not involve changes to the existing land use, and is consistent with all applicable land use and zoning designations. Because the proposed electrical transmission line poles and route are pre-existing, additional long-term impacts to the current surrounding land uses would not be created. It is assumed that SDG&E has rights of access to all of their facilities for maintenance and upgrade activities, based on SDG&E's existing ROWs and ownership of property along the majority of the upgrade areas. Based on SDG&E consultation, temporary construction staging and work areas are anticipated to be sited in the existing ROW, historic stringing sites, and/or on SDG&E-owned properties to minimize potential impacts to existing land uses. In addition, work areas would be delineated so as to avoid sensitive uses (i.e., hospitals, schools, residences, etc.), and biological and cultural resources. Reconductoring would not change the existing land use or displace any existing uses. As a result, potential impacts to land use are expected to be less than significant.

The right-of-way for each utility corridor (i.e., transmission and sub-transmission) would be restored to pre-project conditions when reconductoring activities are complete. Project-related debris would be removed from the ROW and disposed of at an appropriately licensed facility. Any areas requiring revegetation would be seeded with a weed-free seed mix approved by the appropriate land management agency and landowner(s). In summary, the project would result in less than significant impacts.

3.8.2 Mitigation

The project would result in less than significant impacts to land use; therefore, no mitigation would be required. However, SDG&E is expected to implement several BMPs to further ameliorate potential disruption to adjacent land uses during and after construction, which include the following:,

- Landowners adjacent to the transmission utility corridors should be notified of the upcoming project activities.
- The transmission corridor, construction staging areas and temporary access roads should be restored to pre-project condition once construction is complete.

- Construction staging areas, pull and tension sites, and temporary access roads should be sited to reduce or avoid impacts to land uses (i.e., avoiding nearby residences and sensitive uses).

With the use of these BMPs, it is anticipated that potential less than significant land use impacts will be further reduced. No mitigation is expected.

3.8.3 Conclusion

The transmission network upgrade project would not introduce a new use to the project area, and would not change or conflict the existing land use, or displace any existing uses. As a result, potential impacts to land use are expected to be less than significant. SDG&E is expected to implement several BMPs to further ameliorate potential disruption to adjacent land uses during and after construction.

3.9 SOCIOECONOMICS

The construction workforce for the project would be relatively small (up to 20 workers) and would be drawn from existing SDG&E and contractor workforce in the San Diego area. Workers would be employed by SDG&E, and are expected to include electricians (Standard Occupational Code [SOC]: 472111), laborers (SOC: 472061), operating engineers (SOC: 472073), and supervisors (SOC: 471000), as identified in the February 2011 AFC. Construction of the project would result in a minor increase in local purchases of materials or local construction labor but would cause no adverse socioeconomic impacts.

3.10 TRAFFIC AND TRANSPORTATION

The transmission upgrade activities are located within urbanized areas in the City of Escondido and unincorporated San Diego County. The existing transportation network is comprised of local, regional and interstate roadways and would be used for transportation of equipment and access to the transmission corridor and temporary construction staging areas.

The transmission upgrade project would require approximately 20 workers involved in the work at any one time at the undergrounding and pull and tension sites. The work areas would be expected to be located within the existing transmission corridor and on SDG&E-owned property, and would be accessed by trucks, all-terrain vehicles, by foot, and by helicopter. Access would be over existing roads, and no new access roads are anticipated. Access to poles would be from public roads or though developed private property or commercial lots. Helicopters may be used to string the lines and transport workers and materials to the poles.

3.10.1 Transmission Network Upgrade Impacts

During upgrade activities, workers would be expected to first meet at SDG&E's substation facilities for the respective transmission line and sub-transmission line, then travel together in crew trucks, and park adjacent to the construction corridor on SDG&E ROW and/or property. Movement of heavy machinery on local roads would occur intermittently, but infrequently over the 4- to 6-month upgrade project schedule.

Reconductoring the approximately 1,200-foot segment of the Escondido-Palomar 230-kV #1 and #2 Lines and undergrounding the 600-foot portion of the 69-kV lines would not have a significant adverse impact on traffic and transportation resources. Construction activities for these lines would cross Commercial Street (local road) and Auto Park Way (collector road), which would result in temporary lane closures. However, these traffic impacts would be site-specific, temporary, and similar in level to the discussion presented in the February 2011 AFC.

Reconductoring the 10,500-foot segment of the Friars-Doublet Tap 138-kV line is anticipated to include use of helicopter during stringing operations. The reconductoring segment of the transmission line crosses several roads, including Mission Valley Road, Murray Canyon Road, and Frazee Road. Additionally, the reconductoring involves crossing SR-163, which requires coordination with the California Department of Transportation (Caltrans). Absent mitigation, the roadway and SR-163 crossings would result in significant traffic impacts.

3.10.2 Mitigation

To mitigate potential impacts, SDG&E would be expected to implement a traffic control plan, which would be prepared in accordance with the California Department of Transportation Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook. Additionally, SDG&E would be required to coordinate with Caltrans regarding stringing operations across SR-163. SDG&E would also be expected to be required to install netting, or provide other protective measures, as a safety precaution to reduce the potential for construction materials falling on motorists, bicyclists, or pedestrians during the tensioning/cable pulling process where reconductoring activities require the crossing of roadways.

Implementation of these mitigation measures for the affected area for the short duration of construction in that area is anticipated to be adequate to minimize the traffic impacts to less than significant levels.

3.10.3 Conclusion

With mitigation, the network upgrade activities proposed for the PPEC would not result in any significant traffic or transportation impacts to local roadways. The small number of

traffic trips generated from the upgrade activities would not result in significant impacts. Additionally, implementation of the above mitigation measures would reduce any potential traffic and transportation impacts resulting from the network upgrades to less-than-significant levels.

3.11 NOISE

The surrounding land uses along the Escondido-Palomar 230-kV #1 and #2 Lines and 69-kV lines include industrial and power generation, light industrial, commercial, and open space. The primary source of noise in the area is traffic on local roads and industrial uses. No noise sensitive land uses have been identified along the Escondido-Palomar line upgrade areas. The primary source of noise in the area is traffic on local roads and SR-163. Sensitive uses along the Friars-Doublet Tap 138-kV line include hospital and residential uses.

Reconductoring the two transmission lines and relocating the 69-kV lines underground as described in Section 2.0 would require operation of heavy equipment at pull and tensioning sites and during trenching and ductbank construction activities. Heavy equipment operation has the potential to disturb adjacent noise-sensitive land uses during the temporary construction period along the Friars-Doublet Tap 138-kV reconductoring.

3.11.1 Transmission Network Upgrade Impacts

The transmission network upgrades would require use of construction equipment identified in Section 2.0 for the reconductoring and undergrounding activities, which would result in short-term increases in noise levels during construction. Reconductoring work would require operation of construction-type equipment at the pull and tensioning sites. In some cases, a helicopter may be used to string line. Reconductoring work at each of the pull and tensioning site would be short-term (approximately 3 days per site), and is anticipated to take place between 7 a.m. and 5 p.m. on weekdays. Standard noise reduction devices would be implemented to reduce equipment noise. At adjacent residences along the Friars-Doublet Tap 138-kV reconductoring areas, the increase in noise may result in a noticeable temporary increase in the ambient noise levels. Although construction noise would be required to comply with local ordinances, it may still be disruptive to nearby sensitive uses. Absent mitigation, the temporary construction noise impacts would result in potentially significant impacts.

During operation, the upgraded lines are expected to decrease existing corona noise levels. Corona noise is a function of the line voltage and the condition of the line. Because voltage would remain the same after reconductoring and the condition of the line would be upgraded, corona noise may actually be reduced. Undergrounding the 69-kV lines would reduce potential corona noise levels, as the relocated circuits would be insulated within the underground 69-kV ductbank.

3.11.2 Mitigation

Given the temporary nature of noise impacts from reconductoring and undergrounding, the impacts would be expected to be potentially significant, absent mitigation. Therefore, to ensure that potential construction-related noise impacts will be less than significant, the following best management practices and mitigation measures should be considered by the permitting agency:

- Construction noise emission shall comply with all local laws, ordinances, regulations, and standards regarding hours of construction activity and permitted noise levels affecting adjacent uses.
- All construction equipment should be operated and maintained to minimize noise generation. Equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and other shrouds or noise-reducing features, in good operating condition that meets or exceed original factory specifications. Mobile or fixed "package equipment" shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- The use of noise-producing signals, including horns, whistles, electronic alarms, and sirens and bells, will be for safety warning purposes only.
- No construction-related public address, loudspeaker, or music system shall be audible at any adjacent noise-sensitive land use.
- The construction contractor shall implement a noise complaint process and hotline number for the surrounding community. The project owner will have the responsibility and authority to receive and resolve noise complaints.

3.11.3 Conclusion

By implementing mitigation measures similar to those that were proposed in the PPEC February 2011 AFC for construction of the PPEC facility, potential noise impacts from reconductoring and undergrounding work would be less than significant.

3.12 VISUAL RESOURCES

The transmission network upgrade project involves reconductoring and undergrounding work on existing transmission and sub-transmission line segments, and equipment replacement in existing substations. The Escondido-Palomar 230-kV #1 and #2 Lines and 69-kV lines are located in a predominantly industrial area with multiple existing utility lines and a nearby power plant facility. The Friars-Doublet Tap 138-kV line is located in a high-voltage transmission corridor with an existing higher voltage transmission line. Nearby uses along the high voltage transmission corridor include residential, commercial, and open space uses.

