Habitat Restoration and Revegetation Plan

West of Devers Upgrade Project Riverside and San Bernardino Counties, California

Prepared for

Southern California Edison

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Habitat Restoration and Revegetation Plan Checklist

Applicable Agencies:	
Bureau of Indian Affairs	Coachella Valley Conservation Commission
Bureau of Land Management	Morongo Band of Mission Indians
California Department of Fish and Wildlife	Riverside County Regional Conservation Authority
California Public Utilities Commission	U.S. Fish and Wildlife Service
applies in the Following Areas:	
BLM Lands	/-MSHCP
Morongo Reservation 🔀 W	/R-MSHCP
San Bernardino County	
applies to the Following Project Compon	ents:
🛚 Transmission Line 🔀 Subtransn	nission/Distribution
Substations	
Construction Yards	
Addresses the Following Mitigation Meas	sure:

FEIR/FEIS MM VEG-1d Restore or revegetate temporary disturbance areas

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Acronyms and Abbreviations

APM Applicant Proposed Measure

BIA Bureau of Indian Affairs

BLM Bureau of Land Management

BMP best management practice

BO Biological Opinion

BUOW Burrowing Owl

CAISO California Independent System Operator

CAPS Criteria Area Plant Species

CDCA California Desert Conservation Area

CDFW California Department of Fish and Wildlife

CEQA California Environmental Quality Act

CESA California Endangered Species Act

CFR Code of Federal Regulations

CH2M CH2M HILL Engineers, Inc.

CNPS California Native Plant Society

COI Certificate of Inclusion

CPCN Certificate of Public Convenience and Necessity

CPUC California Public Utilities Commission

CRPR California Rare Plant Ranks

CVAG Coachella Valley Association of Governments

CVCC Coachella Valley Conservation Commission

CV-MSHCP Coachella Valley Multiple Species Habitat Conservation Plan

DBESP Determination of Biologically Equivalent or Superior Preservation

DKR Dulzura kangaroo rate

EO Executive Order

FEIR Final Environmental Impact Report

FEIS Final Environmental Impact Statement

FESA Federal Endangered Species Act

FGC California Fish and Game Code

HMMP Habitat Mitigation and Monitoring Plan

HRRP Habitat Restoration and Revegetation Plan

ITP Incidental Take Permit

IWMP Integrated Weed Management Plan

ACRONYMS AND ABBREVIATIONS

kV kilovolt

MM mitigation measure

Morongo Band of Mission Indians

MSHCP Multiple Species Habitat Conservation Plan

NEPA National Environmental Policy Act

NEPS Narrow Endemic Plant Species

NISC National Invasive Species Council

PEA Proponent's Environmental Assessment

Plan Habitat Restoration and Revegetation Plan

PLS pure live seed

Project West of Devers Upgrade Project

PSE Participating Special Entity

R/R Riparian/Riverine

RCA Riverside County Regional Conservation Authority

Reservation reservation trust lands

ROD Record of Decision

ROW right-of-way

RSABG Rancho Santa Ana Botanic Garden

SCE Southern California Edison

SKR Stephens' kangaroo rat

SR State Route

SWPPP Stormwater Pollution Prevention Plan

U.S.C. United States Code

USFWS U.S. Fish and Wildlife Service

WOD West of Devers

WR-MSHCP Western Riverside Multiple Species Habitat Conservation Plan

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Introduction

Southern California Edison (SCE) proposes to construct the West of Devers (WOD) Upgrade Project (Project) to increase the power transfer capability of the WOD 220-kilovolt (kV) transmission lines between the Devers, El Casco, Vista, and San Bernardino substations. The Project is needed to facilitate the full deliverability¹ of new electric generation resources being developed in eastern Riverside County in an area designated by the California Independent System Operator (CAISO) for planning purposes as the Blythe and Desert Center areas. The Project, planned to be operational by 2021, would upgrade the existing WOD transmission line system by replacing the existing WOD 220-kV transmission lines and associated structures with higher-capacity transmission lines and structures, and making telecommunication improvements.

The purpose of this Habitat Restoration and Revegetation Plan (HRRP, or "Plan") is primarily to comply with the habitat restoration requirements for the Project as described by Mitigation Measure (MM) VEG-1d from the Final Environmental Impact Report² (FEIR) and Final Environmental Impact Statement (FEIS) (Bureau of Land Management [BLM], 2016a) as presented in the Certificate of Public Convenience and Necessity (CPCN) (CPUC, 2016b) and Record of Decision (ROD) (BLM, 2016b), respectively. In addition, the Plan was prepared to satisfy requirements from the U.S. Fish and Wildlife Service (USFWS) Biological Opinion (BO) (USFWS, 2016) for the Project, requirements included in the documents supporting SCE's applications for Participating Special Entity (PSE) Status and Certificates of Inclusion (COI) for the Western Riverside County and Coachella Valley Multiple Species Habitat Conservation Plans (WR-MSHCP, CV-MSHCP) (Riverside County Regional Conservation Authority [RCA], 2003; Coachella Valley Association of Governments [CVAG], 2006), and the anticipated requirements from the California Department of Fish and Wildlife (CDFW) Incidental Take Permit (ITP). The Plan describes the restoration and revegetation methods to be implemented on areas temporarily disturbed during execution of the Project.

1.1 Project Overview

The Project would upgrade the existing WOD system by replacing existing 220-kV transmission lines and associated structures with new, higher-capacity 220-kV transmission lines and structures, modifying existing substation facilities, removing and relocating existing subtransmission (66-kV) lines, removing and relocating existing distribution (12-kV) lines, and making various telecommunication improvements. In particular, the Project would:

- Upgrade substation equipment within SCE's existing Devers, El Casco, Etiwanda, San Bernardino, and Vista substations in order to accommodate continuous and emergency power on the upgraded WOD 220-kV transmission lines. Activities related to substation upgrades will take place within the existing, disturbed fence lines of the substations and are not addressed further in this Plan.
- Remove and upgrade the existing 220-kV transmission lines and structures primarily within the existing WOD corridor as follows:

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¹ The terms "full deliverability" or "full capacity deliverability status" describe the condition whereby a large generating facility is interconnected with the electrical grid to allow the full delivery of electricity requested. CAISO Tariff, Appendix A, at footnote 2, http://www.caiso.com/2476/2476bc8114130.pdf.

² For the purpose of this Plan, "FEIR" refers to the FEIR (California Public Utilities Commission [CPUC], 2015) and Addendum to the FEIR (CPUC, 2016a).

- Segment 1 would be approximately 3.5 miles long and extend south from San Bernardino Substation to the San Bernardino Junction. It would include the following existing 220-kV transmission lines: Devers-San Bernardino, Etiwanda-San Bernardino, San Bernardino-Vista, and El Casco-San Bernardino.
- Segment 2 would be approximately 5 miles long and extend west from the San Bernardino
 Junction to Vista Substation. It would include the following existing 220-kV transmission lines:
 Devers-Vista No. 1 and Devers-Vista No. 2.
- Segment 3 would be approximately 10 miles long and extend east from the San Bernardino
 Junction to El Casco Substation. It would include the following existing 220-kV transmission
 lines: Devers-Vista No. 1, Devers-Vista No. 2, El Casco-San Bernardino, and Devers-San
 Bernardino.
- Segment 4 would be approximately 12 miles long and extend east from El Casco Substation to San Gorgonio Avenue in the City of Banning. It would include the following existing 220-kV transmission lines: Devers-Vista No. 1, Devers-Vista No. 2, Devers-El Casco, and Devers-San Bernardino.
- Segment 5 would be approximately 9 miles long and extend east from San Gorgonio Avenue in the City of Banning to the eastern limit of the Morongo Reservations (Morongo Band of Mission Indians) at Rushmore Avenue. It would include the following existing 220-kV transmission lines: Devers-Vista No. 1, Devers-Vista No. 2, Devers-El Casco, and Devers-San Bernardino.
- Segment 6 would be approximately 8 miles long and extend east from the eastern boundary of the Morongo Reservation to Devers Substation. It would include the following existing 220-kV transmission lines: Devers-Vista No. 1, Devers-Vista No. 2, Devers-El Casco, and Devers-San Bernardino.
- Remove a portion (approximately 2 miles) of the existing San Bernardino-Redlands-Timoteo and San Bernardino-Redlands-Tennessee 66-kV Subtransmission Lines from within the existing WOD right-of-way (ROW) and reconstruct as follows:
 - The relocated San Bernardino-Redlands-Timoteo 66-kV Subtransmission Line would be approximately 2 miles long and reconnect to the San Bernardino-Redlands-Timoteo 66-kV Subtransmission Line inside Timoteo Substation.
 - The relocated San Bernardino-Redlands-Tennessee 66-kV Subtransmission Line would be approximately 3.5 miles long and reconnect to the San Bernardino-Redlands-Tennessee 66-kV Subtransmission Line at Barton Road.
- Remove a portion of the existing Dental and Intern 12-kV distribution circuits within the WOD ROW, and relocate the circuits as follows:
 - The relocated Dental 12-kV Distribution Circuit would be approximately 1.5 miles long and reconnect to the existing Dental 12-kV circuit.
 - The relocated Intern 12-kV Distribution Circuit would be approximately 2.25 miles long and reconnect to the Intern 12-kV circuit.
- Install telecommunication lines and equipment for the protection, monitoring, and control of transmission lines and substation equipment.

1.2 Project Location

The Project crosses the cities of Banning, Beaumont, Calimesa, Colton, Grand Terrace, Loma Linda, Palm Springs, Rancho Cucamonga, Redlands, San Bernardino, and Yucaipa, as well as unincorporated areas of

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Riverside and San Bernardino counties. The transmission corridor passes over Interstate 215 in San Bernardino County as well as State Route (SR)-60, SR-79, SR-243, and SR-62 in Riverside County, and runs approximately parallel for the majority of the Interstate 10 corridor in both San Bernardino and Riverside counties.

The Project is located largely within an existing utility corridor in incorporated and unincorporated areas of Riverside and San Bernardino counties, within the San Bernardino Valley. The San Bernardino Valley region is bounded by the San Gabriel and San Bernardino mountains to the north, by the San Jacinto Mountains to the east, and by the Santa Ana Mountains and Pomona Valley on the south and west. The terrain of the Project area varies between gently sloping plains to steep ridges and drainages in the foothills. Elevations within the Project area range from approximately 1,050 to 3,000 feet above mean sea level with mountainous topography, lowlands and foothills, and relatively flat urban areas.

The Project is located in the South Coast Subregion and San Bernardino Mountains District of the Southwestern California Region of the California Floristic Province, as well as in the Sonoran Desert Region of the Desert Province, as described in *The Jepson Manual* (Baldwin et al., 2012). The South Coast Subregion extends along the Pacific Coast and expands inland to the San Gorgonio Pass at Banning. The region was dominated by coastal sage scrub and chaparral vegetation prior to urbanization. The San Bernardino Mountains District is characterized by a topographically well-defined mountain range. The Sonoran Desert Region occupies the southern one-third of the Desert Province and is known for being lower in elevation, warmer, and floristically distinct from the Mojave Desert Region.

The Project, which is divided into six segments for ease of discussion, traverses areas of various land uses and is subject to several federal, state, and local jurisdictions. Segment 1, Segment 2, and the western portion of Segment 3 are located in incorporated and unincorporated portions of San Bernardino County. The eastern portion of Segment 3, all of Segment 4, and very small areas of Segment 5 are located in the WR-MSHCP area. Portions of Segment 5, excluding lands held in trust (Reservation) by the Bureau of Indian Affairs (BIA) for the Morongo Band of Mission Indians (Morongo), and most of Segment 6, excluding small parcels of lands administrated by BLM, are located in the CV-MSHCP area.

Figure 1-1 shows an overview of the Project and the Study Area.

1.3 Relevant Laws, Regulations, and Management Policies

The regulations most applicable to the Plan are summarized in this section. The federal and state regulations, along with FEIR/FEIS MM VEG-1d, provide the regulatory framework for the HRRP.

1.3.1 Federal Laws and Regulations

National Environmental Policy Act

The FEIS was prepared by the BLM (2016a) in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, Title 42 of the United States Code (U.S.C.) Sections 4321 to 4370d as implemented by the Council on Environmental Quality Regulations, Title 40 of the Code of Federal Regulations (CFR) Parts 1500 to 1508, and BLM's NEPA guidance handbook (H-1790-1) (BLM, 2008). MMs to be implemented during the Project for the protection of environmental resources were presented in the FEIS.

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (FESA), as amended (16 U.S.C. 1531 et seq.), provides guidance for the conservation of endangered and threatened species, and the ecosystems upon which they depend. FESA Section 9 lists activities that are prohibited by the act. For example, "take" of any listed species is prohibited. Take under FESA is defined as to harass, harm, pursue, hunt, shoot, wound,

kill, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS may issue permits for incidental take, which may be obtained either through Section 7 consultations, or through a Section 10(a) permit in conjunction with an approved Habitat Conservation Plan. Under provisions of Section 7(a)(2) of FESA, a federal agency that permits, licenses, funds, or otherwise authorizes a project activity must consult with USFWS to ensure that its actions would not jeopardize the continued existence of any listed species or destroy or adversely modify designated Critical Habitat.

The BLM engaged the USFWS in informal and formal consultation for the Project. The USFWS (2016) issued a BO for the Project in accordance with Section 7 of FESA in December 2016. Among other conservation measures, the BO (p. 23) includes requirements for revegetation or restoration of temporarily disturbed areas.

California Desert Conservation Area Plan

In 1976, Congress passed the Federal Land Policy Management Act. Under that law, the California Desert Conservation Area (CDCA) was established, with 12,000,000 acres of public lands administered by the BLM. The CDCA plan consists of five recovery units: Upper Virgin River, Eastern Mojave, Northwestern Mojave, Western Mojave, and Colorado Desert. The Colorado Desert recovery unit overlaps the eastern section of the Project Study Area. The CDCA gives preservation of endangered species the highest priority, and one of the goals is to provide a system of desert wildlife management areas within the recovery unit. In 1994, the CDCA plan established strategies for recovering the desert tortoise: maintain high survivorship of adult desert tortoises; protect existing populations and habitat; institute habitat restoration where necessary; and implement a formal adaptive management program. In addition, the CV-MSHCP is within the Colorado Desert Recovery Unit and establishes conservation areas and a reserve system for species and land cover types covered under the CV-MSHCP.

1.3.2 State and Local Laws and Regulations

California Environmental Quality Act

The FEIR was prepared by the CPUC (2015) pursuant to the California Environmental Quality Act (CEQA) guidelines outlined in Title 14 of the California Code of Regulations Section 15000 et seq. as amended. MMs to be implemented during the Project for the protection of environmental resources were also presented in the FEIR.

California Endangered Species Act

The California Endangered Species Act (CESA) is administered by the CDFW and prohibits the take of plant and animal species identified as either threatened or endangered in the State of California by the Fish and Game Commission (California Fish and Game Code [FGC] Sections 2050–2089). Under CESA, take means to hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture or kill, and does not include the harm or harassment provisions in the FESA definition. However, Sections 2081 and 2080.1 of CESA allow CDFW to authorize exceptions to the prohibition of take of the state-listed threatened or endangered plant and animal species for purposes such as public and private development based on a determination that the project or action includes measures sufficient to "fully mitigate" impacts.

SCE has submitted a draft Section 2081 ITP application for the Project to CDFW. It is anticipated that the issued ITP will include requirements for revegetation or restoration of temporarily disturbed areas, similar to what is included in the BO.

1.3.3 Regional Habitat Conservation Plans

The WR-MSHCP and CV-MSHCP serve as comprehensive, multijurisdictional habitat conservation plans pursuant to both Section 10(a)(1)(B) of FESA and the California Natural Communities Conservation Planning Act that focuses on the conservation of species and their associated habitats in their respective

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plan areas. According to their respective Implementing Agreements, any regional public facility provider (e.g., a utility company or a public district or agency) that operates and/or owns land within the plan areas, such as SCE, may request to participate in a Multiple Species Habitat Conservation Plan (MSHCP) as a PSE. The MSHCPs allows PSEs to obtain authorization for "take" of both federal and/or state-listed species for activities covered by the plans.

PSE activities must comply with the terms and requirements of each MSHCP and its Implementing Agreement and permits. The PSE application is reviewed by the Riverside County Regional Conservation Authority (RCA) for WR-MSHCP and the Coachella Valley Conservation Commission (CVCC) for the CV-MSHCP followed by a concurrence review by USFWS and CDFW, the latter two agencies collectively referred to as the "Wildlife Agencies." For regional utility projects, PSEs will pay a fee or take such other actions as may be agreed to by the RCA/CVCC and the Wildlife Agencies.

SCE applied for PSE status for each MSHCP. In doing so, documents demonstrating consistency with the MSHCPs were prepared for review by RCA and CVCC. The application materials included avoidance, minimization, and MMs intended to ensure biologically equivalent or superior preservation of the MSHCP resources. Those measures were included in the PSE application materials and additional conditions are included in the COIs for the WR-MSHCP and for the CV-MSHCP.

1.4 Mitigation Measure VEG-1d-

This Plan was prepared to address FEIR/FEIS MM VEG-1d. A Habitat Restoration and Revegetation Plan is listed as a submittal requirement for FEIR/FEIS MM VEG-1d. MM VEG-1d states³:

Restore or revegetate temporary disturbance areas. [Supersedes APM BIO-1 to provide further specificity.] This measure has two parts: Part A and Part B. Part A is applicable to all temporary disturbance areas, and Part B is applicable to disturbance occurring in sensitive vegetation types and special-status species habitats.

For all revegetation or restoration areas, if a fire, flood, or other disturbance beyond the control of SCE, CPUC, and BLM damages a revegetation area within the monitoring period, SCE shall be responsible for a one-time replacement. If a second event occurs, no replanting is required, unless the event is caused by SCE's activity (based upon maintenance of erosion control measures; fencing, gates, or other site control; or investigation by a firefighting agency).

Part A: Habitat restoration and revegetation for all temporary disturbance areas.

SCE shall prepare and implement a Habitat Restoration and Revegetation Plan (HRRP), to restore or revegetate all temporary disturbance areas, including temporary disturbance areas around tower construction sites, laydown or staging areas, temporary access and spur roads, cut and fill slopes, and locations of existing towers that are removed during construction of the project. For temporary disturbances in agriculture, developed/disturbed, and most grass-land/forbland (excluding suitable Stephens' kangaroo rat habitat and any areas with 10 percent or greater relative cover of native perennial grass species), and for temporary disturbance areas that cannot be effectively revegetated and are therefore subject to off-site compensation (Mitigation Measure VEG-1e), the overall goals of the HRRP will be to minimize weed invasion, dust generation, and soil erosion. The goals for sensitive vegetation and special-status species habitat are described in Part B of this Mitigation Measure.

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³ To avoid redundancy, the FEIR/FEIS MM language was copied from the CPCN (CPUC, 2016b). While subtle differences in MM language were noted upon review of the ROD (BLM, 2016b), the requirements are ultimately the same. References for the citations in the requirement descriptions can be found in the source documents.

The Draft HRRP shall be submitted to CPUC and BLM for review and approval prior to the beginning of ground-disturbing activities. SCE shall incorporate all requested revisions in coordination with the CPUC and BLM and finalize the HRRP within 12 months from the start of construction.

For all temporary disturbance areas, the HRRP shall include the following elements:

- A statement of revegetation goals and objectives for each portion of the project area, based on vegetation type and jurisdictional status of each site.
- Quantitative success criteria for each revegetation or restoration site or category.
- Implementation details, including but not limited to topsoil stockpiling and handling; postconstruction site preparation; soil decompaction and recontouring; planting and seeding palettes to include only native, locally sourced materials with confirmed availability from suppliers; fall-season planting or seeding dates.
- Maintenance, including but not limited to irrigation or hand-watering schedule and equipment, erosion control, and weed control.
- Monitoring and Reporting, specifying monitoring schedule and data collection methods throughout establishment of vegetation with key indicators of successful or unsuccessful progress, and quantitative values to objectively determine success or failure at the conclusion of the monitoring period.
- Contingency measures such as re-planting, drainage repairs, adjustments to irrigation or
 weeding schedule, and extension of maintenance beyond the original schedule, to repair or
 remediate sites not on track to meet success criteria, or not meeting the criteria at the close
 of the originally scheduled monitoring period.

The Integrated Weed Management Plan (Mitigation Measure VEG-2a) will be implemented throughout implementation of the HRRP. For all revegetation or restoration areas, only seed or potted nursery stock of locally occurring native species from a local source will be used for revegetation. Seeding and planting will be conducted as described in Chapter 5 of Rehabilitation of Disturbed Lands in California (Newton and Claassen, 2003). The list of plants observed during botanical surveys of the project area will be used as a guide to site-specific plant selection.

For all revegetation or restoration areas, the HRRP will include objective, quantifiable success criteria, commensurate with the goals for each site. Monitoring of the reclamation, revegetation or restoration sites will continue annually for no fewer than five (5) years or until the defined success criteria are achieved, whichever is later. SCE will be responsible for implementing remediation measures as needed. Following remediation work, each site will continue to be subject to the success criteria required for the initial reclamation, revegetation, or restoration. The monitoring period for remediation work will be concurrent with the monitoring period required for the initial reclamation, revegetation or restoration.

Part B: Additional habitat restoration and revegetation requirements for sensitive vegetation and special-status species habitat.

For temporary disturbances in grassland/forbland that is either suitable Stephens' kangaroo rat habitat, or has 10 percent or greater relative cover of native perennial grass species (see VEG-1c), and in all other vegetation types (alluvial scrub, coast live oak woodland, coastal sage scrub, chaparral, desert scrub, riparian woodland, and aeolian sand), the Habitat Restoration and Revegetation Plan will be designed to replace the habitat values present prior to disturbance (i.e., native plant species cover, habitat structure, and soil or substrate conditions). Stephens'

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kangaroo rat habitat suitability is to be determined by a qualified SKR biologist. The following performance standards must be met by the end of the monitoring period:

- At least 80 percent of the vegetation cover within the restoration area shall be native species that naturally occur in local native habitats; in grassland or forbland habitat this criterion will be adjusted to account for pre-disturbance non-native grass cover;
- Absolute cover of native plant species and density of native shrubs and trees within the restoration areas shall equal at least 60 percent of the pre-disturbance or reference vegetation cover and density; and
- The site shall have persisted successfully without irrigation or remedial planting for a minimum of two years prior to completion of monitoring.

For revegetation or restoration in these vegetation or habitat types, the HRRP will include (in addition to the components listed in Part A):

- A map depicting the locations of all temporary disturbance areas in these vegetation or habitat types, including a quantitative evaluation of native grass cover and Stephens' kangaroo rat habitat suitability in all mapped grassland/forbland areas, subject to requirements of Part B;
- An inventory of any temporary disturbance areas that cannot be effectively revegetated or restored to replace habitat values within a five-year timeframe (these will be categorized as "long-term disturbance areas," to be addressed under habitat compensation, Mitigation Measure VEG-1e).

Reporting (for Part A and Part B). For all revegetation or restoration areas, SCE will provide annual reports to the CPUC and BLM verifying the total vegetation acreage subject to temporary and permanent disturbance, identifying which items of the HRRP have been completed, and which items are still outstanding. The annual reports will also include a summary of the reclamation, revegetation, or restoration activities for the year, a discussion of whether performance standards for the year were met, any remedial actions conducted and recommendations for remedial action, if warranted, that are planned for the upcoming year. Each annual report will be submitted within 90 days after completion of each year of revegetation and restoration work.

Implementation locations: Parts A and B of this mitigation measure shall apply as follows: San Bernardino County (all); WR-MSHCP (within the WR-MSHCP regardless of SCE's PSE status); CV-MSHCP (within the CV-MSHCP regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

In addition, SCE committed to prepare the HRRP to satisfy restoration requirements included in the BO and included among the conditions of SCE's participation as a PSE in the MSHCPs. Because MM VEG-1d includes the most comprehensive description of the required elements of the Plan, it is listed here as the standard from which the Plan was prepared. However, the Plan will be provided to the USFWS, CDFW, RCA, and CVCC for review. In addition, the Plan was provided to the Morongo Band of Mission Indians and the Bureau of Indian Affairs.

1.5 Agency Involvement

CPUC is the lead state agency responsible for compliance with CEQA and BLM is the lead federal agency responsible for compliance with NEPA. Both agencies are responsible for CEQA and NEPA compliance, respectively, for the entire project. The lead agencies have discretionary approval over the Project and

are responsible for reviewing aspects of the measures documented in this Plan. The Plan is subject to review and approval by the CPUC and BLM.

Consulting agencies are public agencies, other than the lead agencies, that may provide guidance or information needed to satisfy the requirements of the measures contained in this Plan. The USFWS and CDFW may be considered consulting agencies in this case.

The HRRP will be provided to the RCA, CVCC, and the Wildlife Agencies for review and approval prior to the start of construction to ensure consistency with the requirements for each MSHCP, the USFWS's (2016) Biological Opinion for the Project, and the anticipated CDFW Incidental Take Permit. Given that the Project also crosses the reservation trust lands, the Plan is subject to review by the Morongo Band of Mission Indians and BIA (USFWS, 2016).

1.6 Plan Goals and Objectives

The purpose of the Plan is to outline the methods for restoration and revegetation of all areas temporarily disturbed by the Project. Because some mitigation actions fall under the jurisdiction of other Project resource management plans, this Plan may refer to other plans when appropriate. The overall goal of this HRRP is to restore habitats within the temporarily disturbed work areas associated with the Project to functioning, established, early successional communities that will facilitate succession and provide available habitat for the special-status species associated with the Project.

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Existing Plant Communities, Special-Status Species, and Anticipated Project Impacts

2.1 Existing Vegetation Communities and Land Cover Types

Vegetation and land cover types within the Project ROW that will be affected by Project construction include grassland/forbland, chaparral, coastal sage scrub, desert scrub, coast live oak woodland, riparian woodland, alluvial scrub, agricultural land, and disturbed/developed areas. Dominant plant species found in each of the vegetation communities within the Project ROW are described in the following subsections.

2.1.1 Grassland/Forbland

The grassland/forbland vegetation community is dominated by and includes almost exclusively herbaceous, non-woody plants. Grasslands within the ROW are typically dominated by non-native species such as red brome (*Bromus madritensis* ssp. *rubens*), Mediterranean grass (*Schismus arabicus*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and slender wild oats (*Avena barbata*). Common native species found in forblands on the ROW are annual sunflower (*Helianthus annuus*), dove weed (*Eremocarpus setigerus*), and vinegar weed (*Trichostemma lanceolatum*). Common non-native forb species are short-pod mustard (*Hirschfeldia incana*), yellow star-thistle (*Centaurea solstitialis*), prickly wild lettuce (*Lactuca serriola*), and tocalote (*Centaurea melitensis*). While some of these grassland/forbland areas technically satisfy the habitat requirements for SKR, the habitat values are low due to the high percentage of non-native cover and the fact that in many areas the habitat has likely been type-converted from coastal sage scrub to grassland/forbland in a short period of time. Suitable habitats for SKR have been mapped (AMEC, 2014; AMEC, 2016) and surveyed for presence/absence during the licensing/permitting phase of the Project. SKR have not been detected in any areas subject to Project disturbances.

2.1.2 Chaparral

Common native shrubs found in chaparral on the Project are chamise (*Adenostoma fasciculatum*), hairy ceanothus (*Ceanothus oliganthus*), sugar bush (*Rhus ovata*), hoaryleaf ceanothus (*Ceanothus crassifolius*), California scrub oak (*Quercus berberidifolia*), California sagebrush (*Artemisia californica*), redberry (*Rhamnus crocea*), mountain mahogany (*Cercocarpus betuloides*), toyon (*Heteromeles arbutifolia*), and the subshrubs California buckwheat (*Eriogonum fasciculatum*) and black sage (*Salvia mellifera*). Chaparral may also have an understory of non-native and native forbs and grasses.

2.1.3 Coastal Sage Scrub

Common native shrubs and subshrubs found in coastal sage scrub within the Project ROW are California sagebrush, California buckwheat, black sage, red-berry, sugar bush, ceanothus (*Ceanothus* spp.), lemonade berry (*Rhus integrifolia*), brittlebush (*Encelia farinosa*), Palmer's goldenbush (*Ericameria palmeri*), skunk bush (*Rhus trilobata*), and white sage (*Salvia apiana*). Coastal sage scrub in the Proposed Project region generally has an understory of non-native and native forbs and grasses.

2.1.4 Desert Scrub

Common native shrub and subshrub species found in desert scrub communities within the Project ROW are creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), Mormon tea (*Ephedra spp.*),

catclaw (Senegalia [Acacia] greggii), brittlebush, Mojave rabbitbrush (Ericameria paniculata), narrow-leaved stillingia (Stillingia linearifolia), and turpentine broom (Thamnosma montana). Other species found in desert scrub within the Project ROW are teddy bear cholla (Cylindropuntia bigelovii), hedgehog cactus (Echinocereus engelmannii), and Mojave yucca (Yucca schidigera).

2.1.5 Coast Live Oak Woodland

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*), with an understory consisting mainly of grasses and forbs. Oaks are the most evident plants, but the forests and woodlands are made up of diverse assemblages of understory shrubs, vines, herbs, grasses, and parasitic plants (e.g., mistletoe).

2.1.6 Riparian Woodland

Riparian woodlands are dominated by trees, and often extend linearly along stream courses. The two subtypes of riparian woodland that occur within the Project area (mesic riparian woodland and arid riparian woodland) are described below.

2.1.6.1 Mesic Riparian Woodland

Mesic riparian woodlands, which typically occur within Segments 1 through 4, are dominated by Freemont cottonwood (*Populus fremontii*) or red willow (*Salix laevigata*) and are found on the western portion of the Project.

2.1.6.2 Arid Riparian Woodland

Arid riparian woodlands, which typically occur in Segments 5 through 6, are dominated by desert willow (*Chilopsis linearis*) and are found in the Badlands and eastern portion of the Project.

2.1.7 Alluvial Scrub

The dominant plants in alluvial scrub on the Project route include mulefat (*Baccharis salicifolia*), scalebroom (*Lepidospartum squamatum*), cheesebush (*Ambrosia salsola*), and non-native grasses and forbs.

2.1.8 Agricultural Lands

Agricultural land is primarily composed of active or recently active crop fields and groves or orchards. These areas contain crop species and undesired "volunteer" species; both are almost always non-natives.

2.1.9 Developed/Disturbed

Developed/disturbed land cover consists of developed areas such as paved roads, ornamental vegetation, and commercial and residential properties.

2.2 Special-Status Species Habitats

Temporary Project disturbances have the potential to impact habitats known to support special-status wildlife species within the Project ROW. In accordance with FEIR/FEIS MM VEG-1d, temporary disturbances in agriculture, developed/disturbed, and most grassland/forbland (excluding suitable Stephen's kangaroo rate [SKR] habitat and any areas with 10 percent or greater relative cover of native perennial grass and/or forb species), and for temporary disturbance areas that cannot be effectively revegetated, the goals of the HRRP is to minimize weed invasion, dust generation, and soil erosion. For temporary disturbances in grassland/forbland that is either suitable SKR habitat, or has 10 percent or greater relative cover of native perennial grass and/or forb species, and in all other vegetation types

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(alluvial scrub, coast live oak woodland, coastal sage scrub, chaparral, desert scrub, and riparian woodland), the HRRP will be designed to replace the habitat values present prior to disturbance (i.e., native plant species cover, habitat structure, and soil or substrate conditions).

SKRs prefer flat to gently rolling topography (up to 10 percent slopes), but can occasionally be observed on slopes of up to 50 percent (Price and Endo 1989, Riverside County Habitat Conservation Agency 2014). They occur in grassland or sparse coastal sage scrub, typically in less than 15 percent shrub cover (Price and Endo 1989). In denser shrublands and on steeper slopes, they are generally replaced by the more common Dulzura kangaroo rate (DKR) (*Dipodomys simulans*). Suitable SKR habitat was mapped along an approximately 5.1-mile stretch of the alignment in San Bernardino County, extending from the southern end of Segment 1 (that is, from the San Bernardino Junction) to approximately the Riverside County line (AMEC 2014) (Figure 2-1). For the purpose of this Plan, these areas represent suitable SKR habitat in the Project area.

2.3 Project Impacts

Table 2-1 below provides the estimated maximum potential temporary Project impacts to native vegetation communities and habitats that will require post-construction restoration and revegetation. Agriculture and developed/disturbed land cover types are not required by mitigation to be restored/revegetated; therefore, they are not included in the impact calculations. All grassland/forbland is assumed to meet the qualifications for restoration/revegetation (suitable SKR habitat or greater than 10 percent relative cover of native perennial grass and/or forb species) until detailed vegetation mapping surveys are completed in spring 2017.

Table 2-1. Estimated Maximum Potential Temporary Project Impacts to Native Vegetation Communities and Habitats

WOD Habitat Restoration and Revegetation Plan

Vegetation Community	Total Estimated Temporary Project Impacts (acres)
Alluvial Scrub	13.63
Chaparral	26.85
Coast Live Oak Woodland	0.53
Coastal Sage Scrub	65.30
Desert Scrub	271.16
Grassland/Forbland	246.43
Mesic Riparian Woodland (Project Segments 1-4)	1.55
Arid Riparian Woodland (Project Segments 5-6)	0
Suitable Stephens' Kangaroo Rat Habitat (San Bernardino County) ^a	56.35
Suitable Stephens' Kangaroo Rat Habitat (Riverside County) ^a	122.09

^a Based on AMEC (2014 and 2016) habitat mapping. This habitat represents the areas of grassland/forbland deemed suitable for SKR by a qualified biologist. Totals overlap with Grassland/Forbland total (i.e., double-counted).

Impact calculations are based on May 25, 2017, engineering design and 2015 vegetation mapping (CH2M HILL Engineers, Inc., 2015).

Habitat Restoration and Revegetation Methods

The goals and objectives that will guide Project restoration and revegetation are summarized in Table 3-1. These goals and objectives are the guidelines for collecting site-specific preconstruction data and for developing specific strategies and measurable targets. During and following completion of construction work at each site, biologists, with experience in habitat restoration and revegetation, will review site conditions to determine whether the approach summarized in the following subsections will sufficiently meet the applicable Project requirements. The treatment for each site will be reviewed and decided upon in the field through coordination with the Stormwater Pollution Prevention Plan (SWPPP) consultant, visual specialists, and the appropriate agency representatives to determine appropriate site-specific treatments within the parameters of the final HRRP. SCE's site-specific restoration and revegetation work will be based on these recommendations.

Table 3-1. Restoration and Revegetation Goals and Objectives

WOD Habitat Restoration and Revegetation Plan

Land Cover Type/Vegetation Community	Post-construction Goals
 Agriculture Developed/disturbed Grassland/forbland with less than 10 percent relative cover of native perennial grass species 	 Minimize opportunities for colonization by invasive plant species Stabilize soils to reduce erosion Curtail dust generation
Grassland/forbland with 10 percent or greater relative cover of native perennial grass species	Replace plant and wildlife habitat values present prior to disturbance by:
Alluvial scrubChaparral	Developing conditions favorable for native plant re- establishment
Coast live oak woodland	Promoting soil surface biota and biological crusts
Coastal sage scrub	Restoring or maintaining wildlife or plant habitat connectivity
Desert scrubRiparian woodland	Minimizing opportunities for colonization by invasive plant species

The activities and schedule associated with the Project restoration are summarized in Table 3-2 below. Specifics of each activity are provided in Sections 3.1 through 3.3.

Table 3-2. Restoration and Revegetation Schedule

WOD Habitat Restoration and Revegetation Plan

Restoration/Revegetation Treatments	Timing
Pre-construction Activities	
Site Characterization	Prior to contractor mobilization
Pre-construction Weed Treatment ^a	Spring/Summer (or as appropriate for target species)
Seed Collection and/or Procurement	All year

Table 3-2. Restoration and Revegetation Schedule

WOD Habitat Restoration and Revegetation Plan

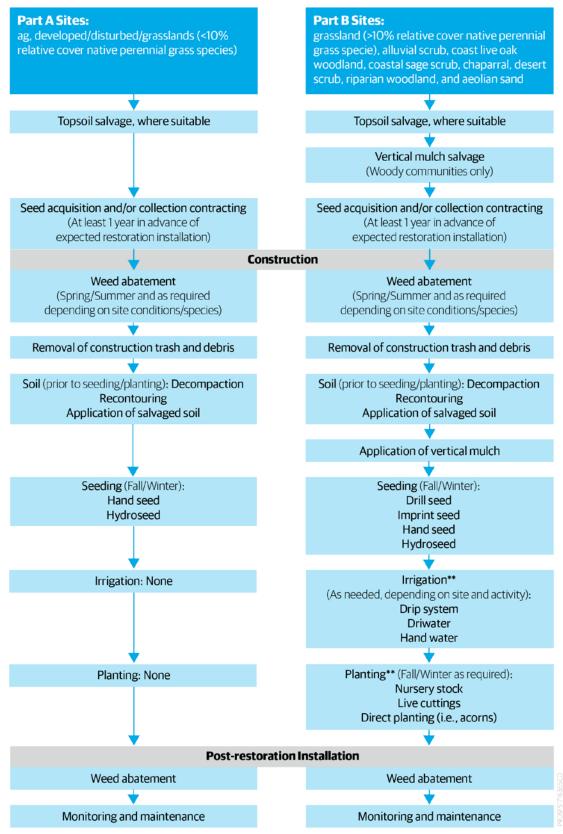
Restoration/Revegetation Treatments	Timing		
Construction Period Activities			
Vegetation Impact Avoidance and Minimization	Prior to contractor mobilization and throughout construction phase		
Soil and Plant Salvage and Storage	Plants: Spring or Fall (or as appropriate for target species). Soil: At site grading initiation		
Post-construction Activities			
Trash and Debris Removal	Prior to soil work or planting activities		
Weed Removal	Spring/Summer (or as appropriate for target species)		
Soil Decompaction	Prior to planting or seeding		
Soil Recontouring	Prior to planting or seeding		
Spread of Salvaged Topsoil	Prior to planting or seeding		
Vertical Mulch Application	In conjunction with or immediately after other seeding/planting activities		
Seeding	Fall/Winter		
Nursery Stock Planting	Fall/Winter		
Watering	In conjunction with planting, and as needed throughout establishment and maintenance period		
Weed Removal	Spring/Summer (or as appropriate for target species) as needed		
Erosion Control	Fall/Winter/Spring as needed		

^a The construction activities will be conducted in phases; therefore, "pre-construction" weed treatment would be conducted, as needed, prior to disturbance at any given site that requires treatment. This activity will likely be completed for most sites prior to the initial start of construction. However, in practice, this activity may be conduct for some sites each year during the construction phase of the project.

The following flow chart summarizes the restoration activities described in the sections that follow from an execution perspective.

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West of Devers Habitat Restoration and Revegetation Plan Activity Summary



^{**}Remedial action

3.1 Pre-construction Activities

The following sections summarize the activities that will be conducted prior to the start of ground-disturbing activities, to the extent feasible. Due to the long duration of the Project, and to ensure that data are current and reliable, some activities, such as detailed vegetation mapping, may be conducted after construction activities have been initiated.

3.1.1 Site Characterization

Field surveys will be conducted to determine site-specific details, including dominant vegetation, cover and density of native vegetation, location of drainages, site topography, and presence of any invasive weed species and the extents of their populations. The field surveys will be conducted to determine the pre-disturbance baseline conditions on all temporary disturbance areas planned for restoration and revegetation efforts. The information collected from these focused surveys will be used to refine site-specific habitat restoration methods. Plants observed during plant surveys of the Project will be used as a guide to site-specific plant selection. The data will be collected on standardized forms and maps. Surveyors will use the site identifiers (e.g., tower number and site numbers or yard names) used by engineers and construction contractors throughout the Project.

3.1.1.1 Vegetation Mapping

The majority of vegetation mapping to categorize major vegetation communities has been completed along the Project ROW (BioResource Consultants, Inc. [BRC], 2013; CH2M HILL Engineers, Inc. [CH2M], 2015). The previously conducted surveys were based on preliminary engineering design. More detailed mapping will be conducted based on final engineering design in vegetation communities proposed for revegetation (grassland/forbland with 10 percent or greater relative cover of native perennial grass species, alluvial scrub, coast live oak woodland, coastal sage scrub, chaparral, desert scrub, and riparian woodland). This detailed effort will include plant composition and species density and cover measurements. Mapped areas will consist of a visual density estimate for dominant tree and shrub species.

Once vegetation mapping surveys are completed, a map figure set (Figure 2-1) will be produced for inclusion with this HRRP that depicts the locations of all temporary disturbance areas in grassland/forbland with 10 percent or greater relative cover of native perennial grass species, alluvial scrub, chaparral, coast live oak woodland, coastal sage scrub, desert scrub, and riparian woodland. The map set will also include native grass cover and SKR habitat suitability in all mapped grassland/forbland areas.

3.1.1.2 Weed Mapping

In accordance with FEIR/FEIS MM VEG-2a, SCE has prepared an Integrated Weed Management Plan (IWMP) (CH2M, 2017b). Preconstruction inventories for invasive plants are among the methods detailed in the IWMP. Inventories were conducted for the Project in 2012-2013 (BRC, 2013) and 2015 (CH2M, 2015). Additional weed inventories will be conducted in 2017 and in subsequent years. Weed inventories will be scheduled to ensure detection of early season and late season weeds. As described by FEIR/FEIS MM VEG-2a, SCE will inventory all areas (both within and outside the ROW) subject to Project-related vegetation removal/disturbance, "drive and crush," and ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and any potential new or improved access and spur roads. The weed inventory will also include vehicle and equipment access routes within the ROW and all Project staging and storage yards. Weed occurrences will be mapped and described according to density and area covered. The map will be updated annually.

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3.1.2 Pre-Construction Weed Treatment

In accordance with FEIR/FEIS MM VEG-2a, weed infestations identified during the preconstruction weed inventory will be evaluated to identify potential for Project-related spread. Physical removal and chemical control of weedy species will be employed as required and are described in the Project's IWMP (CH2M, 2016b) (see also Section 3.3.2 of this Plan). Weed infestations will be treated for control or eradication as soon as possible upon discovery and before they go to seed, to prevent further spread. Weed infestations will be treated at a minimum of once annually until eradication, suppression, or containment goals outlined in the IWMP are met.

3.1.3 Seed Collection

Availability of local seed varies annually in response to weather patterns. Seed for direct seeding and container plant production (if used) will be sourced as locally as possible. Seed may be obtained from onsite seed collection or from commercial vendors. Upon assessment of seed availability by year, SCE will use various seed sourcing options to acquire sufficient seed for restoration at the start of restoration including local collection, seed bulking, and acquisition of regionally appropriate seed through commercial seed suppliers (with verified source information). Seed acquisition would begin at minimum one year before the start of restoration.

For seed that is collected within the Project vicinity, care will be taken to ensure that collection sites are not located in areas occupied by invasive plant species. The specific number and distribution of collection sites will vary according to size, density, continuity of populations, as well as the desired quantity of seed to be obtained.

Close monitoring is required in order to match the timing of seed collection activities to the distribution of seed maturation. Multiple trips to a site may be required for determining when the seed is mature, and also for collecting. Collecting at multiple times throughout the maturation period can help prevent inadvertent selection against either early or late maturing genotypes.

Seed will be collected within and adjacent to the Project area or seed originating from the appropriate source area will be obtained from a native plant nursery or native seed supplier. Seed collected from within the Project area will yield the best results for seeding and nursery stock production. Native seed collections should be weed-free and stored in cool dry conditions until ready to use. Collection efforts will follow characterization of potential revegetation sites and determination of seed mixes. Collection will target as many native annual and perennial species as are available during each collection phase.

Native seed collected in the field requires cleaning. Removing detritus and chaff from seed helps maintain seed vigor and health, and will reduce seed bulk during storage (Vallentine, 1979). A sieve screen will facilitate cleaning in the field. Pulpy seed will be dried and cleaned prior to storage. Seed storage in paper bags, burlap, or polypropylene seed bags will prevent seed molding, particularly when seeds are stored in cool, dry conditions.

3.2 Construction-Period Activities

3.2.1 Vegetation Impact Avoidance and Minimization

During construction, impacts to native vegetation will be avoided and/or minimized as follows:

- Final engineering of the Project will minimize the extent of disturbance and removal of native vegetation, to the extent safe and feasible. This includes locating Project components to avoid sensitive plants and plant communities to the maximum extent practicable.
- Access to Project sites will be via pre-existing access routes to the greatest extent possible.

- Construction yards and staging areas will be located in previously disturbed areas to the extent feasible to minimize impacts to native vegetation.
- Work areas will be conspicuously staked, flagged, or otherwise marked to clearly identify the work area boundaries.
- All work activities, vehicles, and equipment will be limited to approved roads, staging areas, and marked work areas.
- Construction activities will implement drive and crush access and site preparation rather than grading to the extent practicable.
- Removal of perennial, native vegetation will be avoided to the maximum extent practicable, particularly during accessing pulling and splicing stations and pulling and splicing.
- To the extent feasible, stockpiling of spoils and salvaged topsoil will be located in previously disturbed areas and will avoid native vegetation.

3.2.2 Soil and Plant Salvage and Storage

3.2.2.1 Topsoil Salvage

In some areas, topsoil salvage may be appropriate and feasible to preserve the existing seed bank. This seed has advantages over subsequently sown seed in that it is preconditioned to the existing soil environment. However, topsoil salvage may not be feasible at many sites.

The following are the criteria for identifying potentially suitable sites for topsoil salvage:

- Location is a previously undisturbed area
- Construction activities include underground trenching, heavy grading, or other excavation activities where natural soil horizons are substantially disrupted
- Salvage activities can be executed safely and feasibly (topographic limitations)
- Stockpile locations can be identified in safe locations within existing approved disturbance areas and in compliance with other environmental and visual restrictions
- No post-construction disturbance activities such as O&M activities that would cause future disturbance to the site are anticipated

Topsoil salvage will not occur under the following circumstances:

- Slopes greater than 25 percent
- Locations where ground disturbing activities are limited due to environmental resources (e.g., sensitive habitats, cultural resources
- Locations with high densities of non-native or invasive plant species
- Locations with low availability of substrate material (thin soils or rocky)
- Topographical or geographical constraints that preclude safe execution of construction activities

The top 2 inches of desert soils generally contain the majority of seeds, nutrients, cryptogrammic organisms, and organic matter (Scoles-Sciulla and DeFalco, 2009). However, the ideal depth of topsoil to be salvaged may vary based on site-specific conditions. For occupied special-status plant habitats, a Restoration Specialist will determine the appropriate amount of topsoil to be removed and stockpiled, then returned to the surface when earthwork is complete.

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Topsoil will be carefully removed by an experienced operator using a dragline, excavator, scraper, or dozer and will be stockpiled in uncompacted piles less than 4 feet tall. Stockpiled soils will be placed within temporary disturbance areas. Topsoil stockpiles will be stabilized by spraying with a tackifier (soil stabilizer) or covered with a permeable natural material, such as jute or coconut fiber blankets, as consistent with SWPPP requirements. To minimize compaction, no equipment will be allowed to travel over or park on the salvaged soil stockpiles.

Care will be taken to limit potentially adverse effects of stockpiling topsoil. For example, stockpiling has been shown to reduce organic carbon (especially at the surface), and reduce microbial activity and mycorrhizal inoculum potential for vesicular-arbuscular mycorrhizae (Bainbridge, 2007). Wet stockpiles show a greater reduction of vesicular arbuscular mycorrhizae propagules than dry stockpiles (Bainbridge, 2007). Therefore, topsoil stockpiles will be maintained in a dry condition as much as possible. Nutrients, organic matter, and the seed bank will be diluted if topsoil is mixed with subsoil material, so care will be taken to ensure a minimum thickness of topsoil is removed and stockpiled, and that topsoil remains segregated from subsoil.

If soils are stockpiled for extended periods, establishment of a cover crop of perennial native grasses and forbs will be considered to help maintain the viability of soil fungi and microbial communities. Soil stockpiles will be monitored for weeds and weeds will be removed if present. Grubbed vegetation not used as vertical mulch may be included in the stockpiled soil. Once stockpiled, soils will not be disturbed until they are re-spread to initiate revegetation of disturbed areas.

3.2.2.2 Vertical Mulch Salvage

Vertical mulching will be incorporated into revegetation efforts where feasible. Materials for vertical mulch include rocks, boulders and natural organic debris (e.g., shrub branches and other plant materials). In certain habitats in the Conservation Area (e.g., CV-MSHCP Coachella Valley Jerusalem Cricket Habitat and Desert Dry Wash Woodland), vertical mulch will be salvaged as feasible during vegetation removal activities and will be used to restore those impacted habitats. Woody plant material generated during vegetation removal operations will be preserved (windrowed) onsite as mulch for later use in soil rehabilitation of temporary disturbance areas. Prior to use, windrowed vegetation will be chipped or shredded to a large particle size (1 to 3 inches).

3.3 Post-Construction Activities

This section describes general methods that will be used to revegetate and restore vegetation communities and habitats impacted by the Project. A list of the best management practices (BMPs) applicable to the Project and the measures that incorporate the BMPs are provided in the Project SWPPP. Restoration and revegetation of temporary disturbance areas following construction will occur as soon as practical after completion of construction activities in the affected area. To the extent feasible, seeding will occur in the fall following the completion of construction activities to take advantage of the full seasonal rainfall year (October to March). If construction is completed outside that timeframe, the area will be graded to restore the original contours, stabilized according to the project SWPPP, and weeds will be addressed according to the IWMP.

Prior to initiating restoration/revegetation activities the Restoration Consultant will prepare an Execution Plan or Execution Plans designating the specific techniques that will be used to revegetate the temporary impact areas. The Execution Plan(s) will specify the site preparation, seeding, planting, irrigation, monitoring, and maintenance techniques that will be implemented at each restoration site identified by SCE, and will include revised seed mixes and container plant lists, and an implementation schedule. The Execution Plan(s) will be developed in the spring following completion of construction. The Execution Plans will describe the activities to implemented for those sites. Restoration would then occur in the next fall, to the extent feasible. Due to the anticipated project phasing, restoration activities

may also be conducted in phases. It is anticipated that the first restoration activities would not occur until 2019, with the peak of site closeout and restoration occurring in the fall/winter of 2020/2021. The Execution Plan(s) will be reviewed and approved by SCE. The approved Execution Plan will be distributed to the CPUC and BLM.

3.3.1 Trash and Debris Removal

Following completion of Project construction activities, biologists, with experience in habitat restoration, will manage the removal of any trash and debris from the temporary disturbance areas to be restored. This includes all human-made materials and construction debris that may be left onsite. Organic materials, including wood debris, plant material, straw, and sand, may be incorporated into the site soils prior to soil decompaction. However, this will be evaluated case-by-case to ensure that the fundamental characteristics of the underlying soil are not altered to favor non-native over native plant species.

3.3.2 Weed Removal

Weed-control measures will be implemented during post-construction restoration where necessary in accordance with the 2008–2012 National Invasive Species Management Plan (National Invasive Species Council, 2008) regulations. Control measures may include various treatment methods. Physical removal and chemical control of weedy species will be employed as required and are described in the Project's IWMP (CH2M, 2016b).

3.3.2.1 Physical Removal Methods

Physical weed control methods are labor intensive and will generally be used to control relatively small populations of weeds, or used in sensitive habitats where wildlife may be indirectly affected by weed removal activities. The weed control methods may provide an advantage in native habitats where desirable species are left in place while removing surrounding weeds. Recommended physical control methods are as follows:

- Hand pulling will be used to remove localized and discrete populations of annual and biennial
 species that have a single-root mass prior to seed set, and to minimize soil disturbance. Cutting will
 be used to remove shrub and tree species. This method will require follow-up herbicide applications
 to kill the root system and prevent re-sprouting.
- Mechanical removal will be used to remove weed infestations from large areas where few or no native plant species are present. This method will use a mower, weed whacker, or tiller.

3.3.2.2 Chemical Weed Removal Methods

Chemical means of controlling weeds consist of the application of herbicides. Herbicides can be a very effective method in controlling weed species by killing or inhibiting plant growth. The appropriate method of chemical application varies based on species and also with the degree of infestation, time of year, temperature, and environmental conditions. Herbicides will be used to control weeds by a qualified applicator licensed by the State of California Department of Pesticide Regulation, and only where directed by biologists, experienced in habitat restoration. Only herbicides approved by the State of California and BLM for use on public lands will be used within or adjacent to the Project area. The environmental risks of using herbicides will be minimized by using marker dyes to make the herbicide visible in areas where it has been applied. Higher visibility is desirable because it allows personnel to more effectively protect themselves against contamination, prevents unintended multiple application to a particular area or plant, ensures complete coverage of the target area and plants, and informs personnel of overspray and wind-drift issues, which protects non-target plants.

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3.3.3 Soil Decompaction

Decompaction of soils following construction activities is anticipated to be required for temporary disturbance areas that have been subjected to prolonged disturbance (laydown, construction yards, etc.). Decompaction of soils will improve water infiltration and allow for plant root growth in restoration areas. These Project areas will be decompacted by ripping/cross-ripping to a depth of up to 12 inches (highly compacted areas such as temporary roads or crane pads may require deeper ripping), ideally, when possible with ripper teeth mounted to the back of a bulldozer, or disking and scarifying less compacted surfaces using farming implements such as tractor-mounted rototillers. For some sites, decompaction may be limited by the SWPPP requirements. If such areas were dominated by native plants (including bulb plants) prior to construction, soils will be lightly ripped in order to retain their abundance and contribute to the restoration.

3.3.4 Soil Recontouring

Sites that require grading will be contour-graded as close as possible to the pre-impact condition prior to implementation of restoration activities. The following landform grading techniques will be incorporated during recontouring to return the topography of the sites to a condition that blends with the surrounding undisturbed habitat areas:

- Varying slope ratios will be used to avoid the regularity and linearity of straight graded 2:1 slopes
 throughout the Project site. Slope ratios will vary in the horizontal planes, and both steep and flat
 gradients should be incorporated.
- Drainage devices, V-ditches, terrace drains, and benches will be constructed on an angle as
 inconspicuously as possible (with a back cut). Any portion of a drainage device that is visible from a
 distance will be tinted with an appropriate earthen-tone color to be disguised with the surrounding
 habitat.
- In areas where newly graded slopes meet the existing landform, the graded slope will transition in a manner that appears natural (that is, contours will be smoothed rather than end abruptly at existing contours).

3.3.5 Spreading of Salvaged Soil

In areas where topsoil has been salvaged, the finished grade will be scarified to a minimum depth of approximately 6 inches and the salvaged soil spread over the restoration area to the maximum depth based on availability of soil. The loose topsoil will then be tamped into the scarified surface by track walking the area with a dozer or a sheep-foot roller. Track walking should be perpendicular to the contours on any slope. Topsoil surfaces should be left in a roughened (scarified) condition suitable for planting.

3.3.6 Vertical Mulch Application

Vertical mulch materials will be redistributed over the revegetated areas in conjunction with or immediately following other revegetation methods. However, successful installation of vertical mulch can occur throughout the year. Incorporation of vertical mulch will increase site heterogeneity, create shelter for seeds and seedlings, and provide habitat for rodents, reptiles, and other wildlife. Moreover, when combined with boulders and plantings, vertical mulching can be used to form natural physical barriers to close sites and temporary access roads/routes.

3.4 Seeding

Seeding is the primary method for revegetation, where required. Following construction activities for each site where reseeding has been planned, a biologist, experienced in habitat restoration, will recommend seed mix, seeding rate, and application methods, in consultation with the CPUC, BLM, USFWS, and CDFW, as appropriate. Recommendations and seeding specifications (if any) will be based on site-specific conditions, which may include soil structure, potential for water to infiltrate the soil, soil texture, fertility, organic matter, lack of topsoil, large percentage of rocks, low percentage of preconstruction vegetation cover, and susceptibility to weed invasions.

Seeding mixes and rates will be developed based on actual disturbance and, therefore, will be site-specific. To calculate the number of pounds of seed needed for reseeding projects, it is necessary to calculate the number of pure live seeds (PLS) per pound. This will vary depending on which species, and even within each batch of seed.