3.12.1 Transmission Network Upgrade Impacts

The network upgrade activities would result in temporary visual impacts during construction. Construction equipment and activities would likely be visible at various locations along the transmission lines to motorists and nearby residences. However, due to the short duration of the construction timeframe (i.e., 4 to 6 months), with construction activities moving along the corridor approximately every three days, adverse visual impacts associated with construction would be short-term and less than significant. At the end of the construction period, all construction areas and rights-of-way would be restored to pre-project conditions.

Since reconductoring involves the replacement of existing electrical transmission line with new conductors, the reconductoring would be undetectable to viewers of the lines in the existing visual environment. Undergrounding of the Escondido-Palomar 69-kV lines involves burial of existing overhead sub-transmission lines. As a result, once in operation, the undergrounded lines would improve the pre-construction visual environment due to the relocation of sub-transmission lines that were formerly visible above ground to an underground ductbank. All potentially adverse visual impacts associated with reconductoring and undergrounding activities would be temporary, and would be considered to be less than significant.

Upgrades to switches and breakers at the substations may also be required as a part of the network upgrade project. These changes would be minor and would occur within the fenced-in structures of the substation, and would not be expected to result in a change in the visual characteristics of the substation. Therefore, substation upgrades would be considered less than significant.

3.12.2 Mitigation

Impacts to visual resources are anticipated to be less than significant; therefore, no mitigation would be required. However, SDG&E might consider the following best management practices to further ameliorate any visual effects from the upgrade activities:

- During project construction, the work site should be kept clean of debris and construction waste.
- Construction staging areas should be selected to minimize views from public roads, and residences.
- All evidence of construction activities, including ground disturbance due to staging and storage areas, should be removed and remediated upon completion of construction. Construction areas and rights-of-way should be restored to their original grade and contouring. Any vegetation removed in the course of construction should be replaced on a one-to-one, in-kind basis.

- Transmission poles that are modified or replaced should be treated with non-glare finishes and painted in colors that would blend with the surrounding environment.
- Non-specular conductors should be used.
- Insulators should be non-reflective and non-refractive.

3.12.3 Conclusion

Construction of the network upgrades would result in short-term but less than significant visual impacts. Since the reconductored lines are existing transmission lines, once construction is complete, this change to the transmission lines would be expected to be undetectable to most viewers of the line. The undergrounding project reduces visual impacts over the long-term by moving sub-transmission lines that were previously visible above ground into an underground ductbank. As a result, impacts to visual resources would be considered less than significant.

3.13 WASTE MANAGEMENT

Construction of the project would not result in impacts greater than those analyzed in the PPEC February 2011 AFC. Construction of the project would not result in a significant increase in waste. Wastes generated would include the old conductor and conductor spools, which would be disposed of in accordance with SDG&E's standard recycling and waste management procedures. The upgrade project would, therefore, not cause significant impacts in terms of waste management.

3.14 HAZARDOUS MATERIALS AND HANDLING

Hazardous materials use during reconductoring activities would be limited to fuels and lubricants associated with the equipment. Potential impacts would be limited to small fuel or oil spills. SDG&E would use BMPs as standard procedures to avoid the release of hazardous materials. These might include measures such as equipment refueling away from the immediate project area and use of hazardous material use in locations away from water bodies to prevent contamination of water in the event of a spill. Using these BMPs, any potential environmental effects would be limited to small areas of contaminated soil. In the unlikely event of a spill, BMPs would call for the contaminated soil to be placed into barrels or trucks for offsite disposal as hazardous waste. Therefore, the Project is expected to result in less than significant impacts from the handling of hazardous materials.

3.15 PUBLIC HEALTH

The project would require replacement of approximately 2.2 miles of conductor and undergrounding of approximately 600 feet of 69-kV lines. However, because the upgrade activities would not require substantial grading or the replacement of the existing

transmission poles, the upgrading activities are not expected to result in significant quantities of toxic air contaminant emissions. Other project activities would also not have an adverse effect on public health.

3.16 WORKER SAFETY

SDG&E would follow industry standard health and safety practices in accordance with its own health and safety plans and procedures during the upgrade project, as identified in the February 2011 AFC. Such standards and practices include written safety programs (i.e., accident/incident reporting procedures, electrical safety procedures, emergency response plan, motor vehicle safety, etc.). As a result, it is unlikely that the project would cause significant adverse impacts in terms of worker safety and fire protection.

3.17 TRANSMISSION LINE SAFETY AND NUISANCE

The identified reconductoring would involve the substitution of new conductors for existing ones as necessary for effective and safe transmission of the additional energy from PPEC. The magnitude of electromagnetic fields (EMF) associated with transmission lines depends on line voltage and current levels. The potential for perceivable field impacts and significant field exposures would depend on the chosen design, the current levels, and distance from the line, which would be determined by SDG&E at a later date.

3.17.1 Transmission Network Upgrades Impacts

Because the retrofitted lines would be operated at the same voltages as the existing lines, the magnitude of the electric field along each route would not change from current levels. The only field-related change from the retrofit (and its related increases in current flow) would be with respect to the magnetic field, whose intensity depends directly on current levels. Since the retrofitted lines would remain within their existing routes, the retrofit-related increases in magnetic field intensity could lead to corresponding increases in human exposure to line magnetic fields. The residences adjacent to the transmission lines, line workers, and individuals in transit under the transmission line would be subject to an increase or change in EMF exposure.

3.17.2 Mitigation

The CPUC's method of ensuring the appropriate management of fields from high-voltage power lines (in light of the current health concern) is to require incorporation of specific field-reducing measures in the design for new or retrofitted lines. SDG&E's design guidelines for new and retrofitted lines are prepared in compliance with current CPUC requirements. The reconductored lines would be constructed consistent with this CPUC policy as related to field strengths, perceivable field effects, electric shocks, and human exposure. Since the reconductored lines would be designed and operated according to

standard SDG&E practices, it is expected that these lines would be operated in accordance with the applicable health and safety laws, ordinances, regulations and standards and any impacts would be less than significant. As a result, no mitigation is expected for transmission line safety and nuisance.

3.17.3 Conclusion

If the identified 230-kV lines are reconductored and the 69-kV lines relocated underground, they would be designed, built and operated (within their existing routes) according to CPUC's requirements, by SDG&E consistent with their own guidelines to address transmission line safety and nuisance. Therefore, impacts would be less than significant.

3.18 TRANSMISSION SYSTEM ENGINEERING

Reconductoring of the transmission lines described above would involve removing the existing conductors and replacing them with higher-rated conductors, in a manner that complies with applicable safety and reliability standards. Each of these new conductors will significantly increase the ratings of the transmission lines. Insulators could also be removed and replaced with new strings, which would increase the line's capability to withstand voltage surges. Relocating the 69-kV sub-transmission lines would similarly require replacement of the conductors to new cables.

3.18.1 Transmission Network Upgrades Impacts

During construction, applicable safety and reliability laws, ordinances, regulations and standards would be implemented. These include CPUC General Order 95, Title 8 California Code of Regulations Construction Safety Orders, and SDG&E Construction Standards. Additionally, to maintain system reliability, the CAISO must be advised per the CAISO scheduling protocol of scheduled circuit outages prior to occurrence. Such outages are scheduled about 30 days prior to occurrence and are verified just prior to actual outage. In the event that system reliability requires restoring such circuits, a "no work order" is given, and where practicable, circuits are restored. Network upgrades of the transmission circuits described above would result in local system benefits, in that it would provide considerably greater flexibility in routing power in the area. The upgrade project would not only ensure that the PPEC project could generate power at its rated capacity, but would increase the capacity and reliability of power deliveries to and from Southern California.

3.18.2 Mitigation

To reduce potential safety and reliability impacts, the above-stated laws, ordinances, regulations, and standards and CAISO scheduling protocols would be used. The CPUC ensures conformance with the above safety requirements; the CAISO would ensure conformance with its reliability requirements and any impacts would be less than significant.

3.18.3 Conclusion

Conformance with applicable safety and reliability is likely to occur and would be successful in mitigating any safety or reliability implications of reconductoring to less than significant levels.

SECTION 4.0
CONCLUSIONS

Sections 2 and 3 of this report describe the process and the potential impacts of upgrading the Escondido-Palomar and Friars-Doublet Tap transmission lines. This analysis presents the potential indirect environmental and public health effects of the PPEC project.

As the owner of the transmission lines, SDG&E will be responsible for the design and construction associated with the reconductoring and compliance with all applicable LORS. With the implementation of BMPs and appropriate mitigation measures, reconductoring of the transmission lines described above has very little potential for creating significant, unmitigated impacts to public safety or the environment.