PLS calculations take into account the purity (amount of actual seed of the species) and the germination rate of that batch of seed. So, for any given batch of seed, the PLS equals:

% purity x % germination/100 = pure live seed (PLS)

The amount of PLS is then used to calculate the actual seeding rate needed. To do this, divide the PLS figure into the recommended seeding rate to get the actual seeding rate:

recommended seeding rate/% PLS = actual seeding rate needed

3.4.1 Native Plant Palettes

Plant palettes (predominantly seed mixes) may be created for specific revegetation sites from seed or other propagules (i.e., vegetative cuttings) collected near the Project area or purchased seeds collected from nearby areas (preference will be given to seed sourced from western Riverside and San Bernardino counties, if available. If seed is not available in the immediate counties, seed may be acquired from other southern California counties or commercially bulked as available and deemed appropriate). After seed acquisition, a biologist, experienced in habitat restoration, will formulate appropriate plant palettes based on availability of seeds or other propagules and the site-specific approach to restoration for each disturbance area. Species appropriate for container plant production if necessary have been included in the plant palettes listed in Tables 3-2 through 3-8. Seed mix composition will account for predisturbance community composition and will follow guidelines published in Rehabilitation of Disturbed Lands in California: A Manual for Decision Making (Newton and Claassen, 2003). Seed mixes will include dominant species for each vegetation community, "naturally invasive" species (i.e., native species that are successful at colonizing disturbed sites), species known to be prolific seed producers, species known to be successful during seeding, uncommon species (for example, characteristic species within special status vegetation communities), or species known to provide habitat for target wildlife species. Additionally, species in the plant palettes should have a mix of species with differing rooting strategies (Newton and Claassen, 2003). Seeding rates will be specified as pounds per acre of pure live seed. Tables 3-3 through 3-10 provide sample native species plant palettes specific for Project revegetation areas. The palettes have been designed to include priority species that should be included in the seed mixes when available and secondary species that can be included to increase diversity, or to provide substitutions for priority species that may be unavailable at the time of seeding. Total seed application rates should include a minimum of 25 to 30 PLS pounds per acre, but specific rates will be determined at the time of seeding. To promote diversity and site stabilization, mixes should have no fewer than 5 to 10 species.

Seeding will be completed in fall as practical to take advantage of the full seasonal rainfall year (October to March). Ideally, sites should not be seeded in midwinter or later, due to risk of germination and

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subsequent desiccation and die-off. Pre-treatment of seeds by the seed vendor, as necessary, prior to seed application to break dormancy will be completed prior to application.

Table 3-3. Grassland Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Containe Plants
Primary Species			
Acmispon americanus	American bird's foot trefoil	1	no
Asclepias eriocarpa	Indian milkweed	1	yes
Bromus carinatus	California brome	10	yes
Castilleja foliosa	woolly Indian paintbrush	0.5	yes
Elymus glaucus	blue wildrye	8	yes
Elymus multisetus	big squirreltail grass	5	yes
Eriophyllum confertiflorum	golden yarrow	0.2 (treat seeds with oven heat of 248 degrees F for 5 minutes)	yes
Eschscholzia californica	California poppy	1	no
Lasthenia californica	California goldfields	1	no
Lupinus bicolor	bicolored lupine	1 (no treatment for fresh seed; hot water or scarify stored seed)	no
Melica imperfecta	California melic	4	yes
Phacelia distans	common phacelia	1.5	no
Poa secunda	one-sided bluegrass	4	no
Pseudognaphalium stramineum	cottonbatting plant	0.1	no
Stipa pulchra	purple needlegrass	8	yes
Secondary Species			
Acmispon strigosus	strigose lotus	2 (hot water treatment)	no
Agoseris retrorsa	California dandelion	0.5	no
Ambrosia acanthicarpa	annual bursage	1.5	no
Amsinckia intermedia	common fiddleneck	2	no
Artemisia dracunculus	pinon wormwood	1	yes
Asclepias fascicularis	narrow leaf milkweed	3	yes
Chaenactis fremontii	Fremont pincushion	0.5	no
Chaenactis glabriuscula	yellow pincushion	0.5	no
Chenopodium californicum	California goosefoot	0.5	no
Chlorogalum pomeridianum	soap plant	0.5	unknown
Cucurbita foetidissima	calabazilla	3	unknown
Datura wrightii	Jimsonweed	1	yes
Eriogonum nudum	naked buckwheat	0.5	no
Eulobus californicus	California primrose	1	no
Euthamia occidentalis	western goldenrod	0.25	yes
Heterotheca sessiliflora	false goldenaster	1	yes
Solanum umbelliferum	blue witch nightshade	1 (treat stored seeds with scarification or hot water for 1 hour	unknown

Table 3-3. Grassland Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Trichostema lanceolatum	vinegarweed	1	no

^a Germination pre-treatment recommendations from Emery 1988.

Table 3-4. Alluvial Scrub Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Primary species			
Ambrosia salsola	cheesebush	6	yes
Baccharis salicifolia	mulefat	0.5	yes
Bebbia juncea	sweetbush	0.5	yes
Encelia farinosa	brittlebush	2	yes
Ericameria paniculata	black-stem rabbitbrush	4	yes
Larrea tridentata	creosote bush	6 (soak overnight in distilled water)	yes
Lepidospartum squamatum	scalebroom	4	difficult (fresh seed required); possible from root stock cuttings
Peritoma arborea	bladderpod	4 (fire treatment)	yes
Secondary Species			
Atriplex polycarpa	allscale	3	yes
Bahiopsis parishii	Parish's viguiera	0.5	yes
Condea emoryi	desert lavender	1	yes
Ephedra californica	California jointfir	1	yes
Eriogonum fasciculatum	California buckwheat	1	yes
Hilaria rigida	big galleta	5	no
Olneya tesota	desert ironwood	2 (soaking in water 12-24 hours (fresh seed) or 24-36 hours for stored seed. Scarification before soaking.	yes
Parkinsonia florida	blue paloverde	5	yes
Petalonyx thurberi	sandpaper plant	1	yes
Psorothamnus spinosus	smoke tree	1	no
Senecio flaccidus	shrubby butterweed	0.1	yes
Senegalia greggii	catclaw acacia	2 (scarification or hot water)	yes
Yucca schidigera	Mojave yucca	3	yes

^a Germination pre-treatment recommendations from Emery 1988.

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Table 3-4. Alluvial Scrub Seed Palette

WOD Habitat Restoration and Revegetation Plan

Sc	ientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Note:				

lbs/acre = pound per acre

Table 3-5. Chaparral Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Containe Plants
Primary Species			
Acmispon glaber	deerweed	6 (hot water treatment)	yes
Adenostoma fasciculatum	chamise	3 (seeds collected from plants require no treatment; seeds collected from duff require hot water treatment)	yes
Artemisia californica	California sagebrush	1	yes
Bromus carinatus	California brome	10	yes
Cercocarpus betuloides	mountain mahogany	2 (1.5 months stratification may improve germination)	yes
Elymus glaucus	blue wild rye	10	yes
Eriogonum fasciculatum	California buckwheat	1	yes
Eriophyllum confertiflorum	golden yarrow	0.2 (oven heat of 248 degrees F for 5 minutes)	yes
Heteromeles arbutifolia	toyon	3 (fresh seeds no treatment; stored seeds 3 month stratification)	yes
Keckiella antirrhinoides	chaparral beardtongue	1	yes
Melica imperfecta	California melic	5	yes
Quercus berberidifolia	scrub oak	NA	yes, or direct seed in planting basins
Rhamnus crocea	redberry	NA	yes
Rhus ovata	sugar bush	NA	yes
Salvia mellifera	black sage	3 (stratify for 3 months or soak in 400 parts per million gibberellic acid 1 hour)	yes
Secondary Species			
Acmispon americanus var. americanus	American birdsfoot trefoil	2	no
Acmispon strigosus	strigose lotus	2 (hot water treatment)	no
Acmispon wrangelianus	Chilean trefoil	2	no
Amsinckia intermedia	common fiddleneck	2	no
Arctostaphylos glandulosa	Eastwood manzanita	2 (soak in sulfuric acid for 4-15 hours)	difficult

Table 3-5. Chaparral Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Arctostaphylos glauca	bigberry manzanita	2 (soak in sulfuric acid for 4-15 hours)	yes
Asclepias californica	California milkweed	3	yes
Atriplex canescens	fourwing saltbush	3 (fresh seeds need dry storage for about 10 months; stored seeds no treatment or 2.5 months stratification)	yes
Camissoniopsis bistorta	California suncup	0.5	no
Castilleja foliosa	woolly Indian paintbrush	0.5	yes
Ceanothus crassifolius	hoaryleaf ceanothus	2 (hot water and 2-3 months stratification)	difficult
Ceanothus oliganthus	hairy ceanothus	2 (hot water treatment)	difficult
Chaenactis fremontii	Fremont pincushion	0.5	no
Chaenactis glabriuscula	yellow pincushion	0.5	no
Chenopodium californicum	California goosefoot	0.5	no
Croton californicus	California croton	3	yes
Cryptantha intermedia	common cryptantha	2	no
Dendromecon rigida	bush poppy	1 (fire treatment or 2 months stratification)	yes
Ehrendorferia chrysantha	golden eardrops	1 (fire treatment or soak in 400 parts per million gibberellic acid)	unknown
Elymus condensatus	giant wild rye	10	yes
Encelia actonii	Acton's brittlebush	1	yes
Encelia californica	California brittlebush	0.1	yes
Encelia farinosa	brittlebush	1	yes
Ericameria palmeri	Palmer's goldenbush	4	yes
Eriodictyon crassifolium	yerba santa	3 (oven heat of 194 degrees F for 5 minutes)	yes
Eriogonum elongatum	long stemmed buckwheat	1	yes
Eulobus californicus	California primrose	1	no
Helianthemum scoparium	broom rose	2	yes
Helianthus gracilentus	slender sunflower	3	no
Hesperoyucca whipplei	chaparral yucca	2	yes
Heterotheca grandiflora	telegraph weed	0.5	no
Lasthenia californica	California goldfields	1	no
Lupinus albifrons	silver bush lupine	3 (fresh seeds no treatment; stored seeds scarification or hot water)	yes
Lupinus hirsutissimus	nettle lupine	2 (fresh seeds no treatment; stored seeds scarification or hot water)	no

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Table 3-5. Chaparral Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Lupinus microcarpus	chick lupine	4 (fresh seeds no treatment; stored seeds scarification or hot water)	no
Lupinus sparsiflorus	Mohave lupine	2 (fresh seeds no treatment; stored seeds scarification or hot water)	no
Lupinus succulentus	arroyo lupine	4 (fresh seeds no treatment; stored seeds scarification or hot water)	no
Malacothamnus fremontii	Fremont's bush mallow	3; seed requires pretreatment	yes
Malosma laurina	laurel sumac	3 (hot water or oven heat of 200 to 240 degrees F for 5 minutes)	yes
Penstemon spectabilis	showy penstemon	3	yes
Phacelia distans	common phacelia	3	no
Phacelia ramosissima	branching phacelia	3	no
Plantago erecta	California plantain	2	no
Poa secunda	one-sided bluegrass	5	no
Prunus ilicifolia	hollyleaf cherry	NA	yes
Salvia columbariae	chia	1	no
Solanum xanti	chaparral nightshade	1 (hot water for 1 hour)	yes
Stipa coronata	crested needlegrass	8	yes
Stipa pulchra	purple needlegrass	8	yes
Trichostema lanceolatum	vinegarweed	1 (2 months stratification)	no
Yucca schidigera	Mojave yucca	3	yes

^a Germination pre-treatment recommendations from Emery 1988.

Table 3-6. Coast Live Oak Woodland Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Primary Species			
Cercocarpus betuloides	mountain mahogany	2 (1.5 months stratification may improve germination)	yes
Chaenactis glabriuscula	yellow pincushion	0.5	no
Elymus condensatus	giant wild rye	10	yes
Ericameria pinifolia	pine goldenbush	4	yes
Erigeron foliosus	leafy daisy	1	yes
Lasthenia californica	California goldfields	1	no

Table 3-6. Coast Live Oak Woodland Seed Palette WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Lupinus microcarpus	chick lupine	4 (fresh seeds no treatment; stored seeds scarification or hot water)	no
Melica imperfecta	California melic	5	yes
Quercus agrifolia	coast live oak	NA	yes, or direct seed in planting basins
Rhamnus crocea	redberry	NA	yes
Ribes aureum	golden currant	NA	yes
Solanum xanti	chaparral nightshade	1 (hot water for 1 hour)	yes
Symphoricarpos mollis	creeping snowberry	NA	yes
Secondary Species			_
Camissoniopsis bistorta	California suncup	0.5	no
Deinandra kelloggii	Kellogg's tarweed	0.1	no
Eriogonum nudum	nude buckwheat	0.5	no
Eucrypta chrysanthemifolia	common eucrypta	1	no
Heterotheca grandiflora	telegraph weed	0.5	no
Phacelia cicutaria	caterpillar phacelia	3 (oven heat of 248 degrees F for 5 minutes)	no
Trichostema lanceolatum	vinegarweed	1 (2 months stratification)	no
Vitis girdiana	desert wild grape	NA	yes

^a Germination pre-treatment recommendations from Emery 1988.

Table 3-7. Coastal Sage Scrub Seed Palette
WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Primary Species			
Acmispon glaber	deerweed	6 (hot water treatment)	yes
Artemisia californica	California sagebrush	1	yes
Chaenactis glabriuscula	yellow pincushion	0.5	no
Croton californicus	California croton	3	yes
Elymus condensatus	giant wild rye	10	yes
Encelia farinosa	brittlebush	1	yes
Ericameria palmeri	Palmer's goldenbush	4	yes
Eriogonum elongatum	long stemmed buckwheat	1	yes

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Table 3-7. Coastal Sage Scrub Seed Palette
WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability a Container Plants
Eriogonum fasciculatum	California buckwheat	1	yes
Keckiella antirrhinoides	chaparral beard tongue	1	yes
Lasthenia californica	California goldfields	1	no
Melica imperfecta	California melic	5	yes
Penstemon spectabilis	showy penstemon	3	yes
Rhamnus crocea	redberry	NA	yes
Rhus trilobata	skunk bush	NA	yes
Salvia apiana	white sage	2	yes
Salvia mellifera	black sage	3 (stratify for 3 months or soak in 400 parts per million gibberellic acid 1 hour)	yes
Stipa cernua	nodding needlegrass	8	yes
Secondary Species			
Ambrosia acanthicarpa	annual bursage	1.5	no
Artemisia dracunculus	pinon wormwood	1	yes
Astragalus pomonensis	Pomona locoweed	2	yes
Atriplex canescens fourwing saltbush		3 (fresh seeds need dry storage for about 10 months; stored seeds no treatment or 2.5 months stratification)	yes
Baccharis pilularis	coyote bush	0.1	yes
Brickellia desertorum	desert brickellbush	0.25	yes
Camissoniopsis bistorta	California suncup	0.5	no
Corethrogyne filaginifolia	common sandaster	0.1	yes
Cryptantha intermedia	common cryptantha	2	no
Cucurbita foetidissima	calabazilla	3	unknown
Emmenanthe penduliflora	whispering bells	0.5 (oven heat of 500 degrees F for 10 minutes)	no
Encelia californica	California brittlebush	0.1	yes
Epilobium canum	California fuchsia	0.5	yes
Eriastrum densifolium	giant woollystar	4	no
Frigeron foliosus	leafy daisy	1	yes
Eulobus californicus	California primrose	1	no
Hazardia squarrosa	saw toothed goldenbush	2	yes
Hesperoyucca whipplei	chaparral yucca	2	yes
Lupinus albifrons	silver bush lupine	3 (fresh seeds no treatment; stored seeds scarification or hot water)	yes

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Table 3-7. Coastal Sage Scrub Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Lupinus hirsutissimus	nettle lupine	2 (fresh seeds no treatment; stored seeds scarification or hot water)	no
Lupinus microcarpus	chick lupine	4 (fresh seeds no treatment; stored seeds scarification or hot water)	no
Lupinus sparsiflorus	Mohave lupine	2 (fresh seeds no treatment; stored seeds scarification or hot water)	no
Malacothamnus fremontii	Fremont's bush mallow	3; seed requires treatment	yes
Malacothrix saxatilis	cliff aster	0.5	yes
Malosma laurina	laurel sumac	3 (hot water or oven heat of 200 to 240 degrees F for 5 minutes)	yes
Mirabilis laevis	desert wishbone bush	0.5	yes
Plantago erecta	California plantain	2	no
Rhus ovata	sugar bush	seed requires treatment	yes
Salvia columbariae	chia	1	no
Sphaeralcea angustifolia	copper globemallow	1	yes
Stipa coronata	crested needlegrass	8	yes
Stipa lepida	foothill needlegrass	8	yes
Stipa pulchra	purple needlegrass	10	yes
Trichostema lanceolatum	vinegarweed	1 (2 months stratification)	no

 $^{^{\}rm a}$ Germination pre-treatment recommendations from Emery 1988.

Table 3-8. Desert Scrub Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Primary Species			
Acamptopappus sphaerocephalus	rayless goldenhead	0.5	unknown
Acmispon strigosus	strigose lotus	2 (hot water treatment)	no
Ambrosia dumosa	white bursage	3	yes
Atriplex canescens	fourwing saltbush	3 (fresh seeds need dry storage for about 10 months; stored seeds no treatment or 2.5 months stratification)	yes
Bahiopsis parishii	Parish viguiera	0.5	yes

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Table 3-8. Desert Scrub Seed Palette
WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability a Container Plants
Bebbia juncea	sweetbush	0.5	yes
Brickellia desertorum	desert brickellbush	0.25	yes
Chaenactis fremontii	Fremont pincushion	0.5	no
Croton californicus	California croton	3	yes
Emmenanthe penduliflora	whispering bells	0.5 (oven heat of 500 degrees F for 10 minutes)	no
Encelia farinosa	brittlebush	1	yes
Ephedra californica	California jointfir	1	yes
Ericameria paniculata	Mojave rabbitbrush	4	yes
Hilaria rigida	big galleta	5	no
Larrea tridentata	creosote bush	6 (soak overnight in distilled water)	yes
Phacelia campanularia	desert bluebells	2	no
Plantago ovata	desert plantain	2	no
Psorothamnus arborescens	California indigo bush	1	no
Rafinesquia neomexicana	desert chicory	0.1	no
Salvia columbariae	chia	1	no
Senegalia greggii	catclaw acacia	1 (scarification or hot water)	yes
Stephanomeria exigua	small wire lettuce	0.5	unknown
Stillingia linearifolia	narrow-leaved stillingia	0.25	unknown
Thamnosma montana	terpentine broom	0.5	no
Yucca schidigera	Mojave yucca	1	yes
Secondary Species			
Adenophyllum porophylloides	San Felipe dogweed	0.5	unknown
Chilopsis linearis	desert willow	2	yes
Chorizanthe brevicornu	brittle spineflower	0.5	no
Cryptantha intermedia	common cryptantha	2	no
Cucurbita palmata	coyote melon	3	unknown
Dalea mollis	silky dalea	0.1	no
Eriogonum thurberi	Thurber's buckwheat	1	no
Eschscholzia minutiflora	pygmy poppy	2	no
Fagonia laevis	California fagonbush	1	unknown
Hoffmannseggia microphylla	Wand holdback	1	unknown
socoma acradenia	alkali goldenbush	1	yes
Krameria bicolor	white rhatany	1	unknown

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Table 3-8. Desert Scrub Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Olneya tesota	desert ironwood	2 (soaking in water 12-24 hours (fresh seed) or 24-36 hours for stored seed. Scarification before soaking)	yes
Parkinsonia florida	blue paloverde	5	yes
Peritoma arborea	bladderpod	1 (fire treatment)	yes
Petalonyx thurberi	sandpaper plant	1	yes
Psorothamnus schottii	indigo bush	1	no
Simmondsia chinensis	jojoba	NA	yes
Sphaeralcea angustifolia	copper globemallow	1	yes
Stephanomeria pauciflora	desert straw	1	unknown

^a Germination pre-treatment recommendations from Emery 1988.

Table 3-9. Arid Riparian Woodland Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability a Container Plants
Primary Species			
Ambrosia salsola	cheesebush	6	yes
Atriplex polycarpa	allscale	3	yes
Bahiopsis parishii	Parish viguiera	0.5	yes
Bebbia juncea	sweetbush	1	yes
Chilopsis linearis	desert willow	6	yes
Encelia farinosa	brittlebush	2	yes
Eriogonum fasciculatum	California buckwheat	1	yes
Hilaria rigida	big galleta	5	no
Larrea tridentata	creosote bush	6 (soak overnight in distilled water)	yes
Secondary Species			
Condea emoryi	desert lavender	1	yes
Ephedra californica	California jointfir	1	yes
Ericameria paniculata	black-stem rabbitbrush	4	yes
Lepidospartum squamatum	scalebroom	4	difficult
Olneya tesota	desert ironwood	2 (soaking in water 12-24 hours (fresh seed) or 24-36 hours for stored seed. Scarification before soaking)	yes
Peritoma arborea	bladderpod	1 (fire treatment)	yes

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Table 3-9. Arid Riparian Woodland Seed Palette WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Petalonyx thurberi	sandpaper plant	1	yes
Psorothamnus spinosus	smoke tree	1	no
Yucca schidigera	Mojave yucca	3	yes

^a Germination pre-treatment recommendations from Emery 1988.

Table 3-10. Mesic Riparian Woodland Seed Palette WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Containei Plants
Primary Species			
Agrostis exarata	spike bentgrass	5	yes
Ambrosia pilostachya	western ragweed	1.5	yes
Artemisia douglasiana	California mugwort	0.5	yes
Baccharis salicifolia	mulefat	0.1	yes
Carex praegracilis	field sedge	2	yes
Elymus triticoides	beardless wildrye	6	yes
Euthamia occidentalis	western goldenrod	0.25	yes
Hordeum brachyantherum	meadow barley	10	yes
uncus mexicanus	Mexican rush	1	yes
Platanus racemosa	western sycamore	NA	yes
Pluchea sericea	arrow weed	0.5	yes
Populus fremontii	Fremont cottonwood	NA	cuttings
Salix laevigata	red willow	NA	cuttings
Salix lasiolepis	arroyo willow	NA	cuttings
Scrophularia californica	California bee plant	1	yes
Senecio flaccidus	shrubby butterweed	.01	yes
Secondary Species			
Baccharis salicina	willow baccharis	0.1	yes
Fraxinus velutina	Arizona ash	1 (3 months stratification)	yes
Helianthus californicus	California sunflower	3	no
socoma menziesii	Menzies' goldenbush	1	yes
uncus xiphioides	iris leaved rush	1	yes
ythrum californicum	California loosestrife	0.5	no
Mimulus cardinalis	scarlet monkeyflower	0.1	yes

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Table 3-10. Mesic Riparian Woodland Seed Palette

WOD Habitat Restoration and Revegetation Plan

Scientific Name	Common Name	Proposed Seeding Rate (PLS lbs/acre) ^a	Suitability as Container Plants
Rosa californica	California rose	seed requires pretreatment	yes
Solanum douglasii	Douglas' nightshade	1	yes
Urtica dioica ssp. holosericea	stinging nettle	0.5	no
Vitis girdiana	desert wild grape	NA	yes

^a Germination pre-treatment recommendations from Emery 1988.

3.4.2 Seeding Methods

One or a combination of three available methods of seed application may be used depending on the specific restoration area conditions. The methods include drill seeding, imprint seeding, broadcast (or hand-broadcast) seeding, and hydroseeding. Restoration seeding will be completed in fall as practical to take advantage of the full seasonal rainfall year (October to March). If seeding must be delayed due to construction schedule impacts, sites will be stabilized as per methods in the Project SWPPP until seeding can occur.

3.4.2.1 Drill Seeding

Drill seeding places seeds at a depth specified by a machine, which may be a mechanized drill or hand-operated drill. Drill seeding provides greater opportunity for seeds to be in contact with soil moisture, protects seeds from predation by birds or insects, and prevents small seeds from being carried away by wind or precipitation. This method of seeding is optimal for large seeds, but can be used for seeds of all sizes. Because different sized seeds germinate at variable optimal depths, only seeds of similar size should be used in the drill simultaneously. Drill seeding often leaves an "unnatural" visual impact because the seeds are implanted in rows.

If implemented on the Project, generally drill seeding will be used on sites with shallow slopes (less than 3:1) and those that are greater than 1 acre in size with few impediments to maneuvering (Newton and Claassen, 2003). Any corners or narrow areas that cannot be reached with the drill would be hand seeded. Hand seeding may be used to supplement a more natural regrowth pattern by scattering seeds in between rows of the drill seeder. Drill seeding will correspond with seasonal rainfall and will not be used with supplemental irrigation. Drill seeding may be used on compacted or sandy soils because the drill acts to break the soil surface and implant the seeds beneath it.

3.4.2.2 Imprint Seeding

Imprinting may be used on areas larger than 0.5 acre where soils are neither too loose nor heavily compacted. In appropriate soils, imprinting facilitates successful establishment of seed into the soil and eliminates the need for mulch, soil irrigation, and soil binding. Imprinting also increases rainwater infiltration, improves gas exchange between the soil and atmosphere, reduces erosion, and improves contact between seeds and soil water (Barnes, 1950; Gintzburger, 1987; Oliveira et al., 1987; Slayback and Cable, 1970). In addition, imprinting may create microsites that catch and hold wind-dispersed seed, encouraging germination and plant establishment.

Imprinting is accomplished via a mechanical imprinter that is pulled behind a tractor and simultaneously spreads and buries pre-developed seed mixes in V-shaped depressions approximately 3 to 5 inches deep. Imprinting under most conditions results in shrub establishment within 1 to 3 years. However,

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imprinting achieves the best results when accomplished during or immediately following the rainy season.

For this Project, imprinting is recommended for friable soils that are likely to maintain their shape once treated.

3.4.2.3 Hand Seeding

Hand seeding will generally be used where mechanical seeding is deemed infeasible because of substrate, location, or disturbance area size. In general, application of hand-broadcasted seed will be reserved for areas approximately 0.5 acre or less or where small amounts of seed are needed. Hand-seeded sites will be raked or harrowed before seeding to break up the surface and after to allow seeds to fall into crevices. Raking or other post-seeding treatment to lightly cover seed will also be completed to enhance germination likelihood, provide even distribution of seed, and reduce losses to granivores. This will also help retain moisture for germination. The seed material may be broadcast by hand or using a seed spreader. Hand seeding will be timed to occur in the late fall prior to rains.

3.4.2.4 Hydroseeding

Hydroseeding is an effective method of reseeding that can be used in a variety of settings and with diverse seed mixes. It is ideal for steeply sloped or erosive areas, rocky substrates, or large, flat features that require large amounts of material cover. Because hydroseeding requires trucks or trailers to haul, mix, and apply the hydroseed, some accessibility is required near a site; however, hoses may be used to broadcast seed. Hydroseeding does not break apart the soil surface; therefore, a site should be prepared by decompaction, scraping, or raking prior to application of the hydroseed. Each hydroseed mix contains seeds, fertilizer, and a small amount of mulch. Additional hydromulch may be added to the hydroseed mixture or implemented as a separate step. Hydromulch is an additional slurry of organic fibrous material, tackifier, and soil amendments that helps bind the mixture to the soil and retain moisture for germination (Baxter, 2007). One advantage of using hydroseed over other revegetation methods is that when applied at the proper time and during normal precipitation years, no supplemental irrigation is needed.

When hydroseeding is used on the Project, a four-step process will be implemented. First, the soil will be prepared. If it is determined by a biologist experienced in habitat restoration that the soil is too compacted, then a site will be decompacted, scraped, or raked prior to application of the hydroseed. Just before the hydroseed is applied, the soil will be moistened to allow the seed to stick to the soil surface (Newton and Claassen, 2003). However, if significant rainfall has occurred within 24 hours, prewetting may not be necessary and may be determined by the biologist onsite. The hydroseed mixture (seed, water, fertilizer, and small amount of mulch) will then be applied across the site. Lastly, the hydromulch (organic fiber, soil amendments, and tackifier) will be applied. Separating the hydroseed and hydromulch into separate layers helps ensure that the seed comes in contact with the soil rather than being bound up in the mulch or exposed to air where it can dry up without germinating (Newton and Claassen, 2003). A typical rate of application in arid California is 500 pounds per acre of wood fiber mulch for hydroseed-only sites and 1,500 to 2,000 pounds per acre of wood fiber mulch and a tackifier for the hydromulch method (Newton and Claassen, 2003); however, the restoration contractor will determine the specific rate of application on a site-by-site basis in consultation with the SWPPP consultant. If deemed necessary by a biologist, supplemental irrigation may be applied to a site after the hydroseed has been applied until germination.

3.4.3 Nursery Stock Planting

Seeding is the primary method for revegetation, where required. However, nursery-produced container plants *may* be used on some sites or for certain species. The size and shape of the containers should match the plant's rooting strategy (i.e., deep-rooted plants should be grown in tall pots to encourage

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more root development, while fibrous-rooted plants can be grown in shorter pots or as plugs). The numbers, species, sizes, and spacing of container plants, if used, will be determined in conjunction with the development of site-specific seed mixes and seeding approach. Container plants would be installed between October and March.

Container stock installation requires an associated irrigation method to supply irrigation through the first year at a minimum. Irrigation will be installed and tested prior to container plant installation and may include use of flood bubblers or drip emitters. In cases of very small or remote planting sites, DRiWATER or equivalent gel water product or hand watering using buckets may be used to irrigate container plants.

Planting holes will be excavated to diameters approximately twice that of the root ball (but not deeper than the root ball, to avoid settling). Planting holes will be thoroughly moistened by irrigation prior to placement of container plants. During installation of container stock, care will be taken to minimize disturbance of the root system while extracting the plants from their containers. The plants will be placed in the holes and loose native soil will be backfilled into the hole around the plant and firmly hand-packed around the root ball to eliminate any air pockets. For deep pots, soil will be backfilled and packed in lifts of a few inches at a time to discourage settling of plants. Berms or basins may be constructed to aid in irrigation, but special care will be taken to avoid pooling of water around plant stems or settling of the stem/root union below grade. Plants will be watered immediately after installation.

For species such as oaks, direct planting of locally obtained acorns may also be used. Acorns should be planted approximately 2 inches below the soil surface. Use of cuttings is also an option and is described in Section 3.4.4.

3.4.4 Riparian and Jurisdictional Drainage Restoration

In accordance with FEIR/FEIS MM VEG-3a, SCE will prepare a Habitat Mitigation and Monitoring Plan (HMMP) (separate title from this HRRP) that will include restoration or compensation mitigation to assure no net loss of wetland acreage or wetland habitat value from direct or indirect Project impacts, including reduction of wetland acreage, and downstream or upstream effects to channels or their associated habitat. The HMMP will also address WR-MSHCP riverine and riparian resources. The HMMP will incorporate wetland/water permit requirements, which have not yet been issued. Because there will be overlap with the restoration and revegetation methods described in this HRRP, the following paragraphs describe the general approaches that will be included in the HMMP.

A combination of recontouring, seeding, and installation of cuttings may be used to restore/replant temporarily disturbed riparian areas. Specifications will be in compliance with U.S. Army Corps of Engineers 404 permit and CDFW 1602 Streambed Alteration Agreement (both pending).

Seeds from riparian trees and shrubs will be collected on or near the Project site (when feasible). Tables 3-9 through 3-10 list species that will be used for riparian restoration.

Soil stabilization will be performed consistent with SWPPP measures. Riparian area revegetation will be incorporated into the SWPPP design to maximize the efficiency of both soil stabilization and restoration measures.

Installing cuttings of woody species that reproduce vegetatively (e.g., willow and cottonwood species on the Project) can be a successful revegetation method along riparian edges. As the cuttings proliferate, they offer erosion control along banks, fast-growing native vegetation, and, when mature, create a source for future vegetative diversity. "Cuttings" can refer to leaves, stems, or roots and may be rooted or unrooted (Newton and Claassen, 2003). When using stems, cuttings should be of a minimum size (0.75-inch diameter) and should be long enough so that 8 inches are at the lowest annual point of the water table and at least one-half of the length of the stem is in the ground (Hoag, 2004). If used on the

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Project, unrooted cuttings will be 1) collected and planted during the dormant season, 2) oriented in the planting area as from the collection site (bottom versus top), 3) trimmed to one primary piece/stem, 4) kept moist and stored for no longer than 2 weeks from cutting to planting, and 5) watered when planted and planted deeply enough to contact adequate soil moisture for rooting (Newton and Claassen, 2003). To prevent predation, cuttings will be surrounded with protective fencing until established. A biologist, experienced in habitat restoration, will evaluate the potential of this method on a site-by-site basis by evaluating upstream and downstream conditions of these riparian species and bank conditions on a site. Sites that occur at sharp curves, steep banks, or are within large alluvial washes should be avoided for this method (Briggs, 1995).

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Maintenance, Monitoring, and Reporting Requirements and Performance Criteria

Maintenance, monitoring, and reporting of the revegetation or restoration sites will begin with implementation of the restoration and revegetation work at each of the Project's temporary disturbance areas, and will continue for at least 5 years, or until the defined success criteria are met.

4.1 Maintenance Activities and Schedule

Restored sites will be maintained per the schedule presented in Table 4-1 and the methods outlined in the following subsections.

Table 4-1. Maintenance Schedule

WOD Habitat Restoration and Revegetation Plan

Maintenance Activity	Frequency
	Once or twice weekly during the establishment period (approximately the first 3 months after planting).
Watering (container plants suttings or as	Once or twice monthly for the first year.
Watering (container plants, cuttings, or as deemed necessary as a remedial action)	 As deemed necessary by a qualified biologist for the second year or as a remedial action for under-performing sites.
	(Irrigation frequencies will ultimately be determined by precipitation patterns and site conditions).
Weed Control	 As described in the IWMP. Generally, once per year in spring (February to April). A visit in fall may also be warranted for species germinating later in the season. Frequency may be adjusted as needed on a site-by-site basis.
Erosion Control	Once per year in spring (February to April). Additional visits conducted as conditions (flood, fire, etc.) require.

4.1.1 Watering

Irrigation may be used on sites where container plants or cuttings are installed (if container planting occurs). Irrigation and supplemental watering will be considered in conjunction with other restoration treatments on a site by site basis. Germination at seeded areas will rely on natural precipitation. Where irrigation is required, accessible sites will have either drip- or bubbler-type irrigation systems installed that will be fed by either onsite tanks or a water truck connection. Hand watering or installation of gel-type irrigation products (i.e., DRIwater) may occur on inaccessible or small sites. Specific schedules and quantities of irrigation will depend on weather patterns and site conditions.

4.1.2 Weed Control

The strategy for and principal methods of weed control are discussed in the Project's IWMP (CH2M, 2016b). Principal methods used for this Project include prevention, physical weed removal, and herbicide application. For the purpose of habitat restoration and maintenance, weed prevalence will be evaluated annually, and the need for either physical or herbicidal control methods will be decided based on methods that best suit the desired outcome.

Physical weed removal will be the preferred means of maintaining restoration and revegetation sites and will be employed according to guidelines in the IWMP. Herbicide application will be reserved for the

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more difficult and aggressive invasive species not readily removed by physical methods, or for areas where repeated mechanical treatment fails to produce the desired reduction of invasive species.

4.1.3 Erosion Control

Temporary disturbance areas will be monitored for erosion by the Project SWPPP consultant. Any erosion issues observed by the restoration contractor shall be immediately reported to the SWPPP consultant. If erosion issues occur after the SWPPP has been closed out, then the restoration contractor will be responsible for stabilizing restoration sites. Site stabilization may involve recontouring, installation of biodegradable fiber rolls and/or blanket materials, and potentially reseeding.

4.1.4 Trash/Debris Removal

Trash will be removed from the restoration areas by hand during the annual maintenance visits. Trash consists of all human-made materials, equipment, or debris dumped, thrown, washed, blown, and left within the restoration areas. Deadwood and leaf litter of native trees and shrubs will not be removed. Following each site inspection, staff will communicate any additional trash and debris removal requirements to the biologist, experienced in habitat restoration.

4.2 Monitoring and Reporting Activities and Schedule

Monitoring will begin the first spring after restoration and continue annually to assess whether the success criteria have been achieved and whether corrective measures need to be employed. To ensure successful establishment of the sites, SCE may conduct monitoring more frequently as deemed appropriate for site-specific situations and during the initial establishment period. Restoration and revegetation sites will be monitored for no fewer than 5 years, or until established success criteria are met (whichever is greater). Monitoring will include an assessment of the progress and identification of potential problems with the revegetated site. If necessary, remedial action, such as additional planting, weeding, supplemental watering, or erosion control, will be taken. If the restored habitat mitigation does not meet the established performance criteria after the 5-year maintenance and monitoring period, then monitoring may extend beyond the 5-year period until the criteria are met or unless otherwise directed by the CPUC, BLM, USFWS, CDFW, and RCA and CVCC (as appropriate).

Table 4-2. Monitoring ScheduleWOD Habitat Restoration and Revegetation Plan

Monitoring Frequency	Submittals
Biannual qualitative assessments throughout the monitoring period (more frequent visits may occur as needed depending on restoration activity, e.g., container plant installation).	Brief memorandum summarizing results of the visits.
Quantitative monitoring will be conducted in spring as the restoration sites begin approaching final conditions.	

4.2.1 Monitoring Methods

Baseline values from which cover and species richness percentages are to be calculated to determine the success criteria will be established prior to ground-disturbing activities. The presence of annual plants at the site will be recorded, but due to their great inter-annual variability, they will not be used in quantitative success criteria.

Quantitative sampling of vegetation cover will be used to determine cover and the percent contribution of species to plant community composition. Prior to site disturbance, absolute cover of native perennial species will be measured for each habitat type potentially requiring restoration (as determined by previously determined vegetation mapping and habitat classification [i.e., suitable SKR habitat]).

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Sampling will occur by either quadrat or line transects depending on vegetation. Herbaceous sites will likely be sampled using quadrats, while shrub communities will be sampled with transects. Locations and numbers of quadrats and transects will be pre-determined using stratified random selection with geographic information systems. If the number and/or location of sampling quadrats or transects does not provide an accurate representation of the vegetation onsite as determined by the ecologists conducting the sampling (i.e., the site contains some native perennial grasses but none of the stratified randomly located quadrats contain native perennial grasses), then the method will be adjusted using professional judgement in an attempt to sample locations that accurately represent the site conditions. The sampling ecologists will use the data gathered in transect and quadrat sampling to estimate percent cover of native and non-native vegetation for each subsequent site. In addition to the quantitative sampling, qualitative notes will be taken as necessary, such as preponderance of native annual species or weed species. Representative photographs will be taken at each site.

4.2.2 Success Criteria and Adaptive Management

Monitoring and adaptive management of revegetation sites is necessary to ensure long-term native plant community establishment. Data collected prior to site development will support long-term evaluation of revegetation targets and results. Due to the extended duration of passive revegetation in arid environments, revegetation of Project disturbance areas will be accelerated by seeding with primarily early- to mid-successional species. Seedling establishment resulting from dispersal of the native seedbank may also occur.

Plant communities cannot be immediately returned to pre-disturbance composition; therefore, the criteria for revegetation success needs to be established on the basis of *successional* plant associations rather than mature climax vegetation (CH2M, 2008). Successional stages can be identified to the extent that the initial stage of colonization, intermediate successional stage(s), and final stage or climax vegetation are generally predictable.

This means that instead of planning for climax vegetation that physically cannot become established for decades, successional plant communities composed of species native to the area could readily occupy previously disturbed areas. Accelerating their initial establishment and growth in terms of diversity, density, and stature can be achieved through an ecologically realistic revegetation program. Even when revegetation is successful, plant communities established are typically composed of pioneer and successional species adapted to disturbed substrate.

The initial species richness (often called "diversity") of the revegetated sites will not be as great as any reference site. Success will be realistically linked to seedling establishment and survival, increase in the cover and species richness of perennial shrubs, and evolution of the site toward a "mature" community dominated by late-successional plant species.

Table 4-3 presents the success criteria for restoration/revegetation of temporary disturbance areas within the 5-year monitoring period. An explanation of the success criteria follows Table 4-3.

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Table 4-3. Success Criteria for Restored/Revegetated Project Temporary Disturbance Areas

WOD Habitat Restoration and Revegetation Plan

	Success Criteria ^a					
Vegetation Type ^b	Native Vegetation	Absolute Native Plant Cover	Native Shrub/ Tree Density	Maintenance		
Agriculture						
Developed/Disturbed						
Grassland/Forbland (not suitable SKR habitat and less than 10 percent of relative cover of native perennial grass species)	Minimize weed invasion through implementation of the methods and success criteria in IWMP, and control dust generation and soil erosion according to the standards in the pro					
Temporary disturbance areas that cannot be effectively revegetated						
Grassland/Forbland (suitable SKR habitat or 10 percent or greater relative cover of native perennial grass species)	80 percent of vegetation cover shall be native species that occur naturally in local native habitats. Criteria will be adjusted to account for pre-disturbance nonnative grass cover.			The site shall have persisted		
Alluvial Scrub		60 percent of pre-disturbance or reference vegetation.	60 percent of pre- disturbance or reference vegetation.	successfully without irrigation or remedial planting for a minimum of 2 years prior to completion of monitoring.		
Coast Live Oak Woodland	80 percent of vegetation cover or equivalent to pre-disturbance or					
Coastal Sage Scrub	reference cover, whichever is					
Chaparral	greater, shall be native species that occur naturally in local					
Desert Scrub	native habitats.					
Riparian Woodland						

^a MM VEG-1d, Part B

The intent of the success criteria is to (1) prevent the sites from becoming overrun by invasive non-natives, and (2) set meaningful and feasible criteria for replacement of native plant species (and the associated habitat values). Both criteria are based on aerial cover estimates where the sum of native plant cover, non-native plant cover, and bare ground is 100 percent (However, it should be noted that some vegetation sampling methods can produce total cover values greater than 100 percent).

The first criterion refers to <u>relative</u> amounts of native and non-native cover within a given revegetation area. The criterion requires that native species make up the majority (80 percent) of vegetation cover, while recognizing the fact that non-native species will invade the site and will realistically comprise a portion (limited to 20 percent or less) of the total cover. This criterion compares native and non-native cover within a site but it does not compare a revegetation site to reference sites or pre-disturbance condition. However, it allows for adjustment in grassland/forbland, where the pre-disturbance condition is dominated by non-native species.

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^b Impacts to habitats subject to Clean Water Act Sections 404 and 401 permitting and/or permitting pursuant to California Fish and Game Code Section 1602 will be addressed in the project Habitat Mitigation and Monitoring Plan (HMMP). For areas subject to both the HRRP and HMMP, the stricter requirements and success criteria will be applied.

For example, if a 10,000-square-foot revegetation site has total (i.e., absolute) vegetation cover of 60 percent (i.e., 6,000 square feet of the site covered by plants), comprising 4,800 square feet of native plants and 1,200 square feet of non-native plants, this criterion would be met.

The second criterion refers to <u>absolute</u> native plant cover and density within the site as compared to reference sites or pre-disturbance conditions. It requires that native plant cover in revegetation sites reach 60 percent of the pre-disturbance or reference native plant cover, and that the density (i.e., number per acre) of native shrubs and trees reach 60 percent. This criterion requires that revegetated sites provide meaningful native habitat values and native species cover (compared to the reference or pre-disturbance condition), while recognizing that more stringent requirements (e.g., 80 percent or higher) may not be feasible.

For example, if the pre-disturbance or reference condition is 80 percent native plant cover, with the remaining 20 percent comprised of non-natives or bare ground, the example above would apply. The revegetation site must achieve 60 percent of 80 percent (i.e., 48 percent) cover of native plants. Using the example above, a 10,000-square-foot revegetation site should have 4,800 square feet covered by native plants. Additionally, if the reference site supports 1,000 native shrubs per acre, then the revegetation site must support 60 percent of that density (i.e., 600 native shrubs/acre). The site may also include some cover of non-native plants, per the first criterion, but the non-natives do not count toward the native plant cover and must not exceed 1,200 square feet of the site.

Together the two criteria ensure that revegetation is deemed successful when sites have (1) at least 60 percent native species cover and density compared to pre-disturbance or reference vegetation, and (2) no more than 20 percent relative cover of non-native plants within the site.

Table 4-4 includes example scenarios of the success criteria calculations.

Table 4-4. Success Criteria Scenarios *WOD Habitat Restoration and Revegetation Plan*

Reference Site Absolute	Revegetation site absolute cover				
Native Cover	Required Minimum Native Cover (60% x Reference Native Cover)	Maximum Non- Native Cover ^a	Total Absolute Cover ^b		
100%	60%	15%	75%		
90%	54%	13.5%	67.5%		
80%	48%	12%	60%		
70%	42%	10.5%	52.5%		
60%	36%	9%	45%		
50%	30%	7.5%	37.5%		
40%	24%	6%	30%		
30%	18%	4.5%	22.5%		
20%	12%	3%	15%		
10%	6%	1.5%	7.5%		

^a Assumes minimum required native cover from column 2

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^b Assumes minimum native cover + 20% max non-native relative cover. For all rows, the ratio of native to non-native cover is 80:20

Impacted areas will be inspected for species on the California Invasive Plant Council list of invasive plants. If found, SCE will implement the measures outlined in the Project's IWMP.

If plant survival or vegetation cover is not meeting success criteria, remedial planting and maintenance measures such as irrigation or weeding will occur.

During the initial establishment period, erosion-control measures may be implemented. The measures are incorporated as part of the overall restoration plan; however, inspections and repairs may be necessary and should be completed as soon as problems occur.

If the restoration efforts fail to meet the success criteria, contingency measures may be required. Contingency measures may include re-planting/reseeding, drainage repairs, adjustments to irrigation or weeding schedule, or extension of maintenance beyond original schedule to repair or remediate sites not on track to meet, or not meeting success criteria by the end of the monitoring period. Any sites not meeting success criteria within 5 years will be evaluated and SCE will discuss options with the CPUC, the BLM, CDFW, USFWS, RCA, and CVCC.

Additional reference data may be collected and analyzed throughout the duration of the monitoring period and the results applied to modify restoration techniques or success criteria as a component of the adaptive management approach as appropriate.

Though the ultimate long-term goal will be to reestablish native perennial species in scrub or woodland habitats, cover of woody perennial species (especially in arid environments) can be very slow to increase. As such, if a site is not meeting the quantitative success standard listed in Table 4-3 at the end of the monitoring period, the site may be evaluated using additional measures to determine if the site has achieved a positive trajectory toward a stable, native community. For example, if shrub cover is low but the density of shrub seedlings indicates species are becoming established, then the site may be considered on a trajectory toward success. Remedial measures may be needed, and the monitoring period will be extended until the site achieves success. In herbaceous vegetation (but not shrubland or woodland vegetation), if native annual species cover is high and stays high for well after the initial seeding, then the site may be considered successful as it has reached an early successional status of native species that are successfully regenerating.

For herbaceous habitats being restored within a matrix of non-native species, establishing native perennials can be difficult even under the best circumstances. If a site is not meeting the relative cover criteria but has an absolute cover of all plant species (including non-natives present in the undisturbed community, but not including invasive species targeted for control) that is near the absolute cover of the adjacent or reference community, then it may be considered successful (Section 4.2.4).

Alternatively, temporary disturbance areas for which it is believed could not be effectively revegetated or restored within a 5-year timeframe will be categorized as long-term/permanent disturbance areas and addressed through offsite mitigation. In accordance with FEIR/FEIS MM VEG-1e and the mitigation requirements set forth in the BO and MSHCP PSE materials, SCE will prepare a Habitat Compensation Plan. Habitat compensation for all permanent or long-term habitat loss that is not compensated through participation in the WR-MSHCP or CV-MSHCP will be accomplished by acquisition of mitigation land or conservation easements or by providing funding for specific land acquisition, endowment, restoration, and management actions.

For all revegetation or restoration areas, if a fire, flood, or other disturbance beyond the control of SCE, CPUC, and BLM damages a revegetation area within the monitoring period, then SCE shall be responsible for a one-time replacement. If a second event occurs, then no replanting is required, unless the event is caused by SCE's activity (based upon maintenance of erosion control measures; fencing, gates, or other site control; or investigation by a firefighting agency).

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4.2.3 Reporting

Annual reports will be prepared and submitted to CPUC, BLM, CDFW, USFWS, RCA, CVCC, the Morongo Band of Mission Indians, and Bureau of Indian Affairs (as appropriate) within 90 days after completion of each year of revegetation and restoration work. Each report will include results of quantitative and qualitative monitoring efforts, and address success standards and measures to correct underperformance, as needed.

The annual monitoring reports will be based on field observations and measurements, and will record the condition of the restoration and revegetation areas. The monitoring period will begin after completion of the revegetation effort. The monitoring reports will include, but may not be limited to, the following information:

- Total vegetation acreage subject to temporary and permanent disturbance.
- Identification of which items of the HRRP have been completed, and which items are still outstanding.
- Dates and descriptions of reclamation, revegetation, and monitoring activities conducted during the reporting period, including the timing and frequency of data collection, weed control, and maintenance activities.
- Description of the general health and vigor of the plants.
- Description of any pests or circumstances substantially affecting the plants.
- Description of any changes in the physical environment of the plants since the end of the previous reporting period and since the beginning of the monitoring period.
- Presentation of monitoring data and discussion of whether success criteria for the year were met.
- If it is determined that the restoration has not been successful, then the suspected causes of failure and identification of any adaptive management measures necessary for the success of the restoration effort will be noted.

4.2.4 Notification of Completion and Agency Confirmation

Mitigation activities will be considered complete when the final success criteria are met. SCE shall notify the CPUC, BLM, CDFW, USFWS, RCA, CVCC, the Morongo Band of Mission Indians, and Bureau of Indian Affairs (as appropriate) in writing upon attainment of the success criteria. Following receipt of the notification of completion, CPUC and BLM may arrange a visit to the restoration sites to confirm completion of the mitigation effort; the Morongo Band of Mission Indians and Bureau of Indian Affairs may arrange a similar visit for restoration sites on tribal lands.

It is possible that despite SCE's best efforts, success criteria may not be met on some sites. In such cases, SCE will evaluate those sites using adapted standards to determine if the sites are stable and on a trajectory toward recovery. Criteria to evaluate such sites may include qualitative observations such as whether the soils are stable and weeds are under control, signs of successful natural recruitment such as perennial seedlings that may not provide significant cover but are becoming established and will eventually provide higher cover, successful establishment of a native annual populations that appear self-sustaining, or other potential measures. For these sites, remedial measures will be taken as needed using adaptive-management strategies. The monitoring periods will be extended as needed to document achievement of the established success criteria.

In even fewer cases, it may not be possible to reestablish native vegetation with any reasonable level of effort due to site disturbance outside SCE's control (e.g., vehicle use, livestock grazing, or land use

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conversion for non-Project purposes). If sites where revegetation has been attempted but failed, and the CPUC, BLM, CDFW, USFWS, RCA, CVCC, the Morongo Band of Mission Indians, and Bureau of Land Management (as appropriate) concur that a site is not reasonably restorable for reasons outside SCE's control, they will have the option to sign off on the sites and determine that the mitigation effort is complete.

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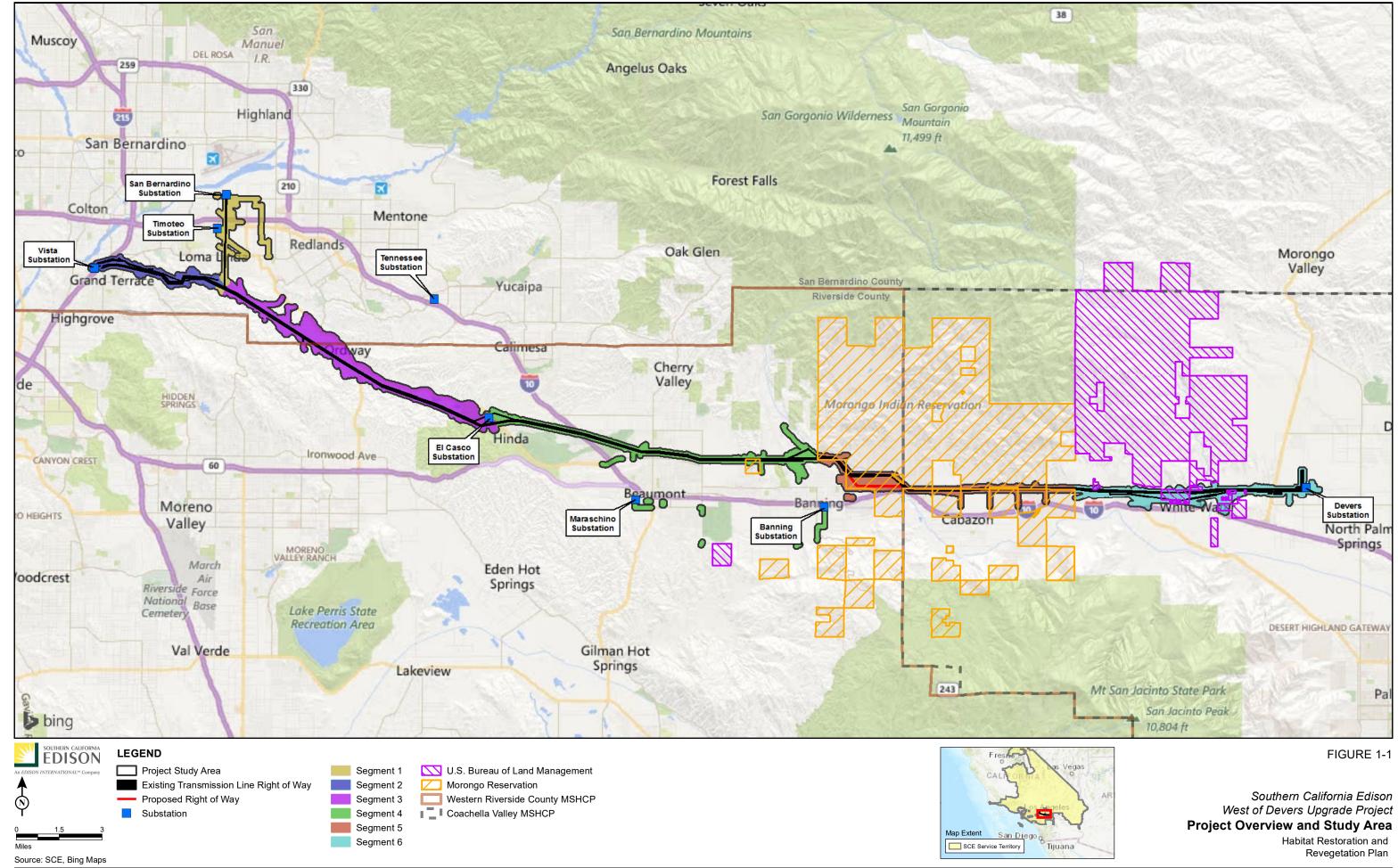
Revisions

Revisions made to standard text (black ink) should be noted below to document changes in requirements or SCE's approach to this HRRP.

Date	Description of Revision	Contact

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Figures





Developed/Disturbed

Grassland/Forbland

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Developed/Disturbed

Grassland/Forbland

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Shoo-fly Work Area

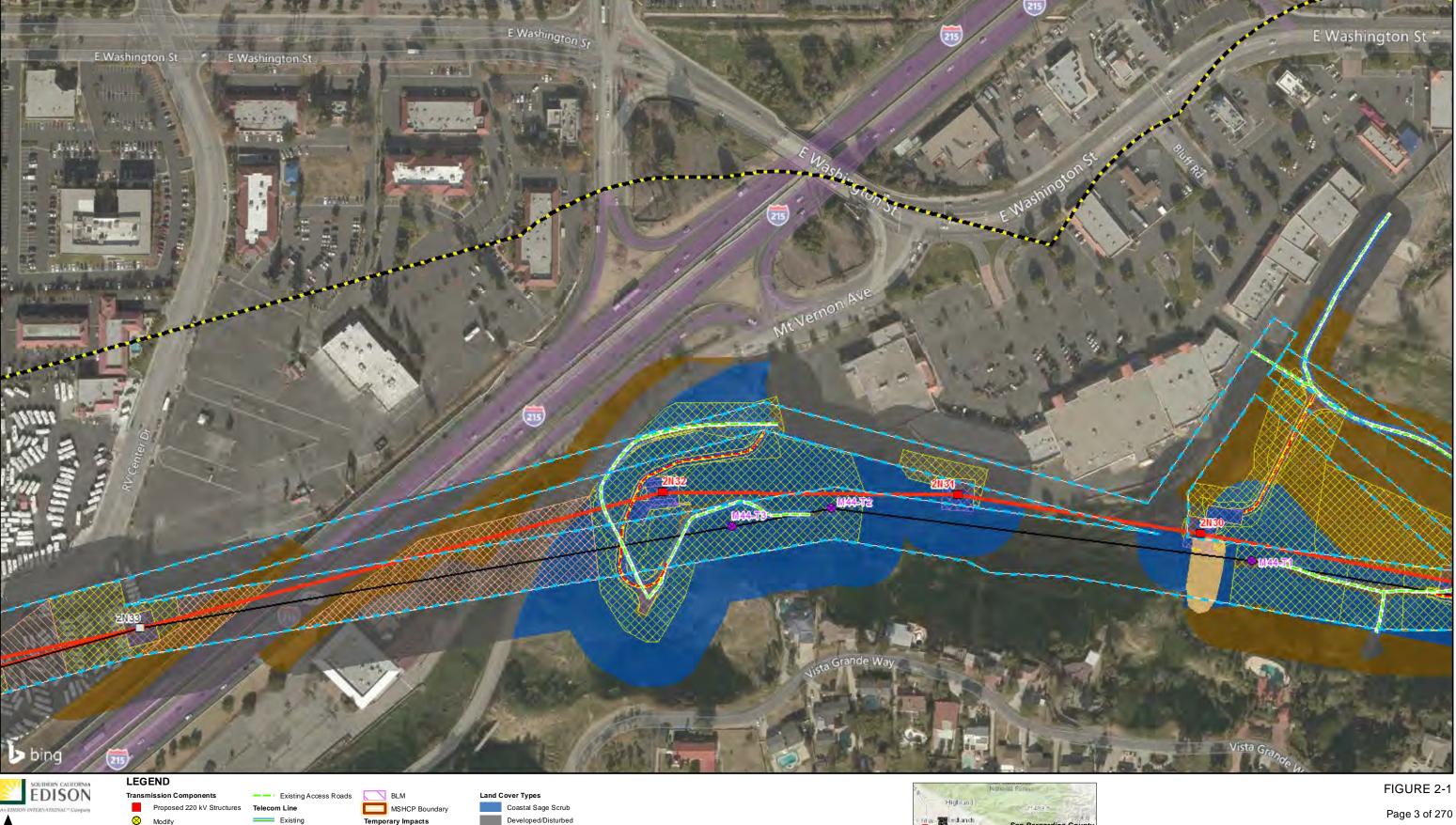
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

Developed/Disturbed

Grassland/Forbland

Temporary Impact Guard Pole

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Permanent Impact

Potential Road Widening

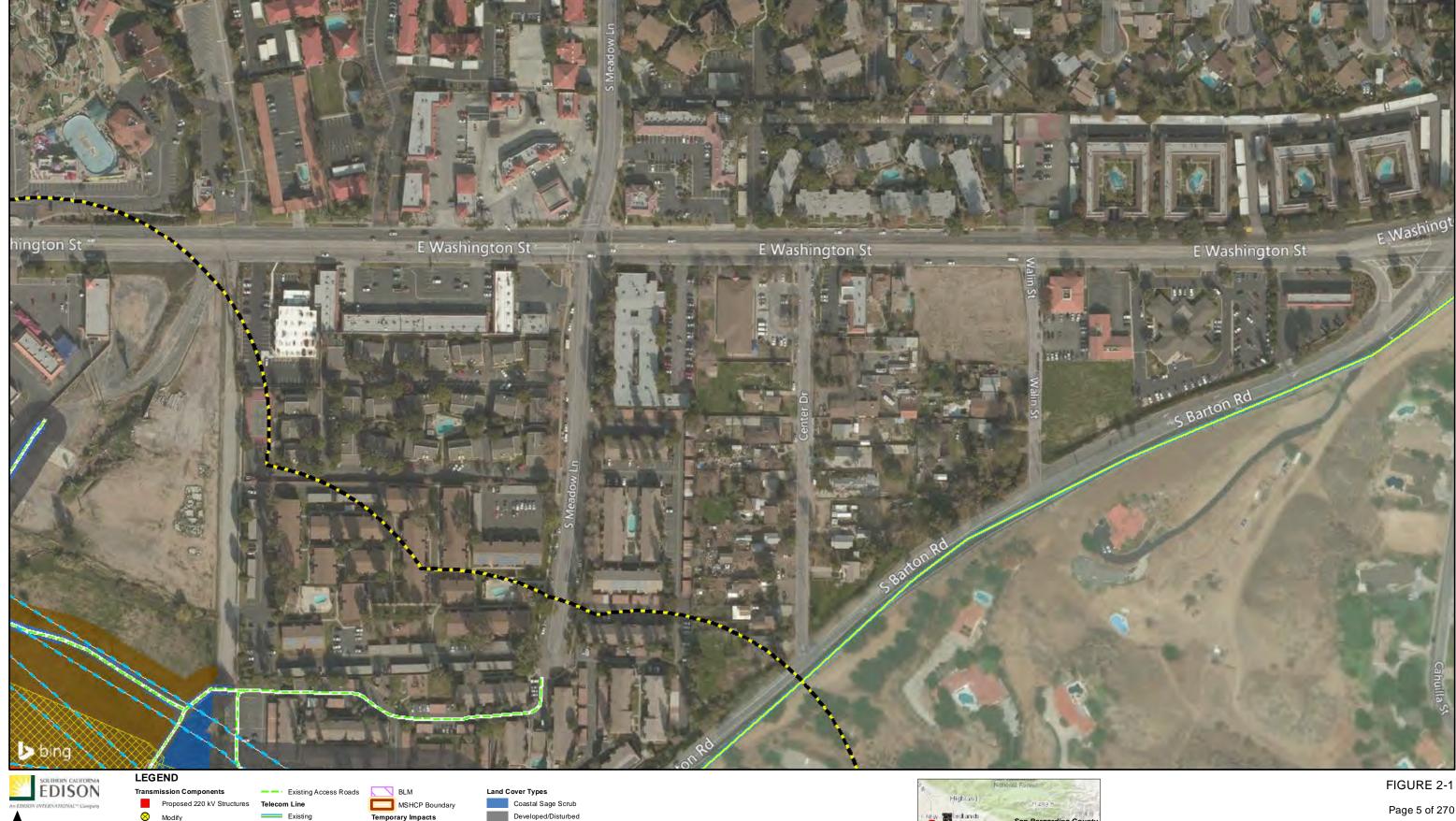
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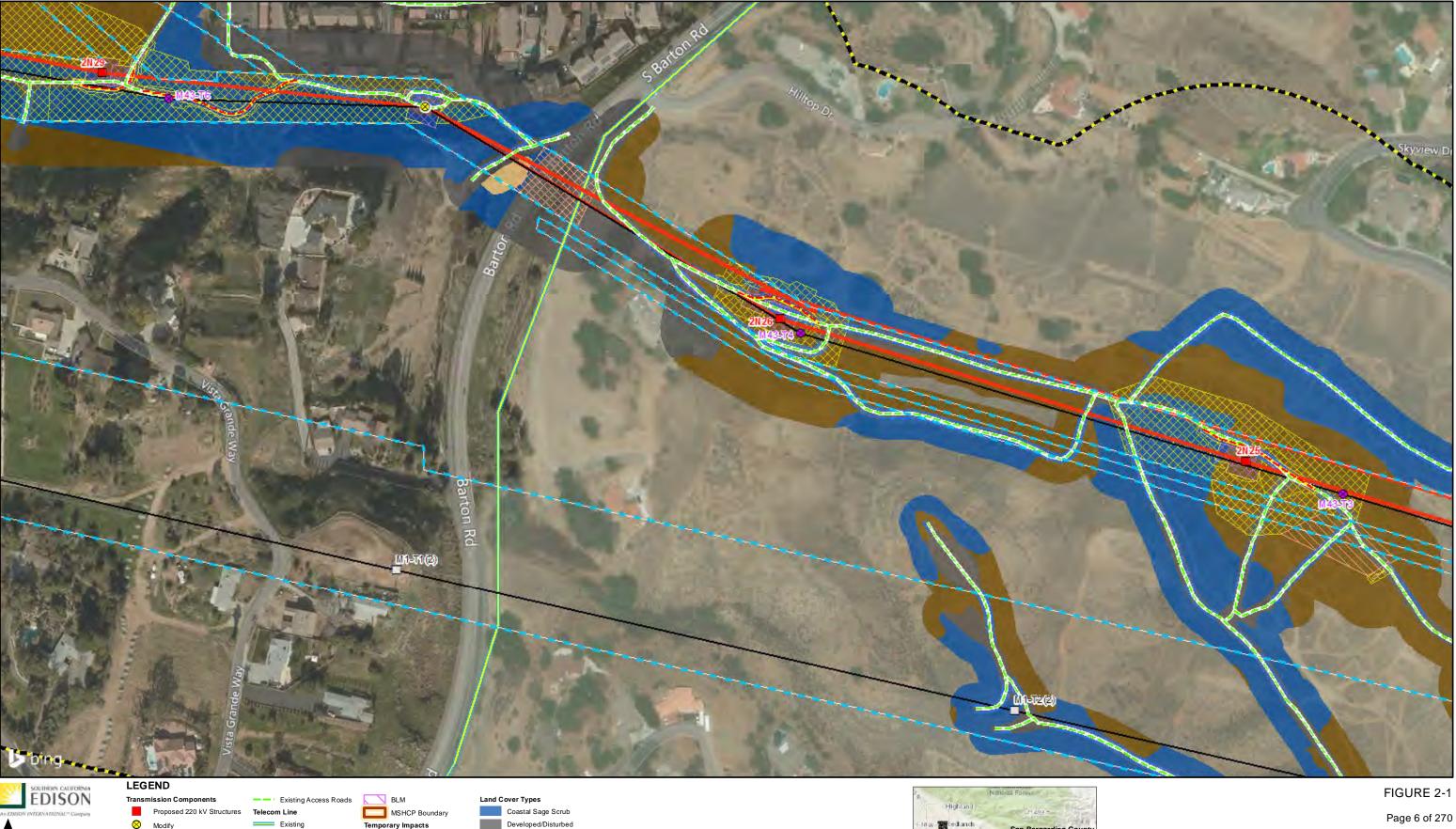
Temporary Impact Guard Pole

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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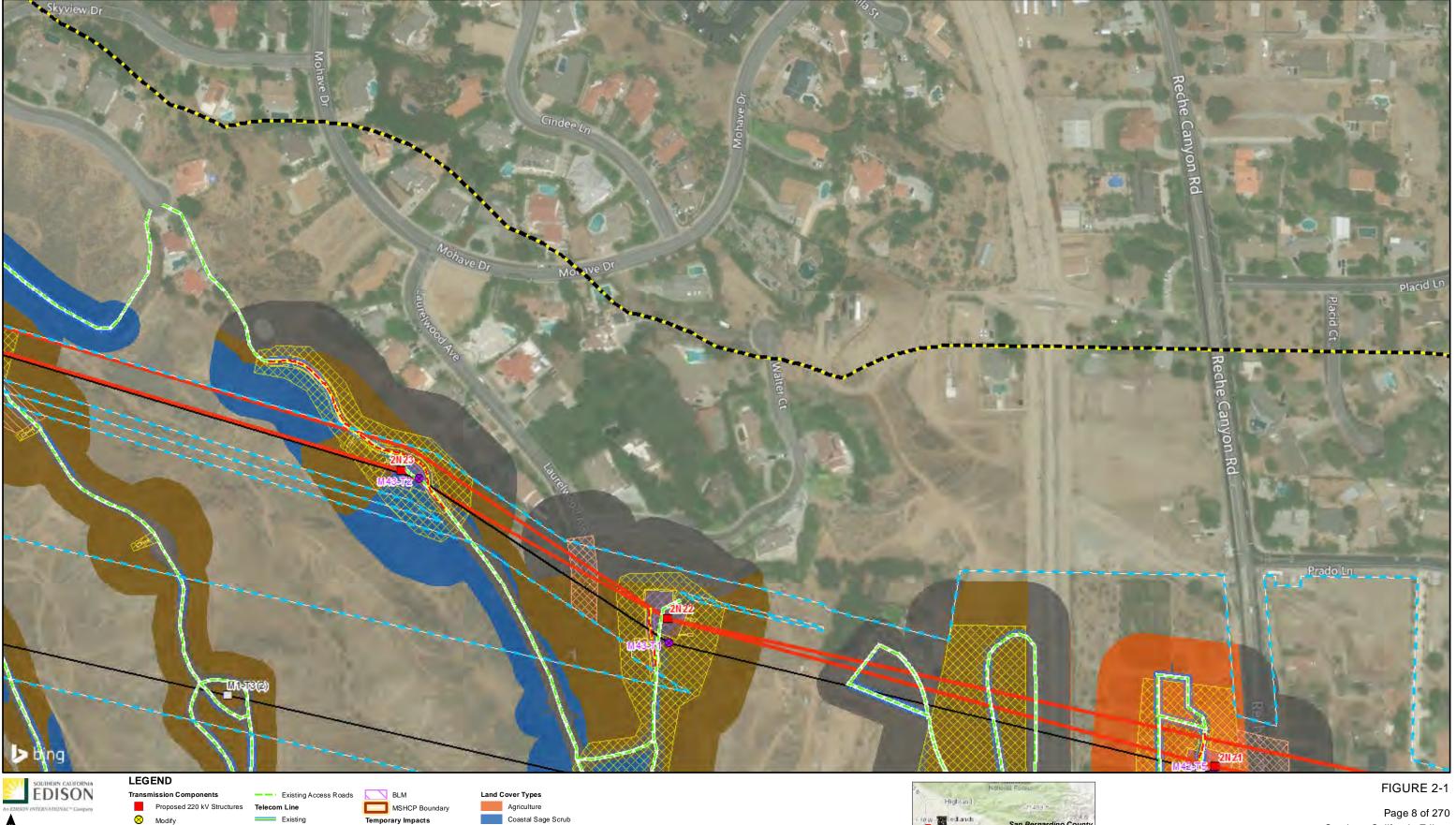
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

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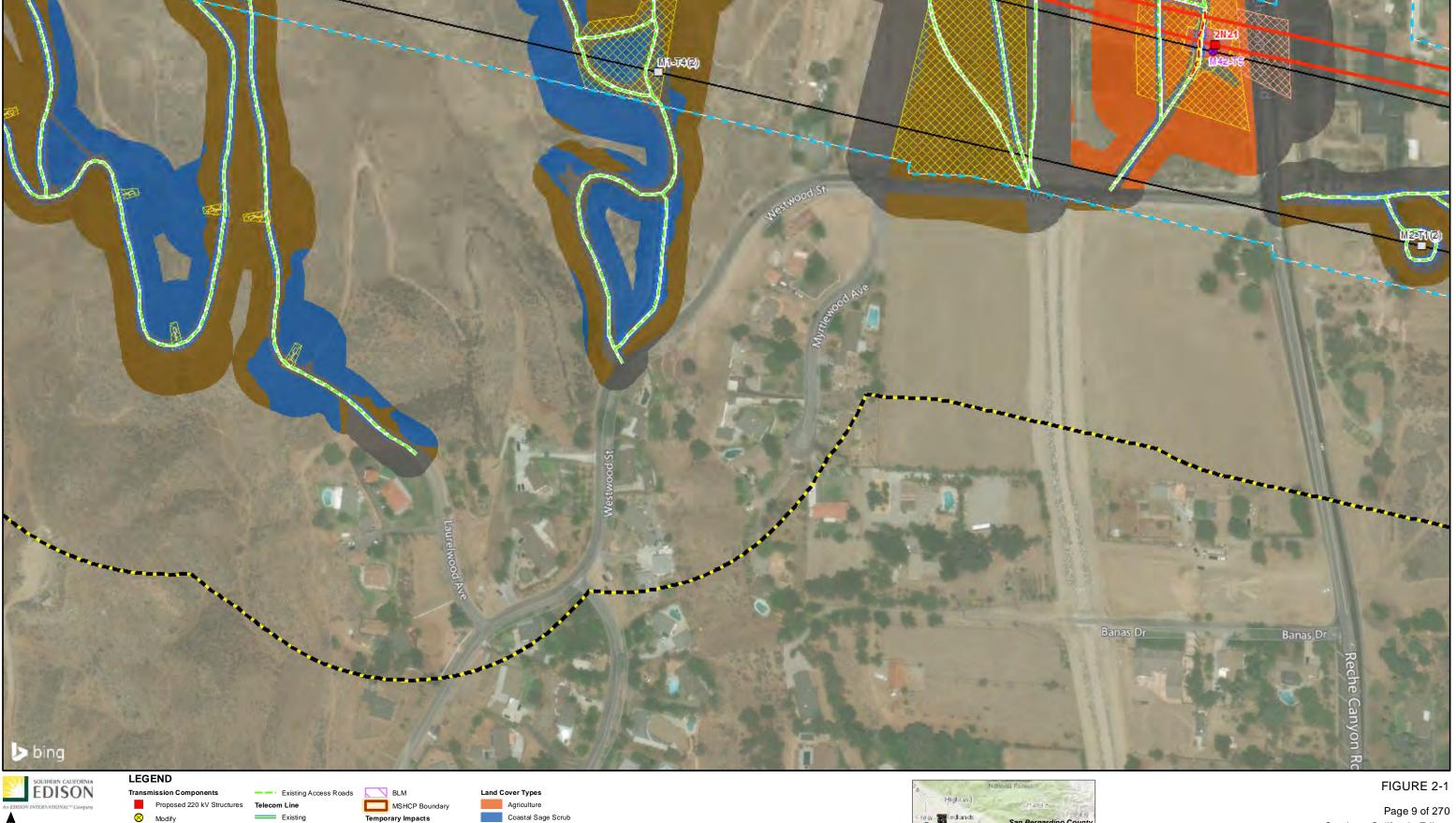
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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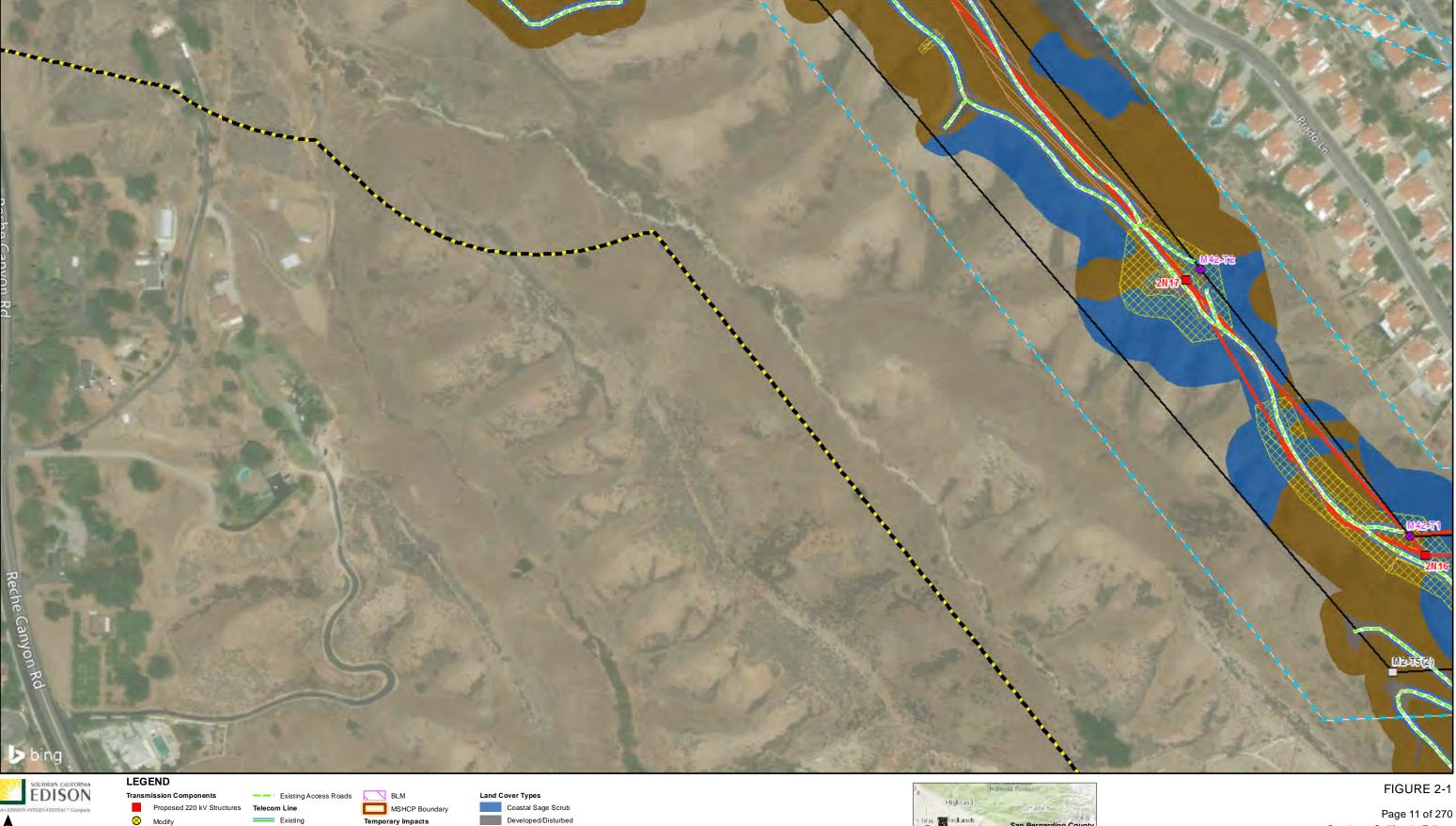
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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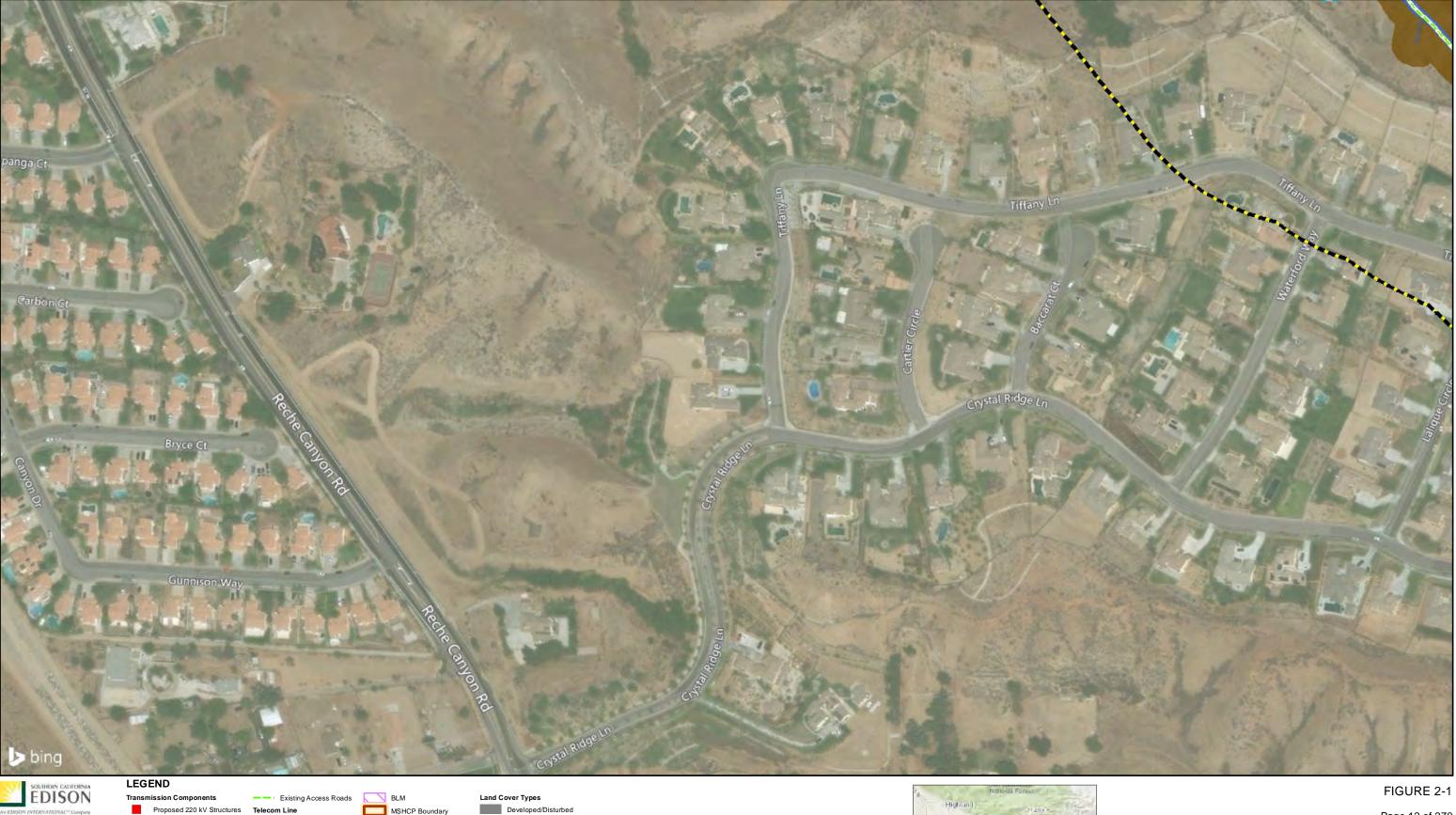
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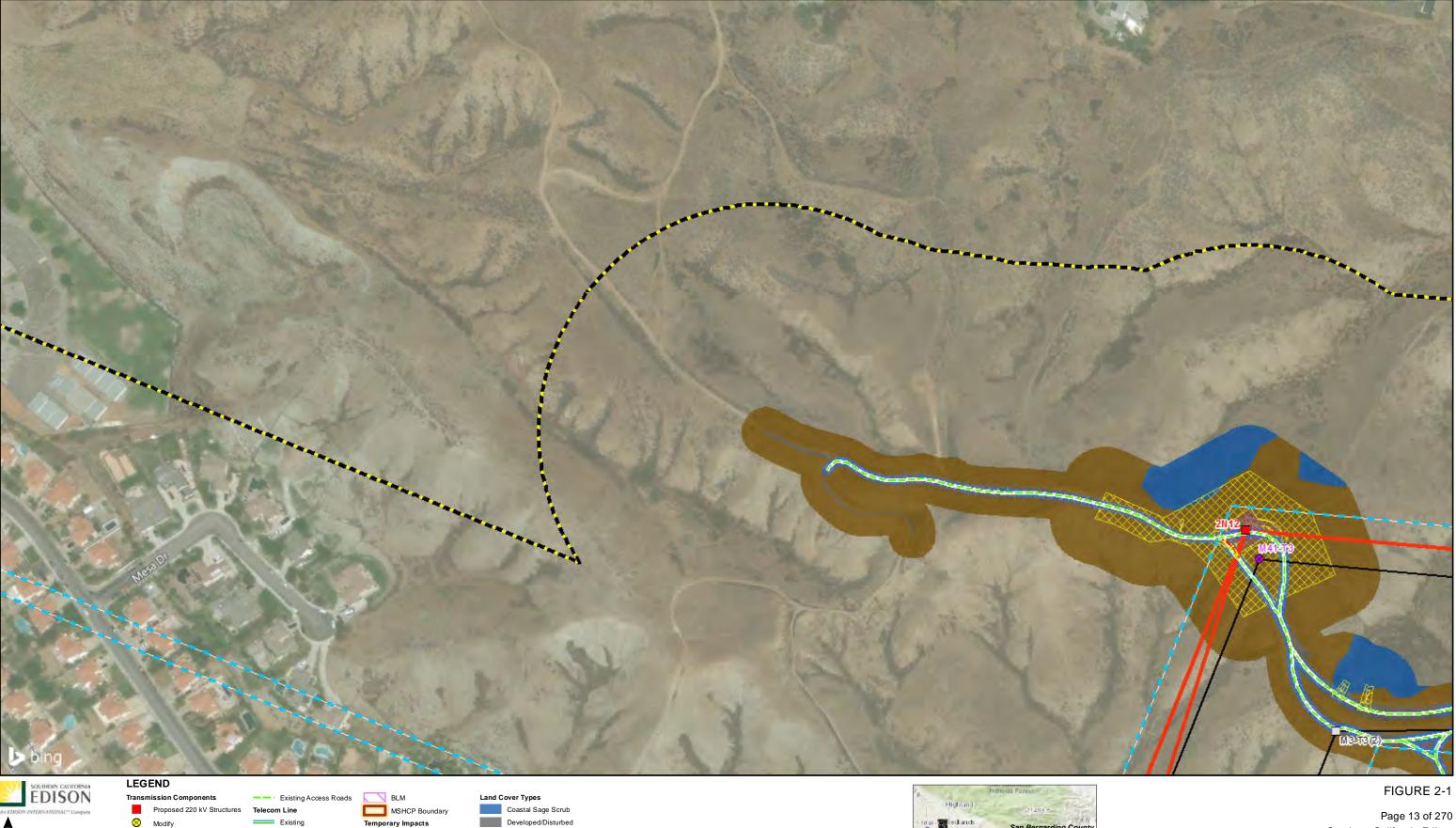
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Proposed 220kV

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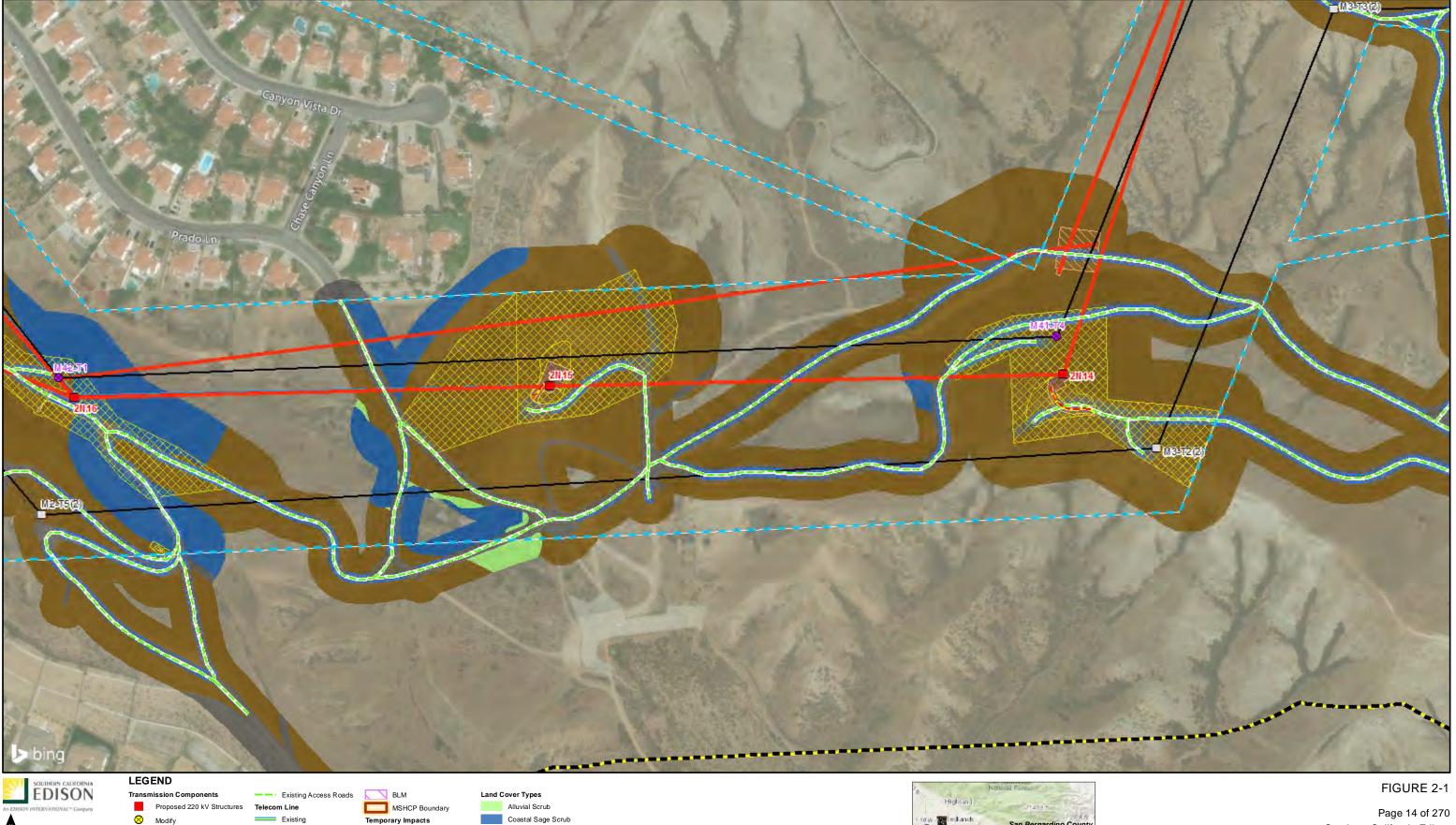
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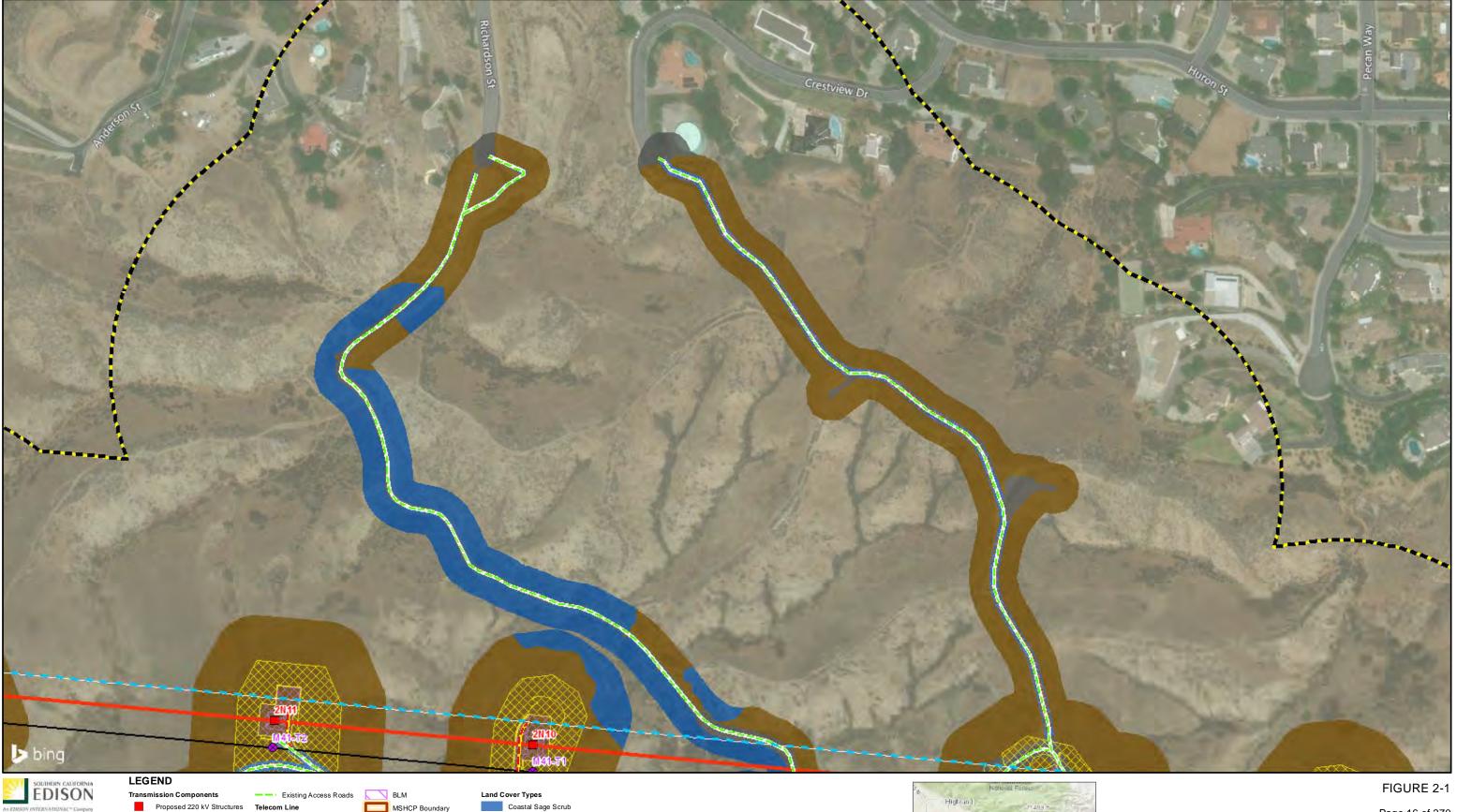
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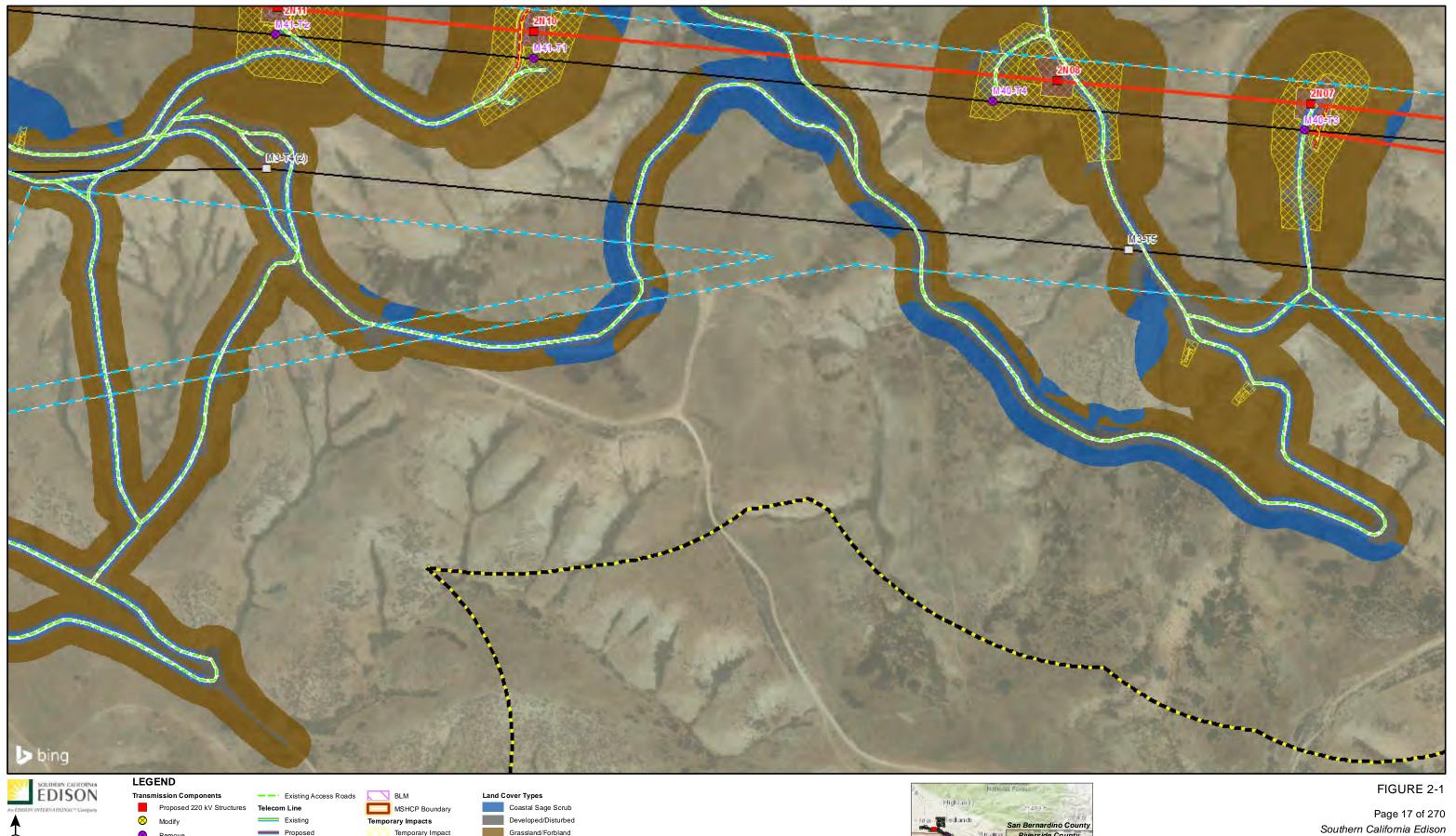
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Proposed 220kV

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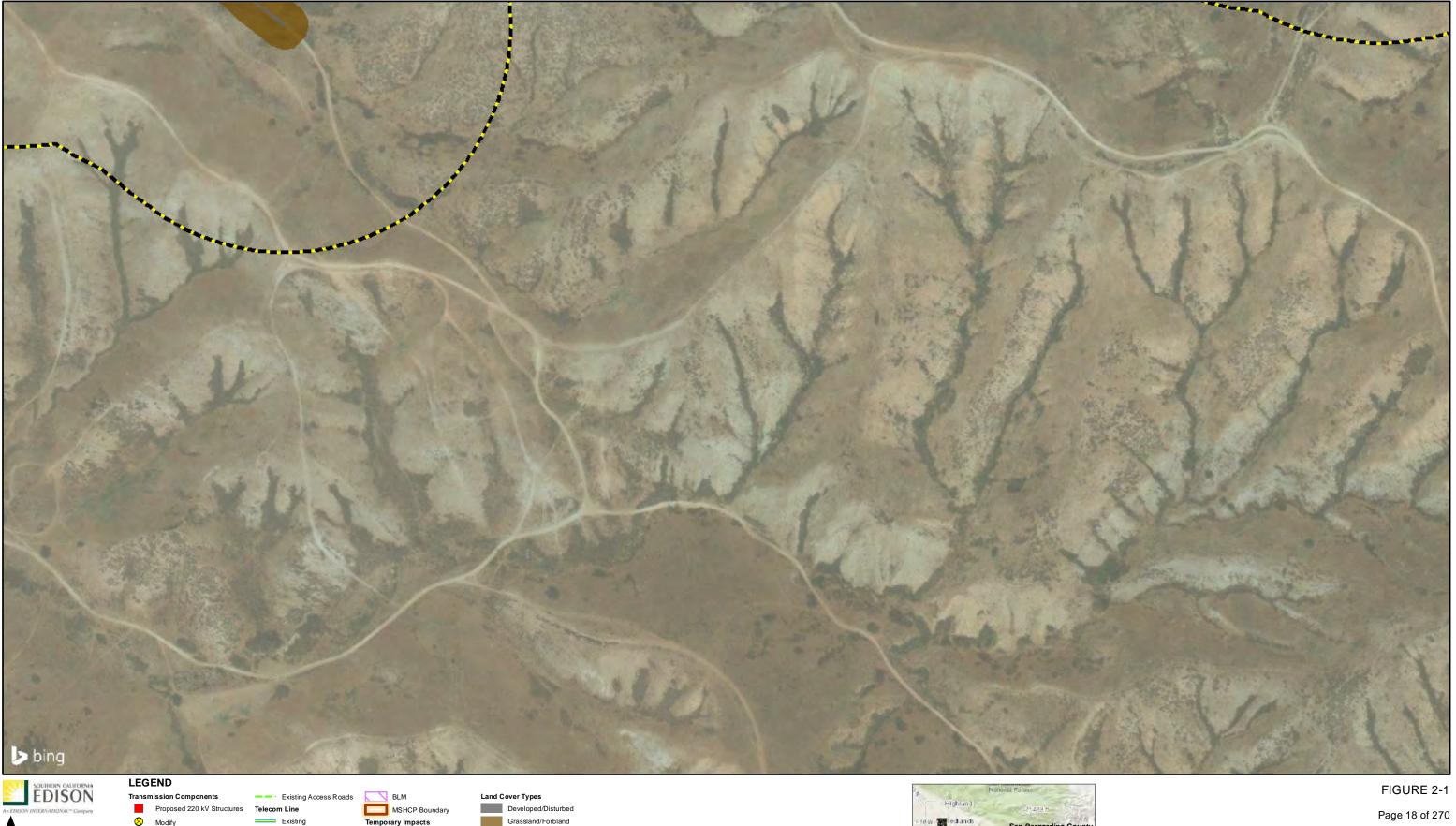
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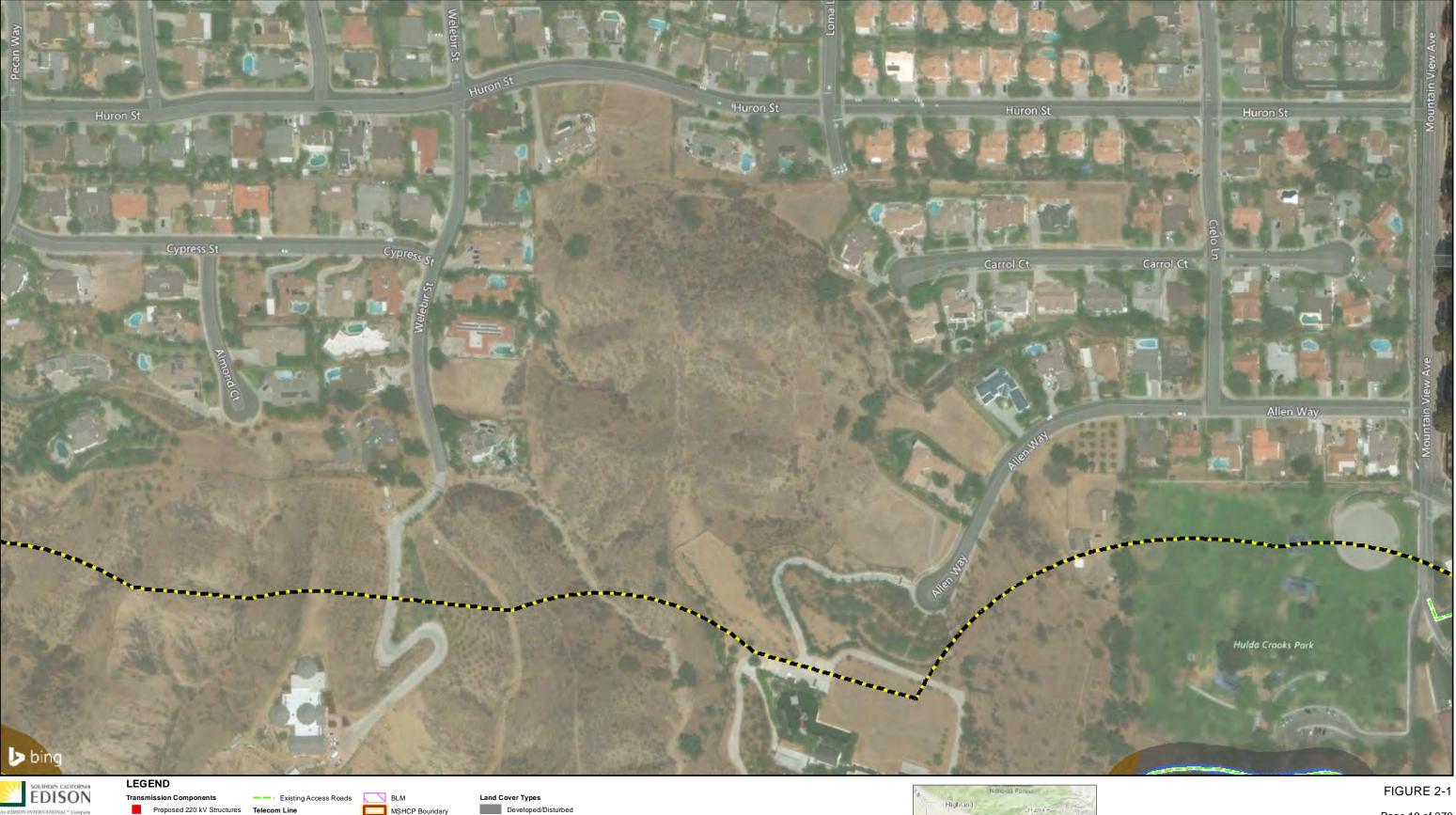
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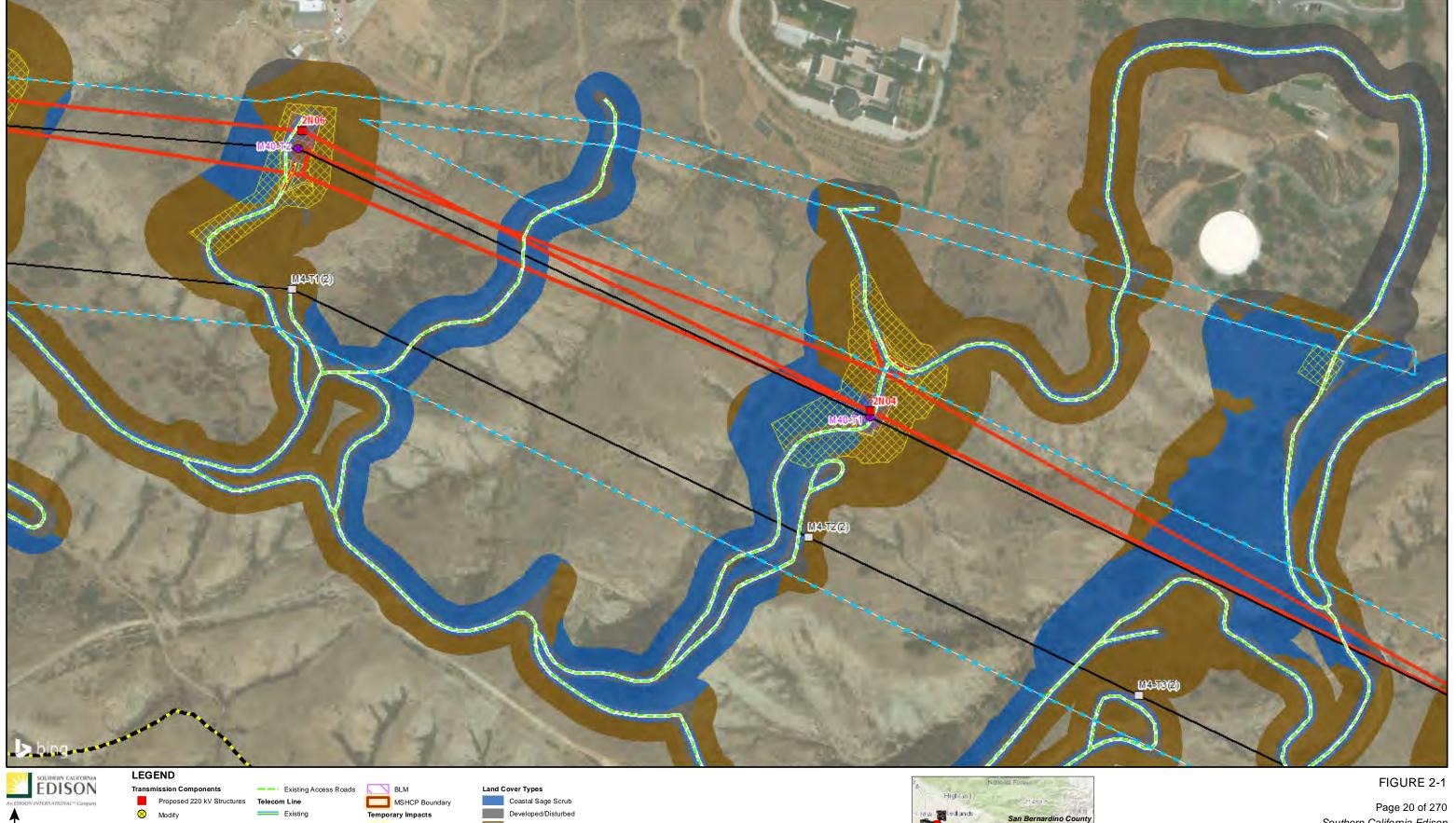
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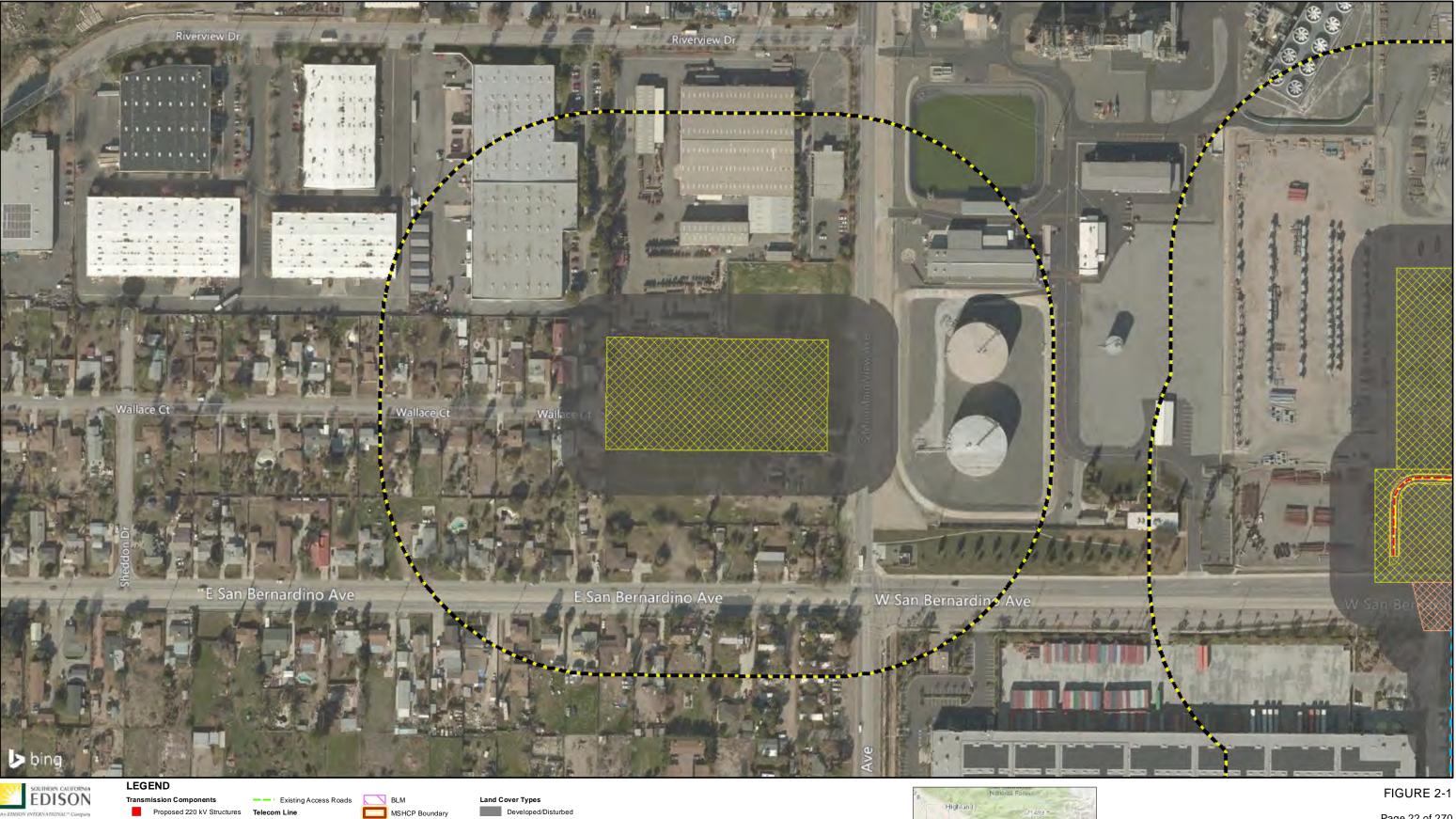
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Shoo-fly Work Area