SECTION 5.0
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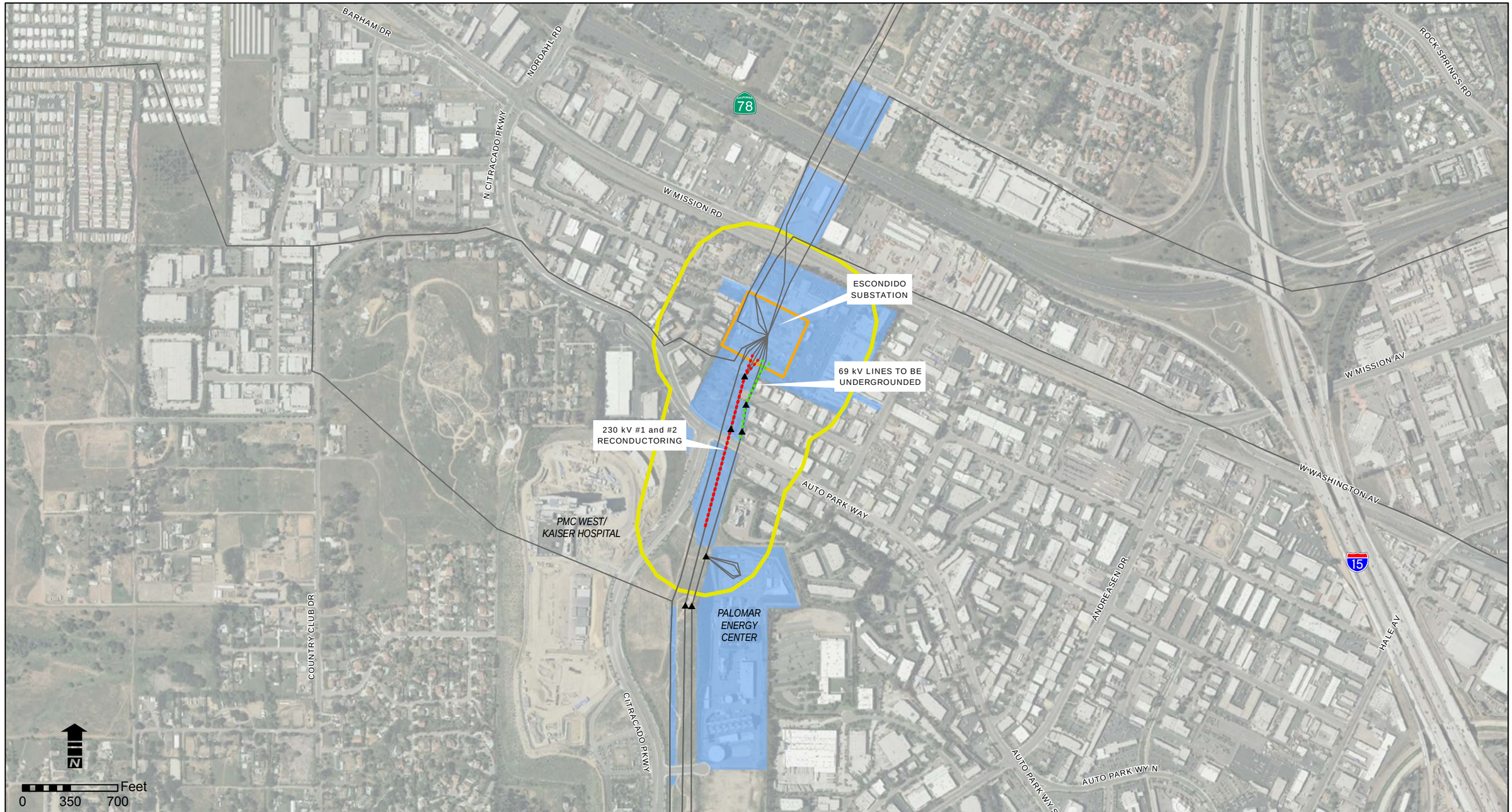
FIGURES



LEGEND

- ▲ TRANSMISSION POLE□TOWER LOCATION (APPROXIMATE)
- 69 kV LINES TO BE UNDERGROUNDED (APPROXIMATELY 600 FEET)
- ESCONDIDO-PALOMAR 230 kV □1 AND □2 RECONDUCTORING (APPROXIMATELY1,200 FEET)
- EXISTING TRANSMISSION LINE
- ESCONDIDO SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW
- SDG□E PARCEL

FIGURE 1
ESCONDIDO-PALOMAR UPGRADES, AERIAL VIEW

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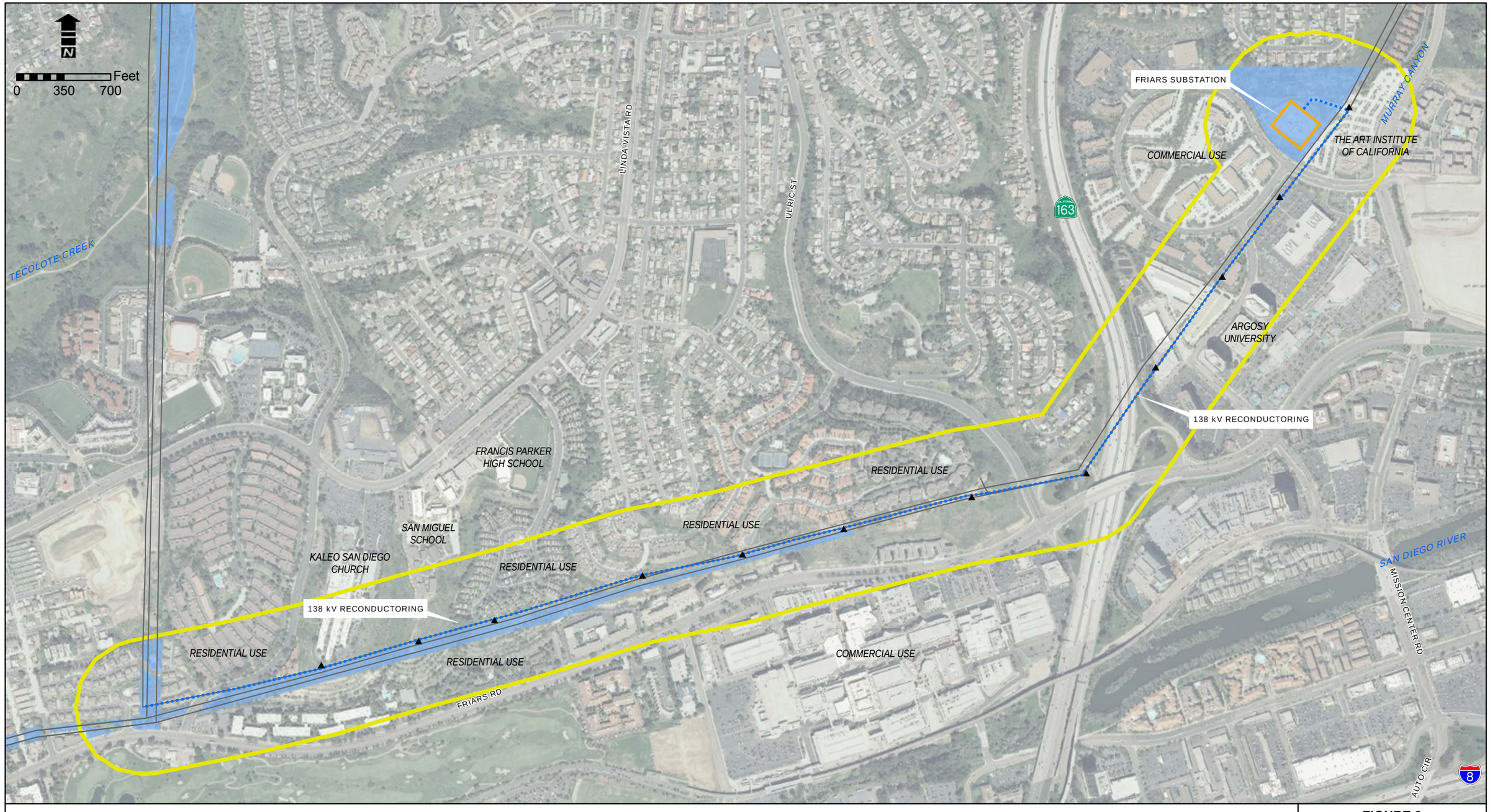

LEGEND

- ▲ TRANSMISSION POLE□TOWER LOCATION (APPROXIMATE)
- FRIARS-DOUBLET TAP 138 kV RECONDUCTORING (APPROXIMATELY 10,500 FEET)
- EXISTING TRANSMISSION LINE
- FRIARS SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW
- SDG□E PARCEL

FIGURE 2
FRIARS-DOUBLET TAP 138kV UPGRADE, AERIAL VIEW

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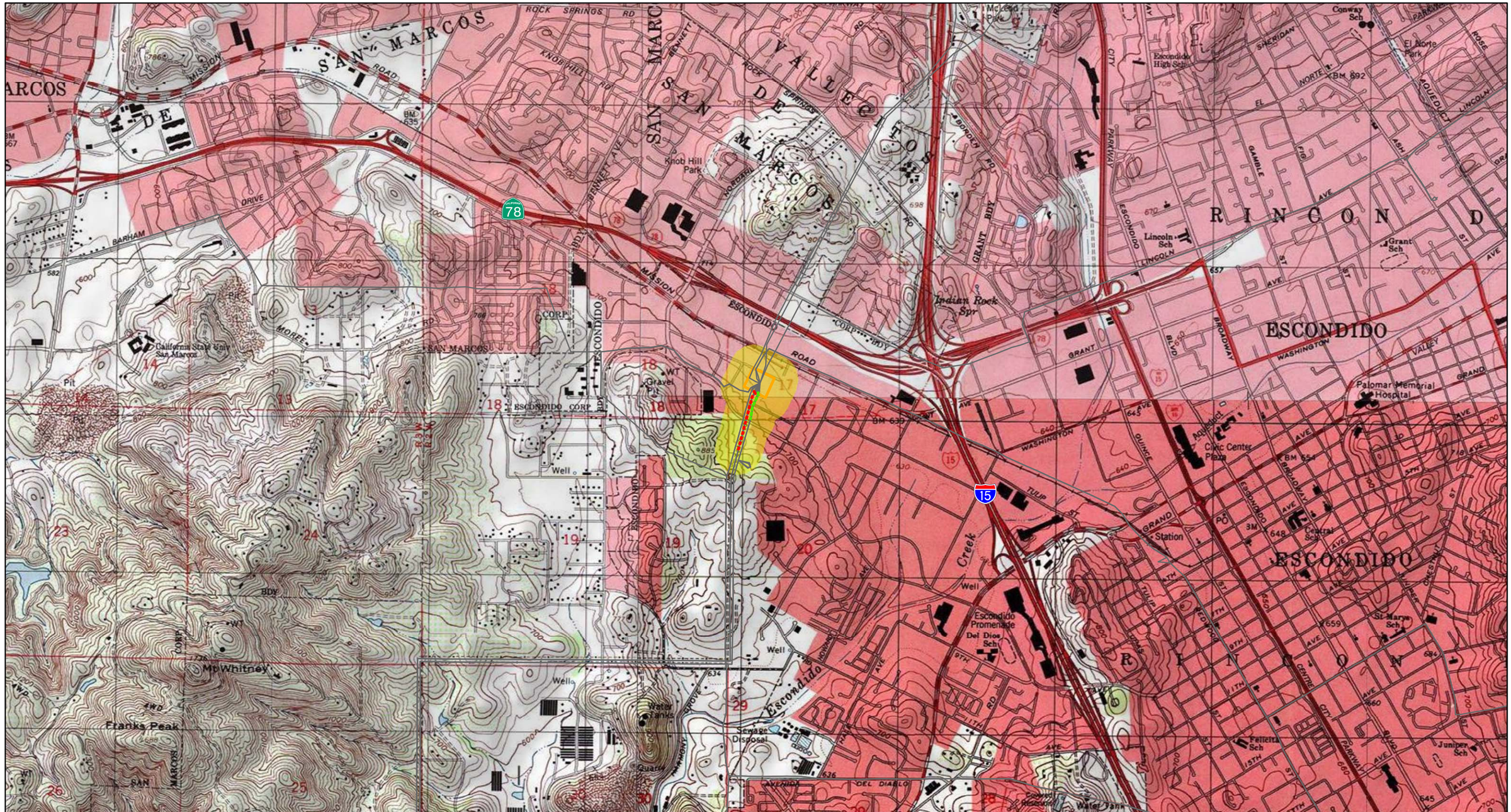

LEGEND

- 69 kV LINES TO BE UNDERGROUNDED (APPROXIMATELY 600 FEET)
- ESCONDIDO-PALOMAR 230 kV □1 AND □2 RECONDUCTORING (APPROXIMATELY1,200 FEET)
- EXISTING TRANSMISSION LINE
- ESCONDIDO SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW

N

0 1,000 2,000 Feet

FIGURE 3
ESCONDIDO-PALOMAR UPGRADES, USGS TOPOGRAPHIC QUADRANGLE

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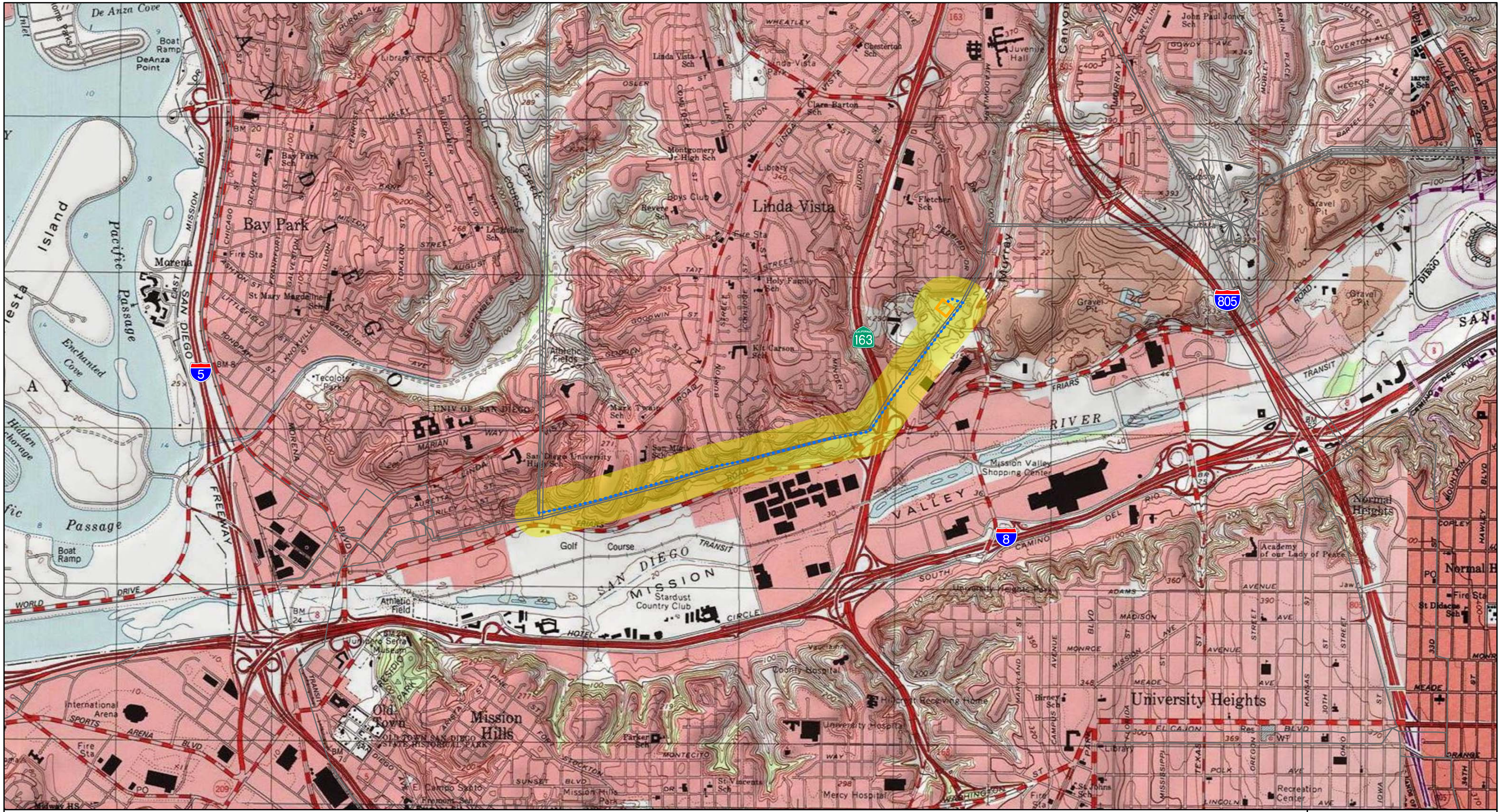


LEGEND

- FRIARS-DOUBLET TAP 138 kV RECONDUCTORING (APPROXIMATELY 10,500 FEET)
- EXISTING TRANSMISSION LINE
- FRIARS SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW

N

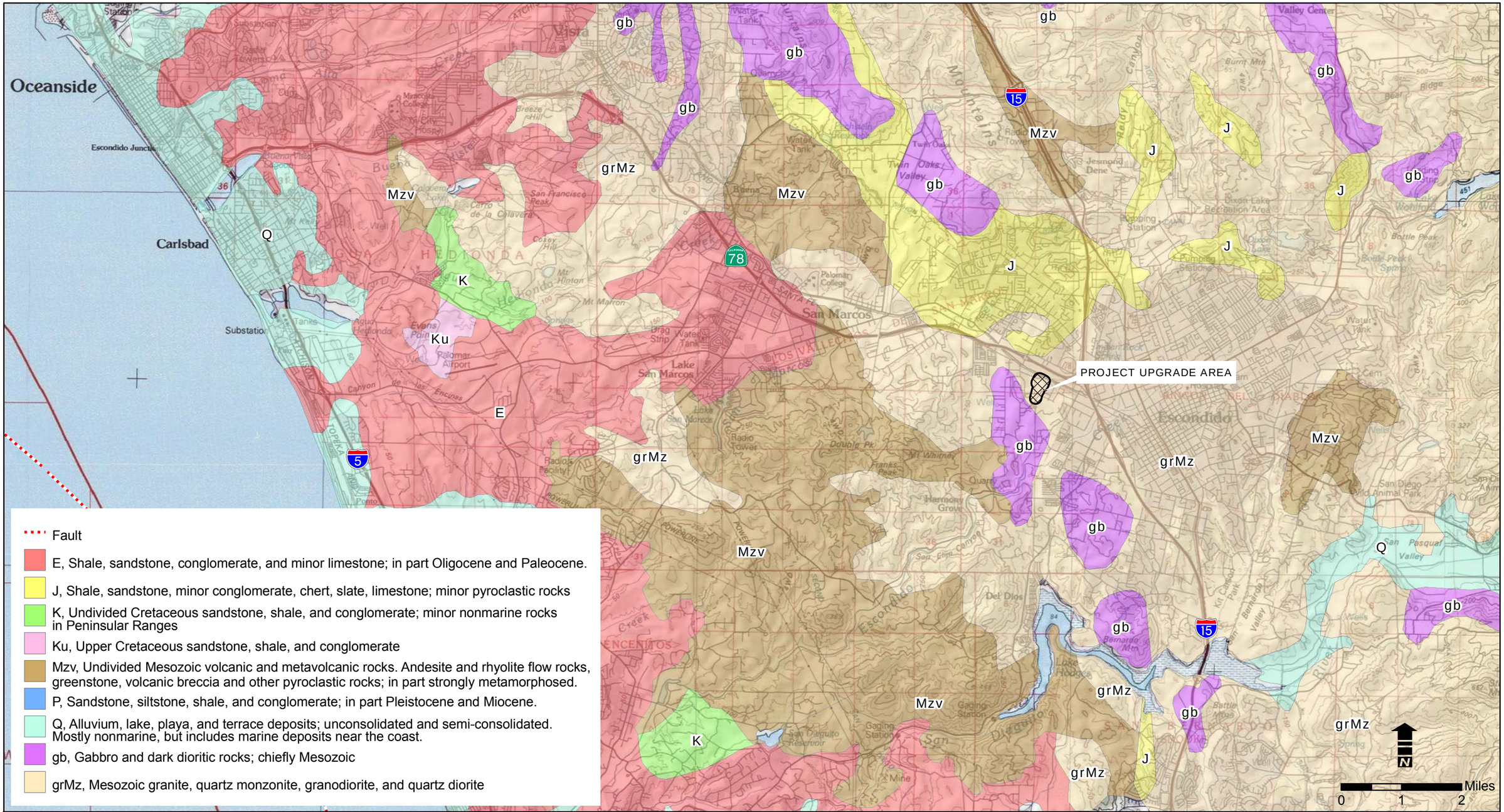
0 1,000 2,000 Feet

FIGURE 4
FRIARS-DOUBLET TAP 138kV UPGRADE, USGS TOPOGRAPHIC QUADRANGLE

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS



LEGEND

PROJECT UPGRADE AREA WITH 500-FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW

FIGURE 5
ESCONDIDO-PALOMAR UPGRADES, GEOLOGIC MAP

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

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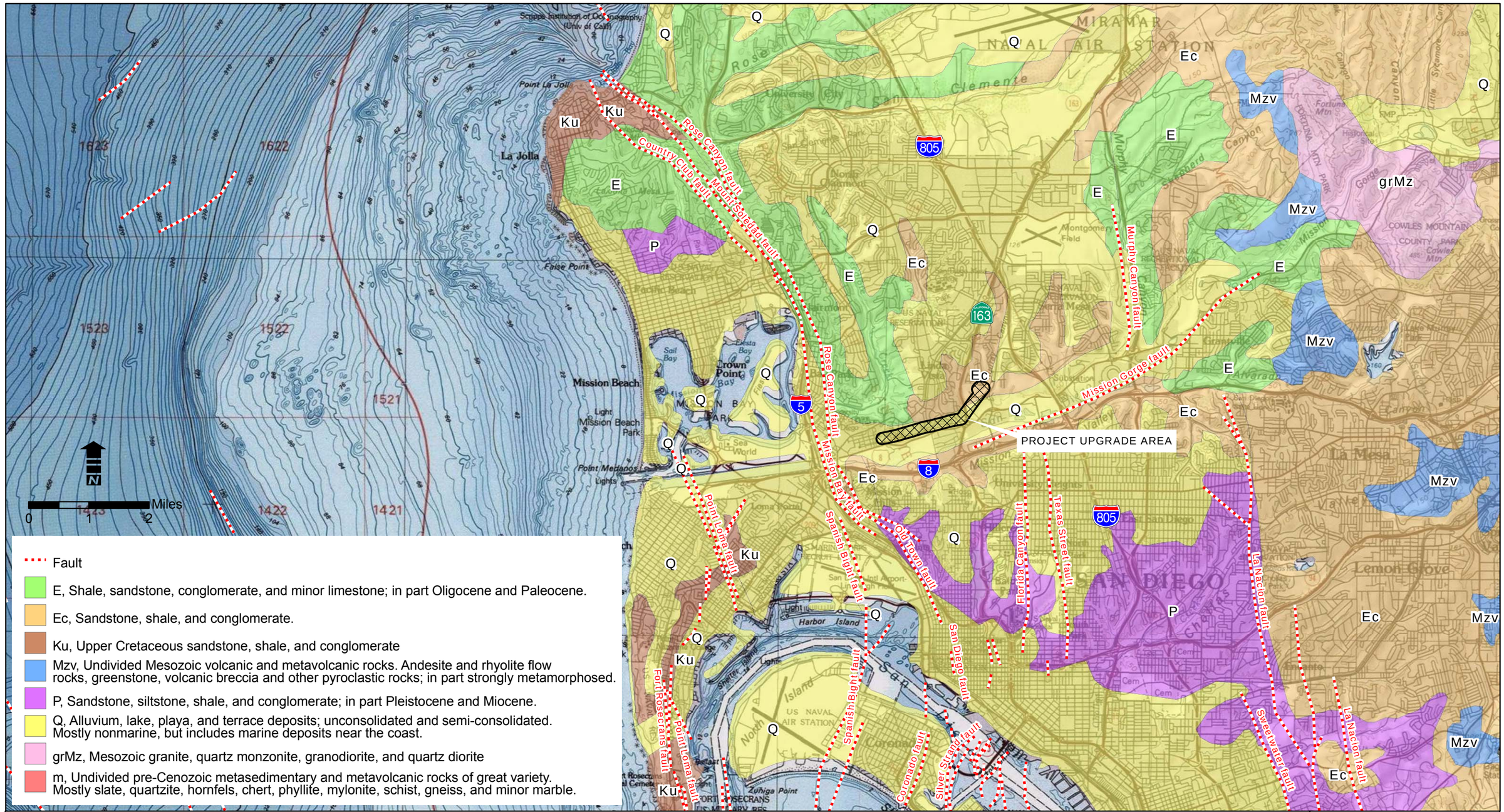


LEGEND

⊠ PROJECT UPGRADE AREA WITH 500-FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW

FIGURE 6
FRIARS-DOUBLET TAP 138kV UPGRADE, GEOLOGIC MAP

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS

BIC, Bonsall sandy loam, 2 to 9 percent slopes
ClD2, Cieneba coarse sandy loam, 5 to 15 percent slopes, eroded
CmE2, Cieneba rocky coarse sandy loam, 9 to 30 percent slopes, eroded
EsE2, Escondido very fine sandy loam, 15 to 30 percent slopes, eroded
FaB, Fallbrook sandy loam, 2 to 5 percent slopes
FaC, Fallbrook sandy loam, 5 to 9 percent slopes
FaD2, Fallbrook sandy loam, 9 to 15 percent slopes, eroded
FeC, Fallbrook rocky sandy loam, 5 to 9 percent slopes
FvD, Fallbrook-Vista sandy loams, 9 to 15 percent slopes
GoA, Grangeville fine sandy loam, 0 to 2 percent slopes
PeC, Placentia sandy loam, 2 to 9 percent slopes
PfC, Placentia sandy loam, thick surface, 2 to 9 percent slopes
RaB, Ramona sandy loam, 2 to 5 percent slopes
VaB, Visalia sandy loam, 2 to 5 percent slopes
VaC, Visalia sandy loam, 5 to 9 percent slopes
VsC, Vista coarse sandy loam, 5 to 9 percent slopes
VsD, Vista coarse sandy loam, 9 to 15 percent slopes
VsD2, Vista coarse sandy loam, 9 to 15 percent slopes, eroded
VsE, Vista coarse sandy loam, 15 to 30 percent slopes
VsE2, Vista coarse sandy loam, 15 to 30 percent slopes, eroded
VvD, Vista rocky coarse sandy loam, 5 to 15 percent slopes

N

0 350 700 Feet

LEGEND

- 69 kV LINES TO BE UNDERGROUNDED (APPROXIMATELY 600 FEET)
- ESCONDIDO-PALOMAR 230 kV □1 AND □2 RECONDUCTORING (APPROXIMATELY1,200 FEET)
- EXISTING TRANSMISSION LINE
- ESCONDIDO SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW
- SOIL BOUNDARY

FIGURE 7
ESCONDIDO-PALOMAR UPGRADES, SOILS MAP

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS

CcC, Carlsbad-Urban land complex, 2 to 9 percent slopes
CgC, Chesterton-Urban land complex, 2 to 9 percent slopes
DcD, Diablo-Urban land complex, 5 to 15 percent slopes
GP, Gravel pits
GaF, Gaviota fine sandy loam, 30 to 50 percent slopes
GoA, Grangeville fine sandy loam, 0 to 2 percent slopes
HrC, Huerhuero loam, 2 to 9 percent slopes
HrE2, Huerhuero loam, 15 to 30 percent slopes, eroded
HuC, Huerhuero-Urban land complex, 2 to 9 percent slopes
HuE, Huerhuero-Urban land complex, 9 to 30 percent slopes
Md, Made land
OhE, Olivenhain cobbly loam, 9 to 30 percent slopes
OhF, Olivenhain cobbly loam, 30 to 50 percent slopes
OkC, Olivenhain-Urban land complex, 2 to 9 percent slopes
OkE, Olivenhain-Urban land complex, 9 to 30 percent slopes
QU, Quarries
RhC, Redding-Urban land complex, 2 to 9 percent slopes
RkB, Reiff fine sandy loam, 2 to 5 percent slopes
Rm, Riverwash
TeF, Terrace escarpments
TuB, Tujunga sand, 0 to 5 percent slopes
Ur, Urban land

LINDA VISTA RD
ULRIC ST
MURRAY CANYON
FRIARS RD
MISSION CENTER RD
SAN DIEGO RIVER
AUTO CIR
163
8

LEGEND

- FRIARS-DOUBLET TAP 138 kV RECONDUCTORING (APPROXIMATELY 10,500 FEET)
- EXISTING TRANSMISSION LINE
- FRIARS SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW
- SOIL BOUNDARY