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Existing ROW Study Area

Temporary Impacts Temporary Impact Guard Pole Shoo-fly Work Area

Permanent Impacts

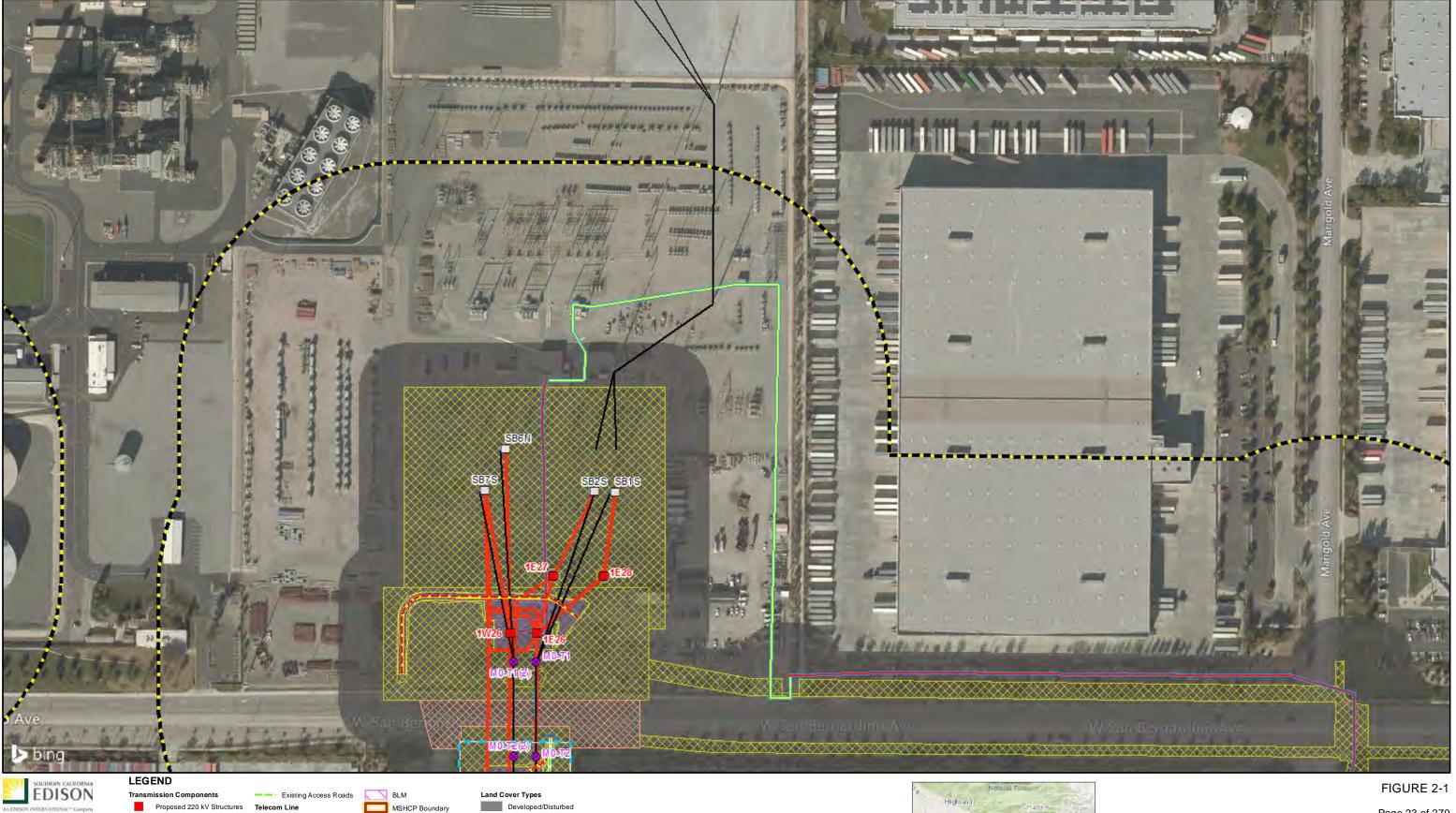
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Morongo Reservation

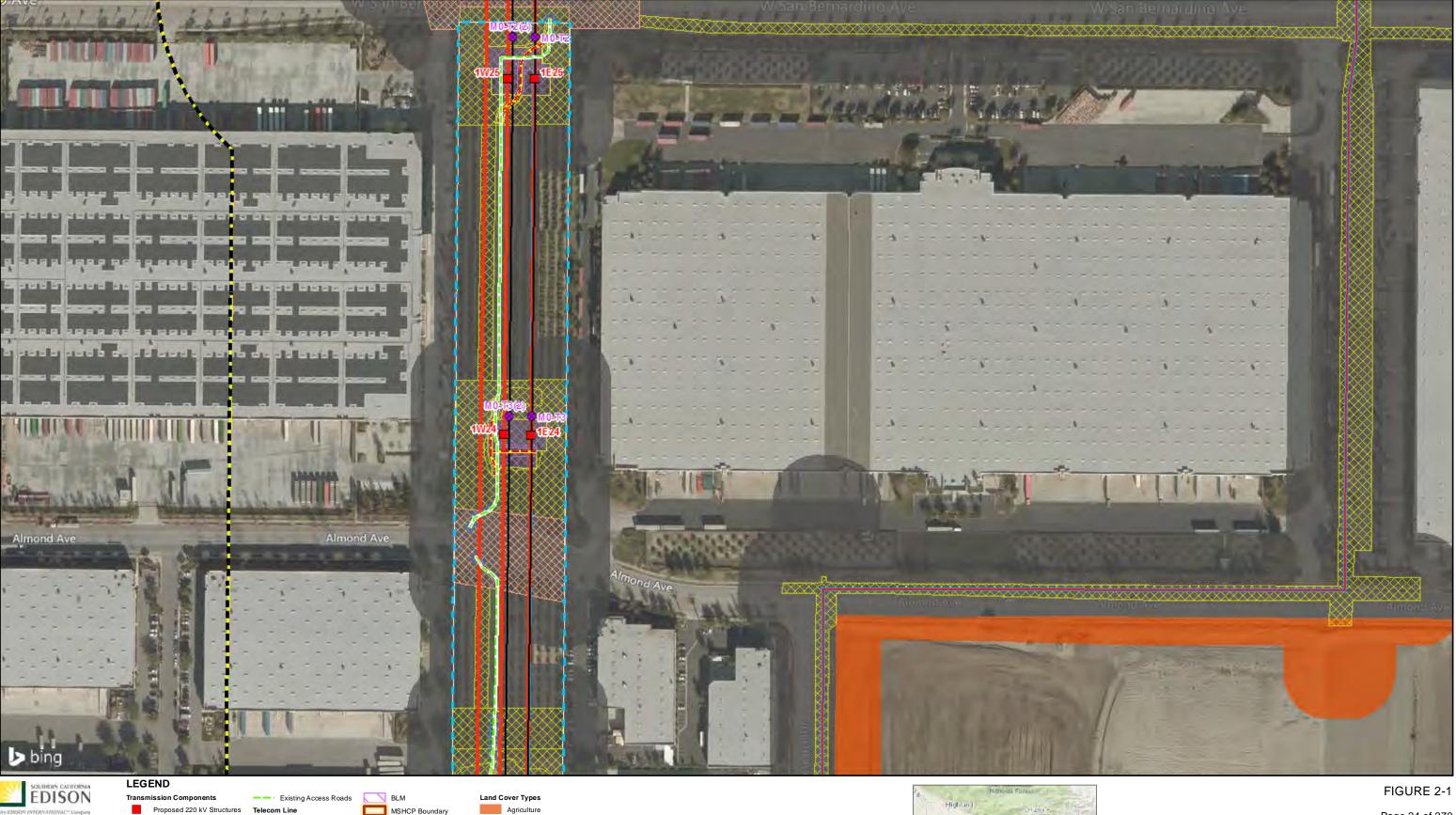
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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FEET New Access

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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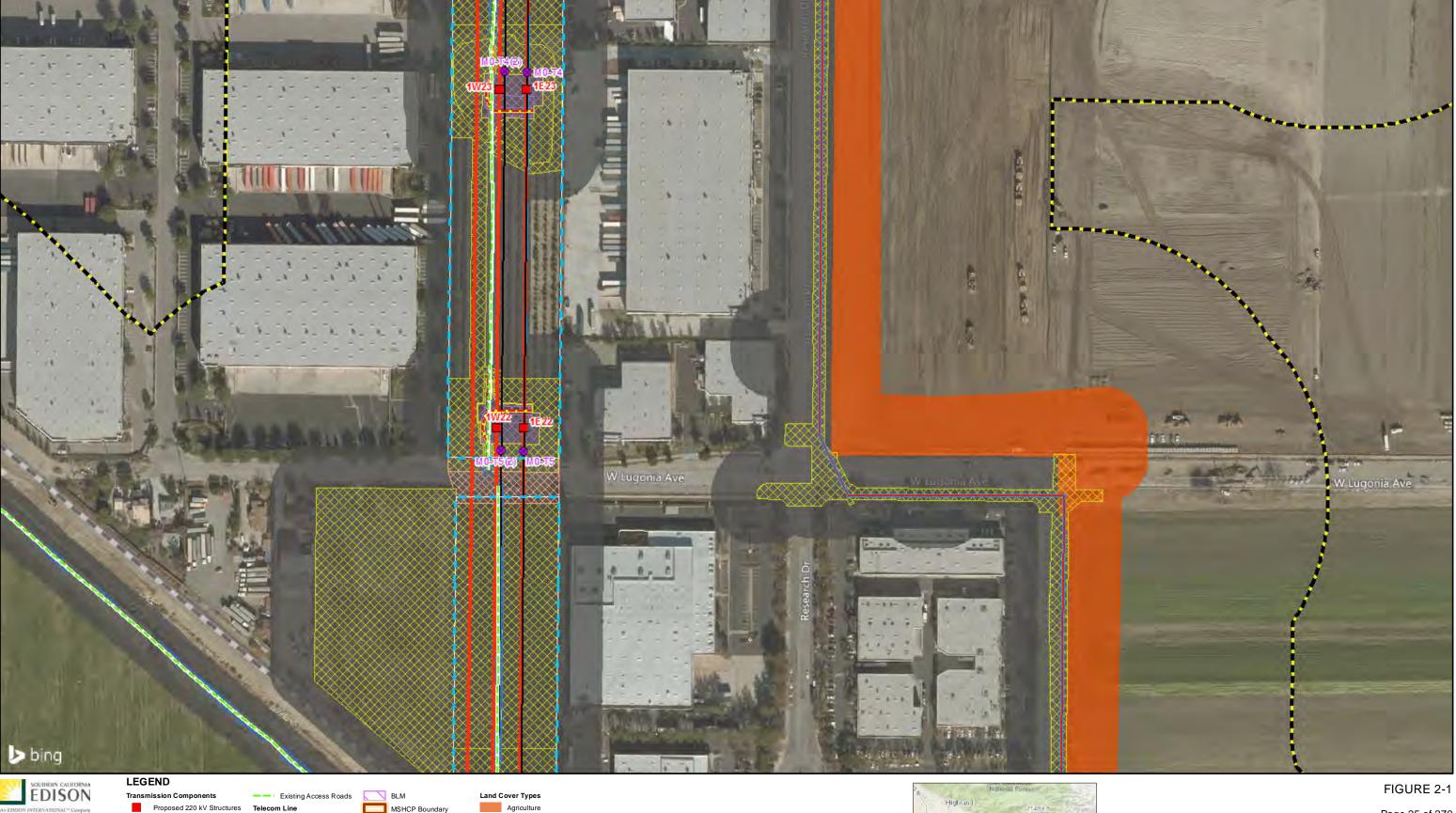
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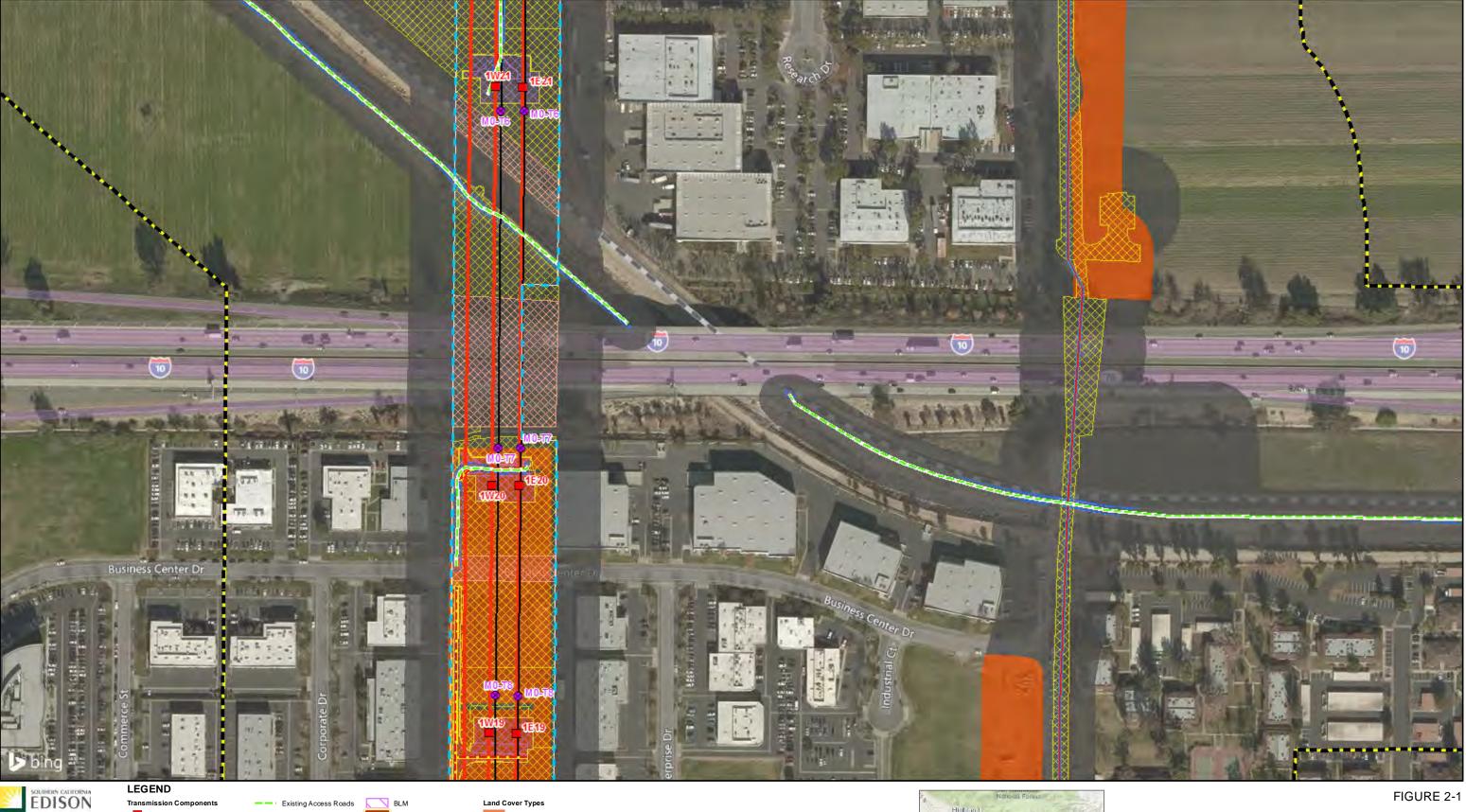
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Proposed 220 kV Structures

Existing Existing ROW Study Area

MSHCP Boundary Temporary Impacts

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Permanent Impact

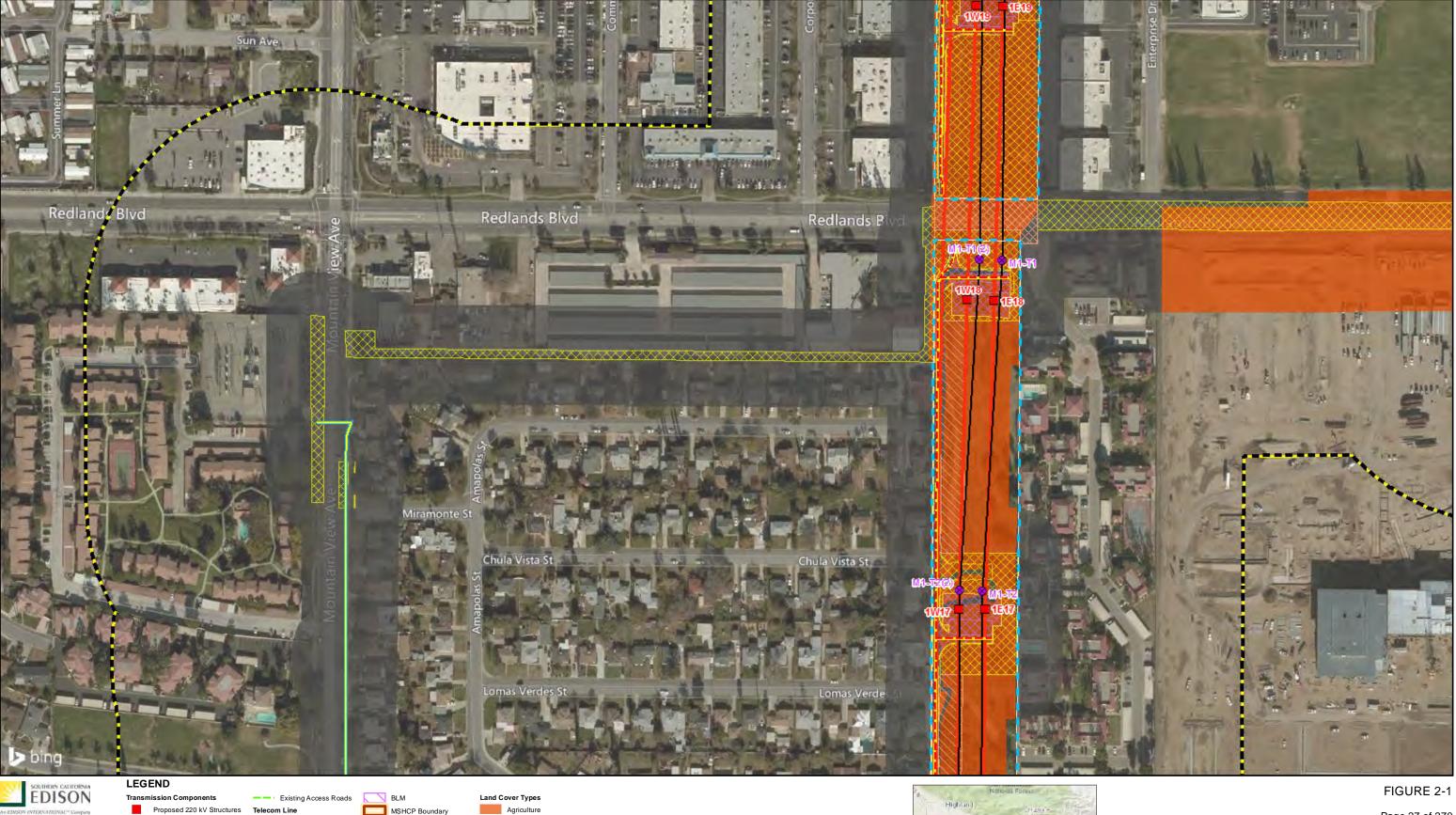
Potential Road Widening

Agriculture Developed/Disturbed

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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FEET New Acces

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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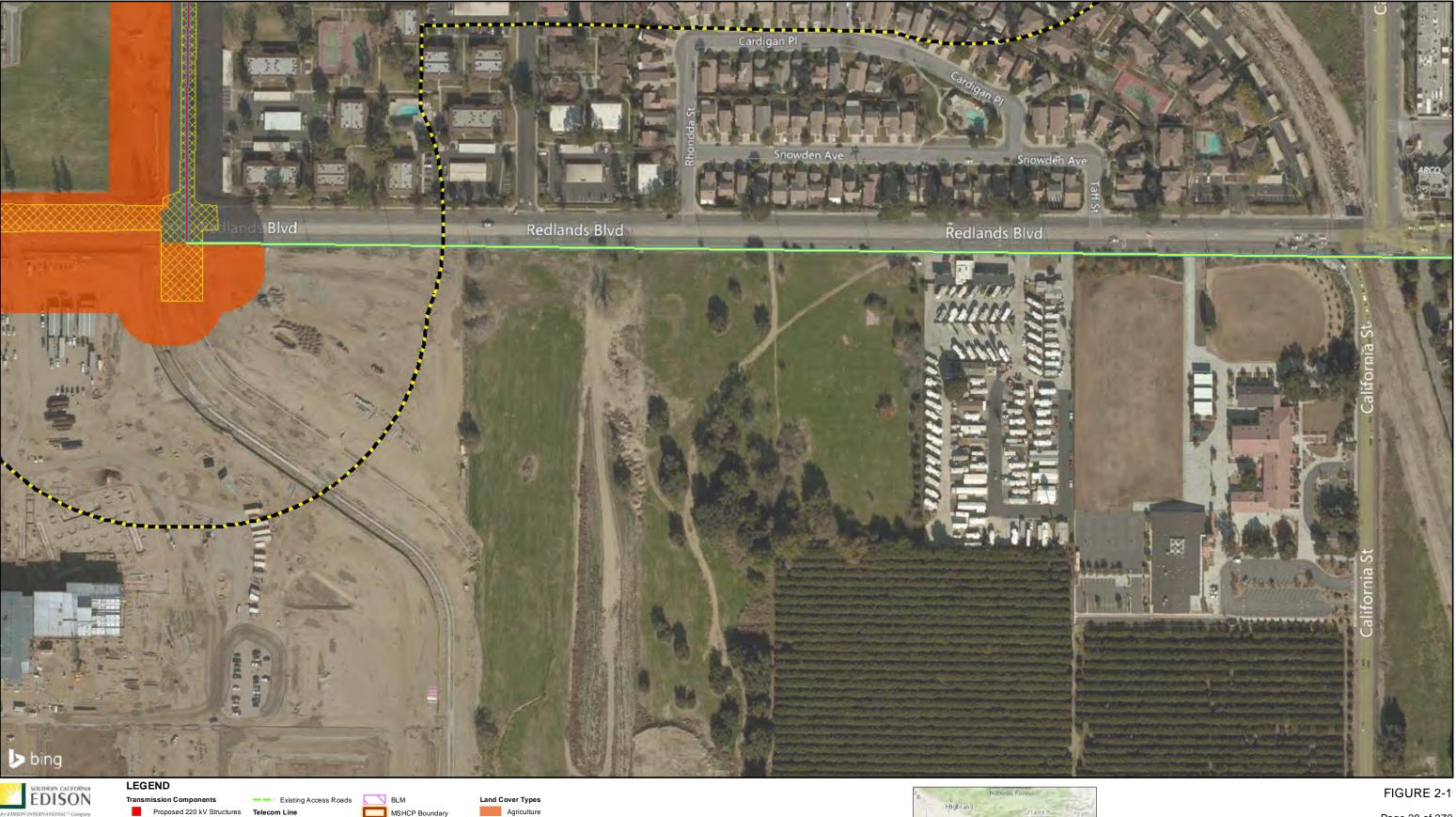
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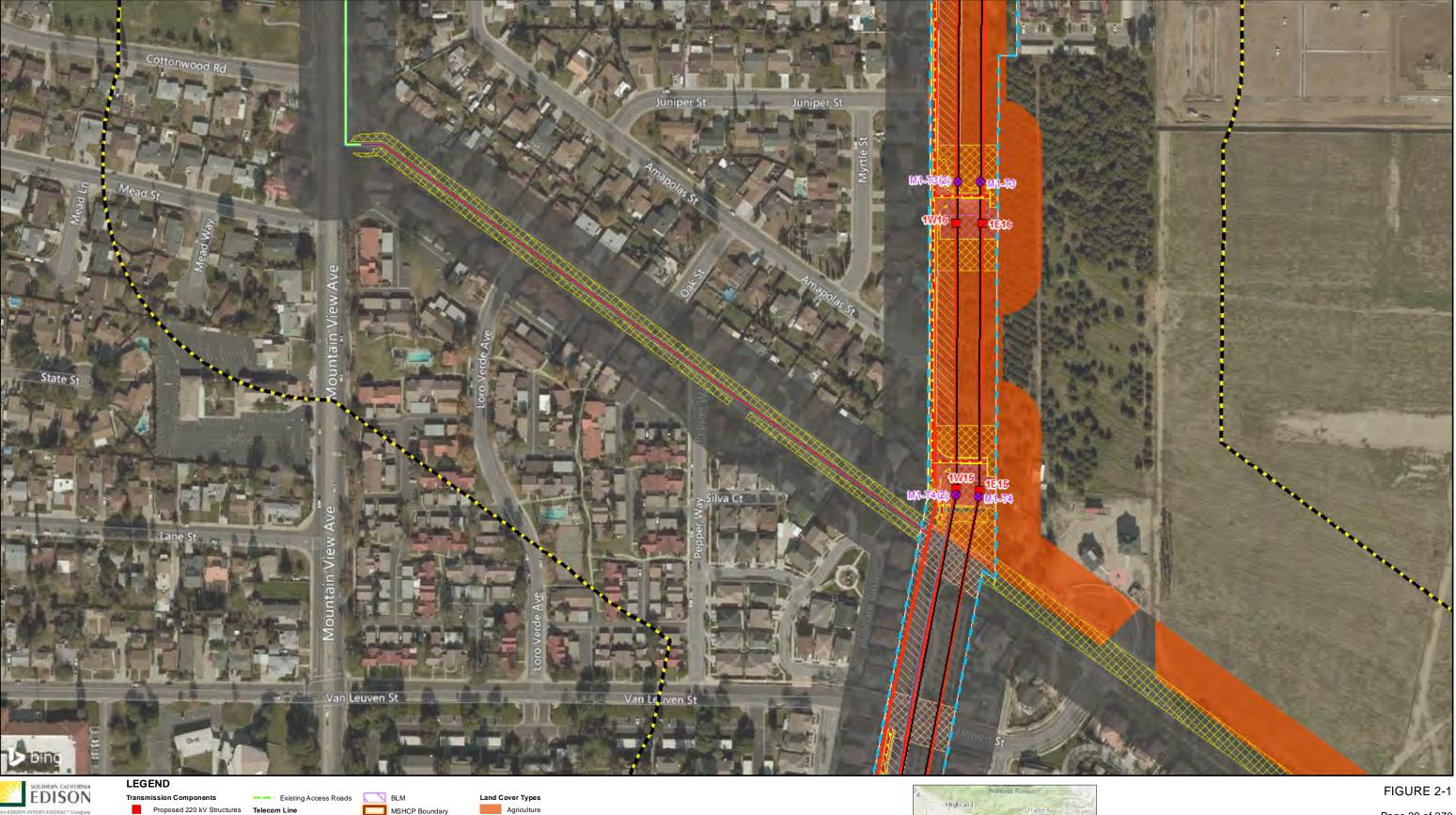
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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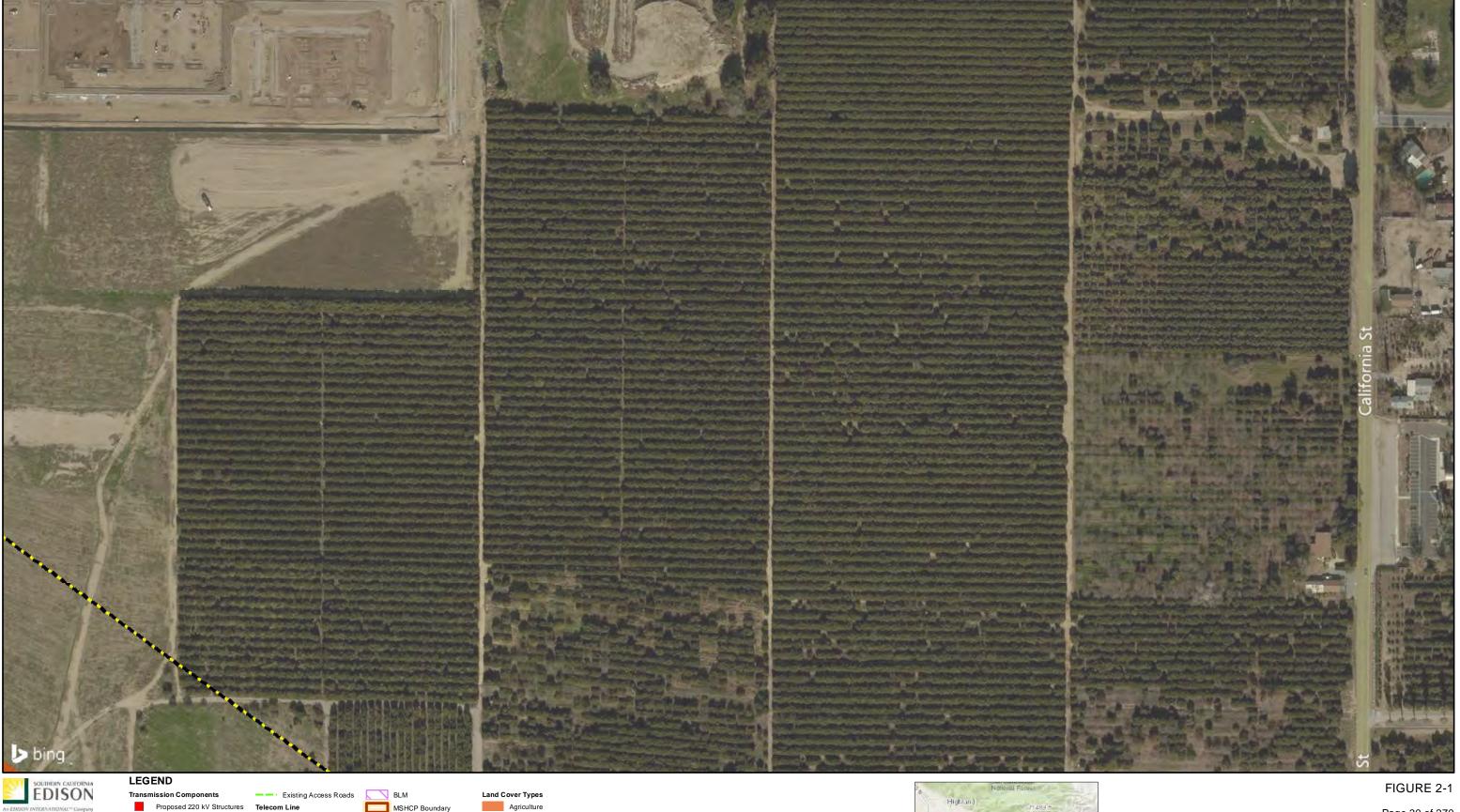
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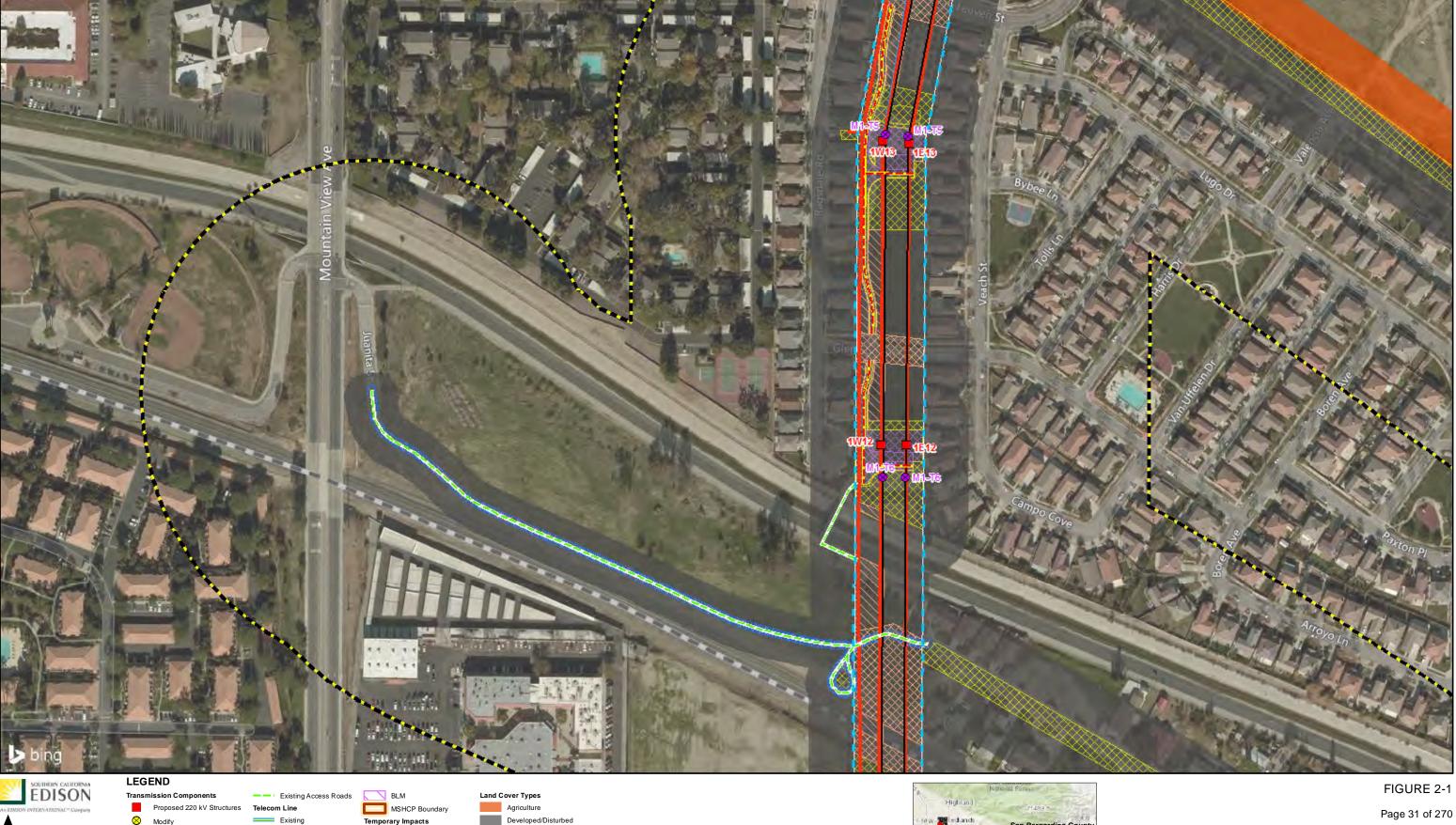
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Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Existing ROW

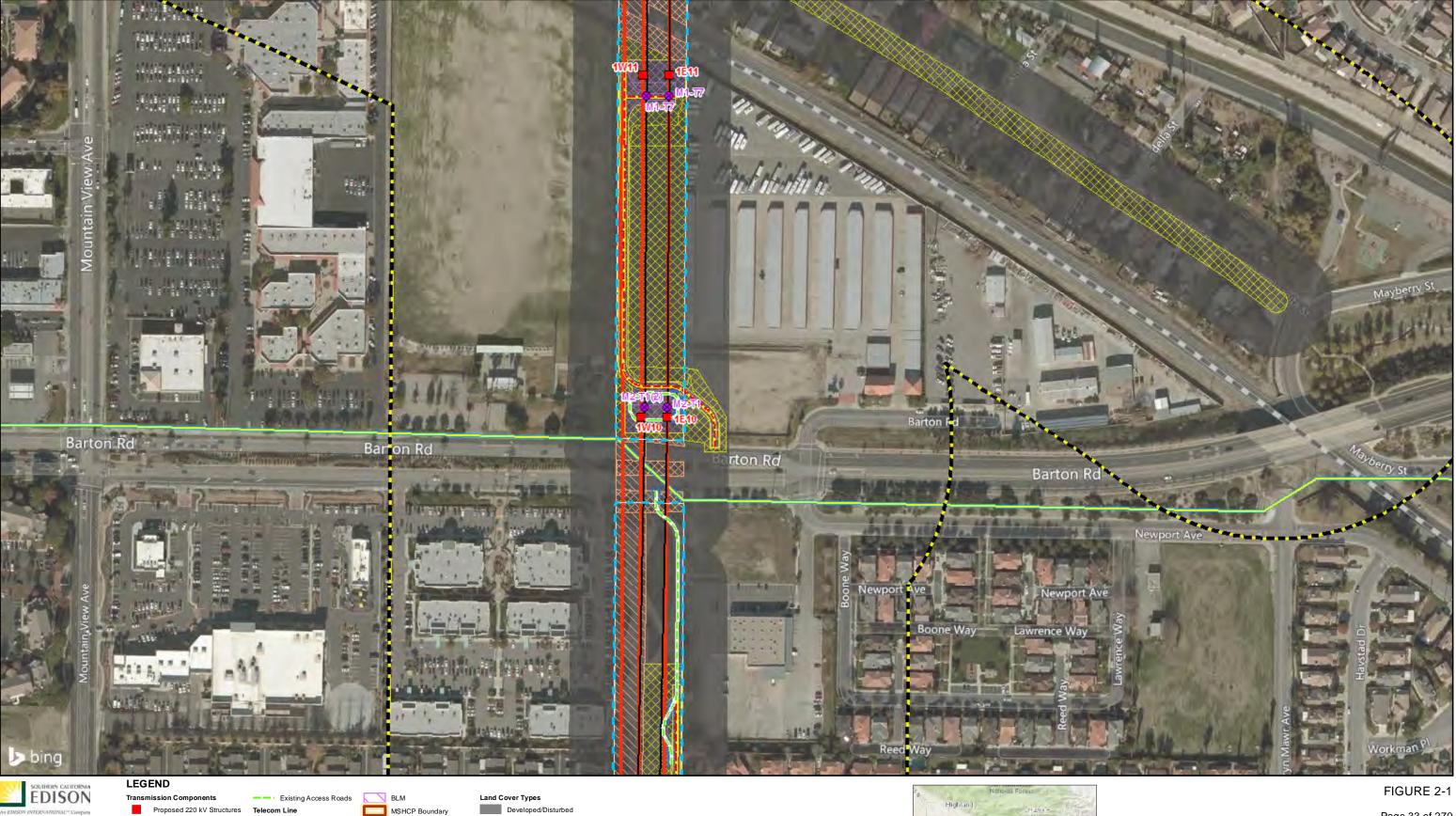
Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



FEET New Access

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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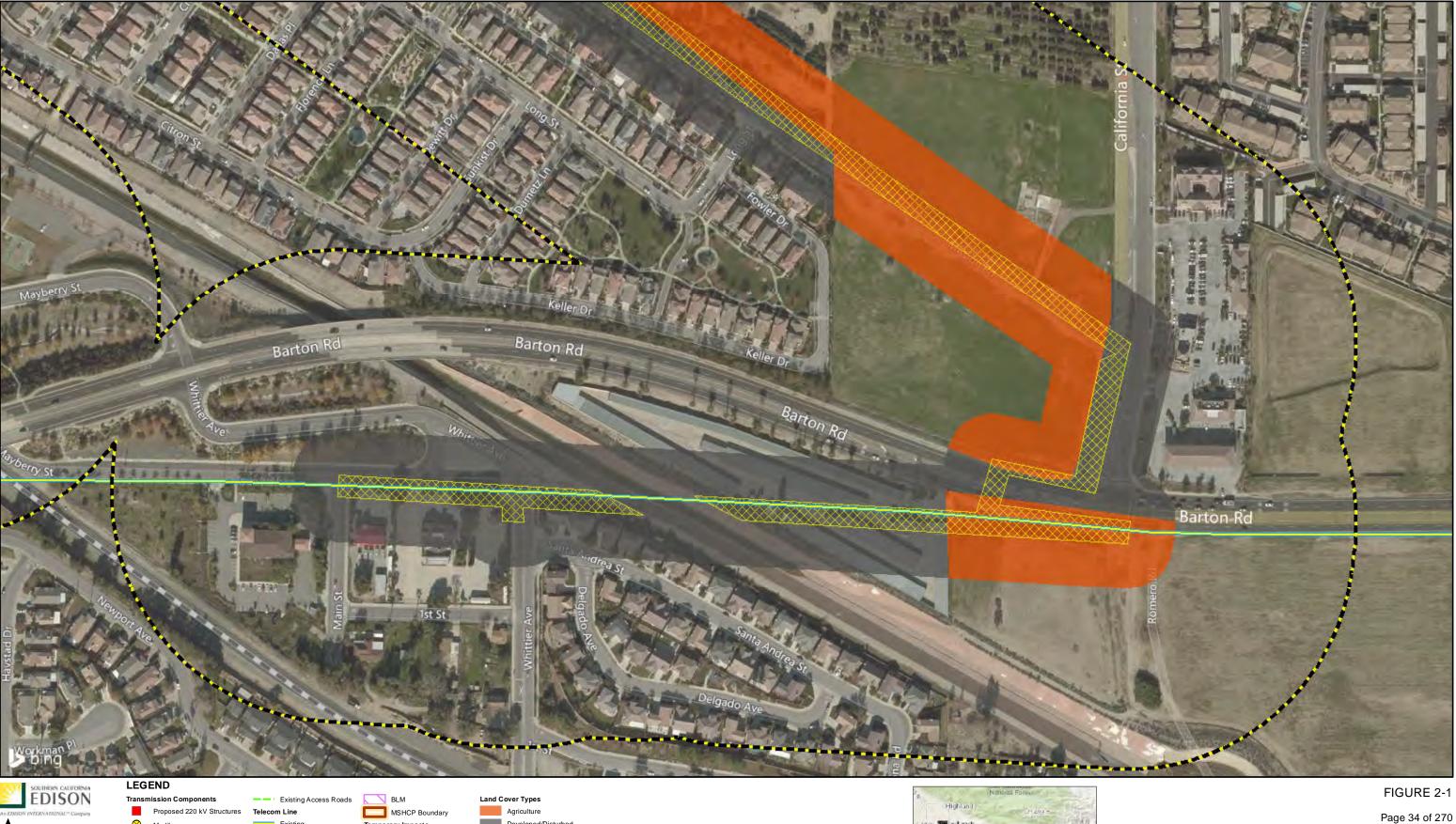
Permanent Impacts

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



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Developed/Disturbed

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

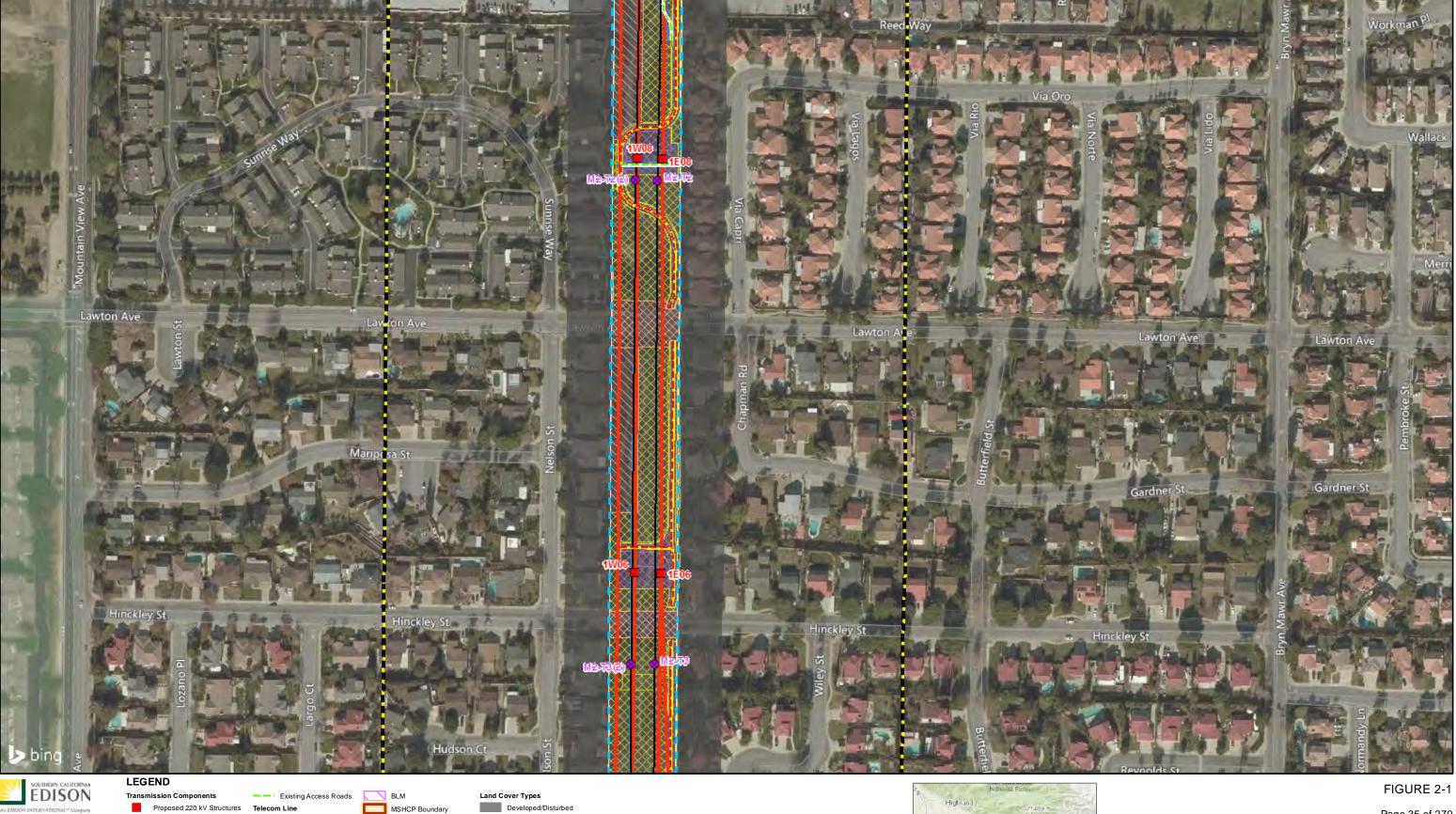
Permanent Impacts

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Existing ROW

Study Area

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Permanent Impacts

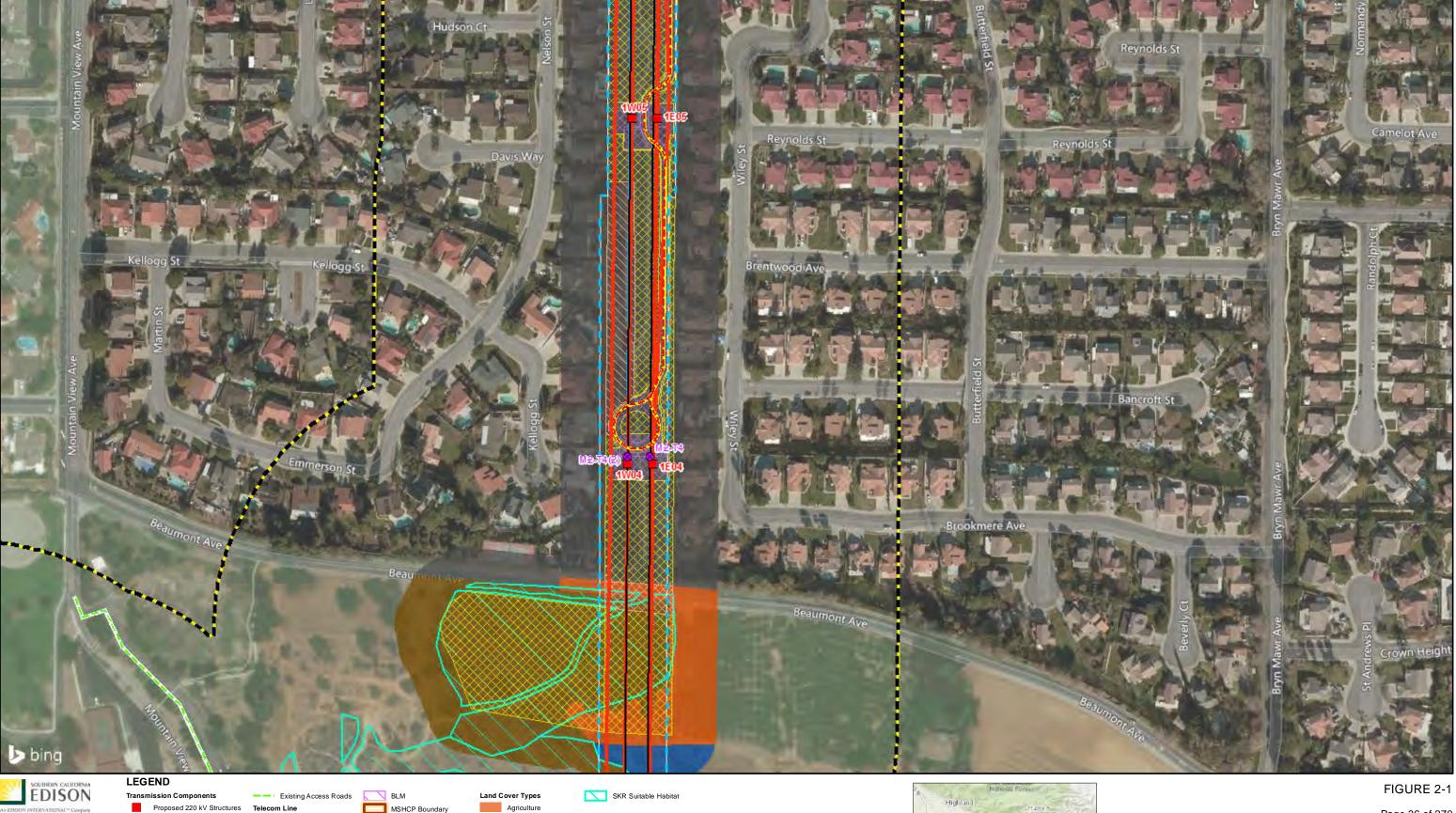
Temporary Impact

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

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Existing

Existing ROW

Study Area

Temporary Impacts

Permanent Impacts

Temporary Impact

Shoo-fly Work Area

Permanent Impact

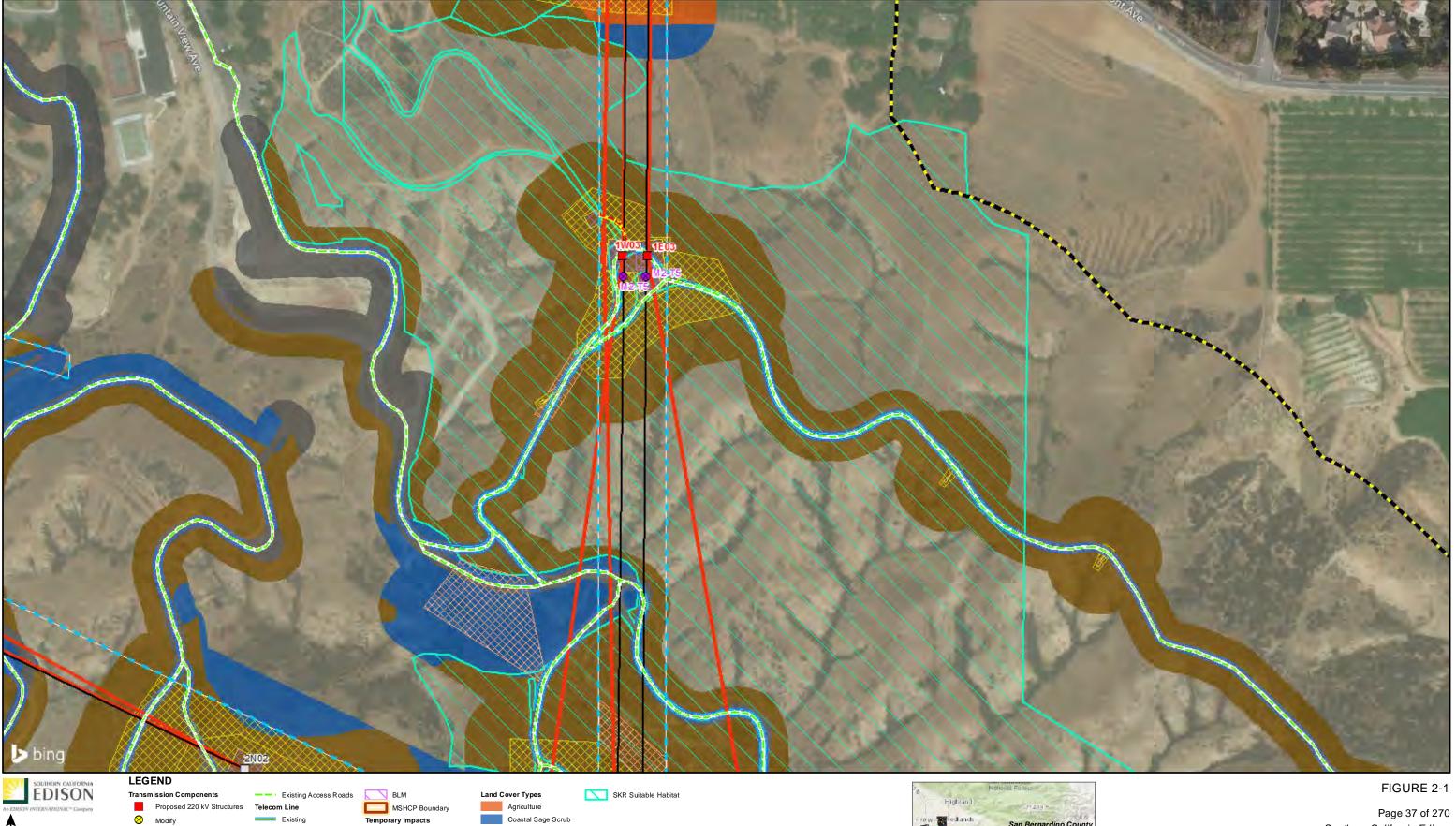
Potential Road Widening

Guard Pole

Coastal Sage Scrub

Developed/Disturbed

Grassland/Forbland



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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Existing

Existing ROW

Proposed

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Permanent Impacts

Temporary Impact

Shoo-fly Work Area

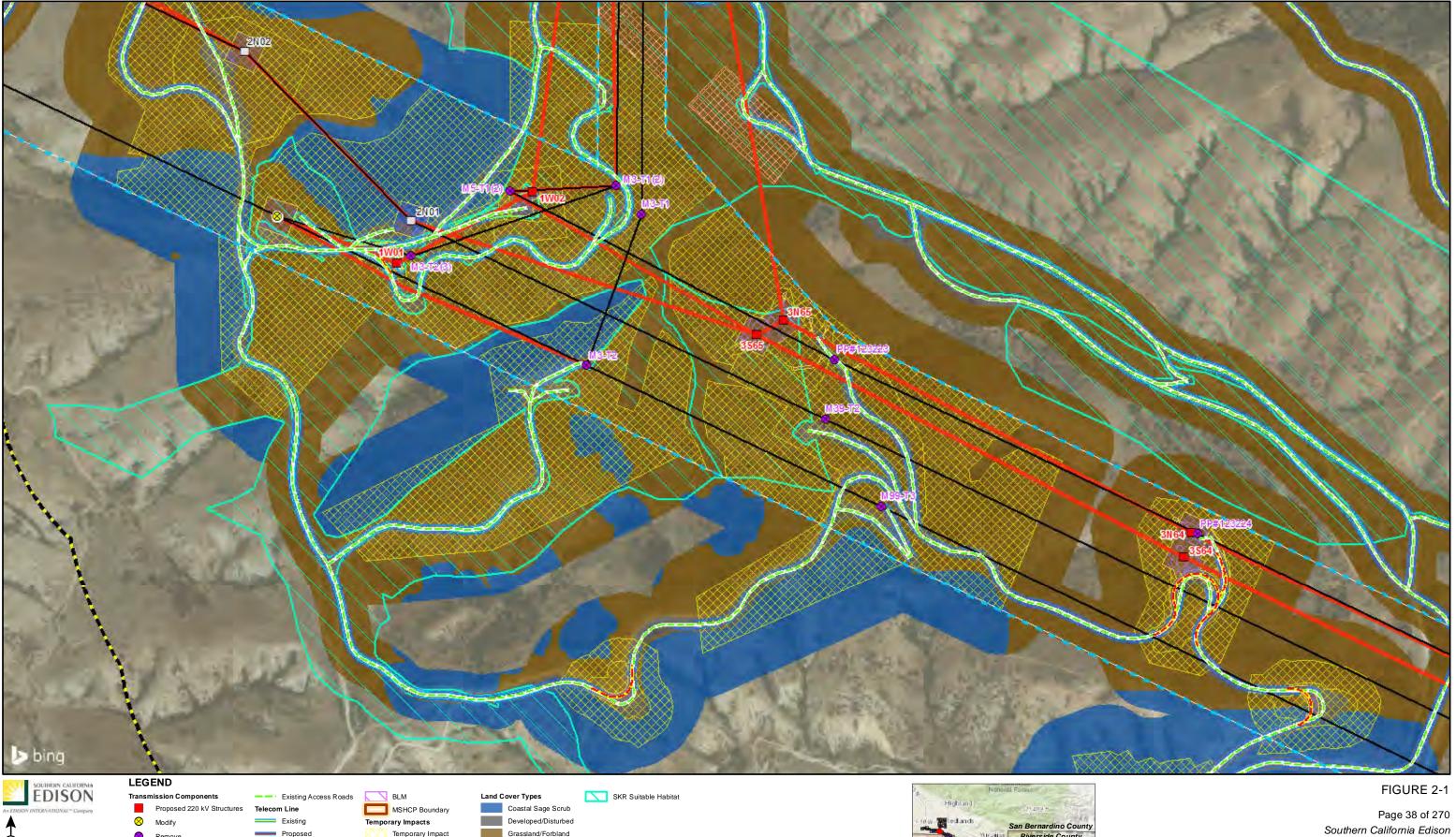
Permanent Impact

Potential Road Widening

Guard Pole

Developed/Disturbed

Grassland/Forbland



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Existing ROW

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Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Developed/Disturbed

Grassland/Forbland

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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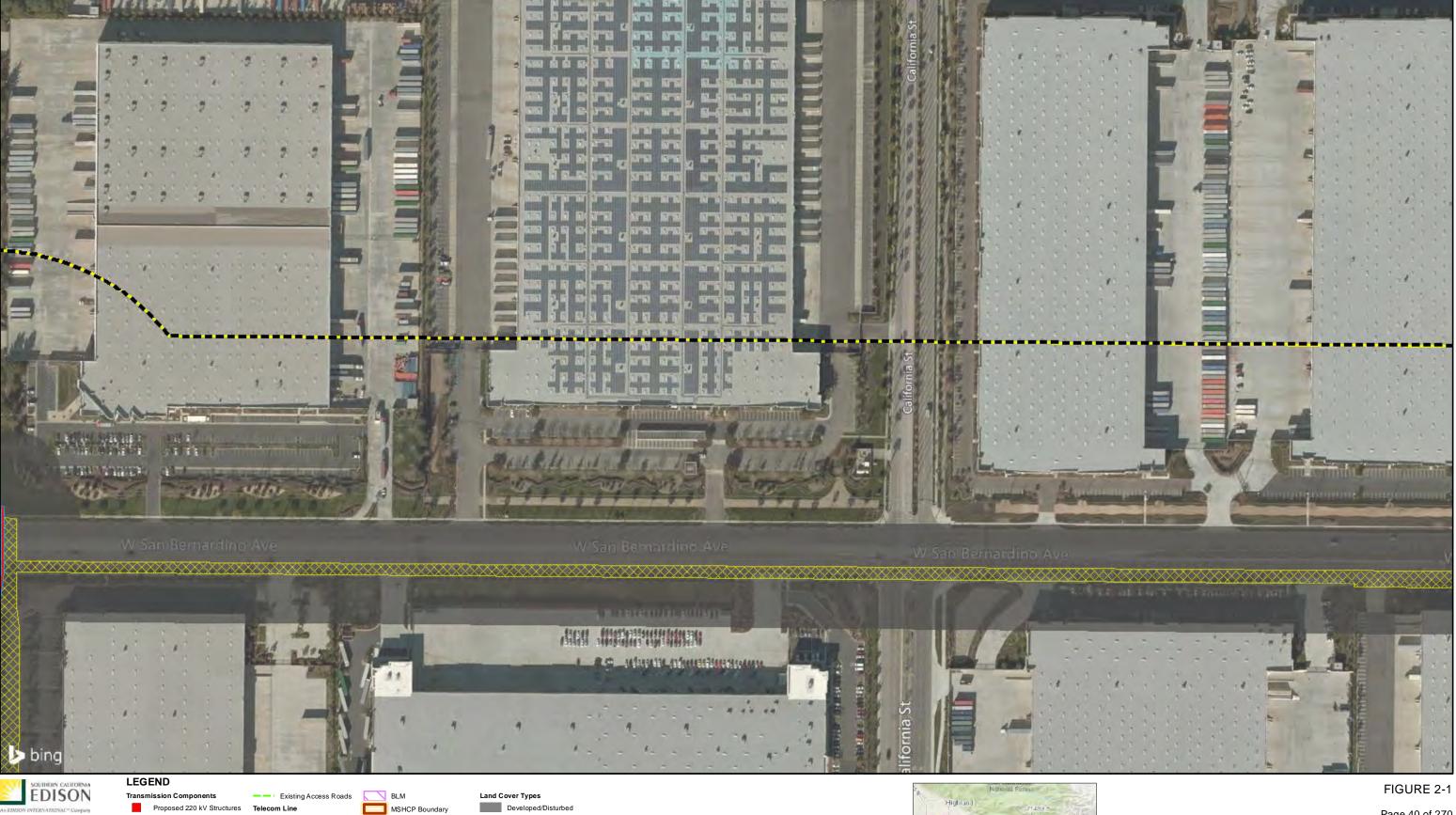
Permanent Impacts

Temporary Impact Guard Pole

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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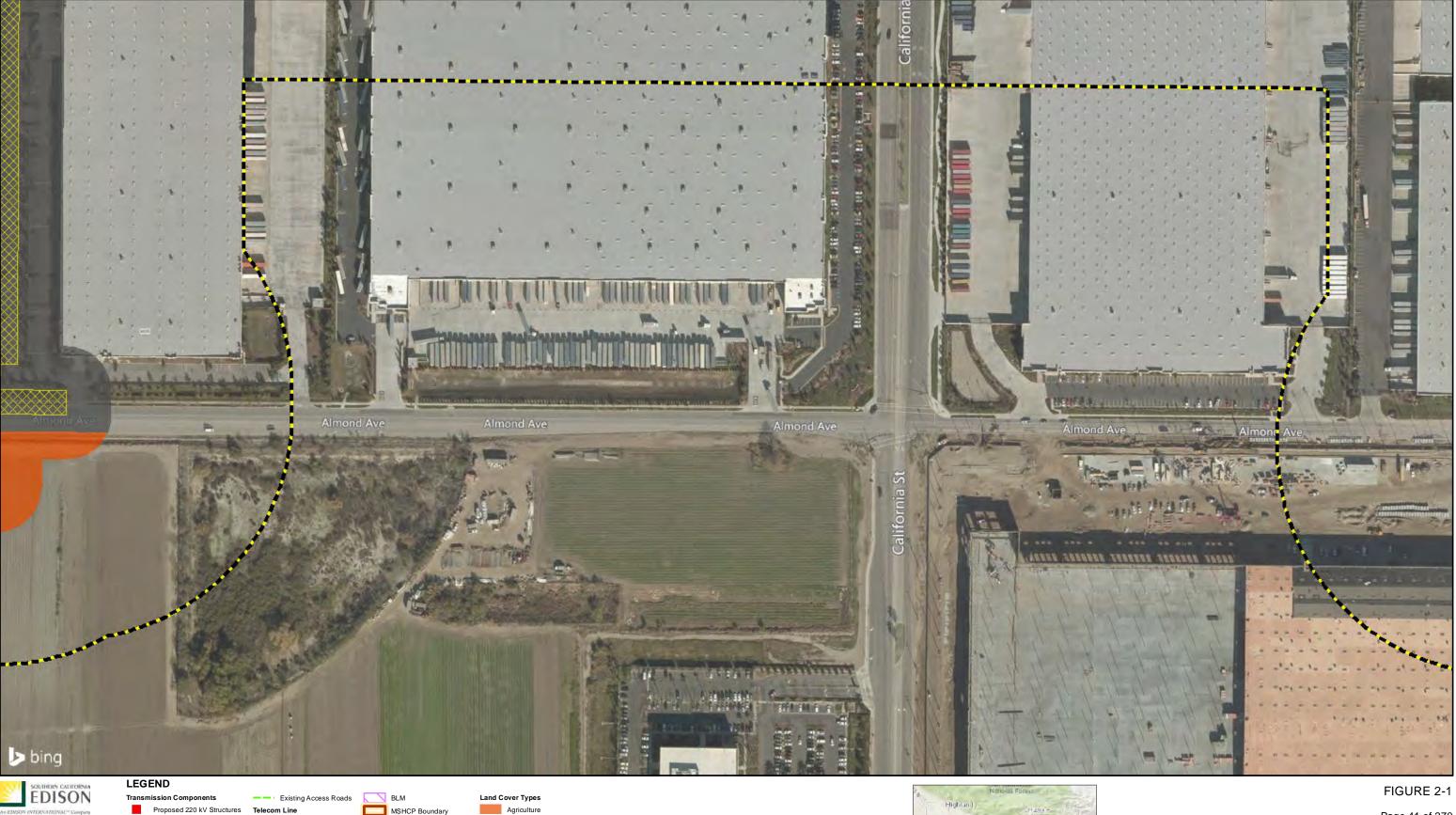
Temporary Impact

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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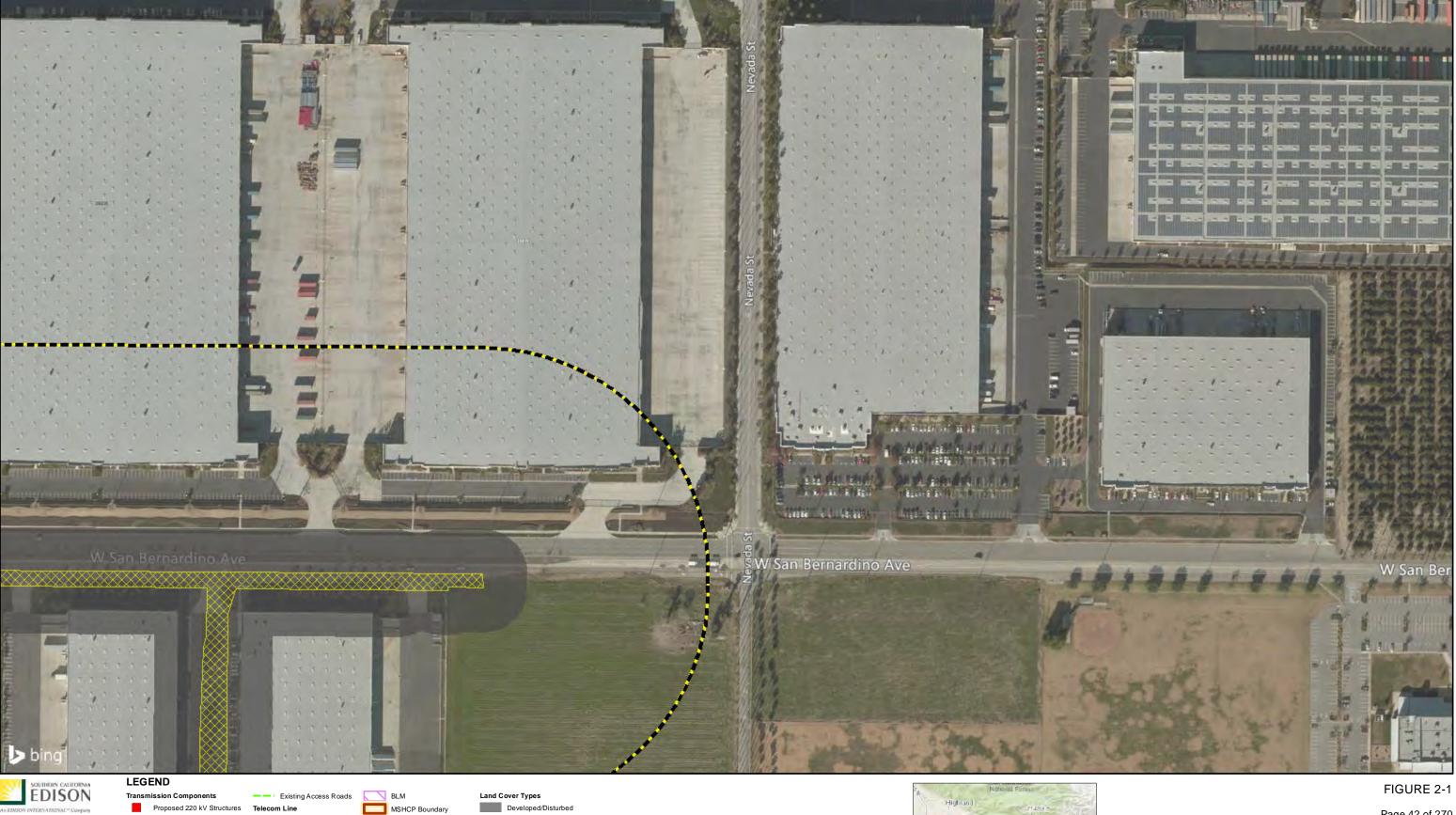
Permanent Impacts

Temporary Impact Guard Pole

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Proposed 220kV

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Temporary Impacts

Permanent Impacts

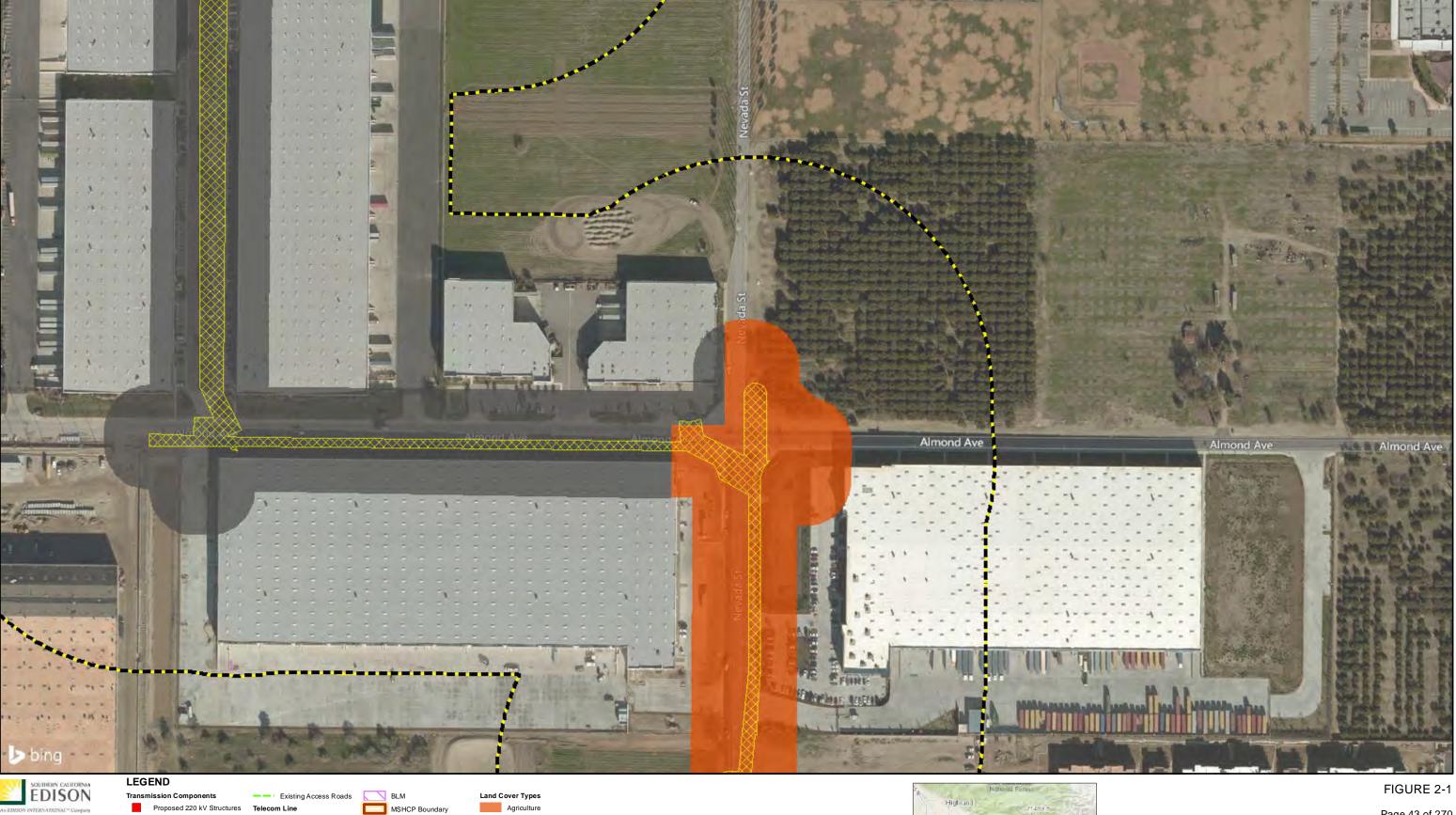
Temporary Impact

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Guard Pole



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction. Highland

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Temporary Impacts

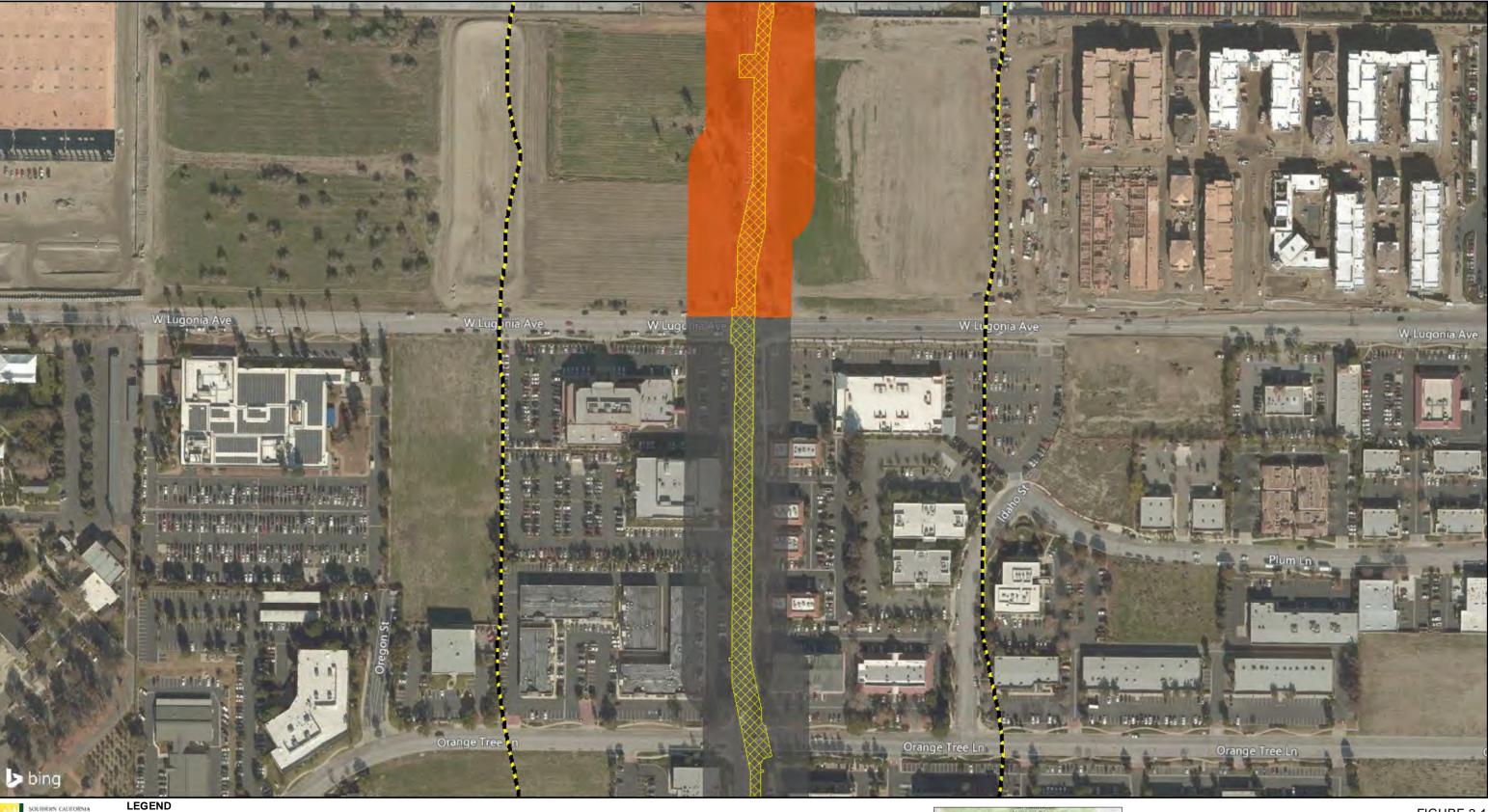
Permanent Impacts

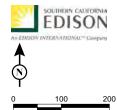
Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening





Proposed 220 kV Structures

- Existing Access Roads Existing

> Existing ROW Study Area

BLM MSHCP Boundary Temporary Impacts Temporary Impact

> Permanent Impacts Potential Road Widening

Land Cover Types Agriculture Developed/Disturbed

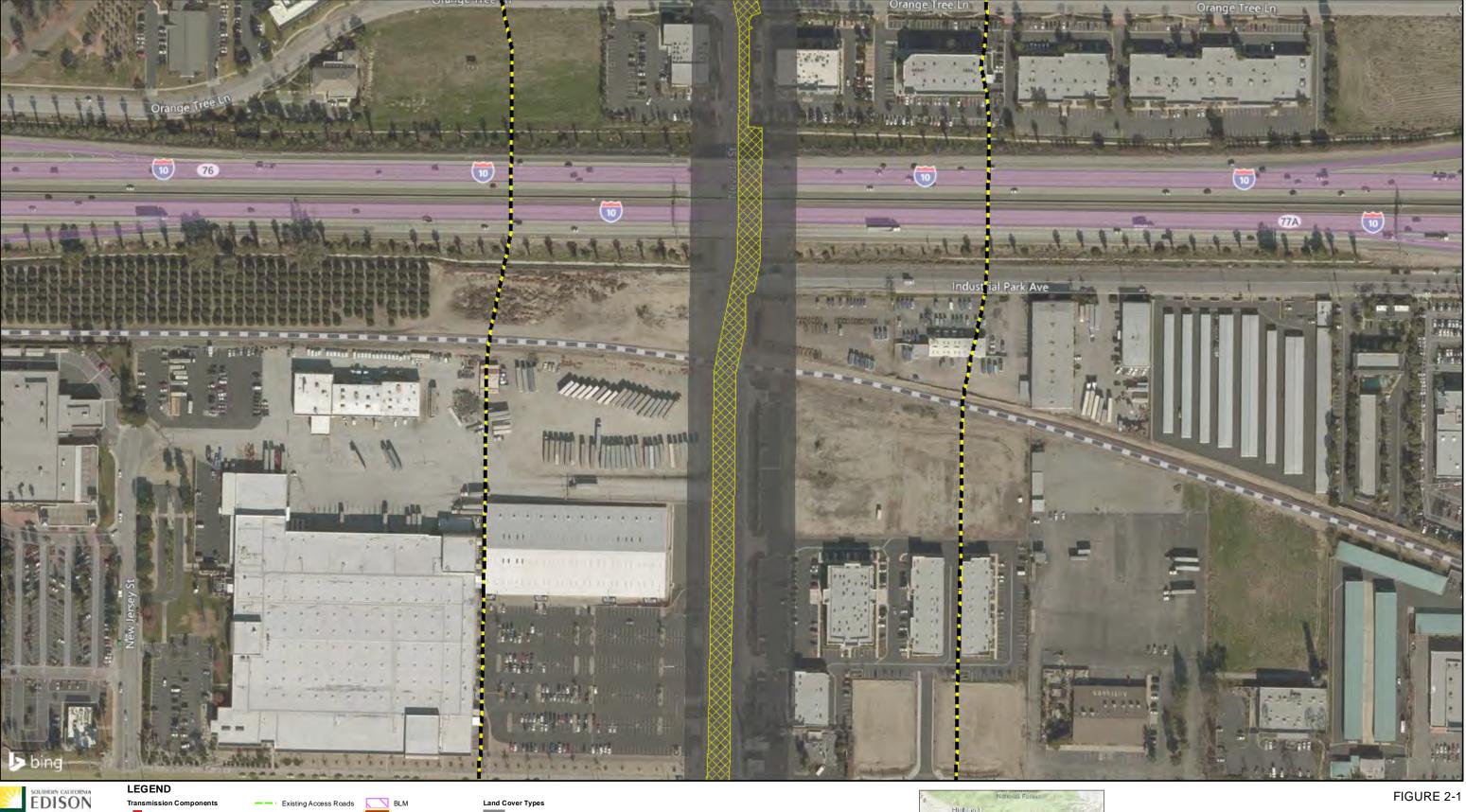
Guard Pole Shoo-fly Work Area Permanent Impact

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



FIGURE 2-1

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Existing ROW Study Area

Temporary Impact

MSHCP Boundary Temporary Impacts Guard Pole Shoo-fly Work Area

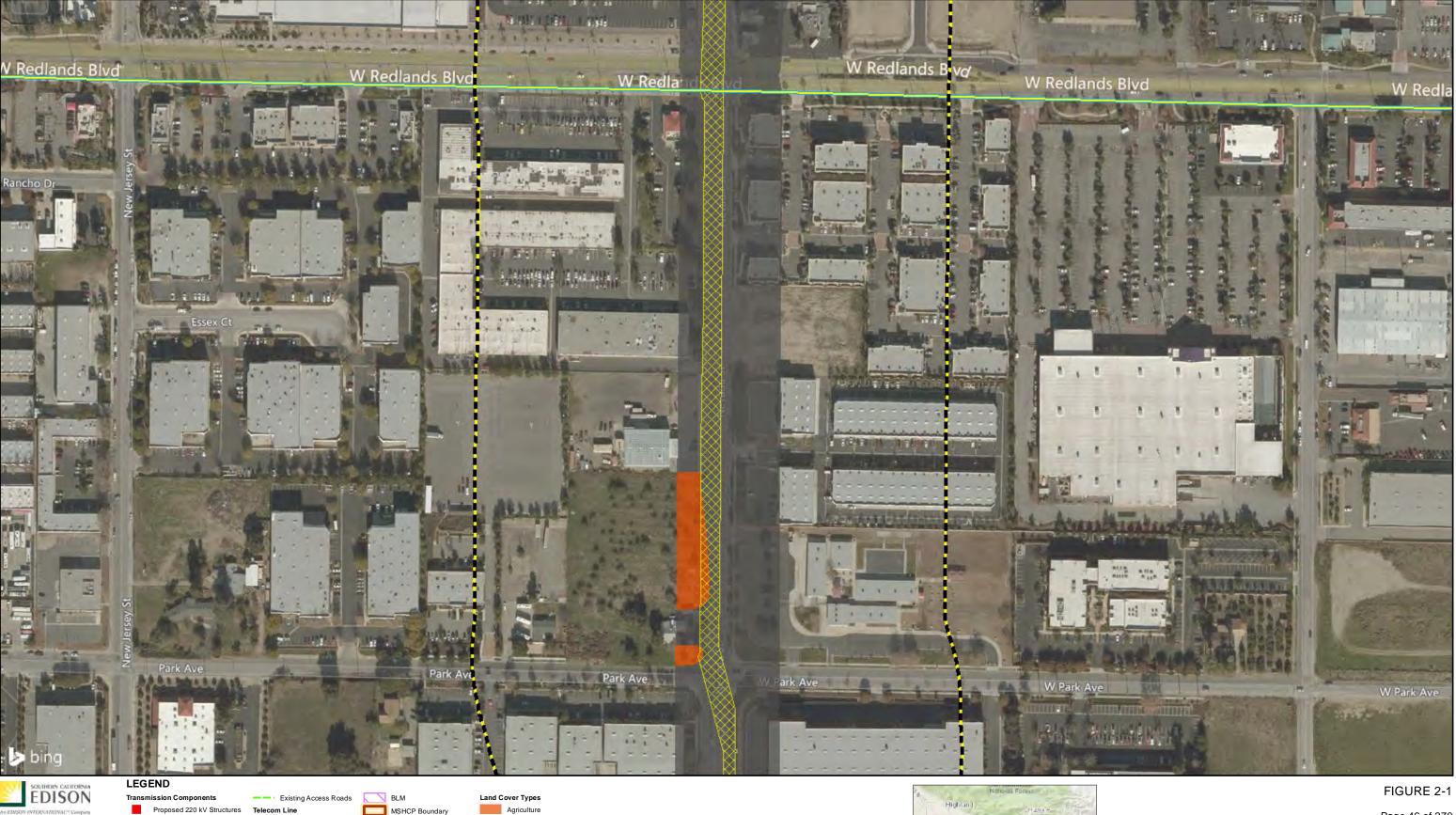
Potential Road Widening

Permanent Impacts Permanent Impact Developed/Disturbed

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Existing

Existing ROW

Study Area

Temporary Impacts

Permanent Impacts

Temporary Impact

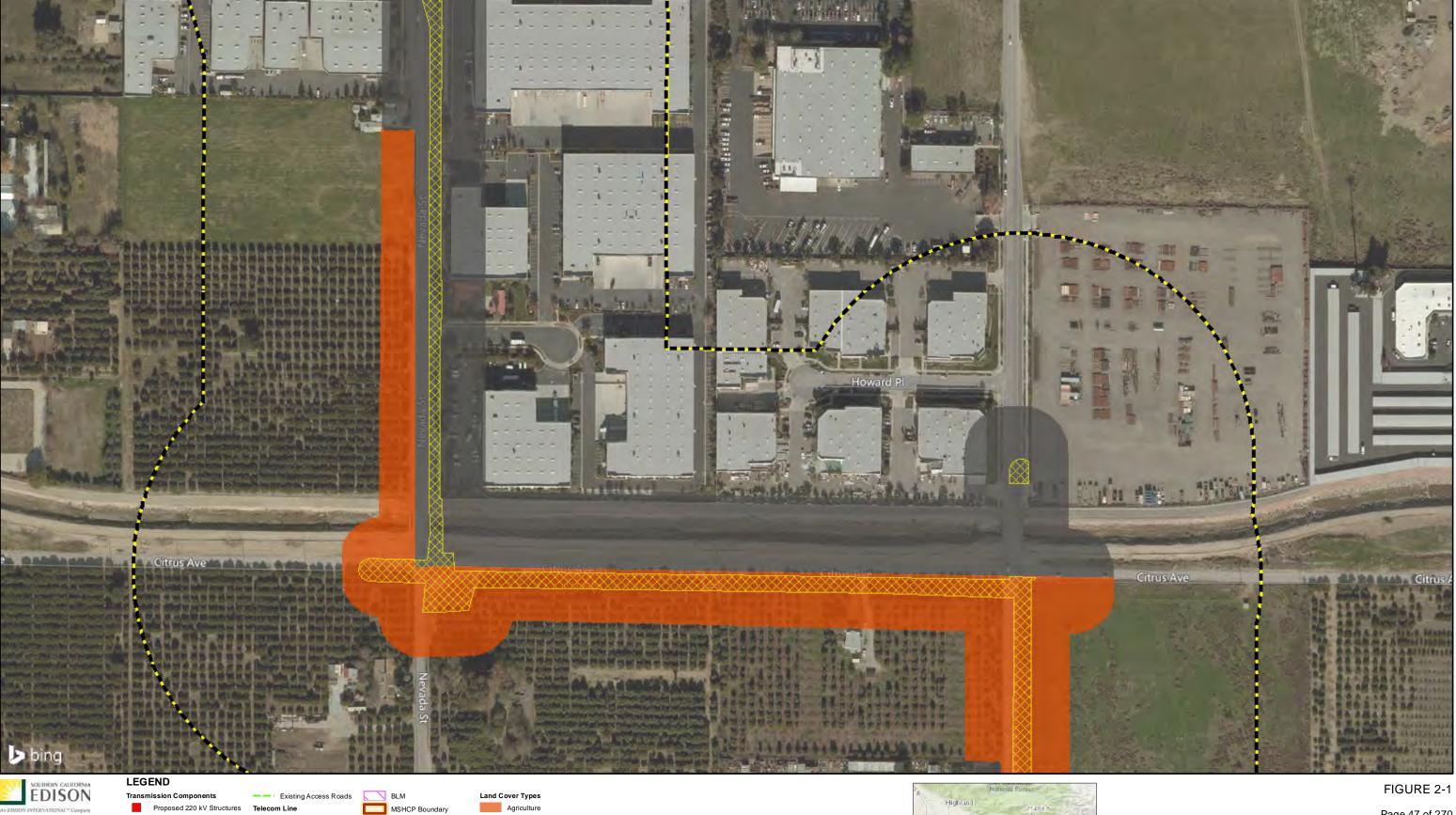
Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Guard Pole

Developed/Disturbed



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Existing

Existing ROW

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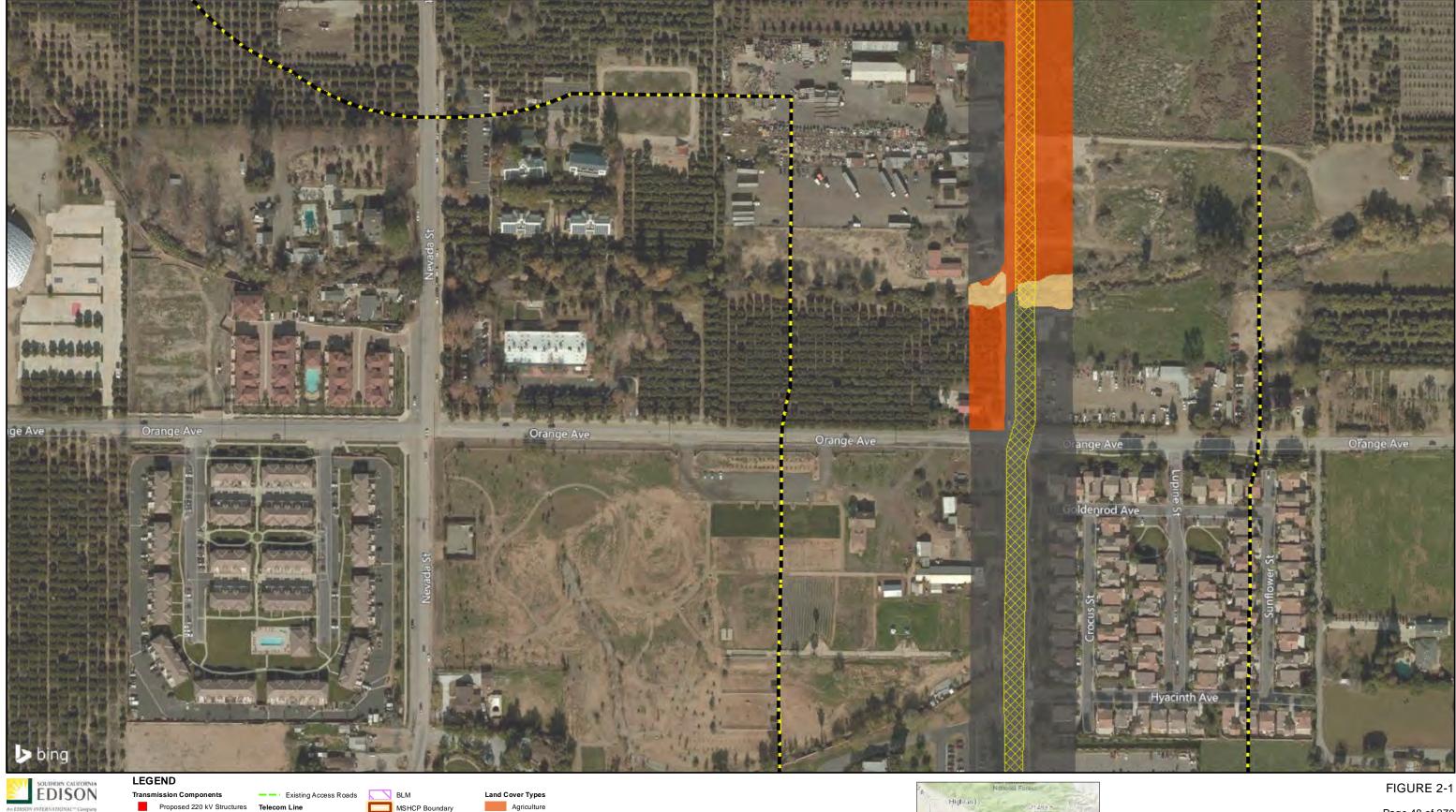
Developed/Disturbed

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Temporary Impact Guard Pole

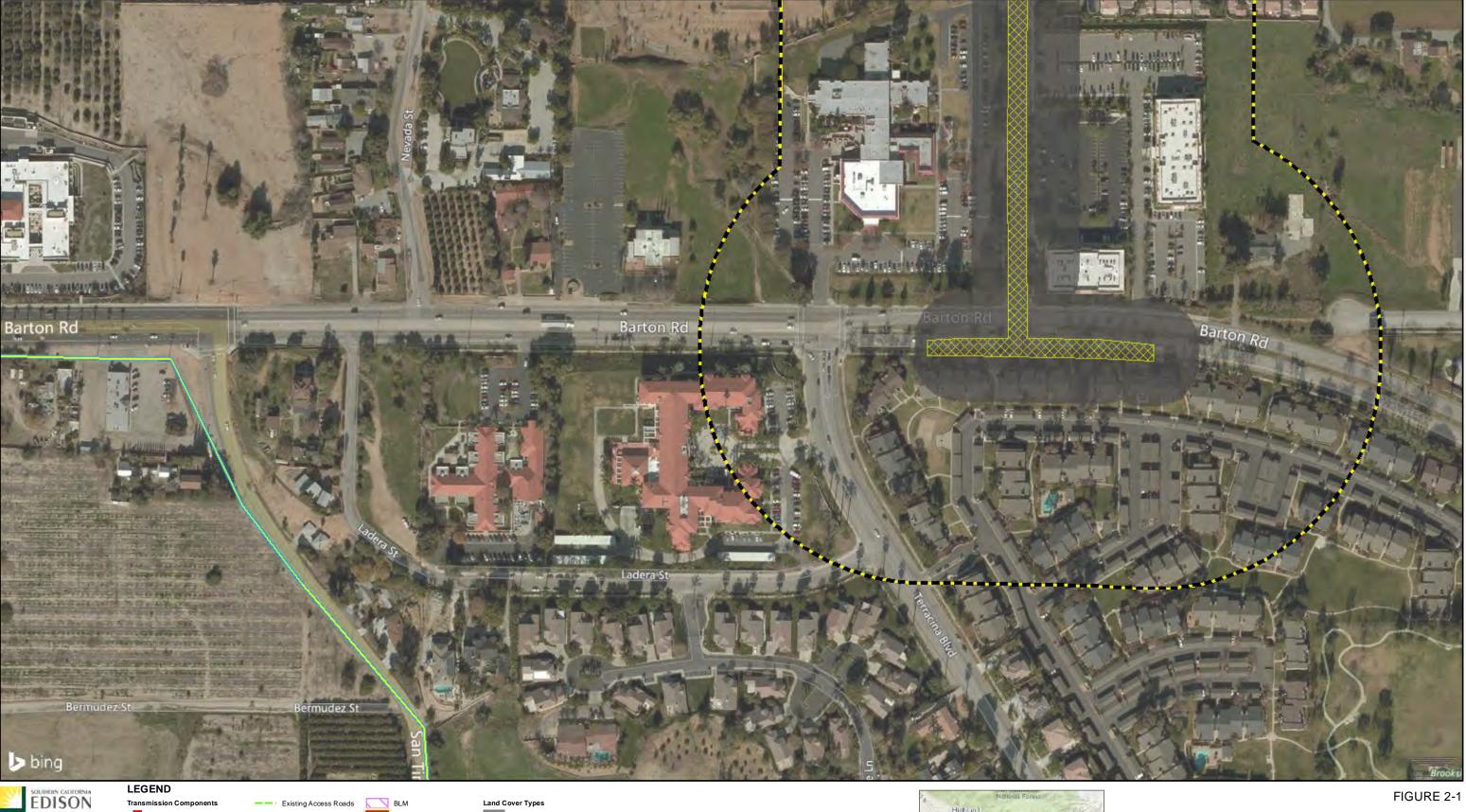
Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Permanent Impacts

Riparian Woodland



Proposed 220 kV Structures

Existing ROW Study Area

MSHCP Boundary Temporary Impacts Temporary Impact

Guard Pole Shoo-fly Work Area Permanent Impacts Permanent Impact

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Developed/Disturbed

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction. Sheet Index

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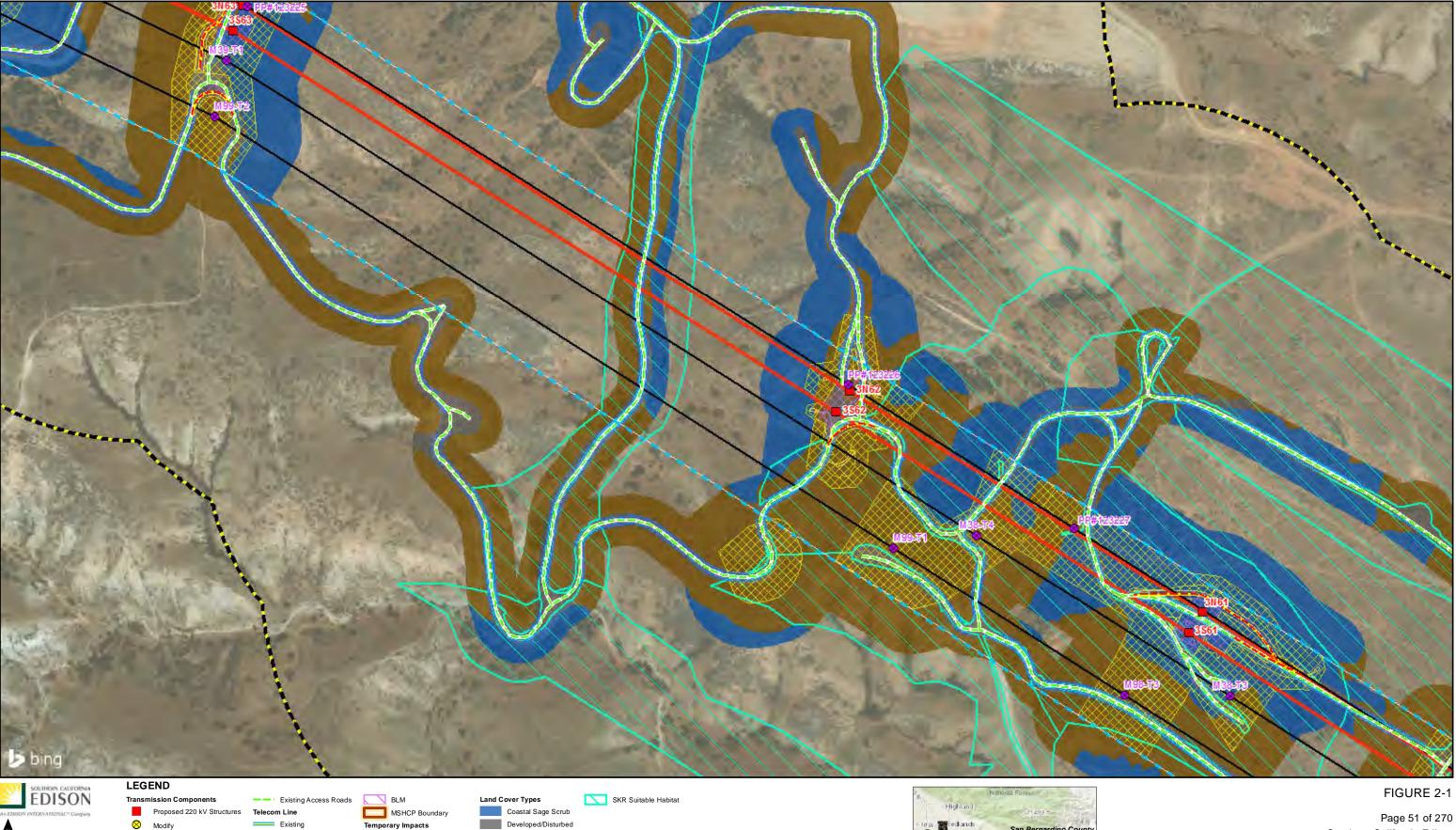
Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Grassland/Forbland



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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Proposed

Existing ROW

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Potential Road Widening

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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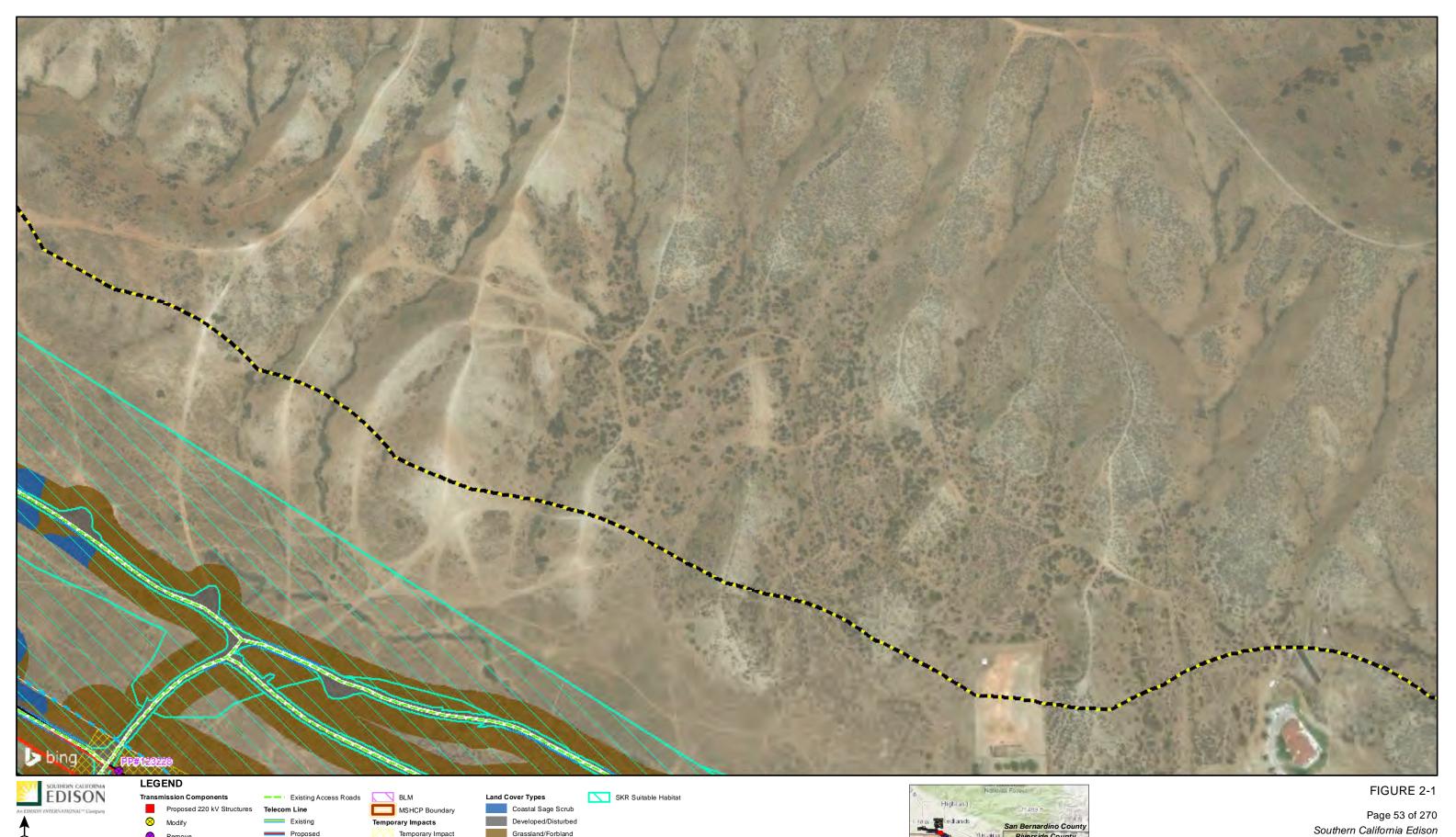
Shoo-fly Work Area

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Potential Road Widening

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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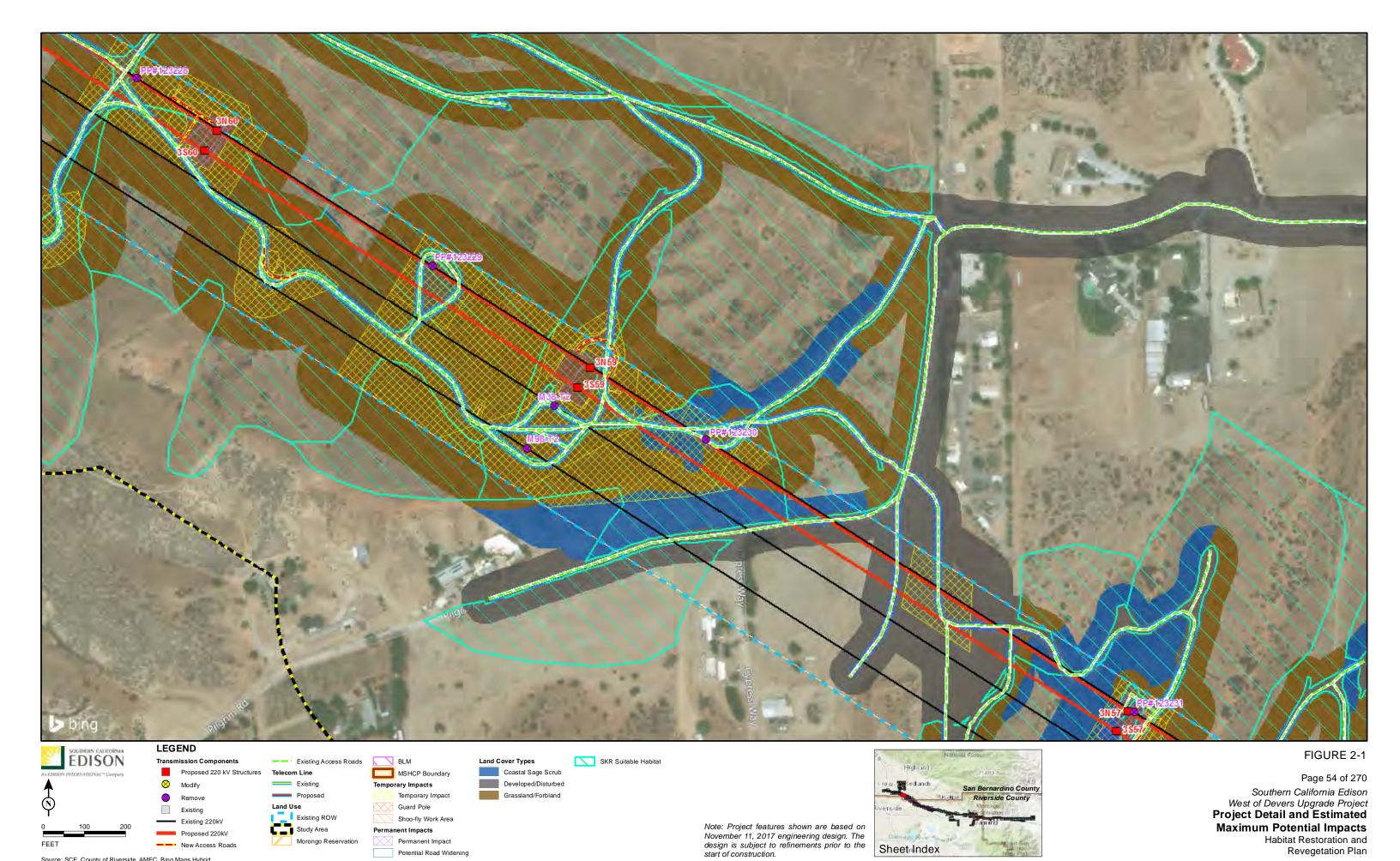
Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



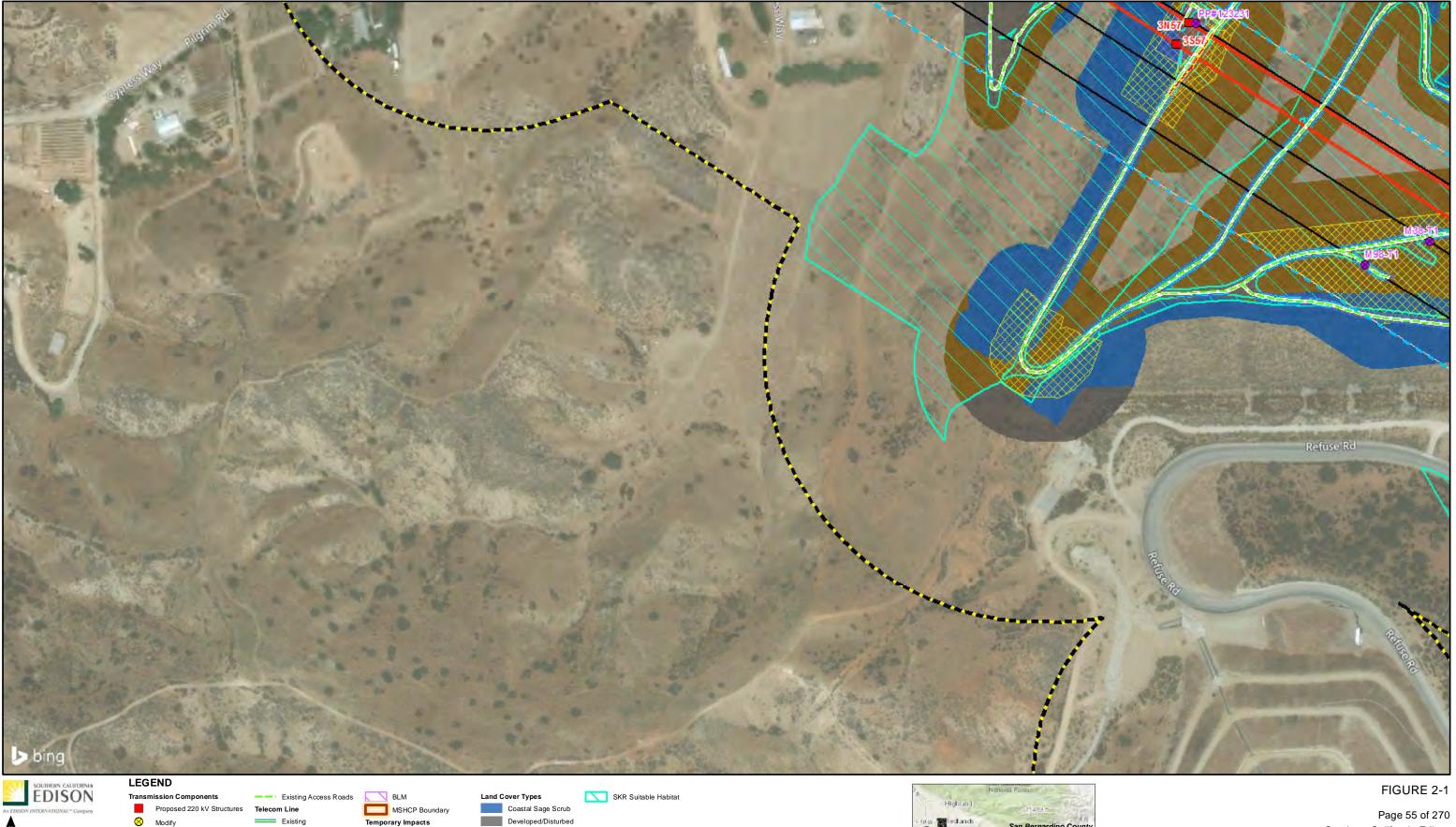
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Potential Road Widening Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Permanent Impact

ch2m:

Habitat Restoration and Revegetation Plan



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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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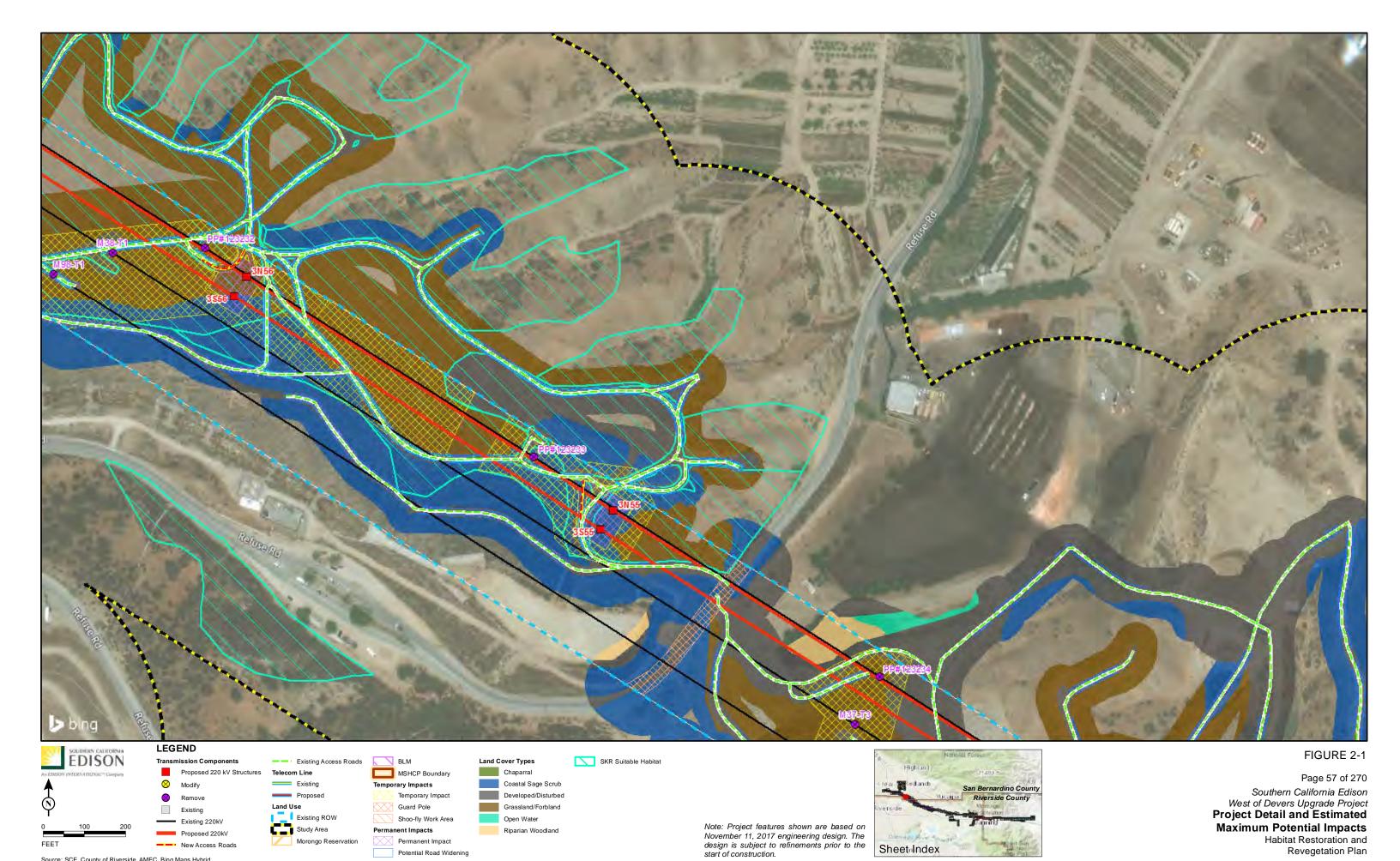
Grassland/Forbland