N

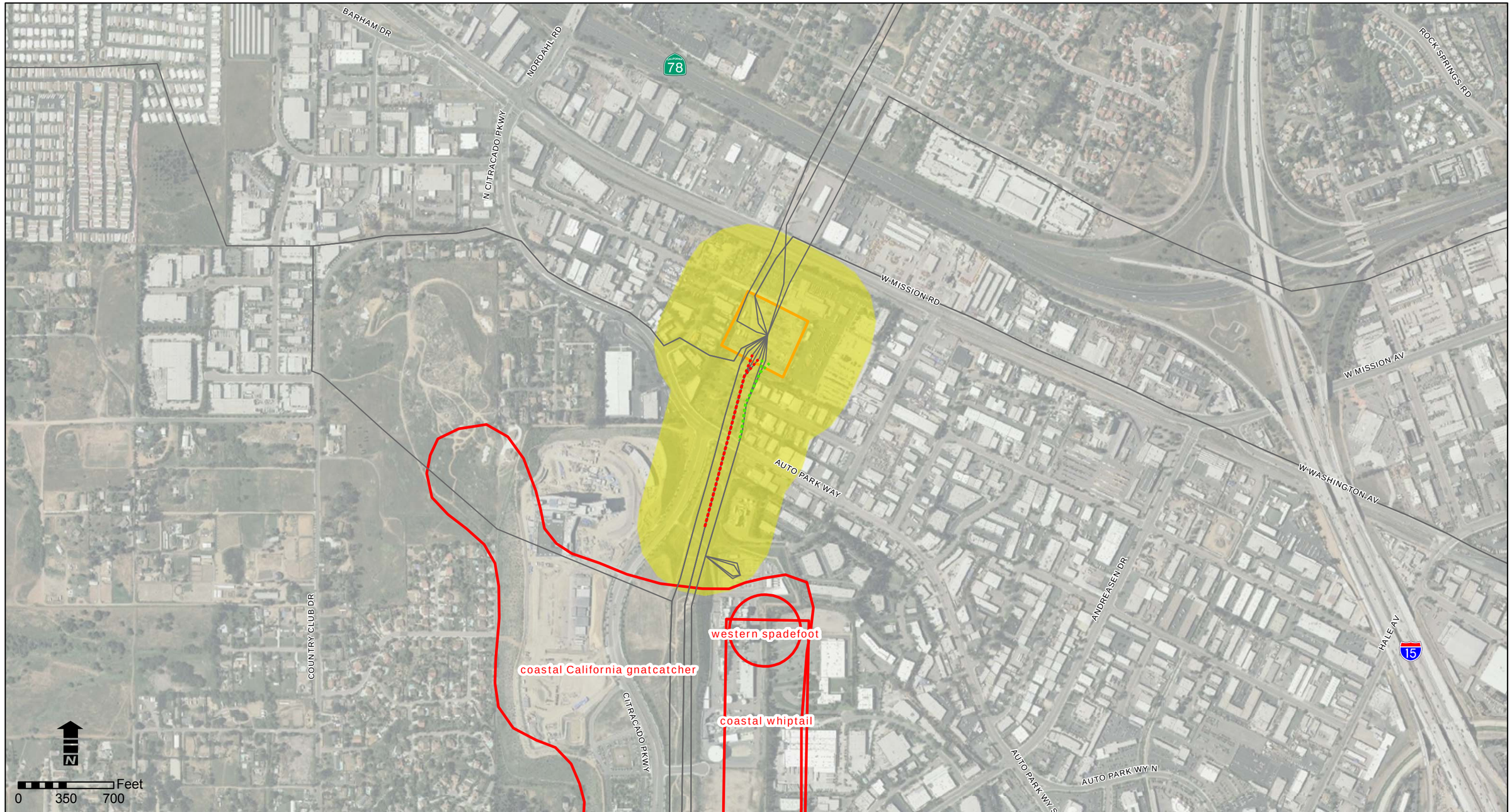
0 350 700 Feet

FIGURE 8
FRIARS-DOUBLET TAP 138kV UPGRADE, SOILS MAP

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS



LEGEND

- 69 kV LINES TO BE UNDERGROUNDED (APPROXIMATELY 600 FEET)
- ESCONDIDO-PALOMAR 230 kV □1 AND □2 RECONDUCTORING (APPROXIMATELY1,200 FEET)
- EXISTING TRANSMISSION LINE
- ESCONDIDO SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW
- CALIFORNIA NATURAL DIVERSITY DATABASE (CNDDB)

FIGURE 9
SENSITIVE BIOLOGICAL RESOURCES ALONG ESCONDIDO-PALOMAR UPGRADES

PIO PICO ENERGY CENTER

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URS

Oil neststraw occurs within the La Jolla USGS quadrangle at non-specific locations.

N

Feet
0 350 700

Palmer's grapplinghook
San Diego goldenstar
least Bell's vireo
San Diego barrel cactus
coastal California gnatcatcher
pocketed free-tailed bat
coastal California gnatcatcher
San Diego button-celery
purple stemodia
TECOLOTE CREEK
LINDA VISTA RD
ULRIC ST
163
San Diego mesa mint
Orcutt's brodiaea
coastal California gnatcatcher
variegated dudleya
beach goldenaster
Southern Cottonwood Willow Riparian Forest
FRIARS RD
Davidson's saltscale
Brand's star phacelia
coast woolly-heads
Robinson's pepper-grass
light gray lichen
estuary seablite
Mexican long-tongued bat
Nuttall's scrub oak
San Diego goldenstar
San Diego barrel cactus
SAN DIEGO RIVER
MISSION CENTER RD
Otay Mesa mint
chaparral ragwort
8

LEGEND

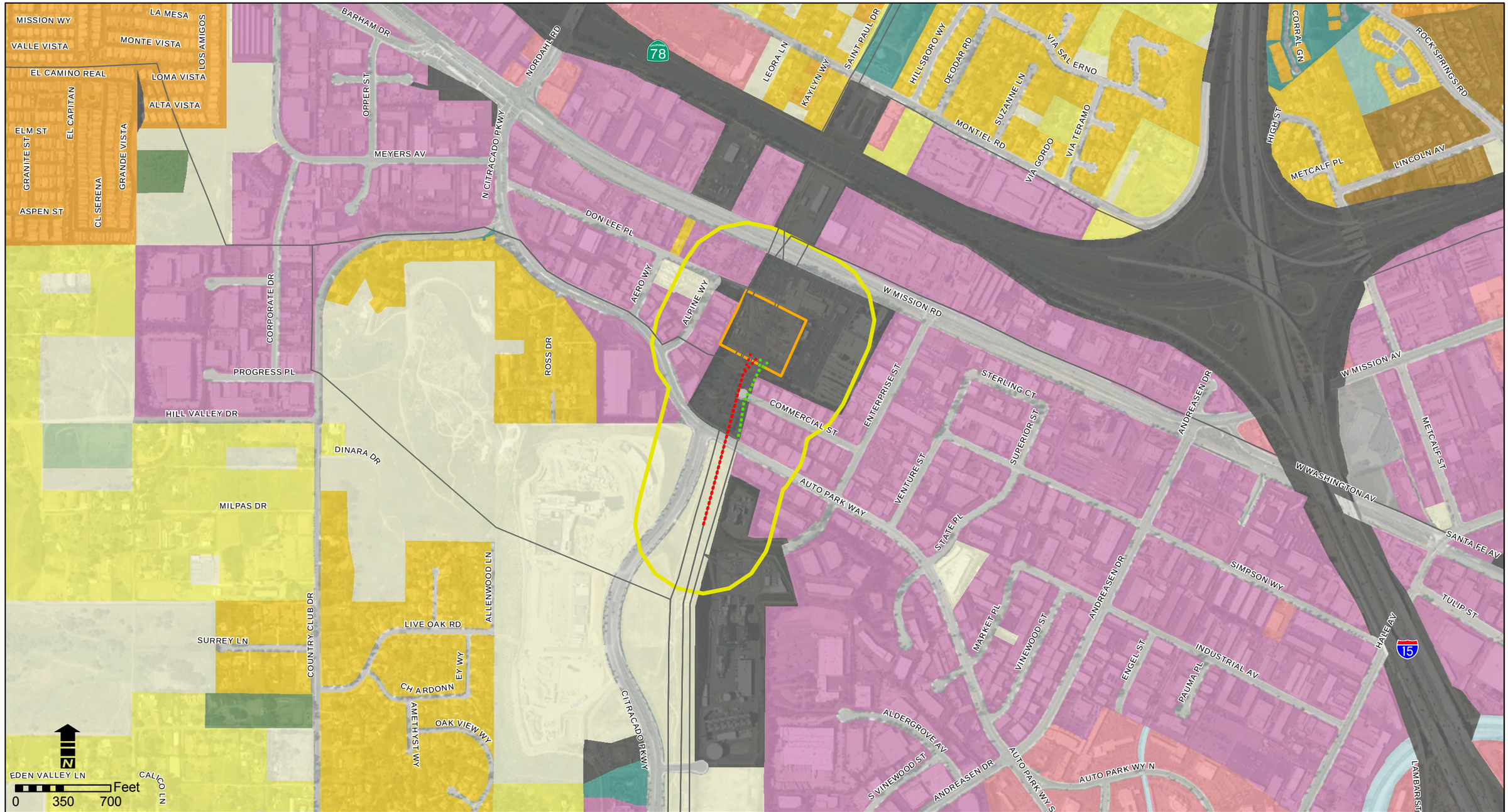
- FRIARS-DOUBLET TAP 138 kV RECONDUCTORING (APPROXIMATELY 10,500 FEET)
- EXISTING TRANSMISSION LINE
- FRIARS SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW
- CALIFORNIA NATURAL DIVERSITY DATABASE (CNDDB)

FIGURE 10
SENSITIVE BIOLOGICAL RESOURCES ALONG FRIARS-DOUBLET TAP 138kV UPGRADE

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS



LEGEND

- 69 KV LINES TO BE UNDERGROUNDED (APPROXIMATELY 600 FEET)
- ESCONDIDO-PALOMAR 230 KV □ 1 AND □ 2 RECONDUCTORING (APPROXIMATELY1,200 FEET)
- EXISTING TRANSMISSION LINE
- ESCONDIDO SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW

CITY OF ESCONDIDO DESIGNATED LAND USE, 1999

- SPACED RURAL RESIDENTIAL
- SINGLE FAMILY DETACHED
- SINGLE FAMILY ATTACHED
- MOBILE HOMES
- MULTIPLE FAMILY
- COMMERCIAL AND OFFICE
- LIGHT INDUSTRY
- TRANSPORTATION, COMMUNICATIONS, UTILITIES
- INSTITUTIONS
- RECREATION
- OPEN SPACE PARKS
- INTENSIVE AGRICULTURE
- EXTENSIVE AGRICULTURE
- UNDEVELOPED
- WATER

FIGURE 11
LAND USE DESIGNATIONS ALONG ESCONDIDO-PALOMAR UPGRADES

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS

LEGEND

- FRIARS-DOUBLET TAP 138 KV RECONDUCTORING (APPROXIMATELY 10,500 FEET)
- EXISTING TRANSMISSION LINE
- FRIARS SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW

CITY OF SAN DIEGO DESIGNATED LAND USE, 1999

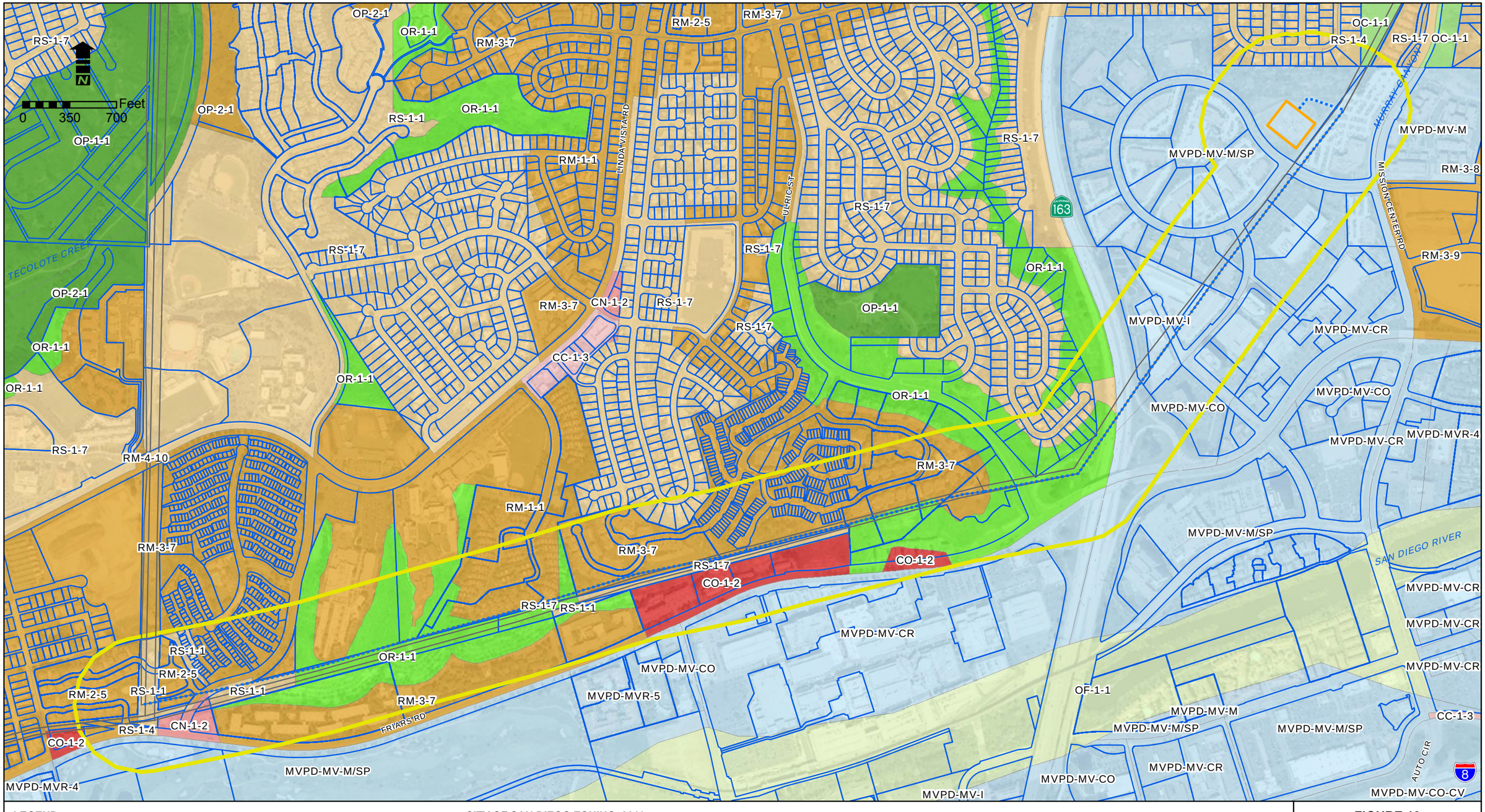
- SINGLE FAMILY DETACHED
- SINGLE FAMILY ATTACHED
- MULTIPLE FAMILY
- SHOPPING CENTERS
- COMMERCIAL AND OFFICE
- LIGHT INDUSTRY
- EXTRACTIVE INDUSTRY
- TRANSPORTATION, COMMUNICATIONS, UTILITIES
- EDUCATION
- INSTITUTIONS
- RECREATION
- OPEN SPACE PARKS
- UNDEVELOPED
- WATER

FIGURE 12
LAND USE DESIGNATIONS ALONG FRIARS-DOUBLET TAP 138kV UPGRADE

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS



LEGEND

- FRIARS-DOUBLET TAP 138 kV RECONDUCTORING (APPROXIMATELY 10,500 FEET)
- EXISTING TRANSMISSION LINE
- FRIARS SUBSTATION
- 500 FOOT BUFFER FROM OUTSIDE EDGES OF TRANSMISSION CORRIDOR ROW
- PARCEL BOUNDARY

CITY OF SAN DIEGO ZONING, 2011

- OPEN SPACE (OF)
- OPEN SPACE CONSERVATION (OC)
- OPEN SPACE RESIDENTIAL (OR)
- OPEN SPACE PARK (OP)
- COMMERCIAL COMMUNITY (CC)
- COMMERCIAL NEIGHBORHOOD (CN)
- COMMERCIAL OFFICE (CO)
- RESIDENTIAL MULTIPLE-UNIT (RM)
- RESIDENTIAL SINGLE-UNIT (RS)
- MISSION VALLEY PLANNED DEVELOPMENT (MVPD)

FIGURE 13
ZONING ALONG FRIARS-DOUBLET TAP 138kV UPGRADE

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: OCTOBER 2011

URS

APPENDIX A
SPECIAL-STATUS PLANT AND WILDLIFE SPECIES POTENTIAL FOR OCCURRENCE

TABLE A-1
SPECIAL-STATUS PLANT SPECIES POTENTIAL FOR OCCURRENCE

Scientific and Common Name	Habitat and Distribution	Blooming Period	Status Designation	Potential for Occurrence
Atriplex serenana var. davidsonii Davidson's saltscale	Annual herb. Found in coastal bluff scrub, coastal dunes, coastal scrub, and playas. Occurs from 0 to 460 feet in elevation.	Mar Oct	Fed: NONE CA: NONE CNPS: List 1B.2	Low
Bloomeria clevelandii San Diego goldenstar	Annual herb. Found in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. It inhabits mesa grasslands, scrub edges, clay soils often on mounds between vernal pools in fine, sandy loam. Occurs from 164 to 1,510 feet in elevation.	Apr May	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Brodiaea orcuttii Orcutts brodiaea	Bulbiferous herb. Found in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools mesic and clay soils, sometimes serpentine. Occurs from 100 to 5,500 feet in elevation.	May Jul	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Ceanothus verrucosus Wart-stemmed ceanothus	Perennial herb. Found in chaparral from 0 to 1,247 feet in elevation.	Dec May	Fed: NONE CA: NONE CNPS: List 2.2	Absent
Dudleya variegata Variegated dudleya	Perennial herb. Found in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools clay soils. Occurs from 10 to 1,900 feet in elevation.	Apr Jun	Fed: NONE CA: NONE CNPS: List 1B.2	Moderate
Eryngium aristulatm **var.** *parishii* San Diego button-celery	Annual herb. Found in coastal scrub, valley and foothill grassland, and vernal pools mesic soil. Occurs from 66 to 2,035 feet in elevation.	Apr Jun	Fed: END CA: END CNPS: List 1B.1	Absent
Ferocactus viridescens San Diego barrel cactus	Stem succulent. Found in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Occurs from 10 to 1,500 feet in elevation.	May Jun	Fed: NONE CA: NONE CNPS: List 2.1	Moderate
Harpagonella palmeri Palmers grapplinghook	Annual herb. Found in chaparral, coastal scrub, and valley and foothill grassland clay. Occurs from 66 to 3,130 feet in elevation.	Mar May	Fed: NONE CA: NONE CNPS: List 4.2	Absent