Existing

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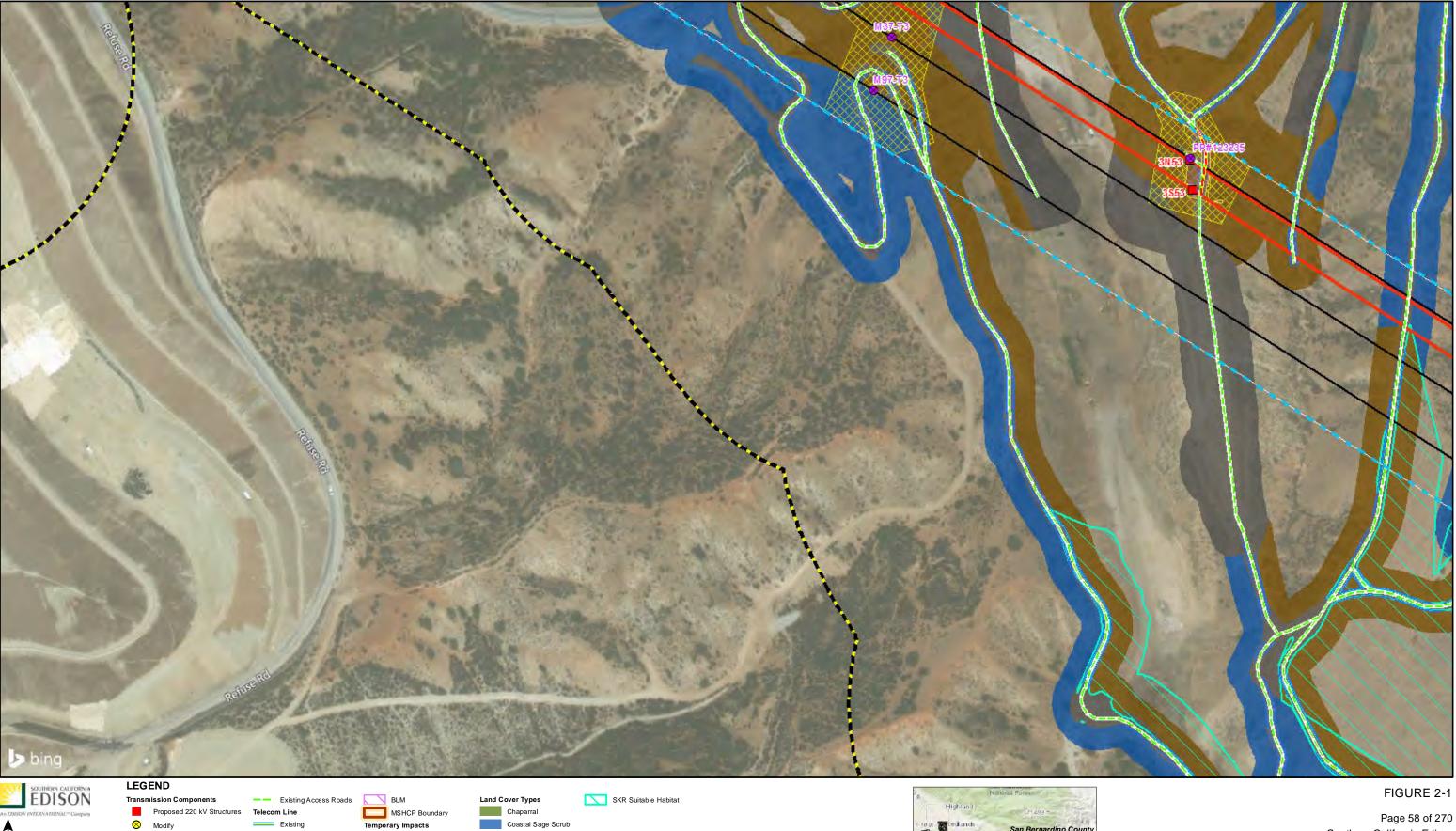
Potential Road Widening Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

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Maximum Potential Impacts Habitat Restoration and Revegetation Plan ch2m:

Permanent Impact

Riparian Woodland



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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Proposed 220kV

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Proposed

Study Area

Existing ROW

Morongo Reservation

Land Use

Developed/Disturbed

Grassland/Forbland

Temporary Impact

Shoo-fly Work Area

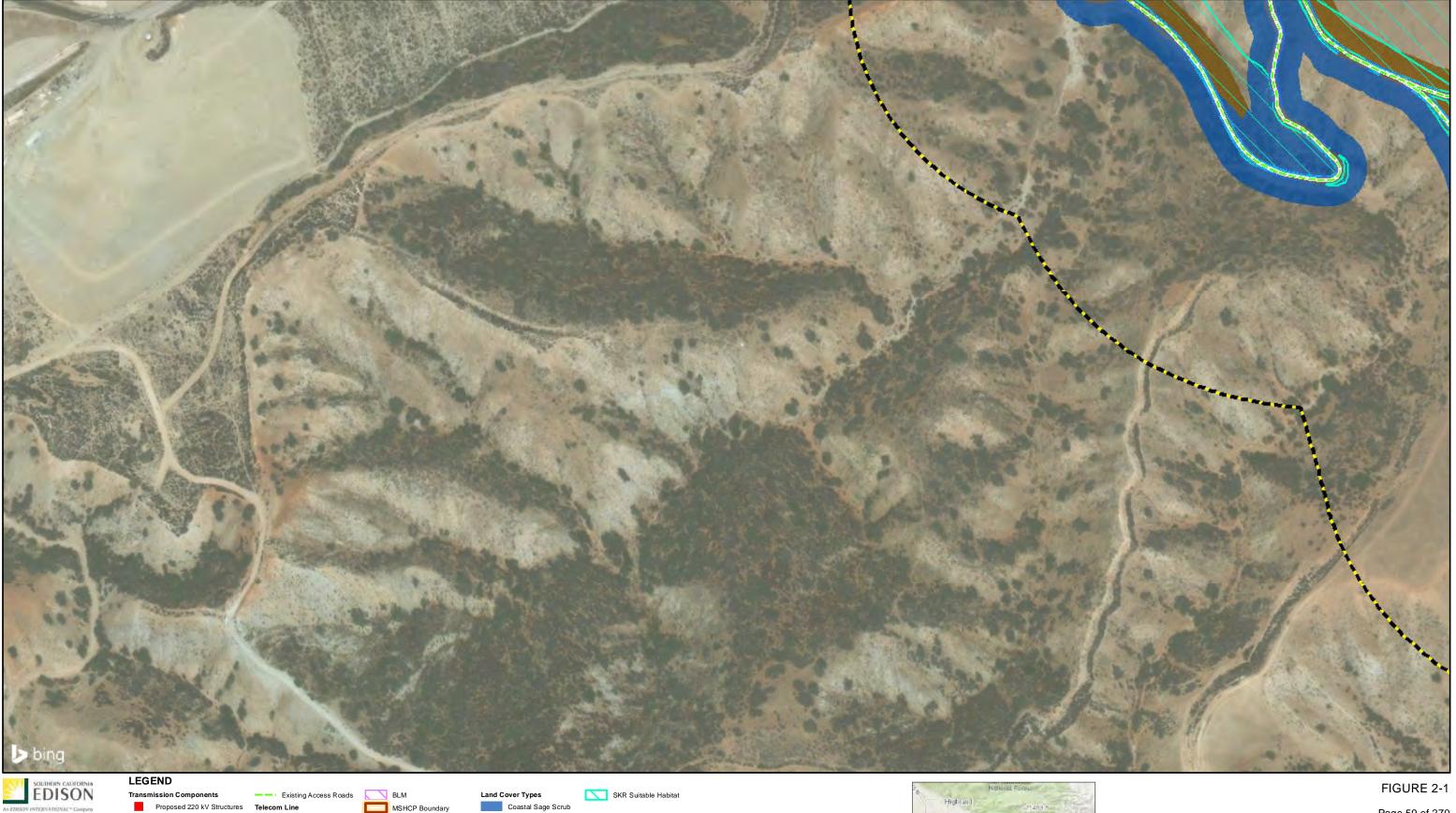
Permanent Impact

Potential Road Widening

Guard Pole

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Temporary Impact Guard Pole

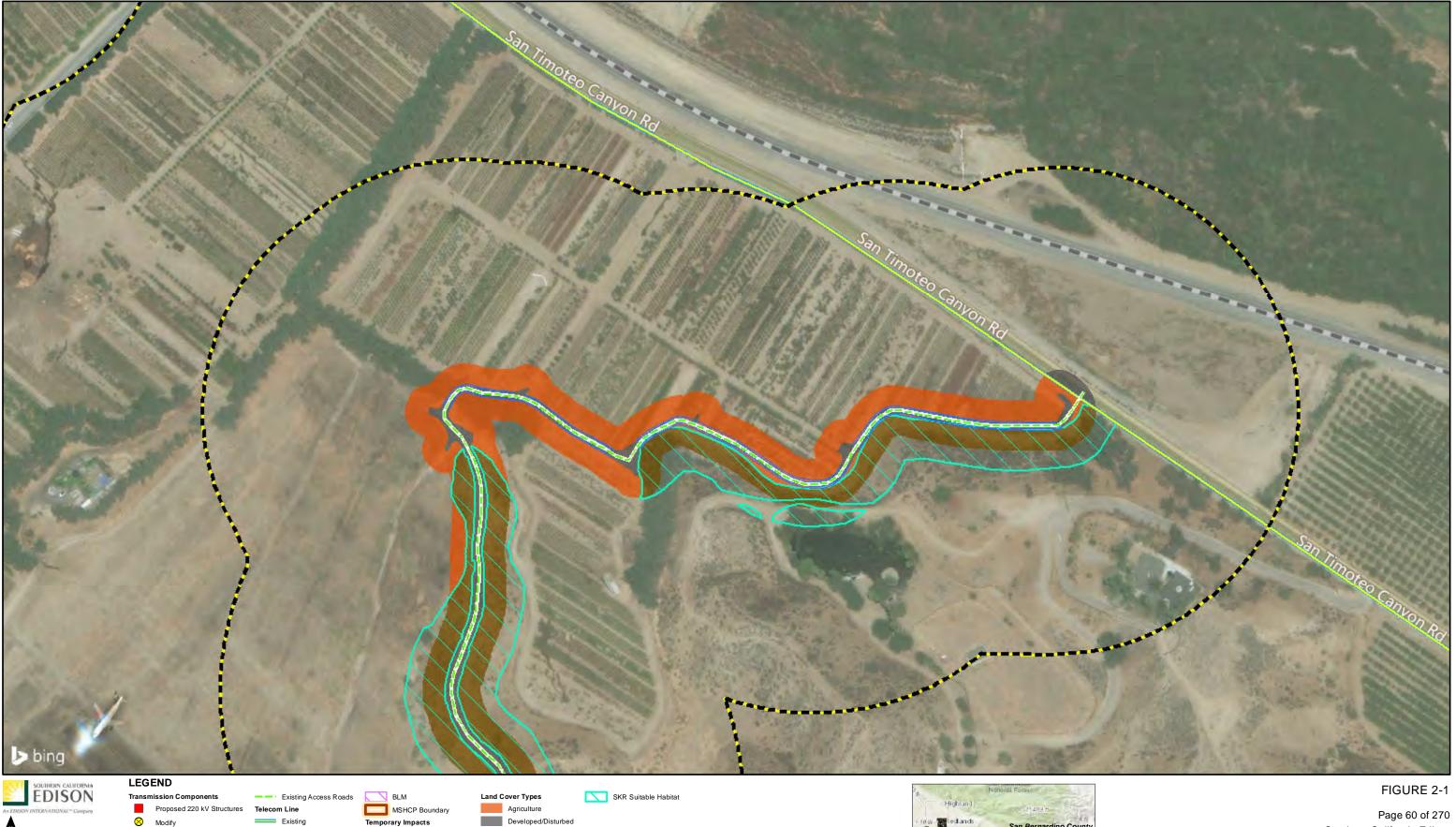
Shoo-fly Work Area

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New Access Roads

Morongo Reservation

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Potential Road Widening

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

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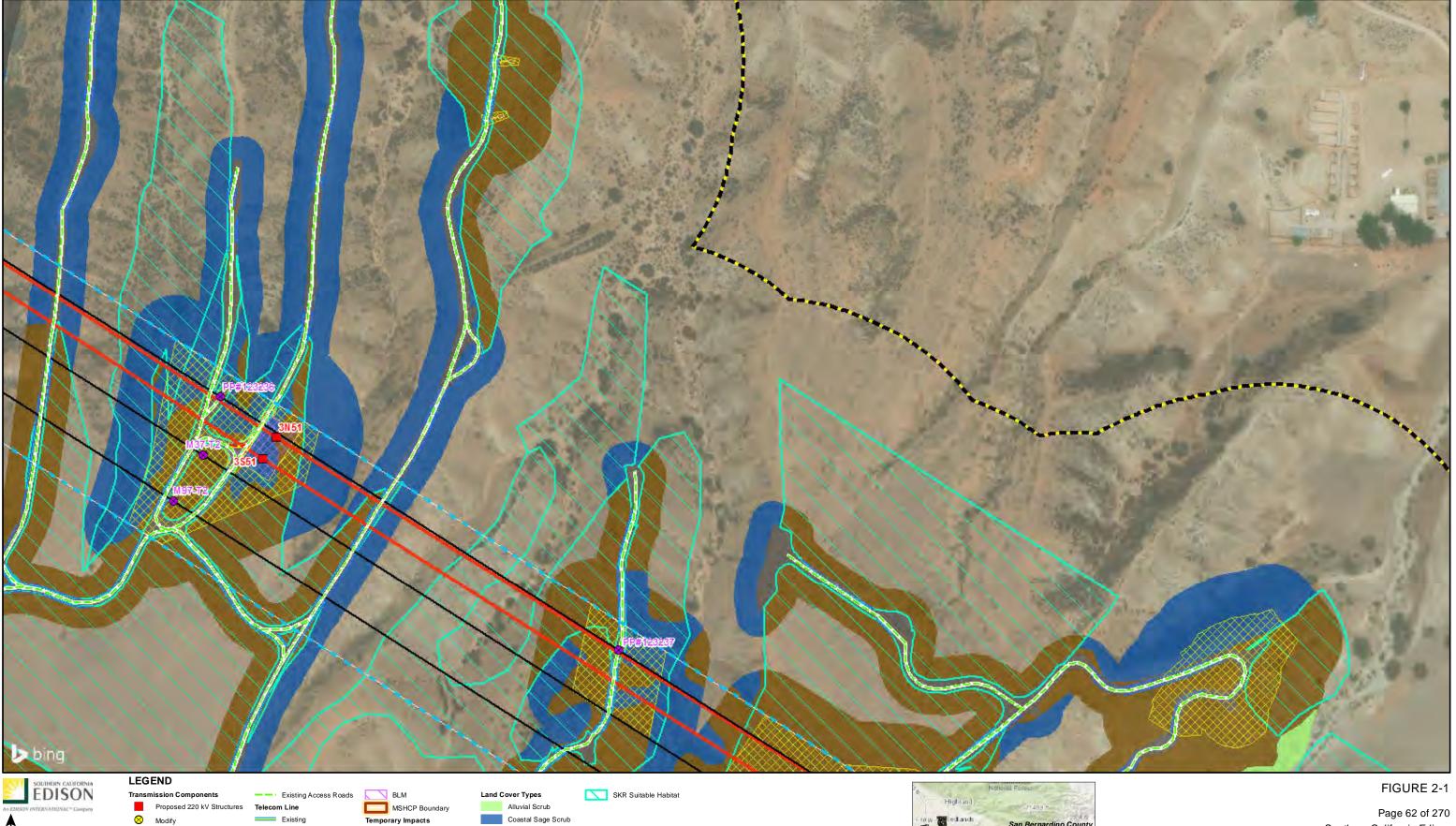
Shoo-fly Work Area

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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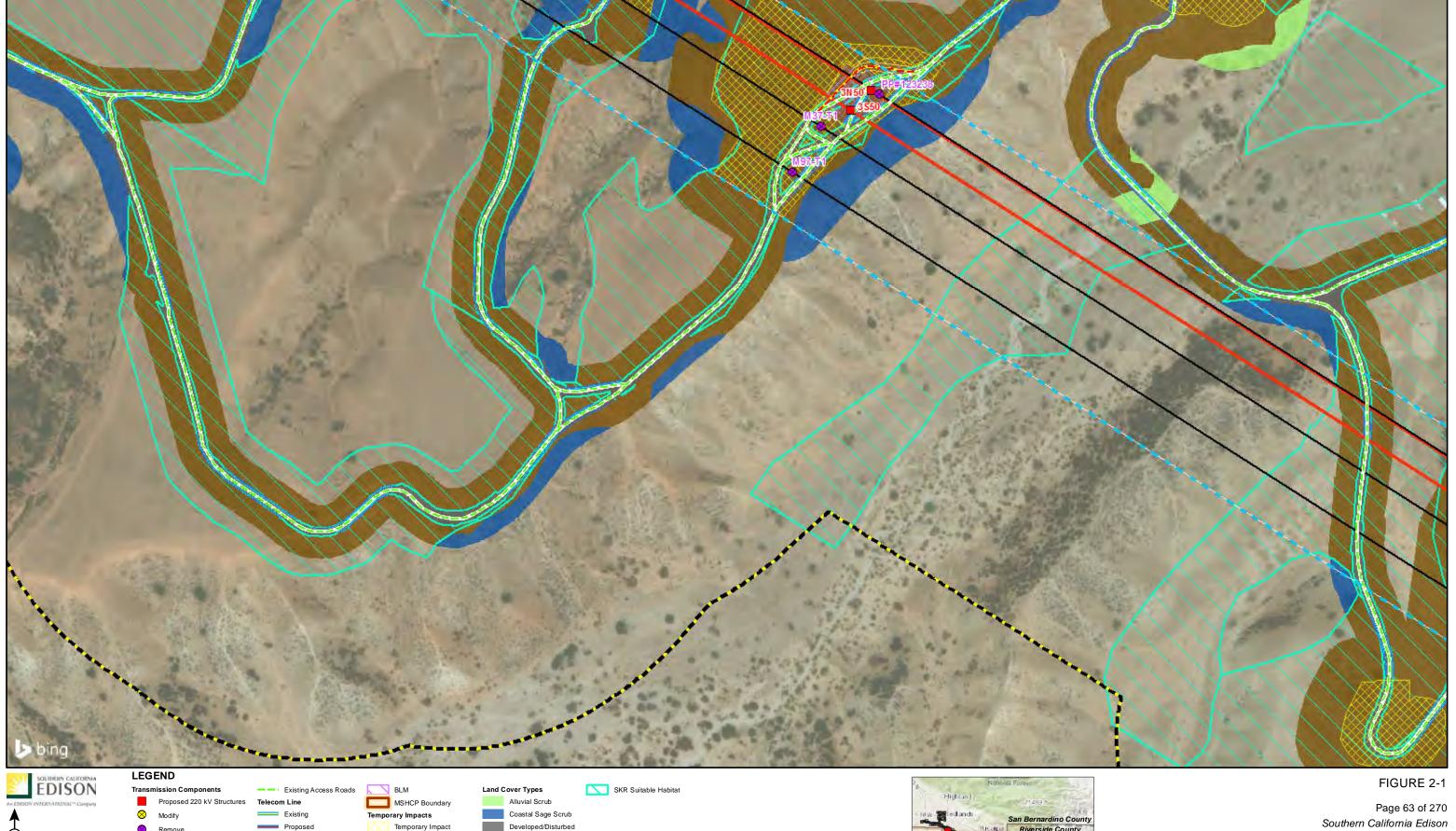
Temporary Impact

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Potential Road Widening

Guard Pole



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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Grassland/Forbland

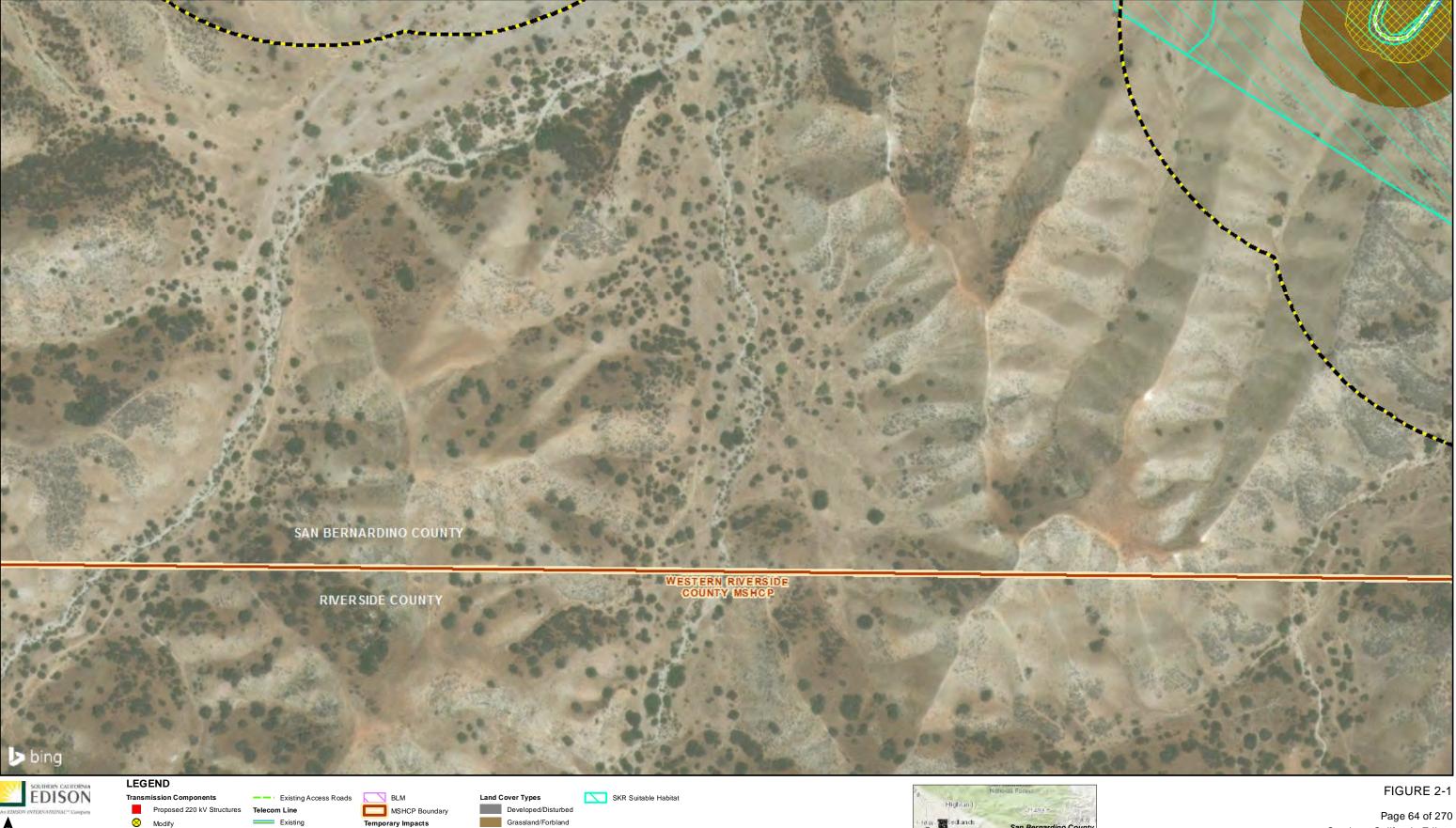
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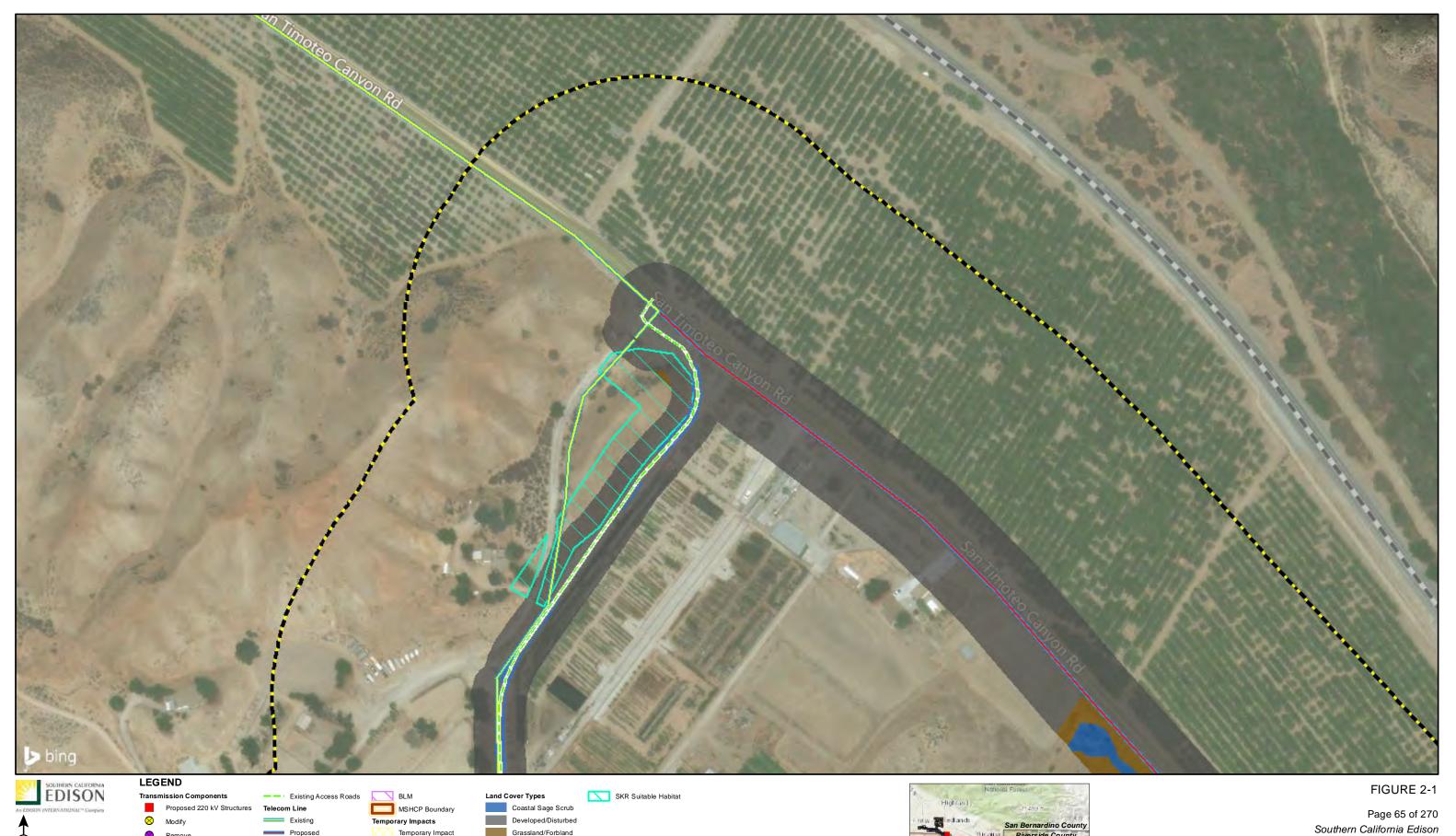
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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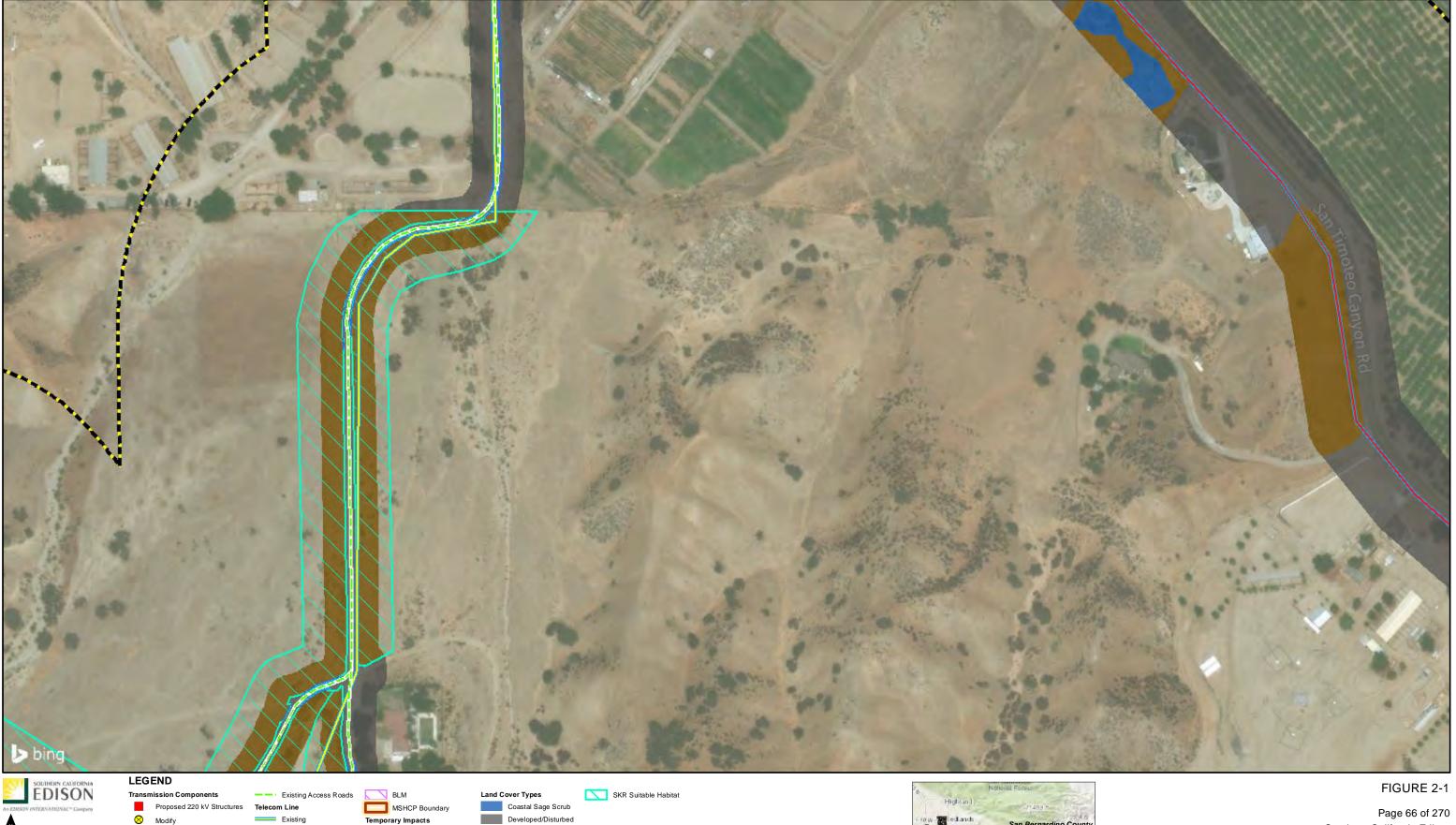
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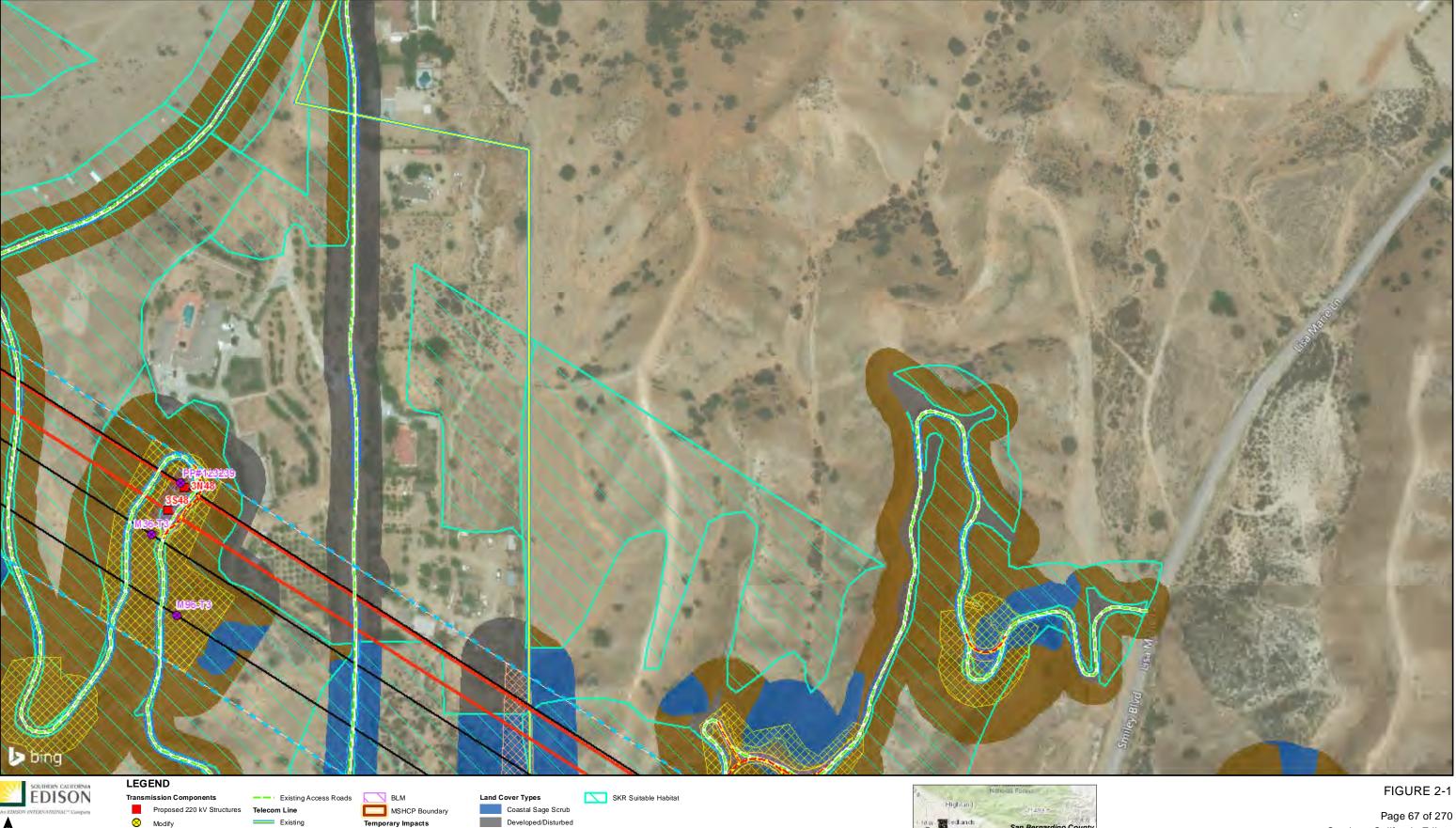
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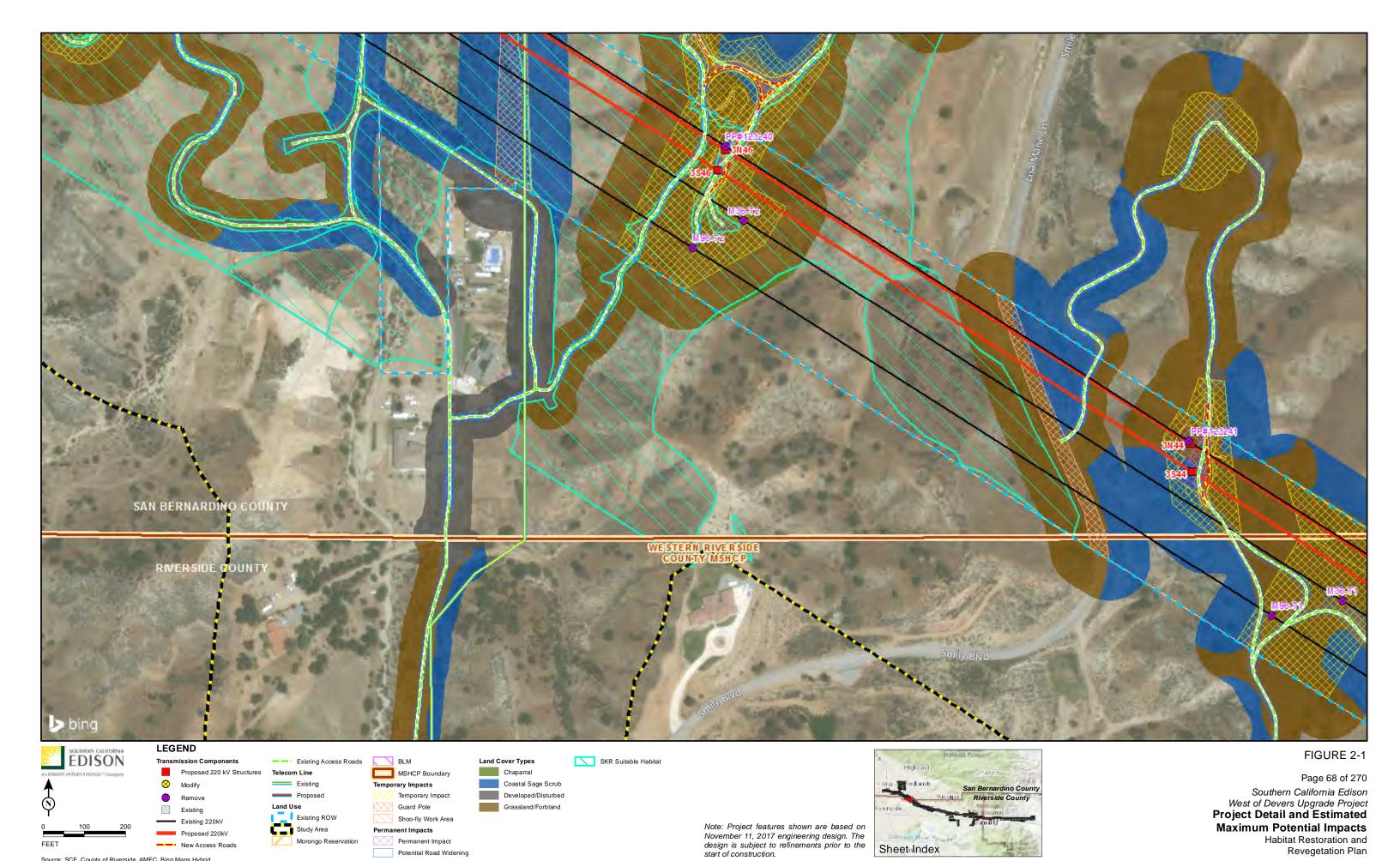
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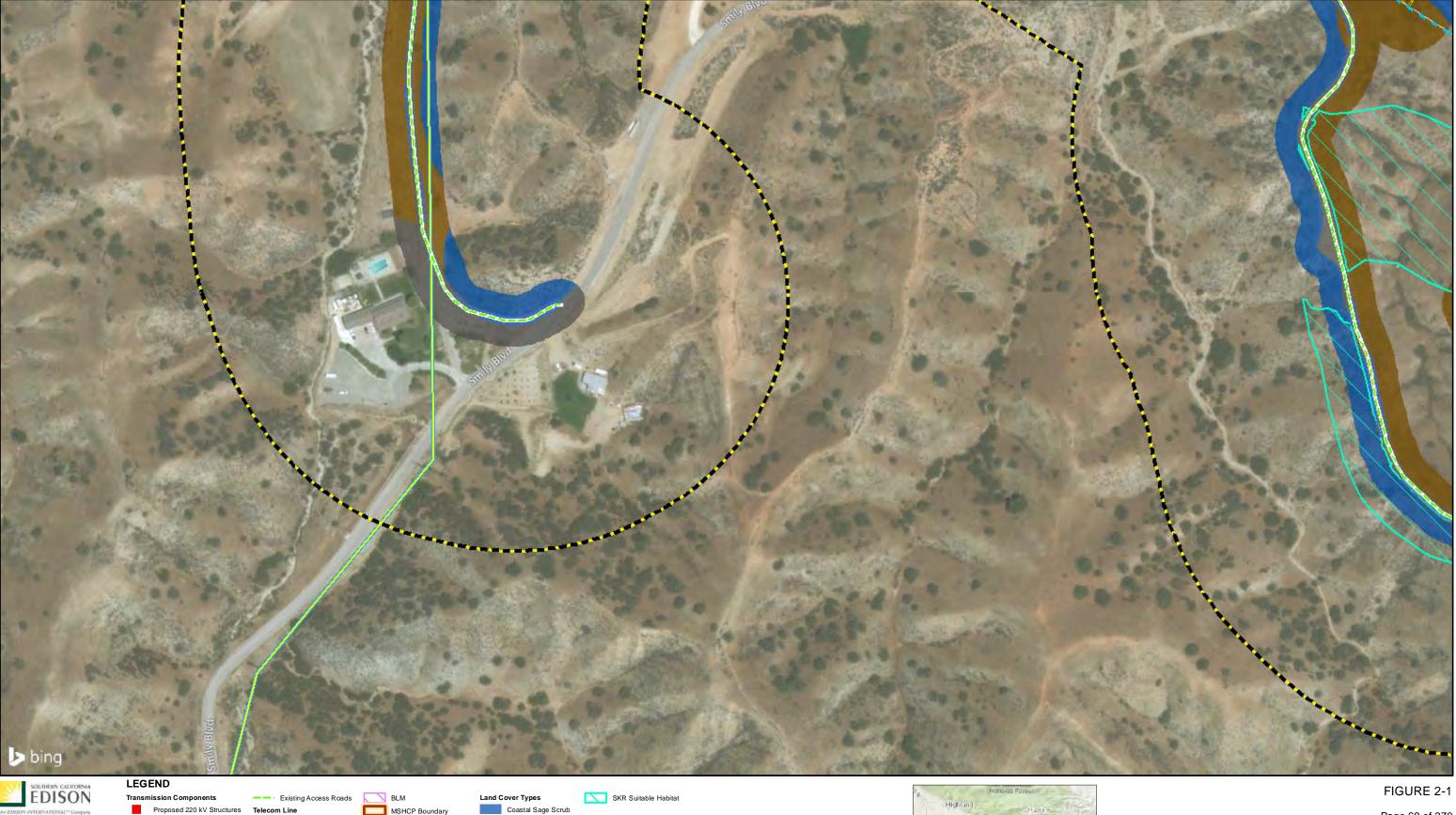
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Potential Road Widening Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)





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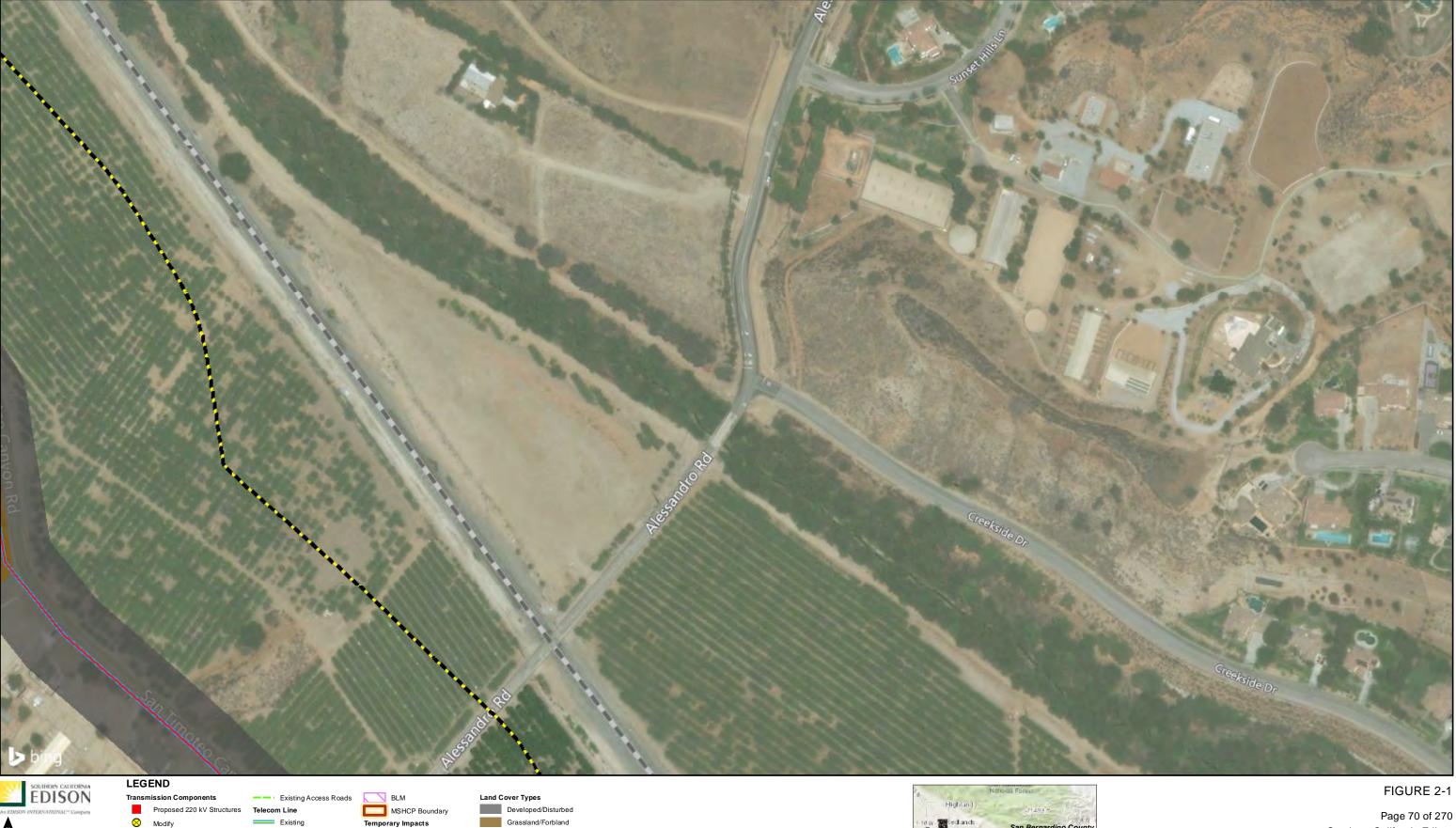
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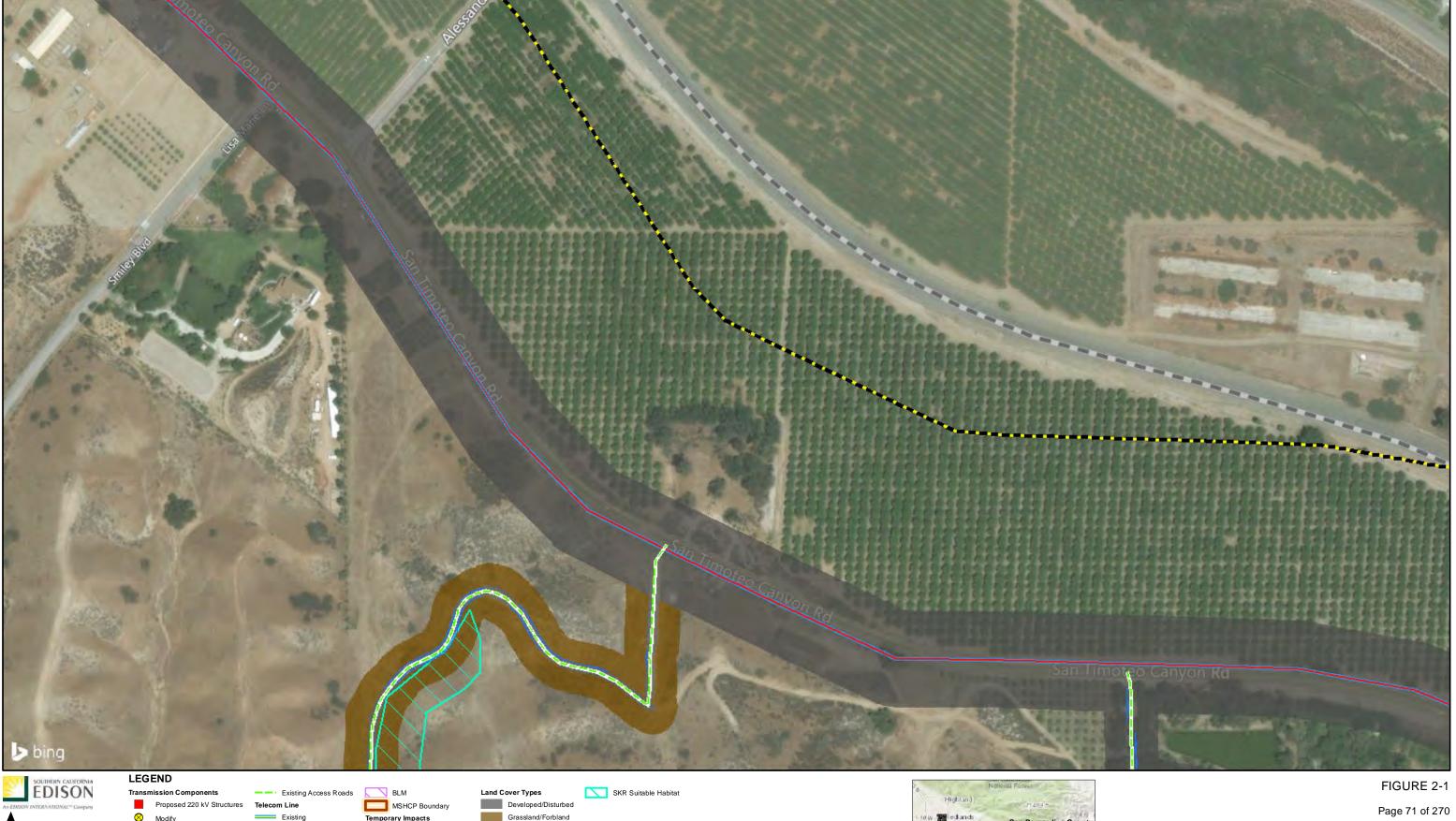
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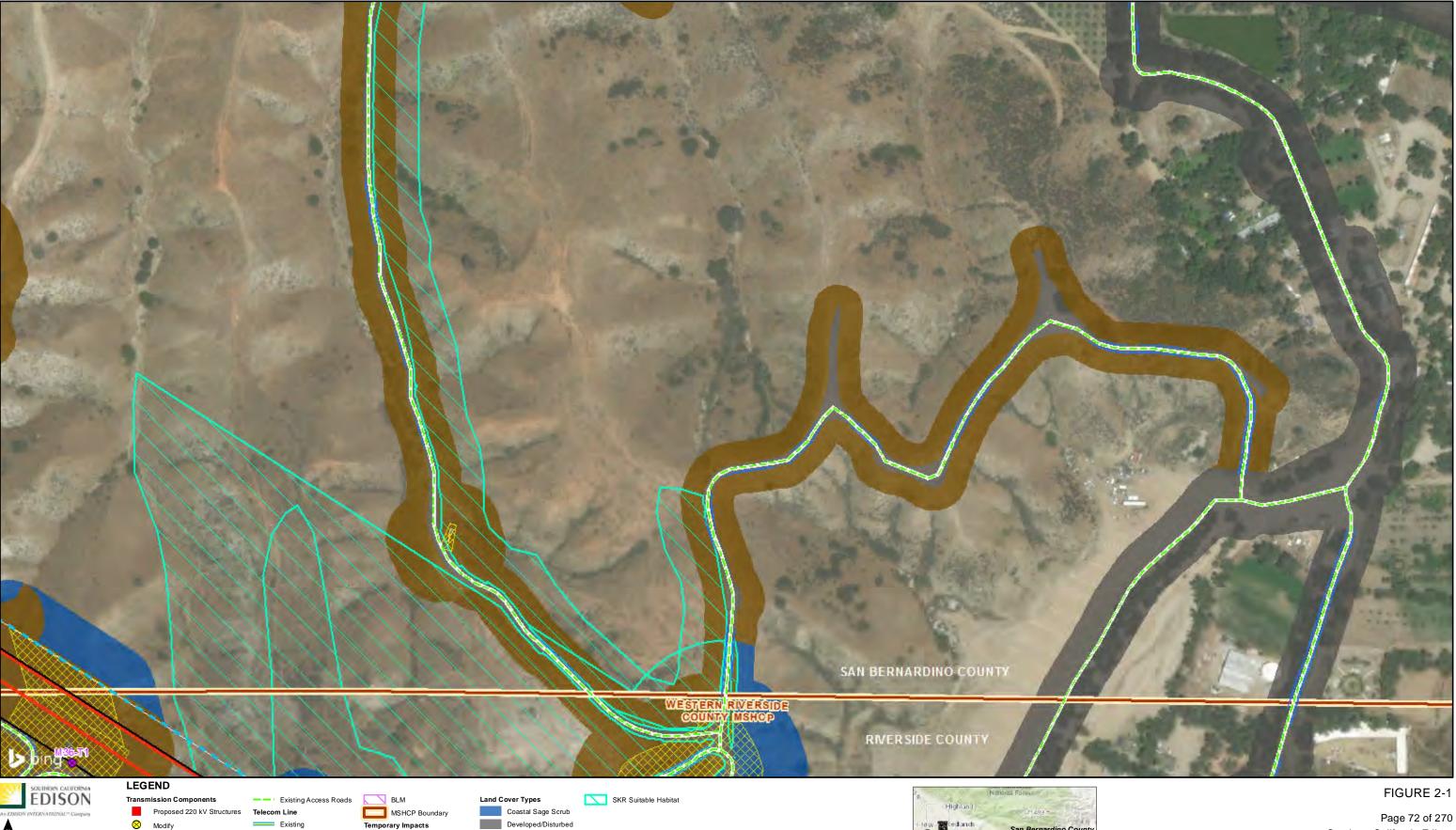
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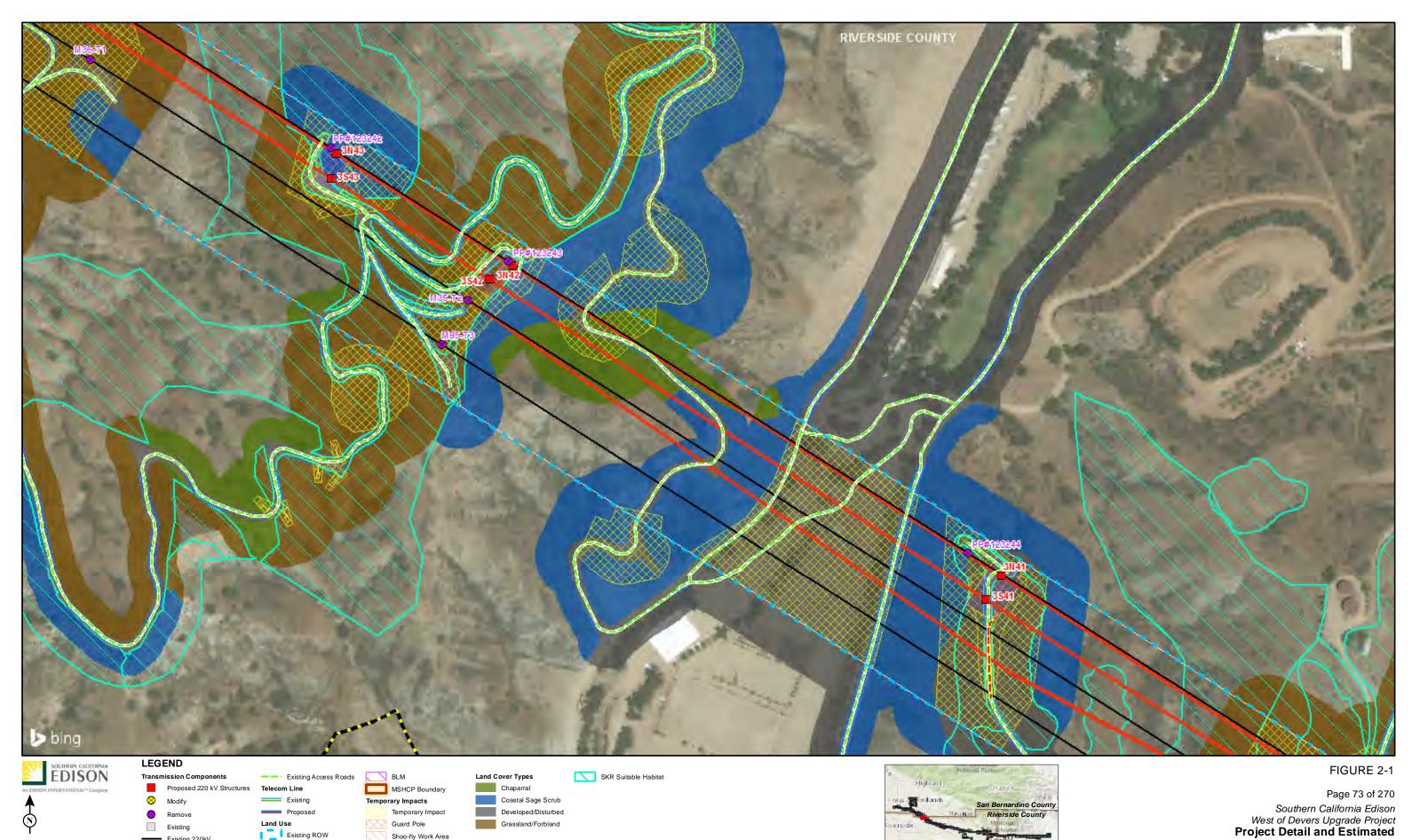
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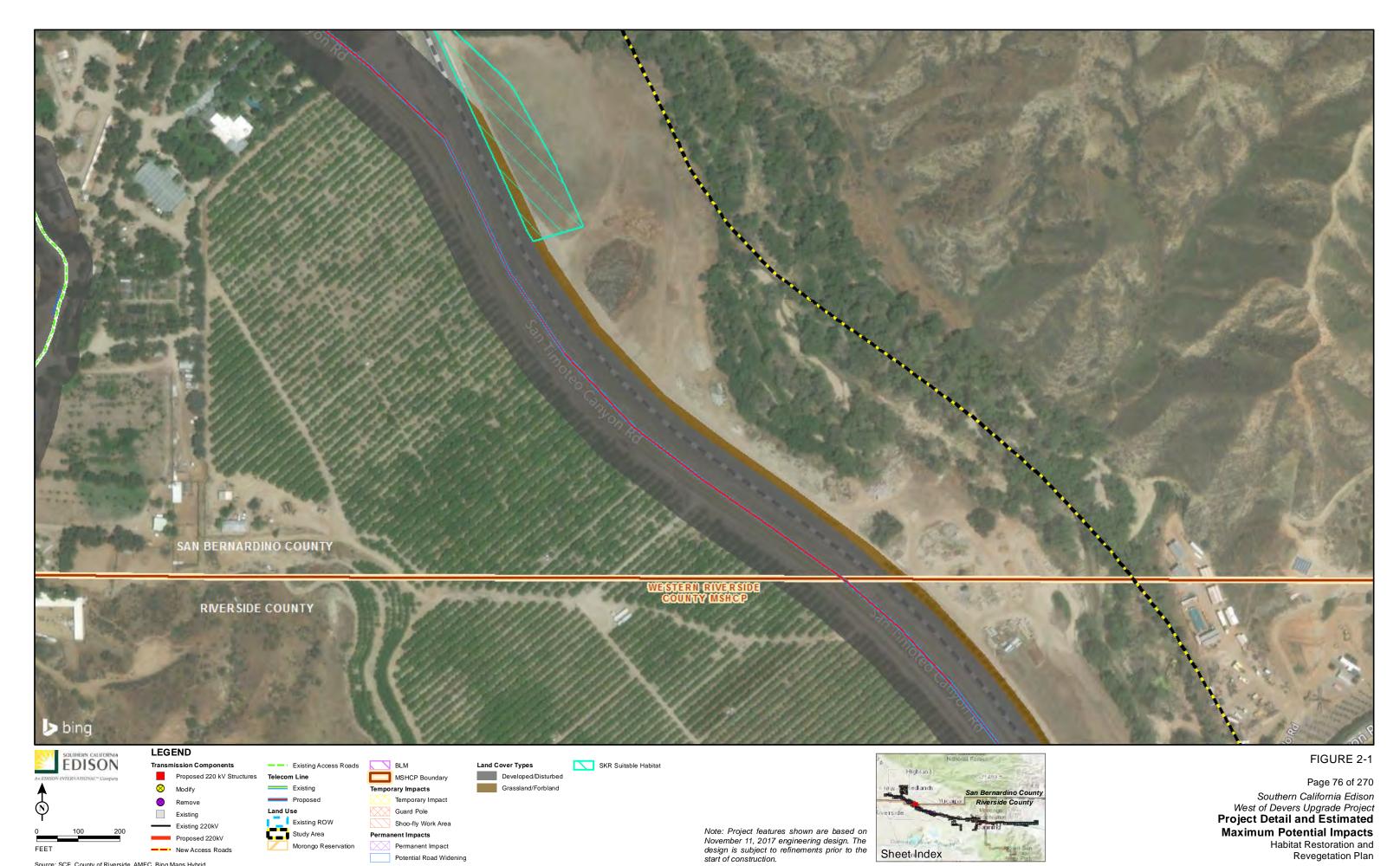
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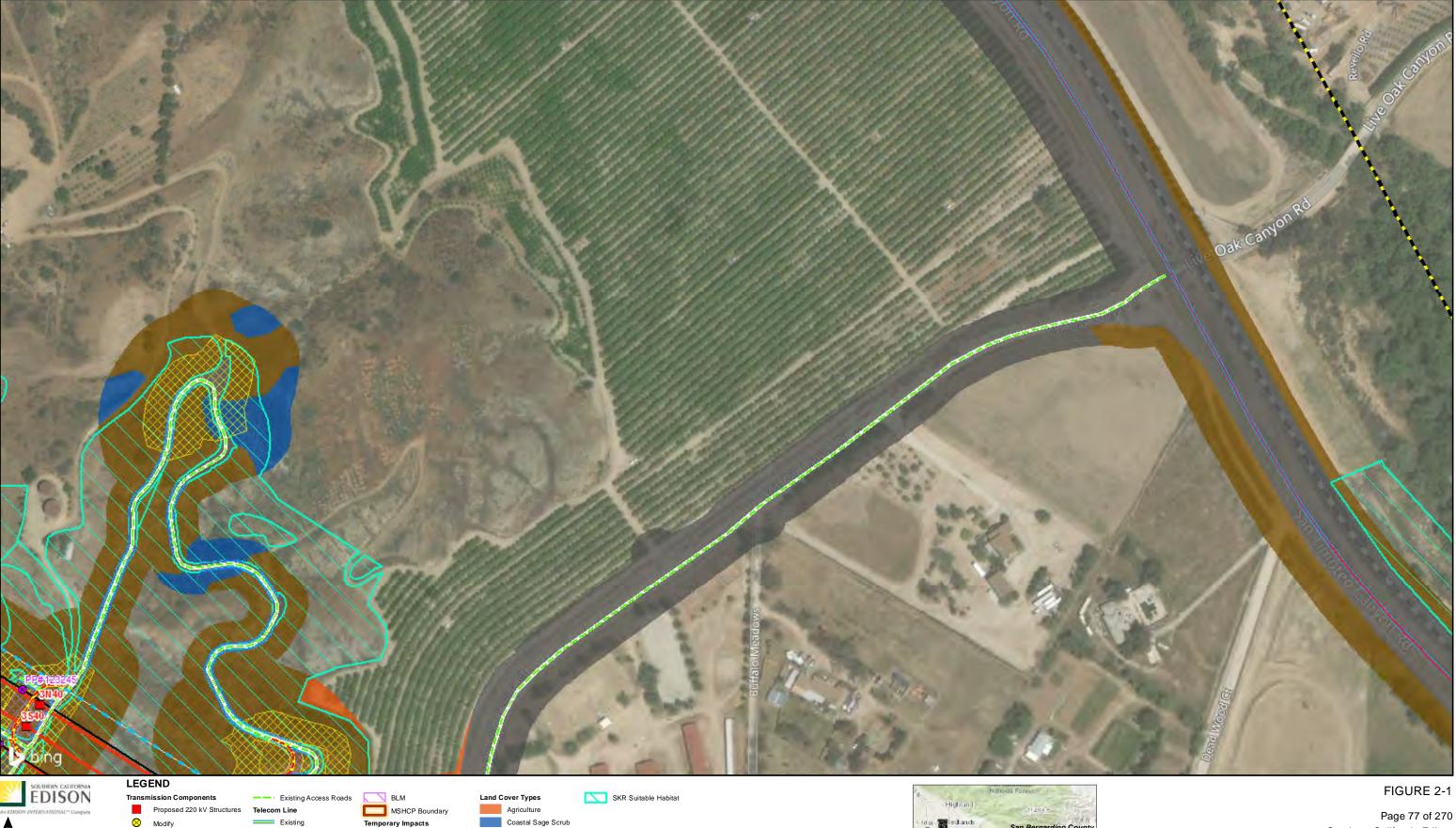
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

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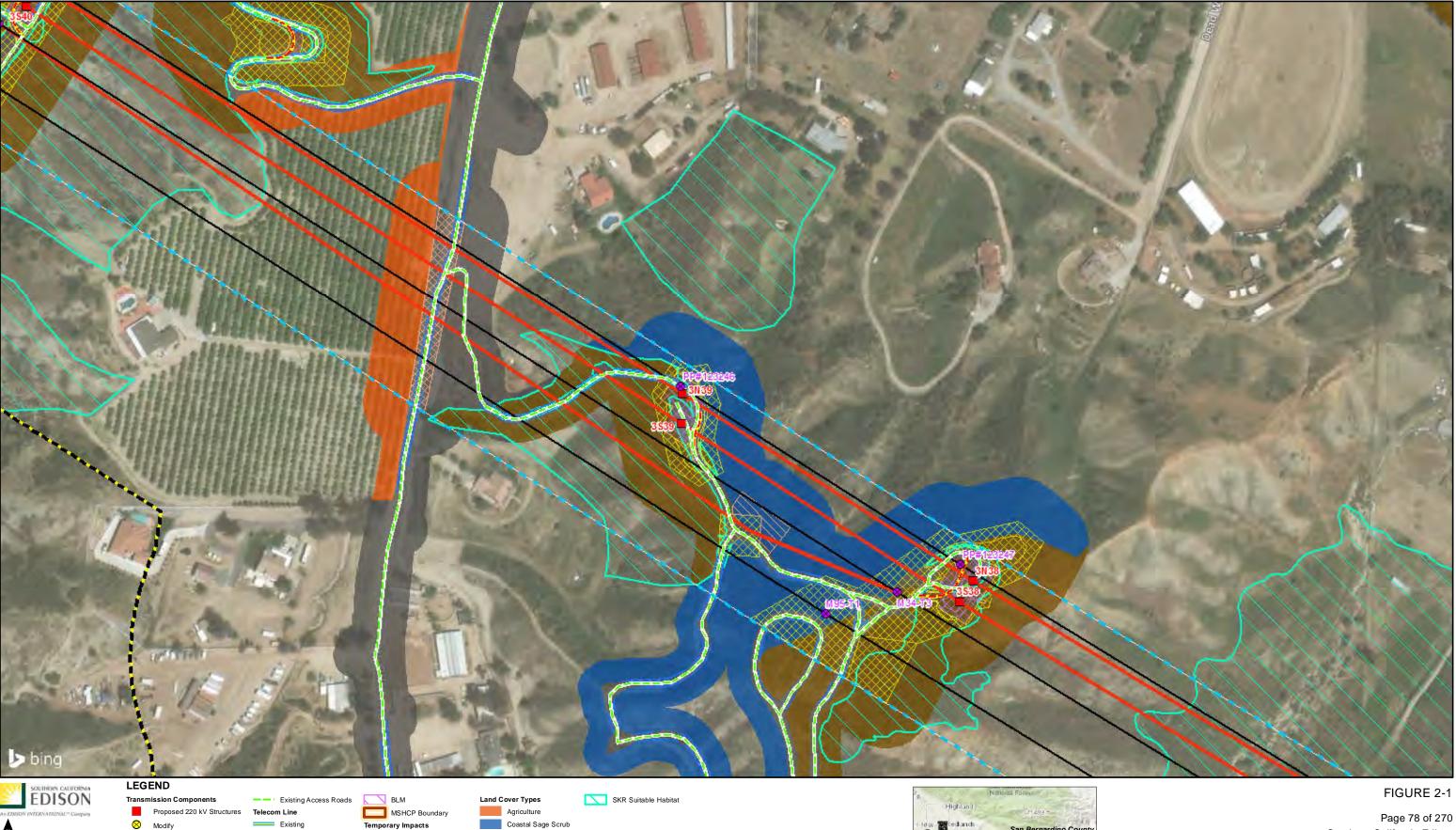
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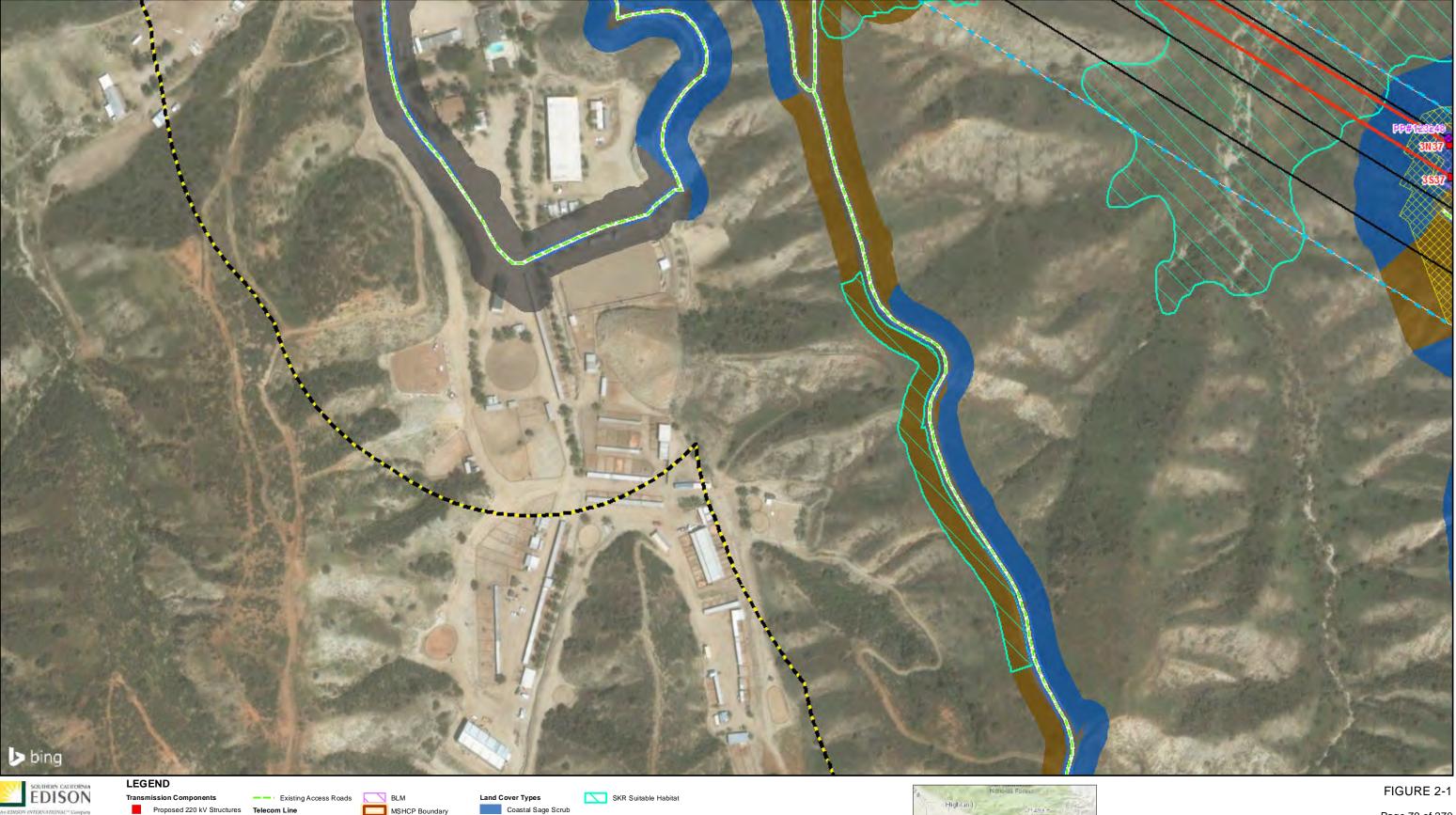
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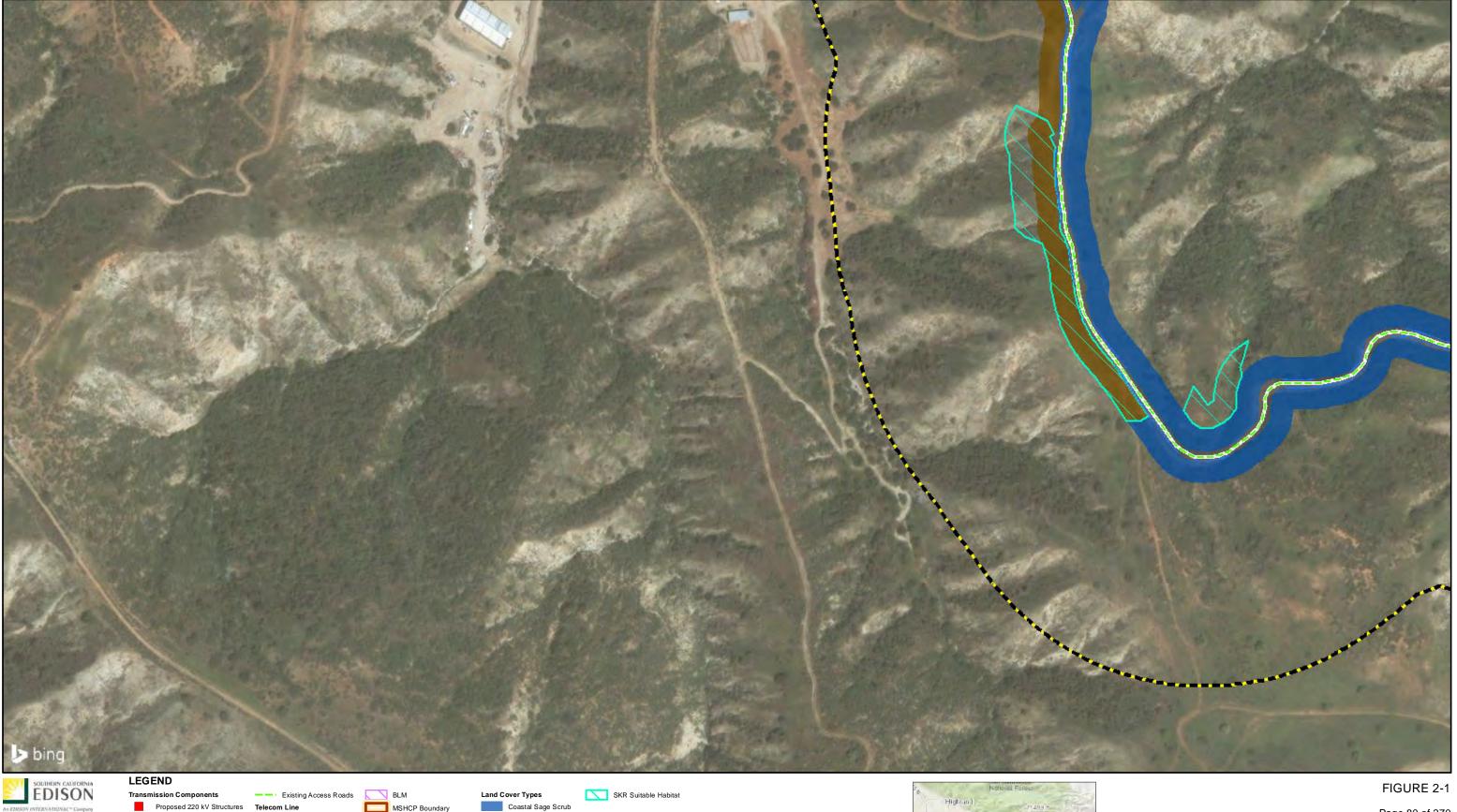
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

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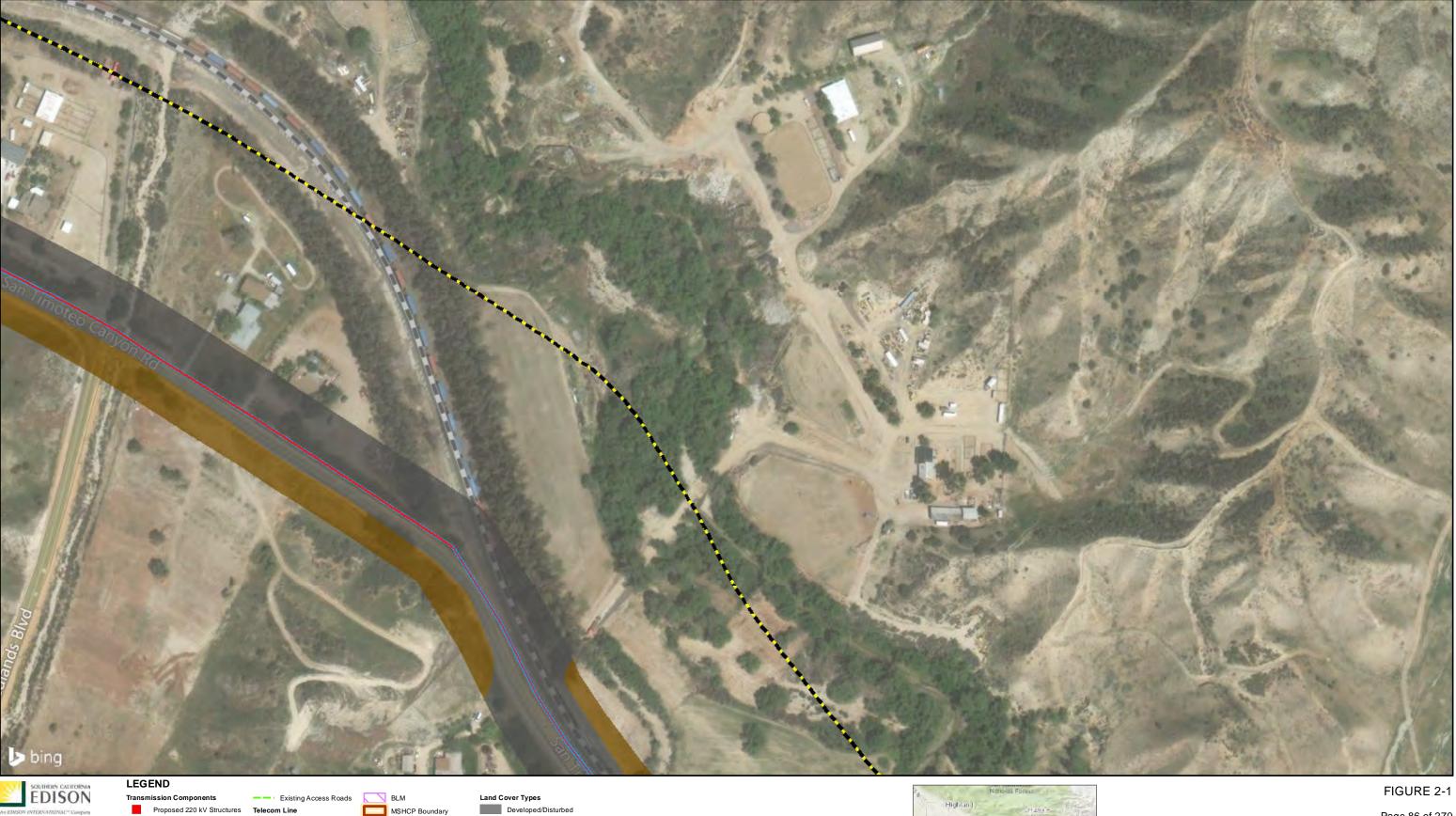
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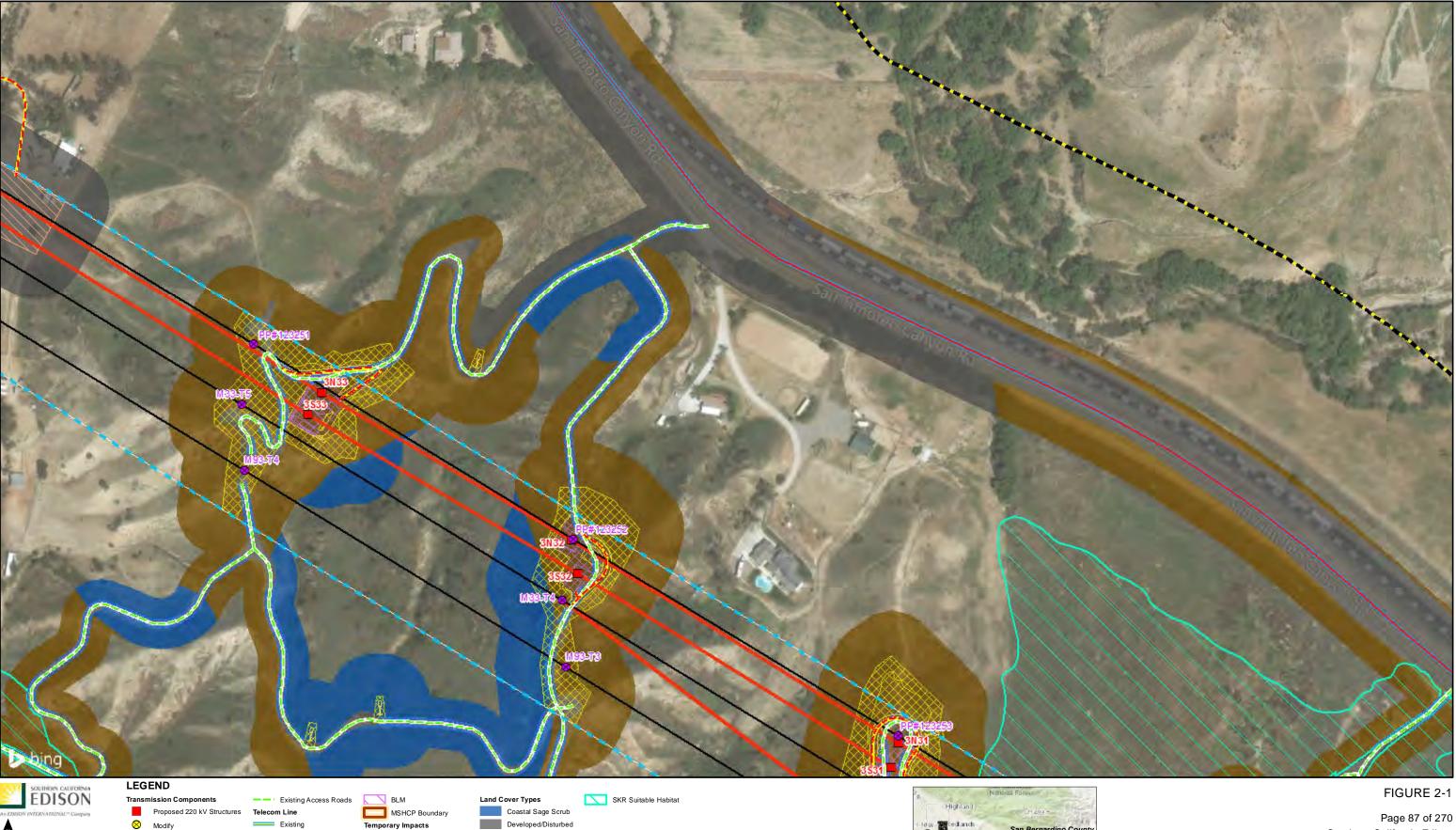
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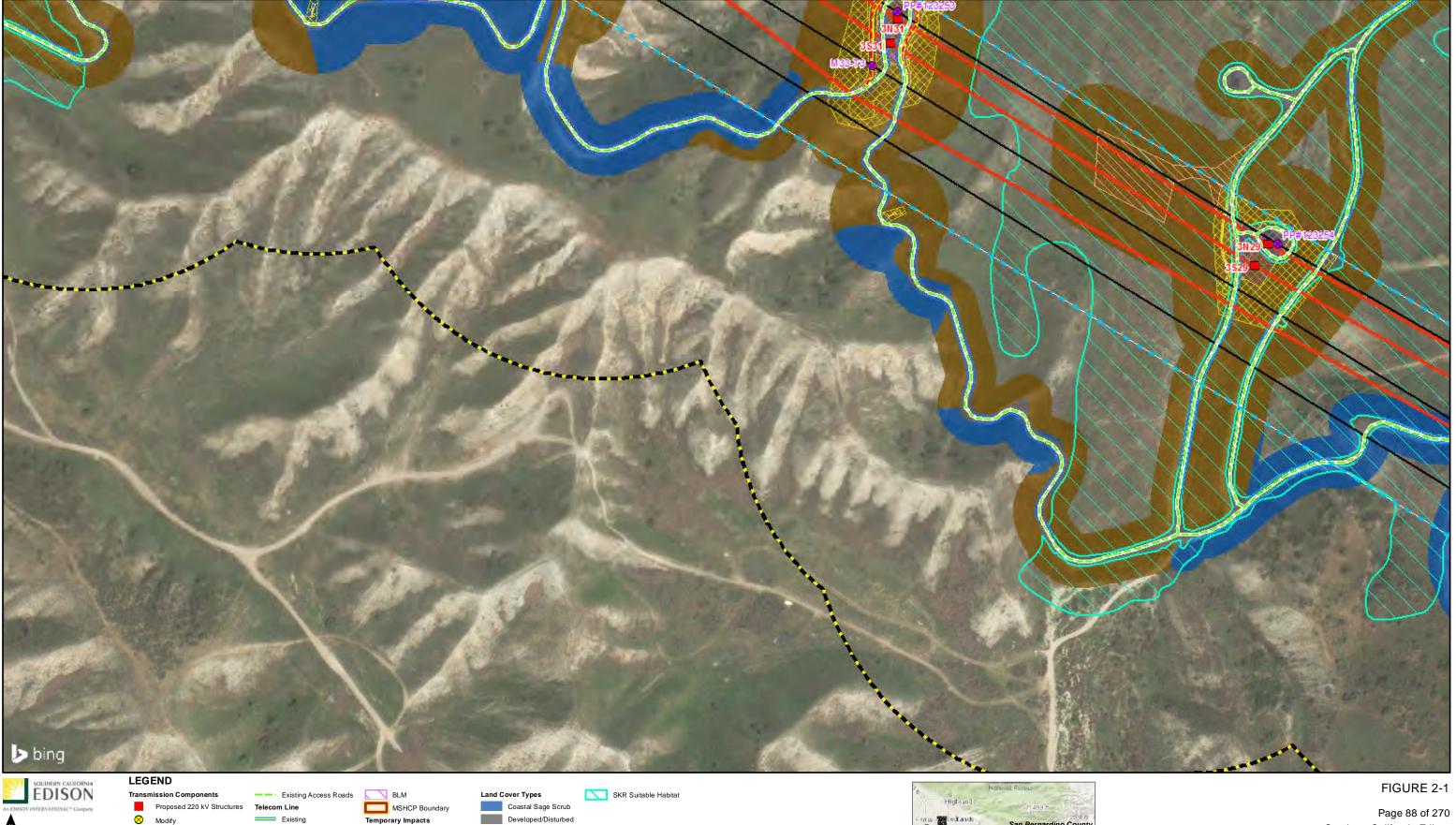
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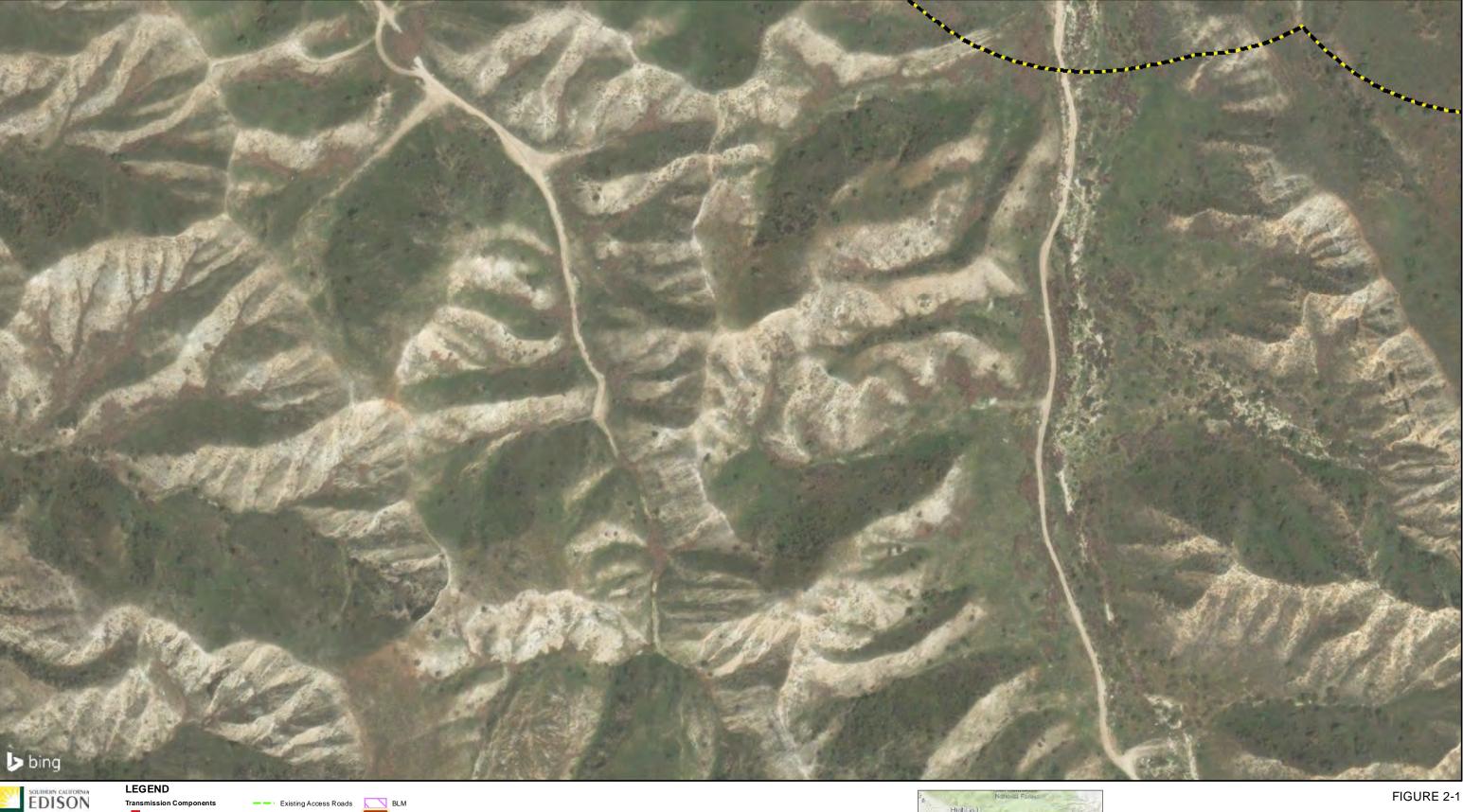
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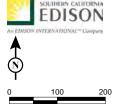
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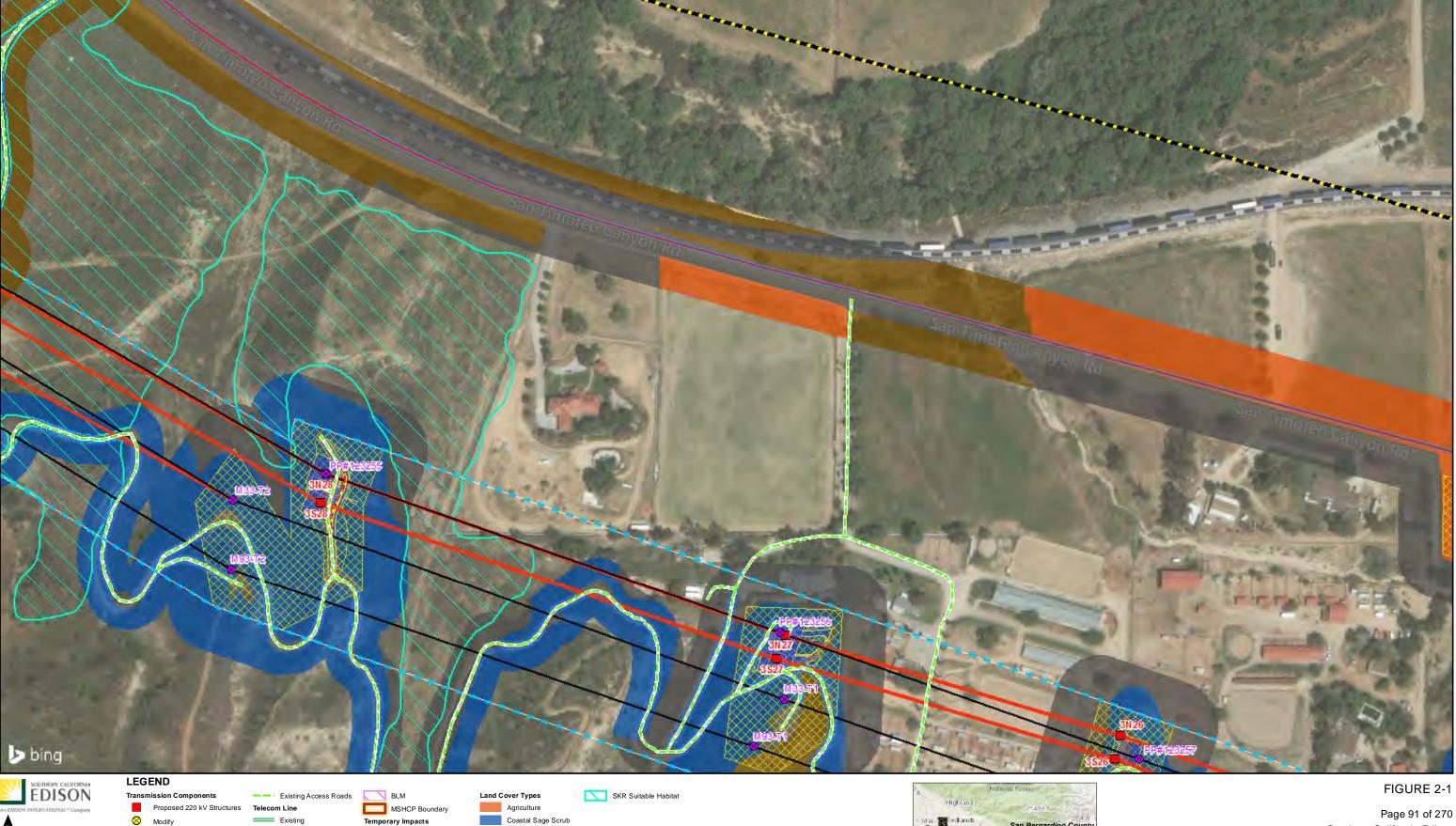
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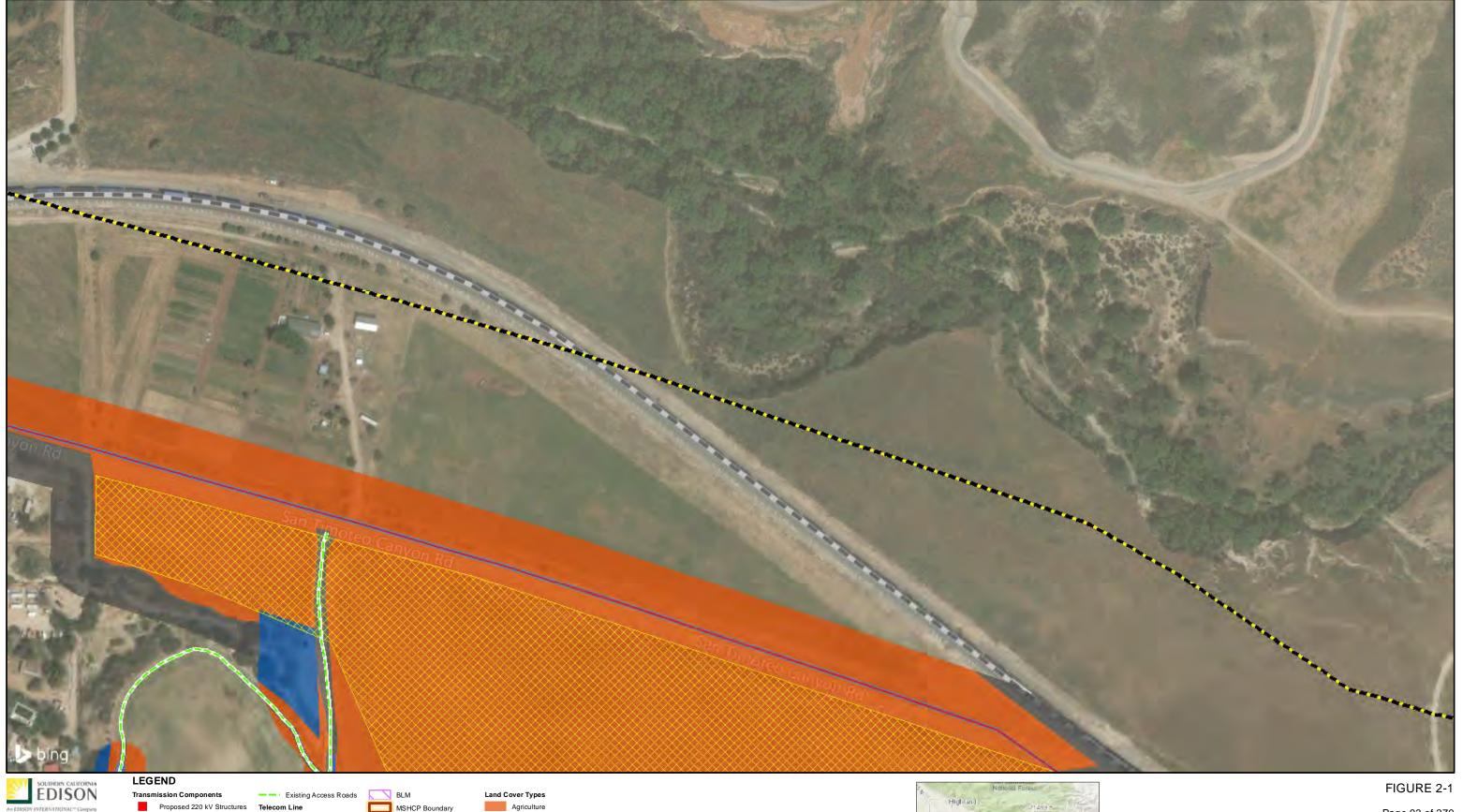
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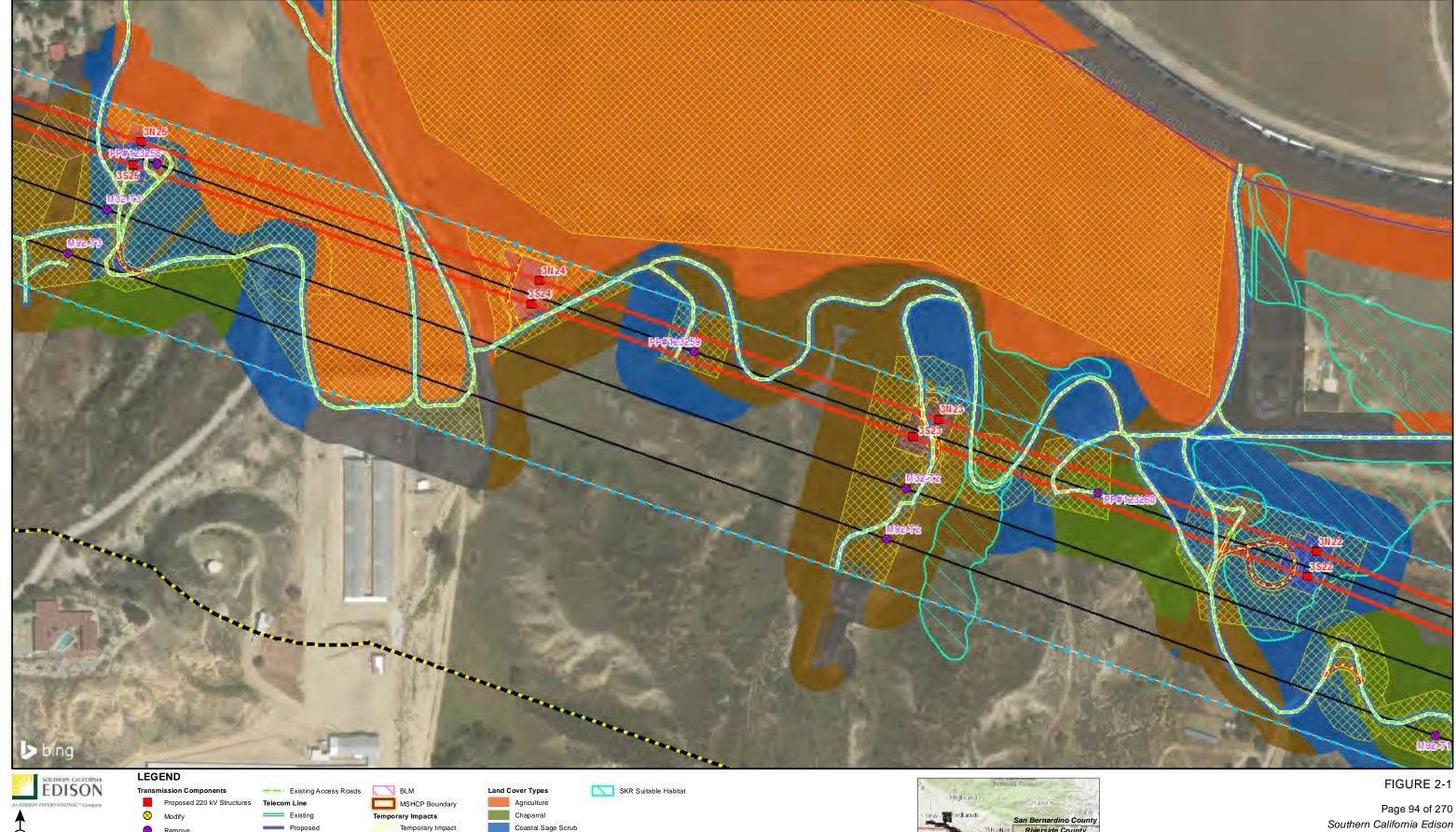
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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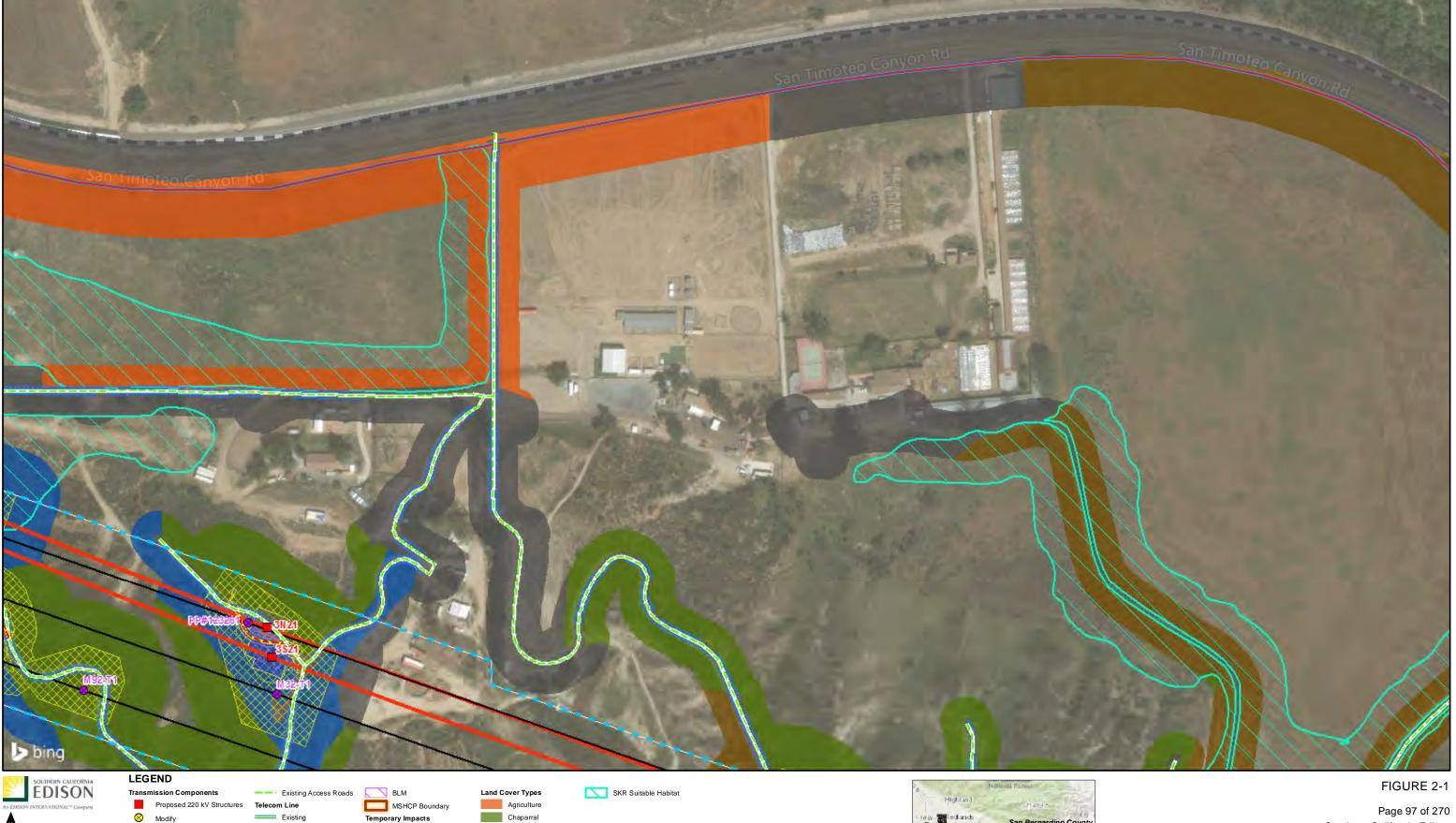
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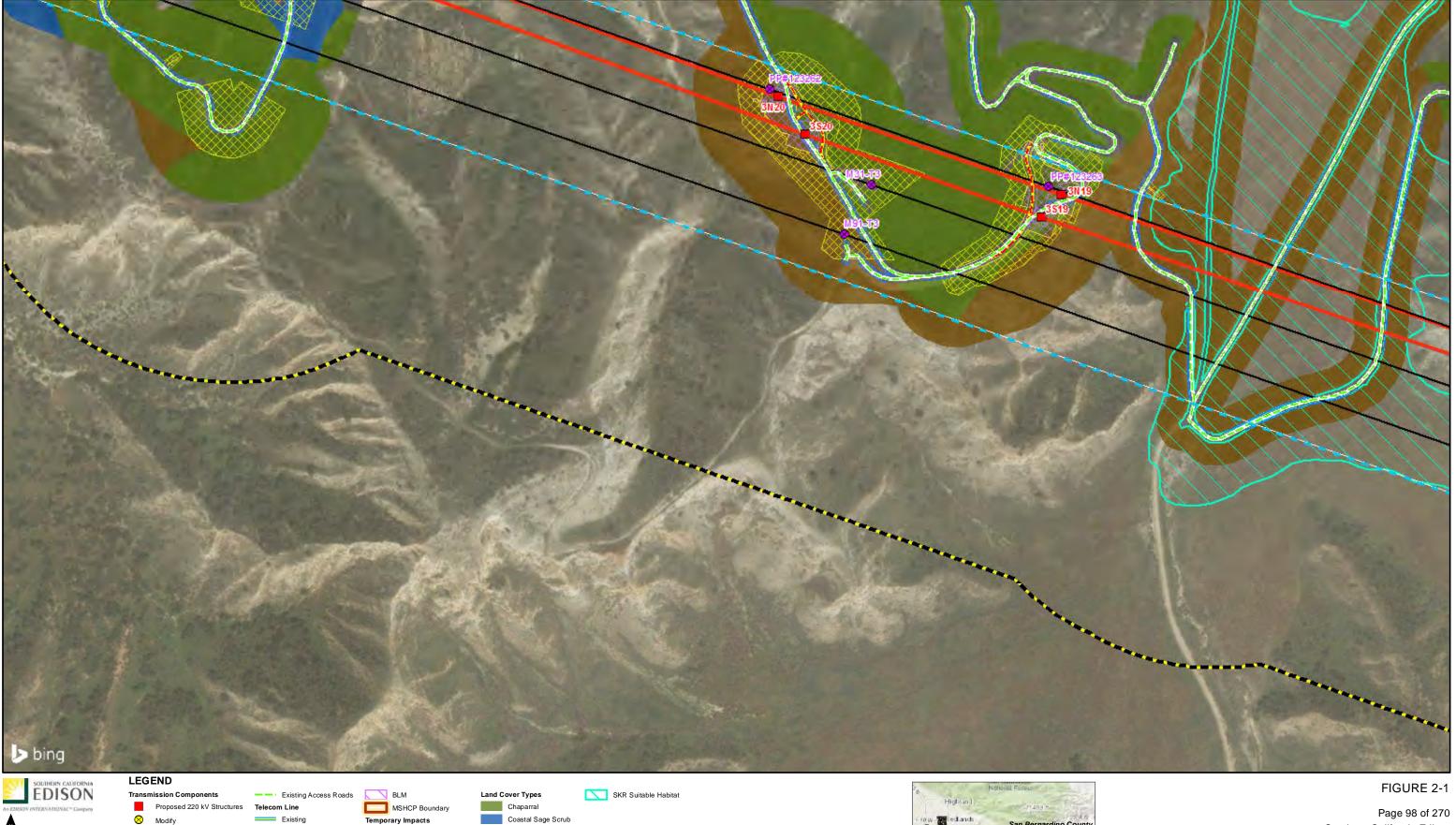
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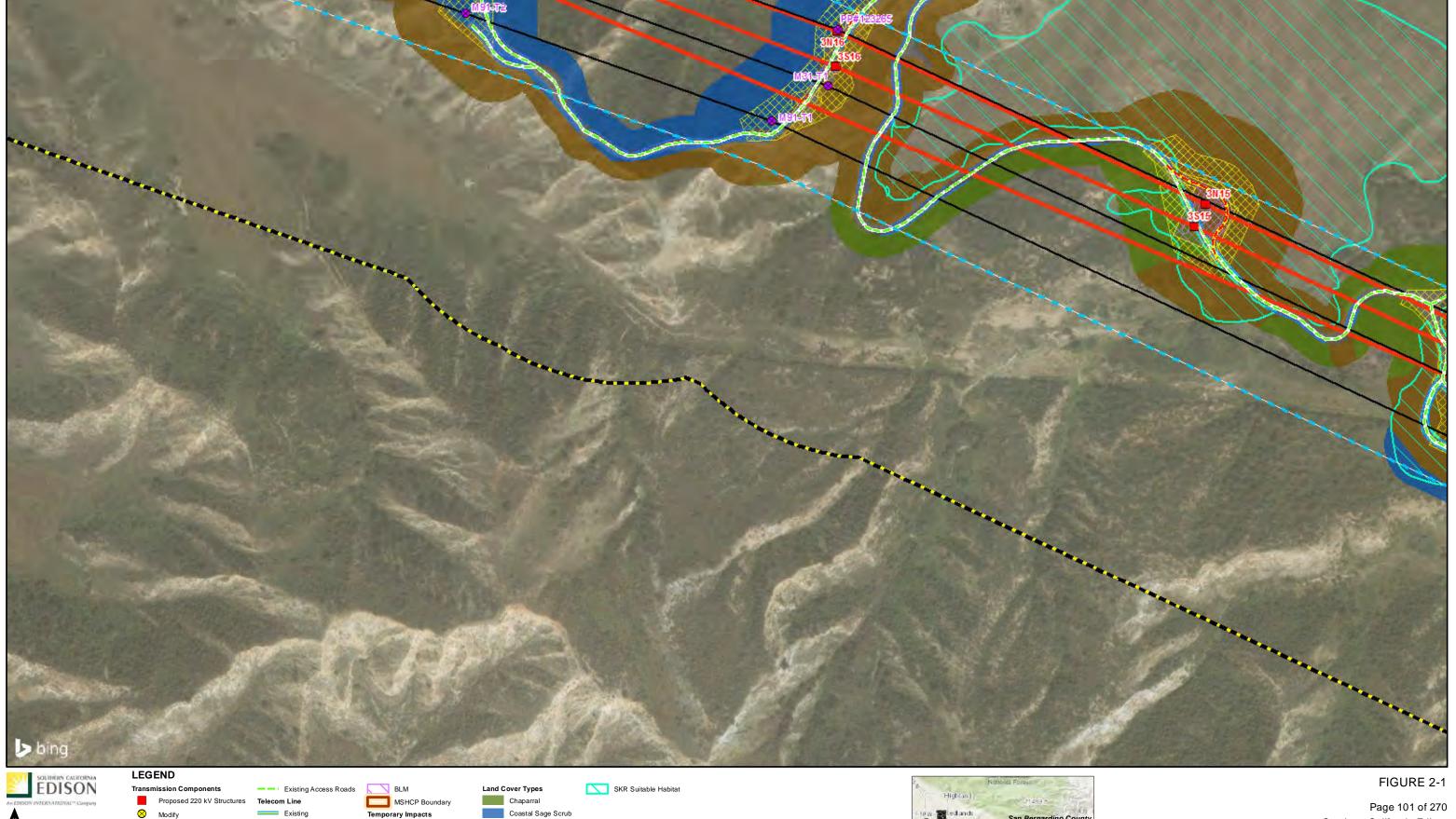
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Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Existing 220kV