TABLE A-1 (CONTINUED)
SPECIAL-STATUS PLANT SPECIES POTENTIAL FOR OCCURRENCE

Scientific and Common Name	Habitat and Distribution	Blooming Period	Status Designation	Potential for Occurrence
Heterotheca sessiliflora **ssp.** *sessiliflora* Beach goldenaster	Annual herb. Found in sandy areas within coastal dunes, coastal scrub, and coastal chaparral. Occurs from 1 to 4,015 feet in elevation.	Mar Dec	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Lasthenia glabrata ssp. coulteri Coulter's goldfields	Annual herb. Found in coastal salt marshes, playas, valley and grassland, and vernal pools. Occurs from 1 to 4,592 feet in elevation.	Feb Jun	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Lepidium virginicum **var.** *robinsonii* Robinson s pepper-grass	Annual herb. Found in chaparral and coastal scrub. Occurs from 3 to 2,900 feet in elevation.	Jan Jul	Fed: NONE CA: NONE CNPS: List 1B.2	Moderate
Nemacaulis denudata var. denudate Coast woolly-heads	Annual herb. Found in sandy areas within coastal dunes from 0 to 328 feet in elevation.	Apr Sep	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Phacelia stellaris Brand's star phacelia	Annual herb. Found in coastal scrub and coastal dunes from 5 to 4,969 feet in elevation.	Mar Jun	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Pogogyne nudiuscula Otay Mesa mint	Annual herb. Found in vernal pools. Occurs from 295 to 820 feet in elevation.	May Jul	Fed: END CA: END CNPS: List 1B.1	Absent
Quercus dumosa Nutall s scrub oak	Evergreen shrub. Found in closed-cone coniferous forest, chaparral, and coastal scrub sandy, clay loam soils. Occurs from 50 to 1,312 feet in elevation.	Feb Apr	Fed: NONE CA: NONE CNPS: List 1B.1	Moderate
Senecio aphanactis Chaparral ragwort	Annual herb. Found in coastal scrub and cismontane woodlands on drying alkali flats. Occurs from 66 to 1,886 feet in elevation.	Jan Apr	Fed: NONE CA: NONE CNPS: List 2.2	Moderate
Stylocline citroleum Oil neststraw	Annual herb. Found in chenopod scrub and coastal scrub in clay soils. Occurs from 164 to 984 feet in elevation.	Mar Apr	Fed: NONE CA: NONE CNPS: List 1B.1	Moderate
Suaeda esteroa estuary seablite	Perennial herb. Found in coastal salt marshes in clay, silt, or sand substrates. Occurs from 0 to 16 feet in elevation.	May Oct	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Stemodia durantifolia Purple stemodia	Perennial herb. Found in Sonoran desert scrub (often mesic, sandy soils). Occurs from 590 to 984 feet in elevation.	Jan Dec	Fed: NONE CA: NONE CNPS: List 2.1	Absent

TABLE A-1 (CONTINUED)
SPECIAL-STATUS PLANT SPECIES POTENTIAL FOR OCCURRENCE

STATUS CODES:

Federal designations (Federal Endangered Species Act, USFWS):

END Federal-listed, endangered.
THR Federal-listed, threatened.
NONE Not listed.

State designations (California Endangered Species Act, CDFG):

END State-listed, endangered.
THR State-listed, threatened.
RARE State-listed as rare.
NONE Not listed.

California Native Plant Society (CNPS) designations:

List 1A Plants presumed extinct in California.
List 1B Plants rare and endangered in California and throughout their range.
List 2 Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3 Plants about which we need more information; a review list.
List 4 Plants of limited distribution; a watch list.

THREAT CODES:

.1 Seriously endangered in California (over 80 percent of occurrences threatened high degree and immediacy of threat).
.2 Fairly endangered in California (20 80 percent occurrences threatened).
.3 Not very endangered in California (20 percent of occurrences threatened or no current threats known).

POTENTIAL FOR OCCURRENCE:

Absent (A) Species distribution is restricted by substantive habitat requirements, which do not occur within the project footprint, and no further survey or study is necessary to determine likely presence or absence of this species.
Low (L) Species distribution is restricted by substantive habitat requirements, which are negligible within the project footprint, and no further survey or study is obligatory to determine likely presence or absence of this species.
Moderate (M) Species distribution is restricted by substantive habitat requirements, which marginally occur within the Project s foot print, and further survey or study may be necessary to determine likely presence or absence of species.
Habitat Present (HP) Species distribution is restricted by substantive habitat requirements, which occur within the project footprint, and further survey or study may be necessary to determine likely presence or absence of species.
Present (P) Species or species sign were observed to be present in the project footprint.

SOURCE:

California Department of Fish and Game, California Natural Diversity Database RareFind 3, 2011.

KEY:

Federal and Endangered Species Act:
E Federally Endangered.
T Federally Threatened.
FD Federally Delisted.
California Endangered Species Act:
CSC California Department of Fish and Game Species of Special Concern.
R State Rare.
E State Endangered.
T State Threatened.
California Native Plant Society:
1A Presumed extinct in California.
1B Rare or Endangered in California and elsewhere.
2 Rare or Endangered in California, more common elsewhere.

TABLE A-1 (CONTINUED)
SPECIAL-STATUS PLANT SPECIES POTENTIAL FOR OCCURRENCE

3 Plants of limited distribution-watch list.
.1 Seriously endangered in California (over 80 percent of occurrences threatened high degree and immediacy of threat).
.2 Fairly endangered in California (20 80 percent occurrences threatened).
.3 Not very endangered in California (less than 20 percent of occurrences threatened or no current threats known).

Critical Habitat:
Yes: The proposed project area falls within the critical habitat area, as defined by the USFWS.
No: The project area does not overlap USFWS designated critical habitat.

Potential To Occur:
High: These species are considered highly likely to occur in the project area because aerial imagery suggests that suitable habitat is present within the project area for these species and there are numerous occurrences in the vicinity of the project area.
Moderate: These species are considered moderately likely to occur in the project area because while habitat appears to be present, it is limited or there are few nearby occurrences.
Low: These species are considered to have a low likelihood of occurring in the project area because habitat appears to be limited and there are few nearby occurrences; however, there is some potential.
None: These species are not expected to occur in the project area due to lack of suitable habitat (based on aerial imagery) or because the project area is out of the species range or elevation requirements.

TABLE A-2
SPECIAL-STATUS WILDLIFE SPECIES POTENTIAL FOR OCCURRENCE

Scientific and Common Name	Habitat and Distribution	Status Designation	Potential for Occurrence
Reptiles			
Spea hammondii Western spadefoot	Occurs primarily in grasslands; occasional populations occur in valley foothill hardwood woodlands. Ranges throughout the Central Valley and adjacent foothills; usually common where it occurs. Found from near sea level to 4,470 feet in elevation.	Fed: NONE CA: SSC	Absent
Birds			
Polioptila californica californica Coastal California Gnatcatcher	Local, uncommon, obligate resident of arid coastal sage scrub vegetation on mesas, hillsides and in washes. Nests almost exclusively in California sagebrush.	Fed: FT CA: SSC	Moderate
Vireo belli pusillus Least Bell's Vireo	Resides in low riparian areas close to the water or dry riverbeds. Nests are usually constructed in bushes or within the branches of mesquite (*Prosopis* spp.), willows, and mule fat. Found below 2,000 feet in elevation.	Fed: FE CA: SE	Absent
Mammals			
Choeronycteris Mexicana Mexican long-tongued bat	Occasionally found in San Diego County, which is the extent of their range. Feeds on nectar and pollen of night blooming succulents. Roosts in relatively well-lit caves and in and around buildings.	Fed: NONE CA: SSC	Low
Nyctinomops femorosaccus Pocketed free-tailed bat	Found near large, open water sources in a variety of habitats, including desert shrub and pine-oak forest. Roosts in colonies in crevices of rugged cliffs, high rocky outcrops, slopes, and buildings.	Fed: NONE CA: SSC	Absent

STATUS CODES:

Federal Endangered Species Act:

FE Federal Endangered
FT Federal Threatened
CH Critical Habitat

California Endangered Species Act:

SE State Endangered
ST State Threatened
FP Fully Protected

CDFG Code:

SSC California Species of Special Concern

POTENTIAL FOR OCCURRENCE:

Absent (A) – Species distribution is restricted by substantive habitat requirements, which do not occur within the project footprint, and no further survey or study is necessary to determine likely presence or absence of this species.

Low (L) – Species distribution is restricted by substantive habitat requirements, which are negligible within the project footprint, and no further survey or study is obligatory to determine likely presence or absence of this species.

TABLE A-2 (CONTINUED)
SPECIAL-STATUS WILDLIFE SPECIES POTENTIAL FOR OCCURRENCE

Moderate (M) – Species distribution is restricted by substantive habitat requirements, which marginally occur within the Project's foot print, and further survey or study may be necessary to determine likely presence or absence of species.
Habitat Present (HP) – Species distribution is restricted by substantive habitat requirements, which occur within the project footprint, and further survey or study may be necessary to determine likely presence or absence of species.
Present (P) – Species or species sign were observed to be present in the project footprint.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 — WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
FOR THE *PIO PICO ENERGY CENTER, LLC*

Docket No 11-AFC-1
PROOF OF SERVICE
(Revised 5115/11)

Pio Pico Energy Center, LLC
Letter to Eric Solorio, Siting Project Manager, California Energy Commission, dated October 31, 2011 re Applicant's Responses to Requests #72-73

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Jennifer Jennings
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E-mail preferred
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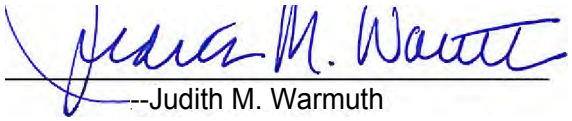
DECLARATION OF SERVICE

I, Judith M. Warmuth, declare that on October 31, 2011, I deposited copies of the aforementioned document and, if applicable, a disc containing the aforementioned document in the United States mail at 500 Capitol Mall, Suite 1600, Sacramento, California 95814, with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

AND/OR

Transmission via electronic mail, personal delivery and first class U.S. mail were consistent with the requirements of California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is ue a d correct.



--Judith M. Warmuth