Proposed 220kV

Proposed

Existing ROW

Morongo Reservation

Study Area

Land Use

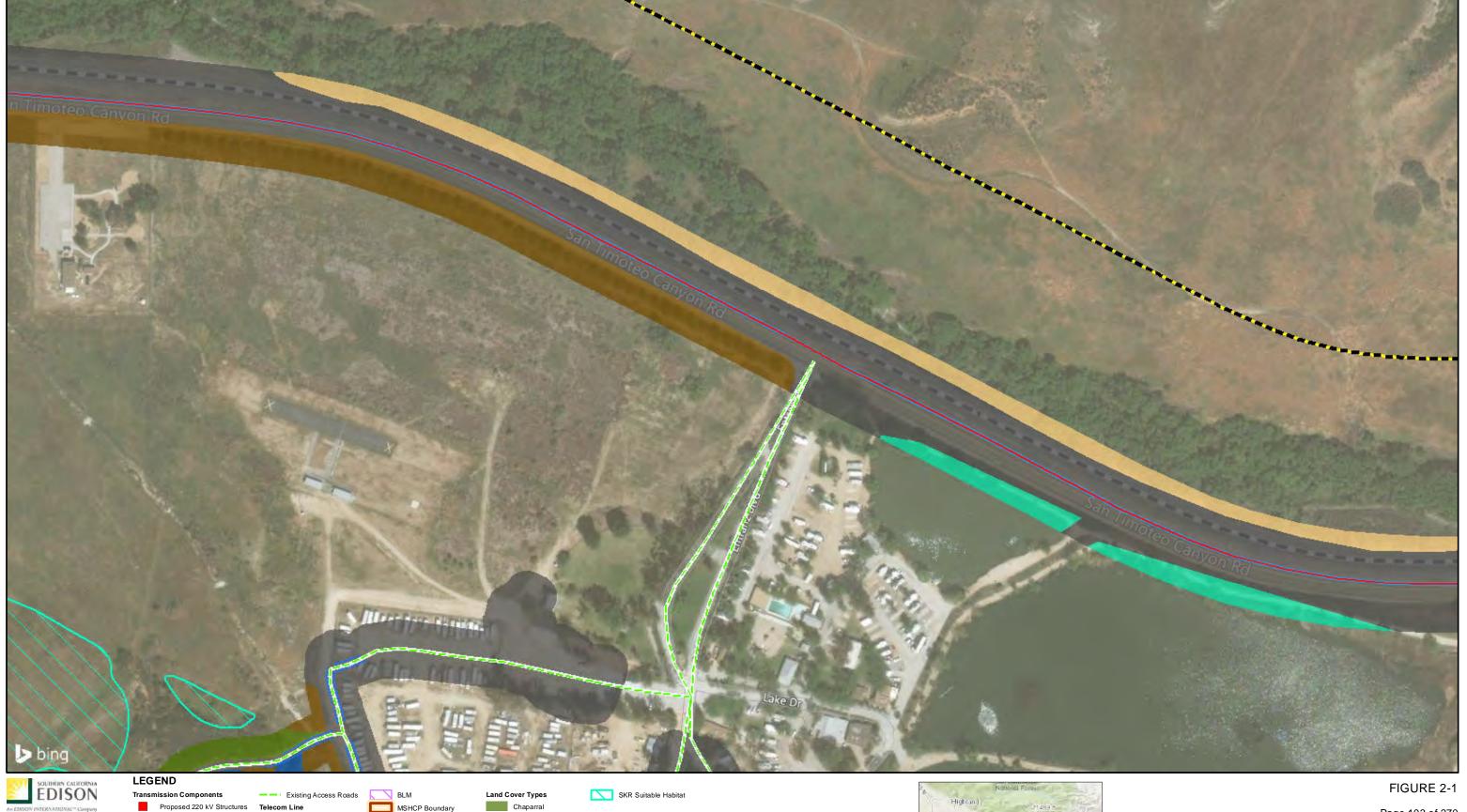
Temporary Impact

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Guard Pole



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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\\galt\\Proj\\SoCalEDISON\\493461\\MapFiles\\Plans\\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Existing

Existing ROW

Proposed

Study Area

Land Use

Temporary Impacts

Permanent Impacts

Temporary Impact

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Guard Pole

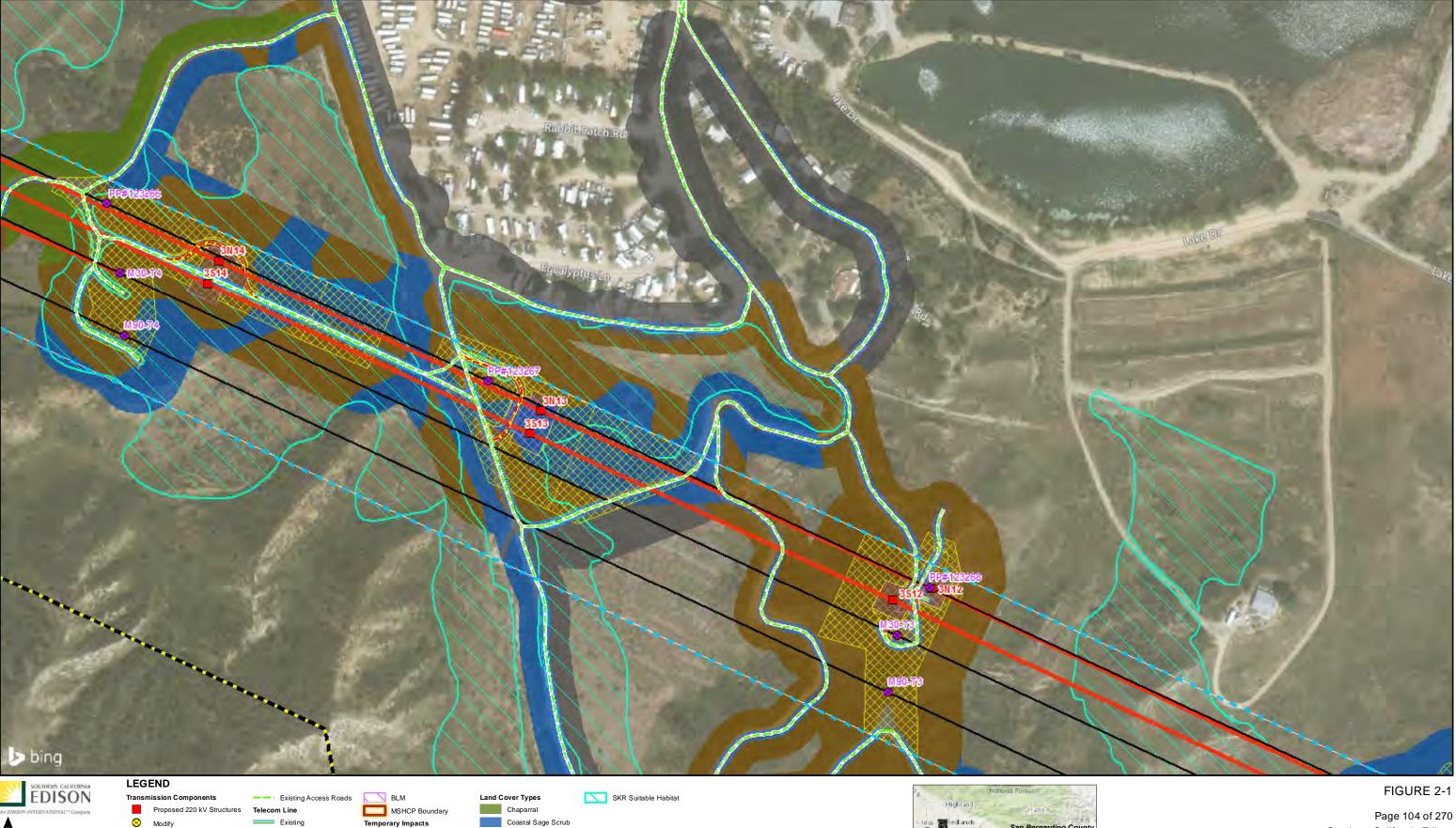
Coastal Sage Scrub

Developed/Disturbed

Grassland/Forbland

Riparian Woodland

Open Water



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Potential Road Widening Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Proposed

Study Area

Existing ROW

Developed/Disturbed

Grassland/Forbland

Temporary Impact

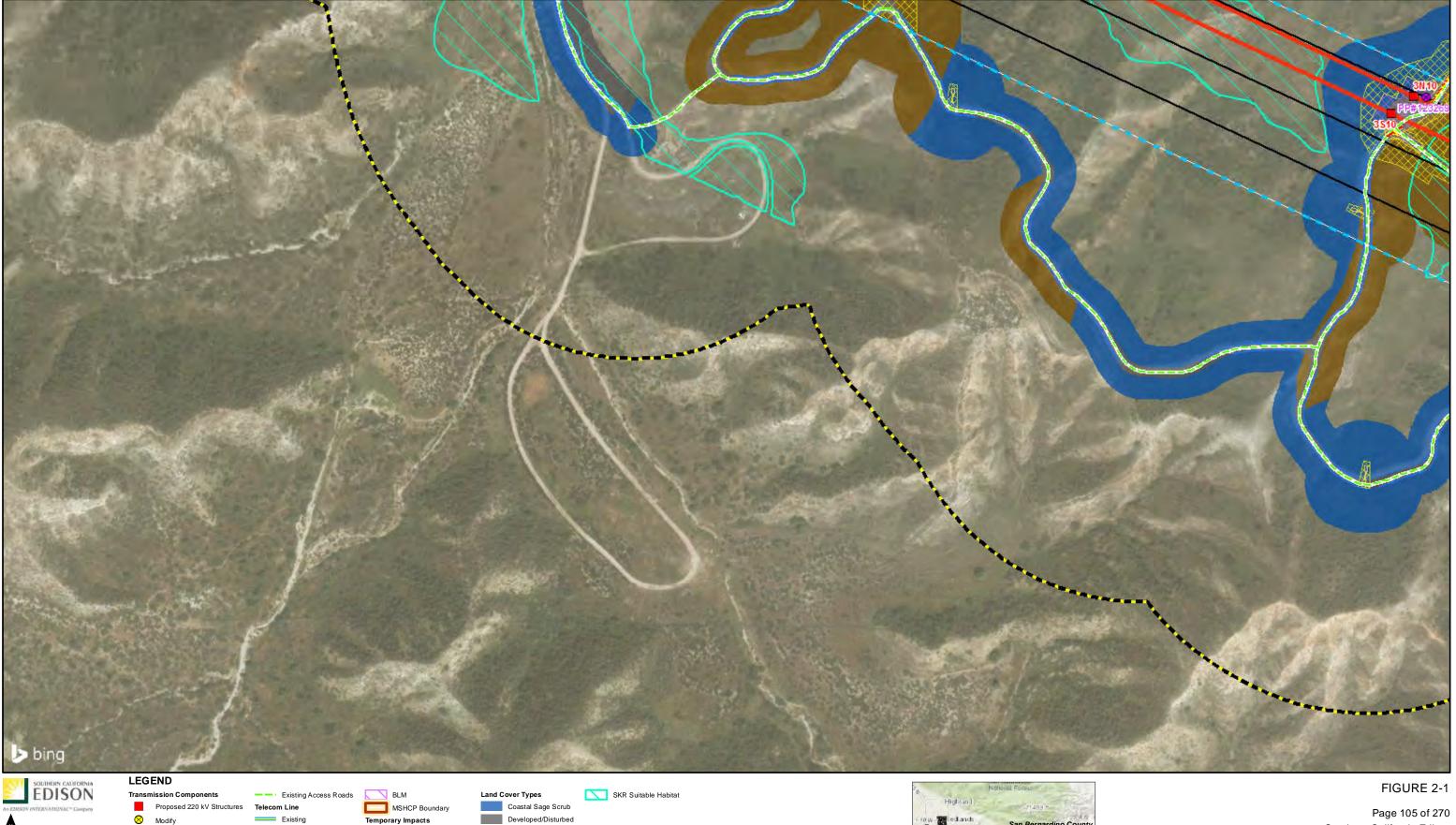
Shoo-fly Work Area

Permanent Impact

Guard Pole

Permanent Impacts

Southern California Edison West of Devers Upgrade Project Project Detail and Estimated Maximum Potential Impacts
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Grassland/Forbland

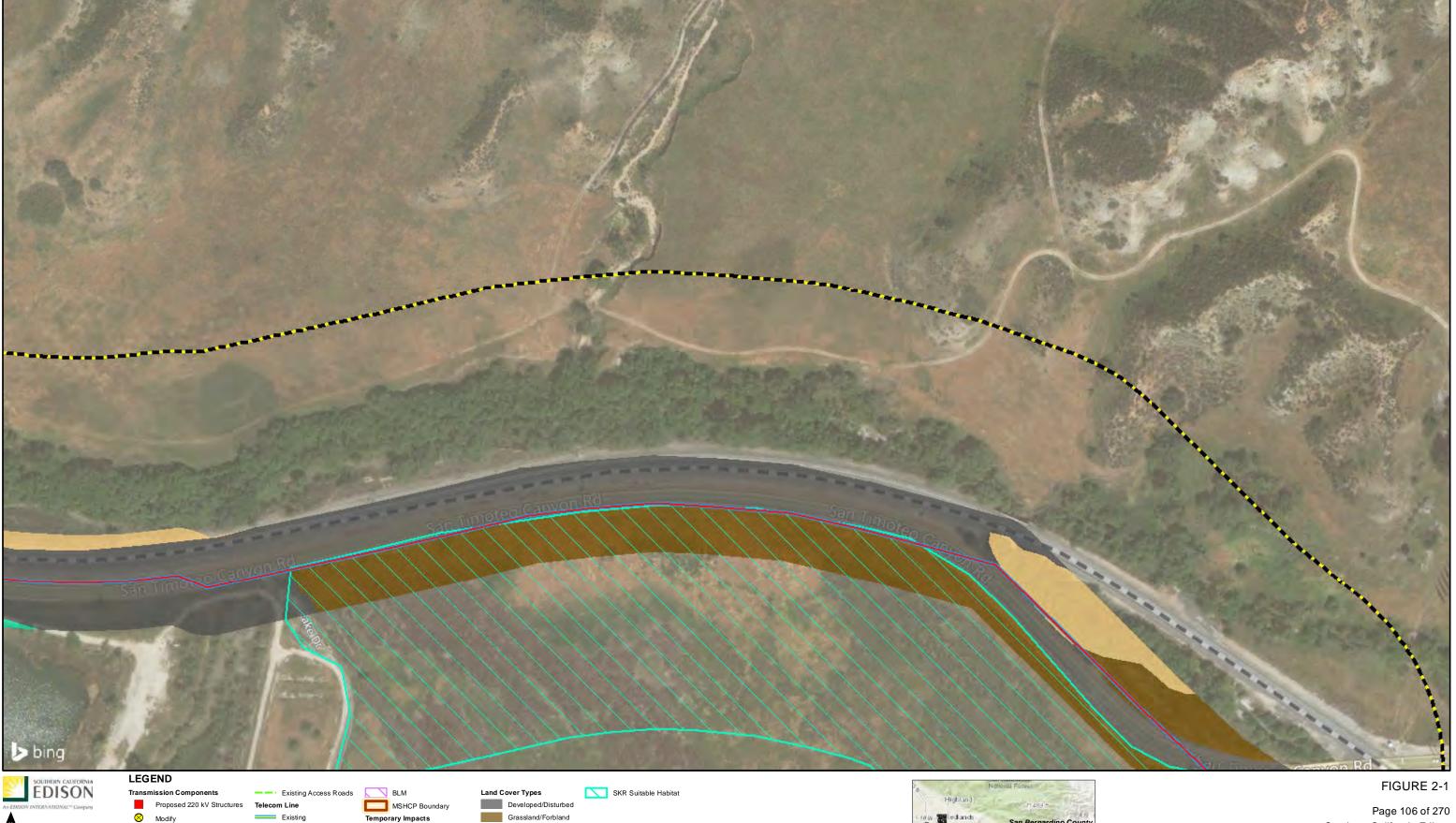
Temporary Impact

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Open Water

Riparian Woodland

Temporary Impact

Shoo-fly Work Area

Permanent Impact

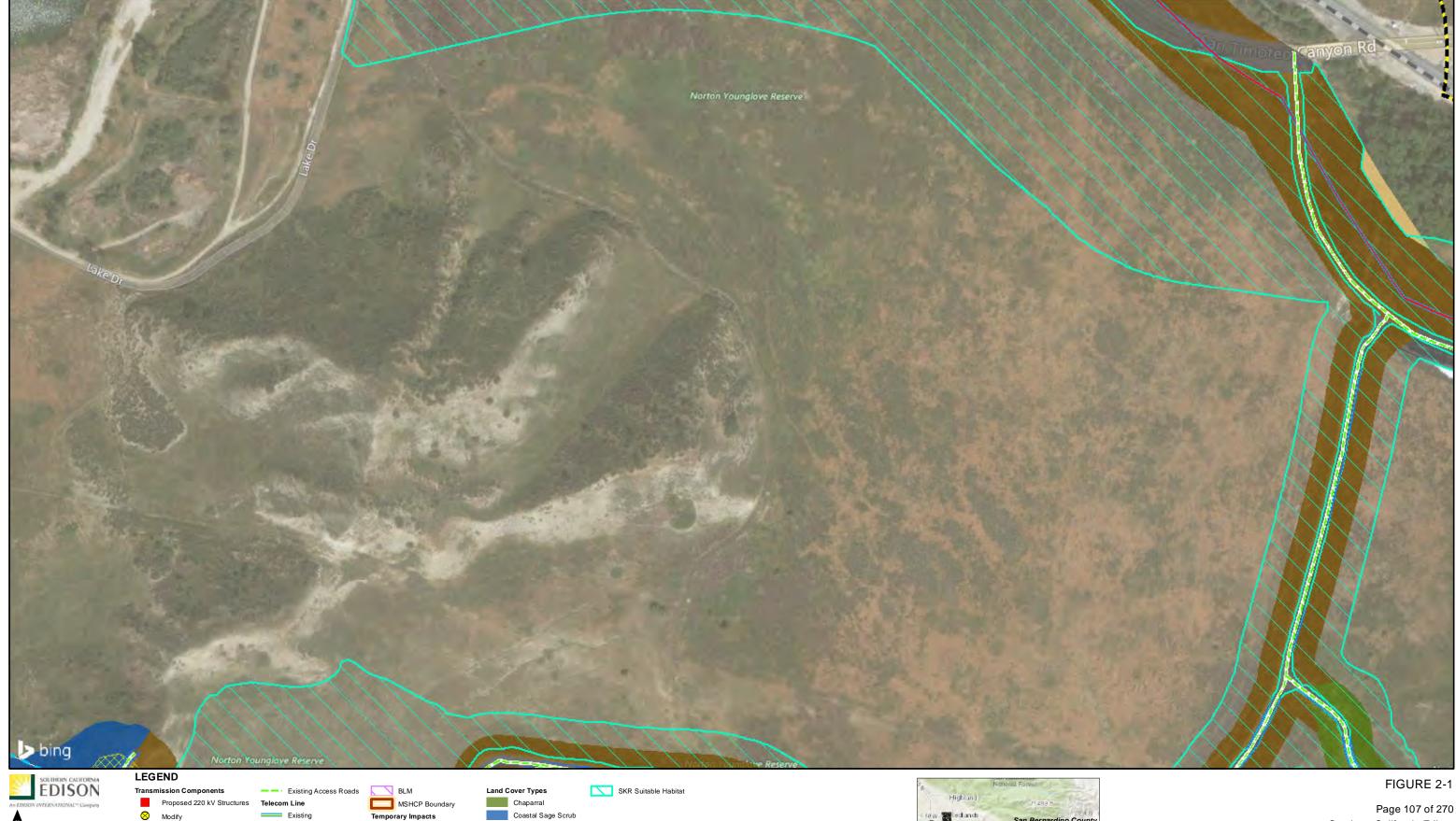
Potential Road Widening

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Maximum Potential Impacts



Note: Project features shown are based on

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Riparian Woodland

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Riverside County

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Project Detail and Estimated
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Revegetation Plan

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Proposed 220kV

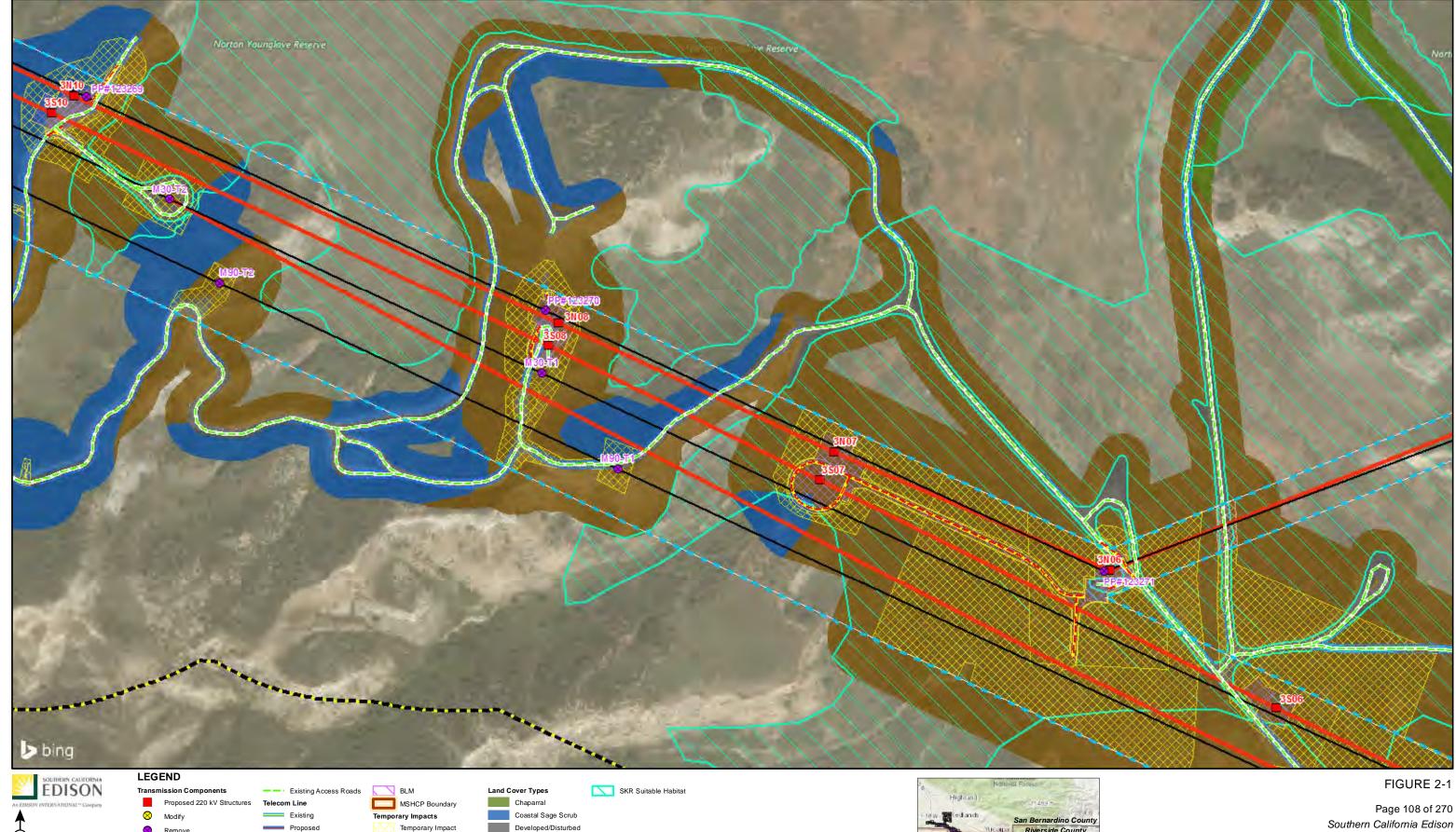
Proposed

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Land Use



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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

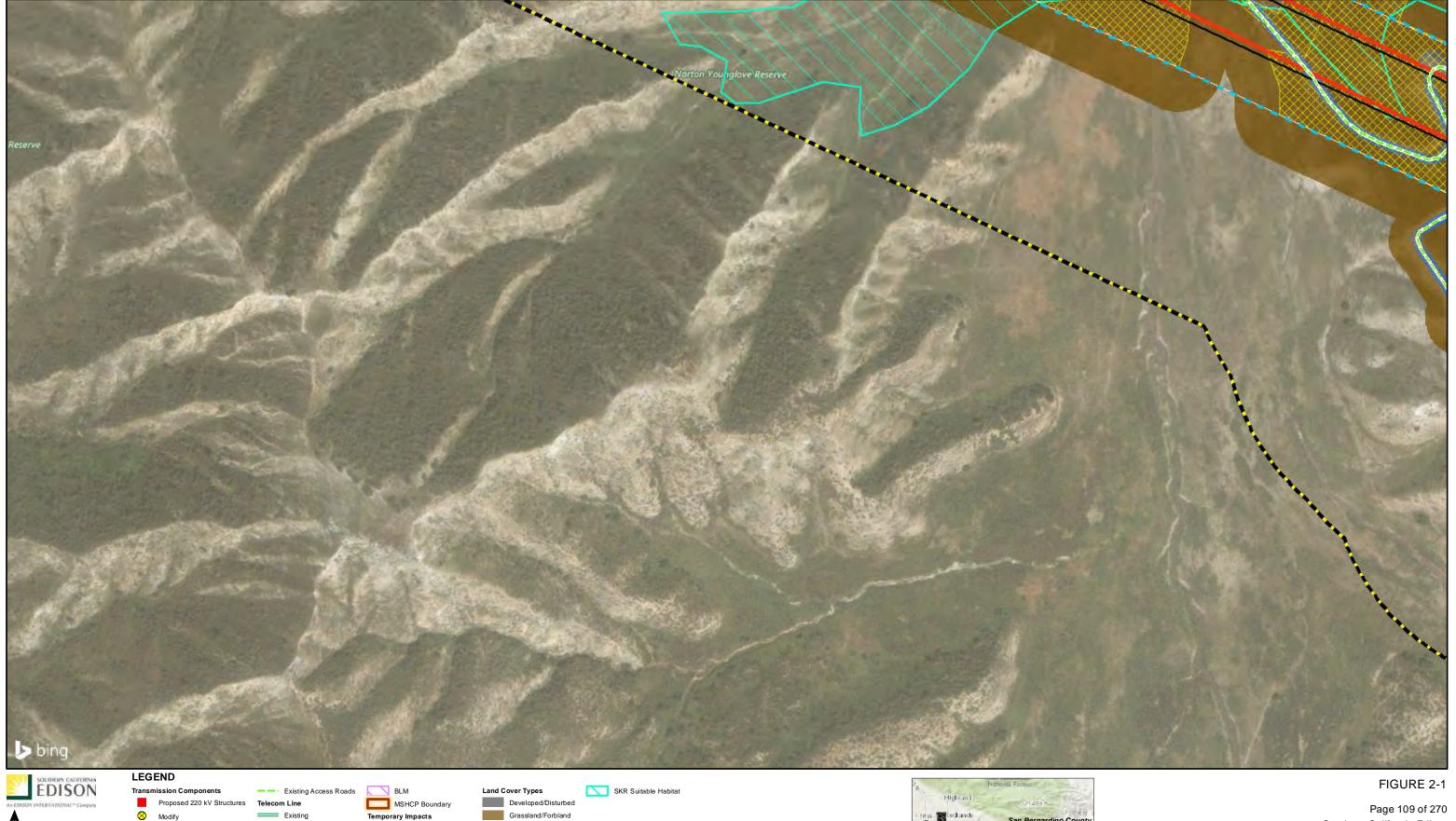
Study Area

Grassland/Forbland

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Proposed 220kV

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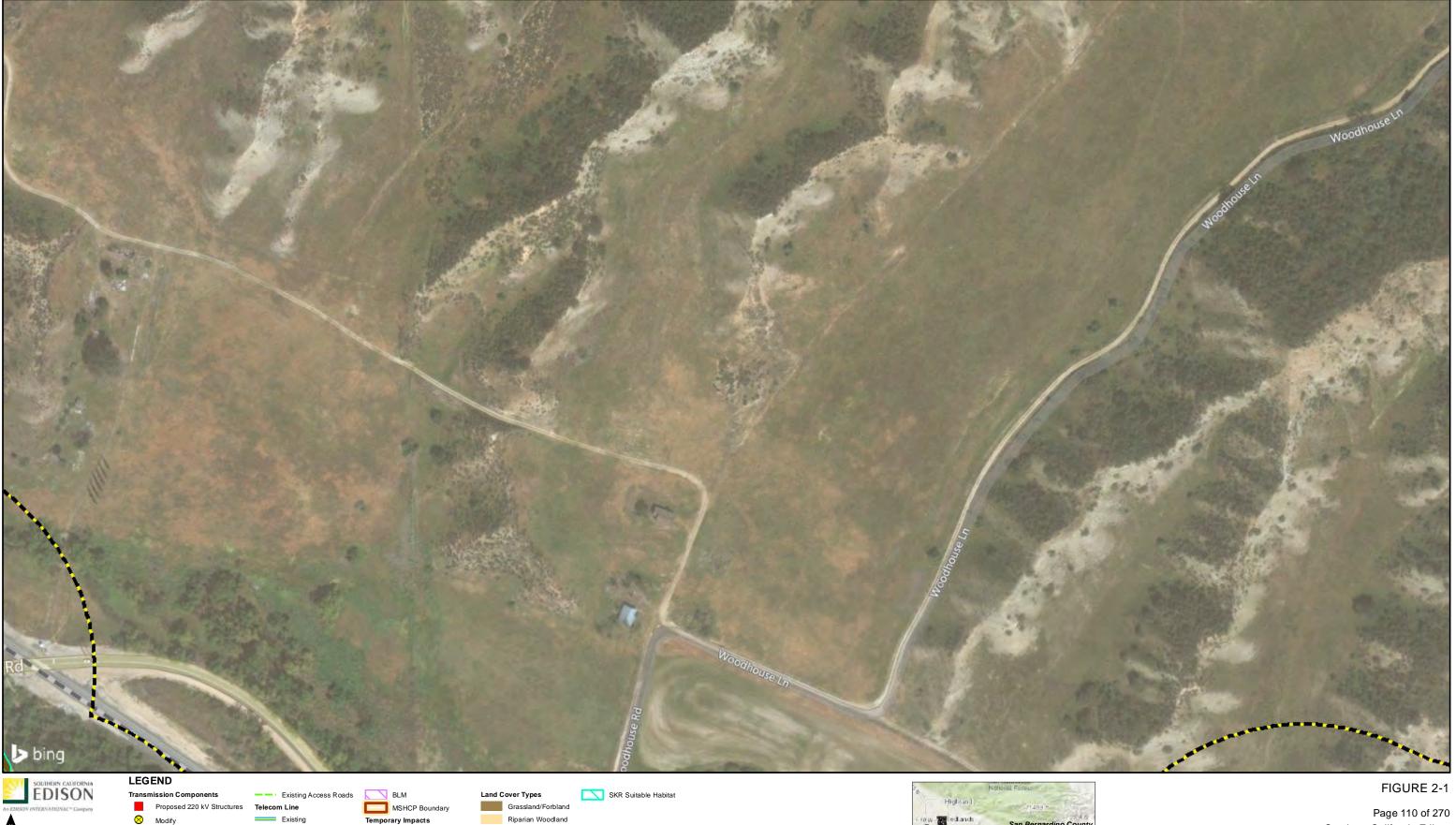
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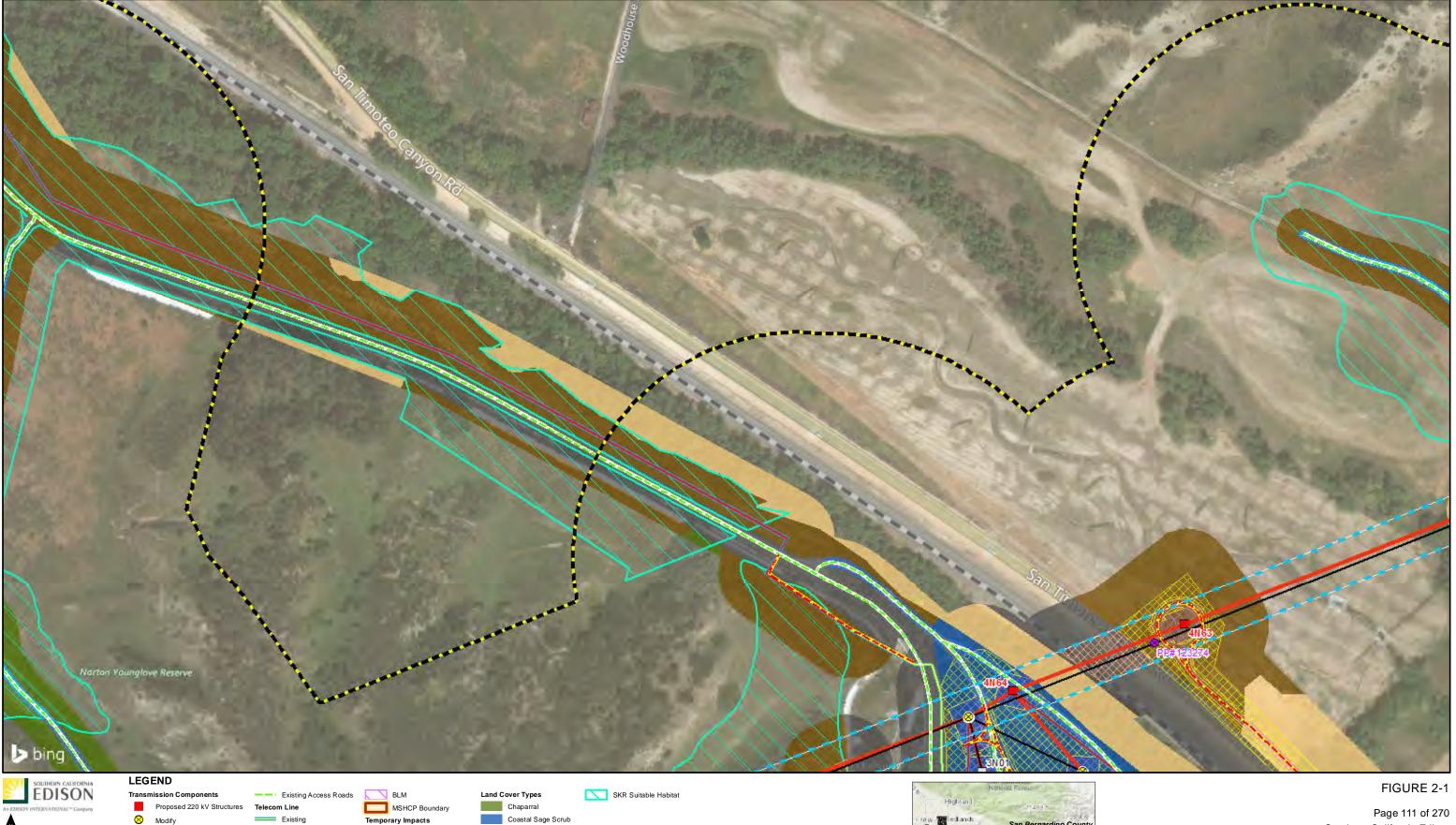
Temporary Impact

Shoo-fly Work Area

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Guard Pole



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

San Bernardino County
Riverside County
Notice San Bernardino County
Notice

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Grassland/Forbland

Riparian Woodland

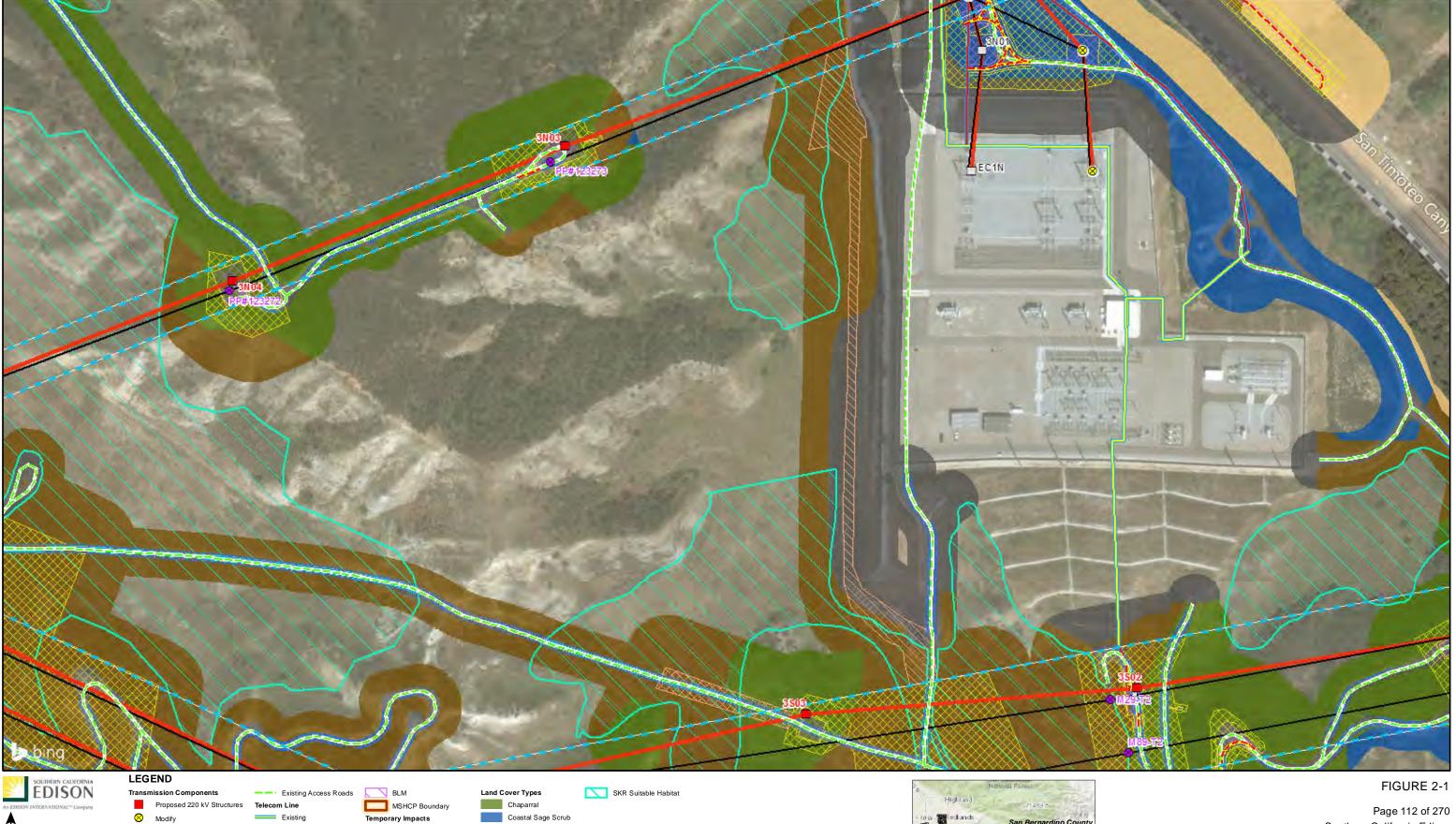
Temporary Impact

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Permanent Impact

Potential Road Widening

Guard Pole



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening
DETAILS_2018-02-14.mxd (2/14/2018)

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Grassland/Forbland

Riparian Woodland

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Highland

San Bernardino County

Riverside County

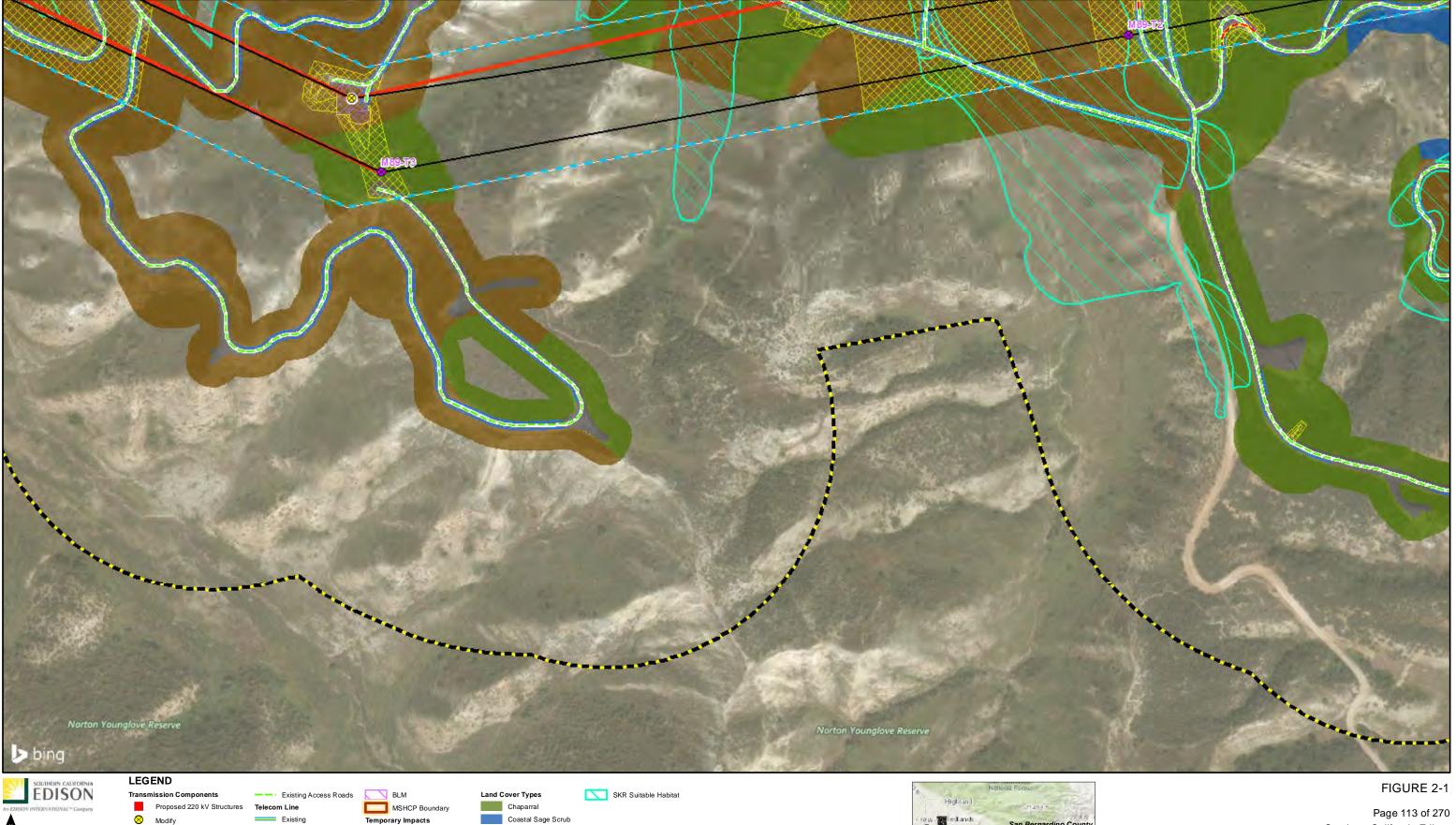
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

Highland

Highland

San Bernardino County

Riverside

Sometime County

Riverside

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Grassland/Forbland

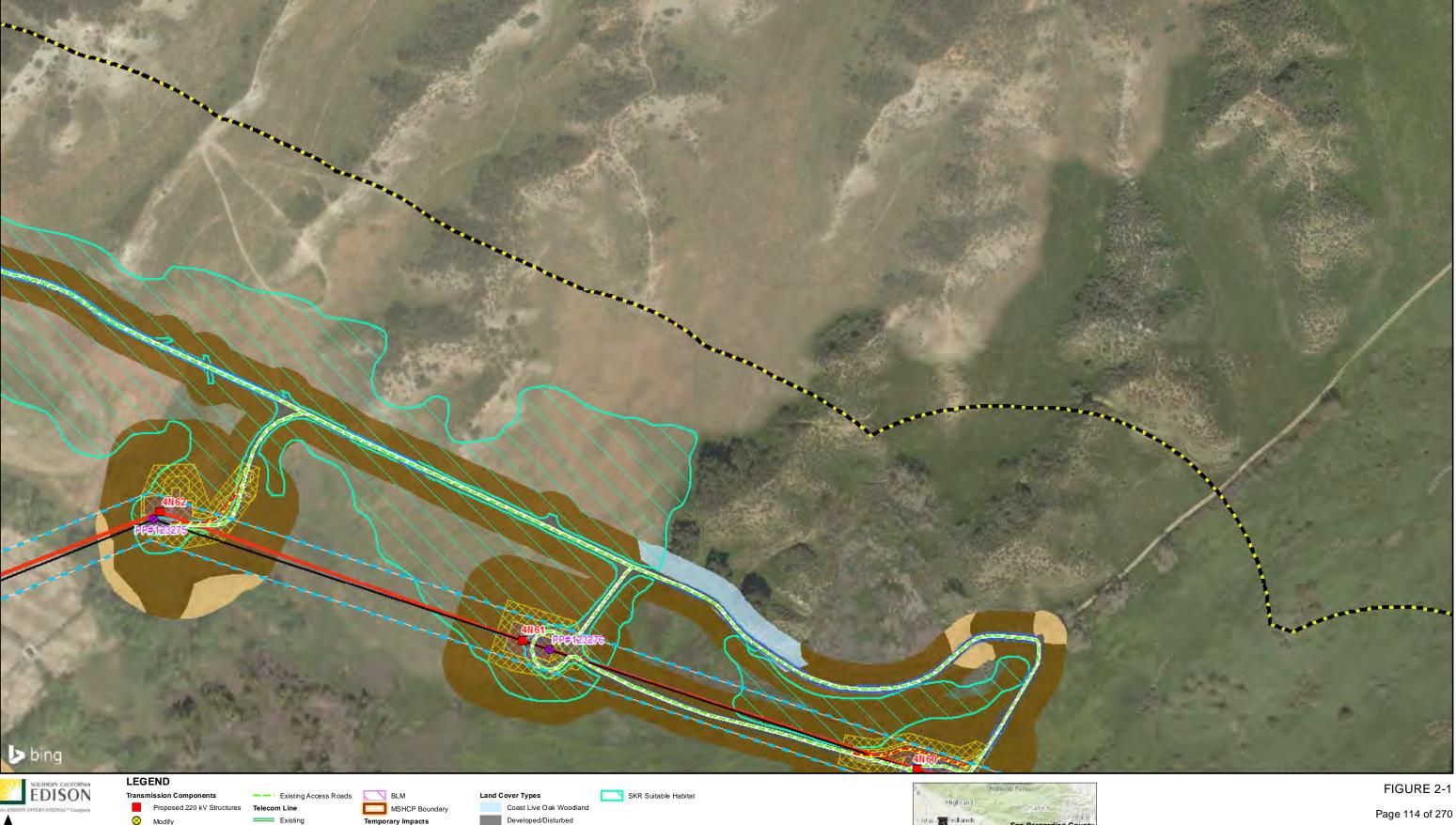
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Existing

Existing ROW

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Temporary Impact

Shoo-fly Work Area

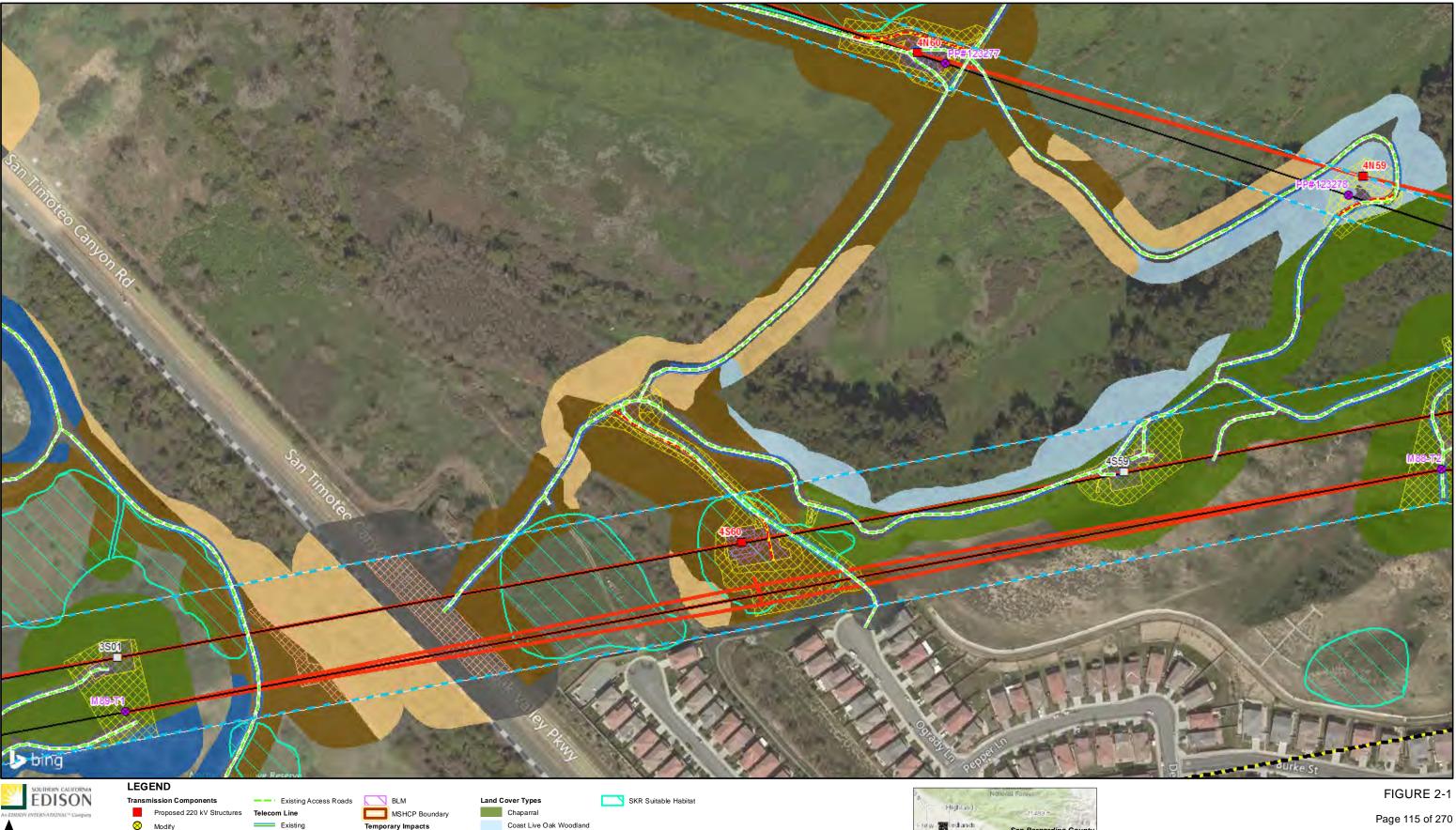
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Grassland/Forbland

Riparian Woodland



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Coastal Sage Scrub

Riparian Woodland

Developed/Disturbed

Grassland/Forbland

Temporary Impact

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Guard Pole

Permanent Impacts

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

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Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Study Area

Permanent Impacts

Permanent Impact

Maximum Potential Impacts
Habitat Restoration and
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Coastal Sage Scrub

Developed/Disturbed

Grassland/Forbland

Temporary Impact

Shoo-fly Work Area

Permanent Impact

Guard Pole

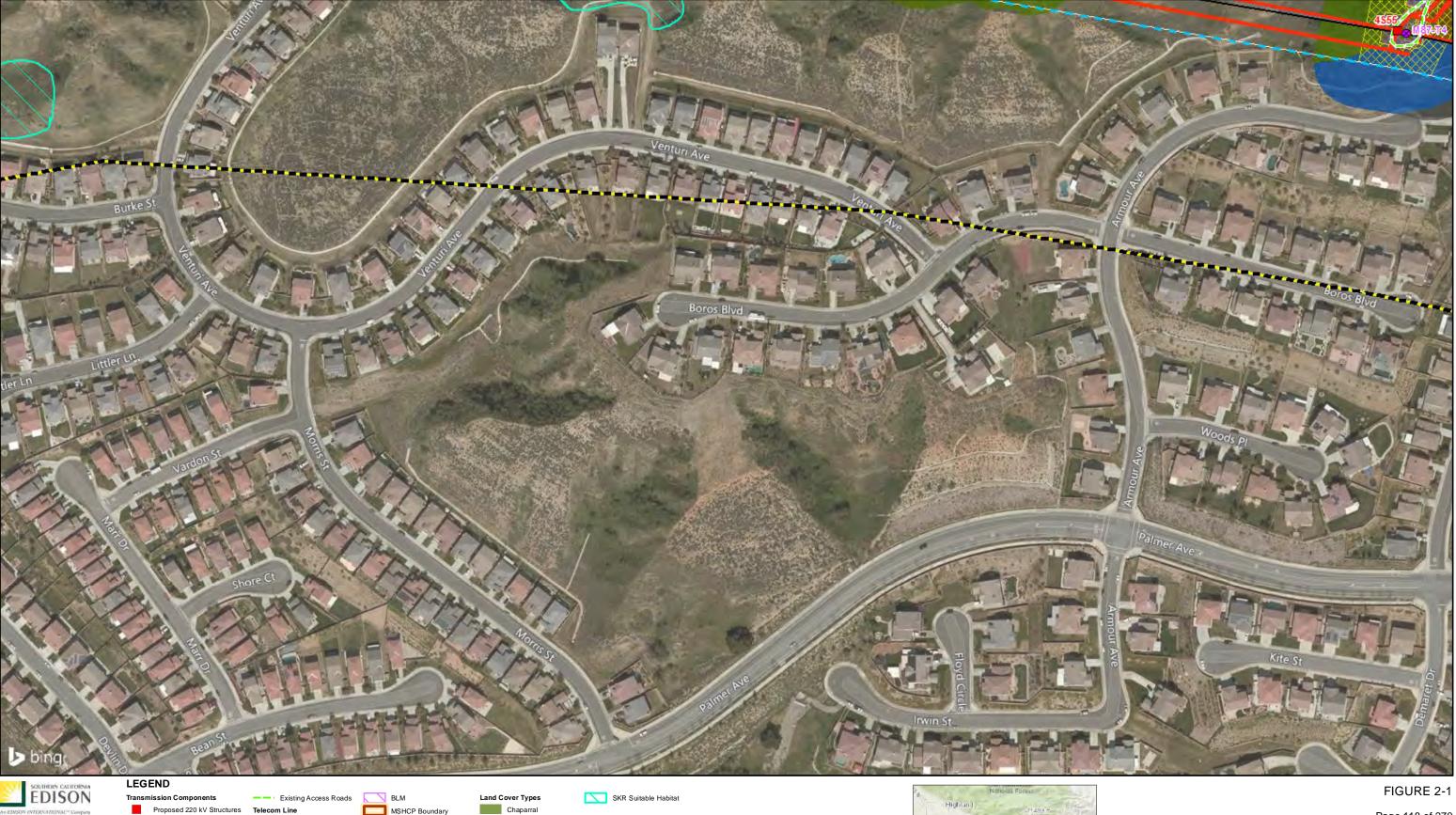
Permanent Impacts

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Existing ROW

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Coastal Sage Scrub

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

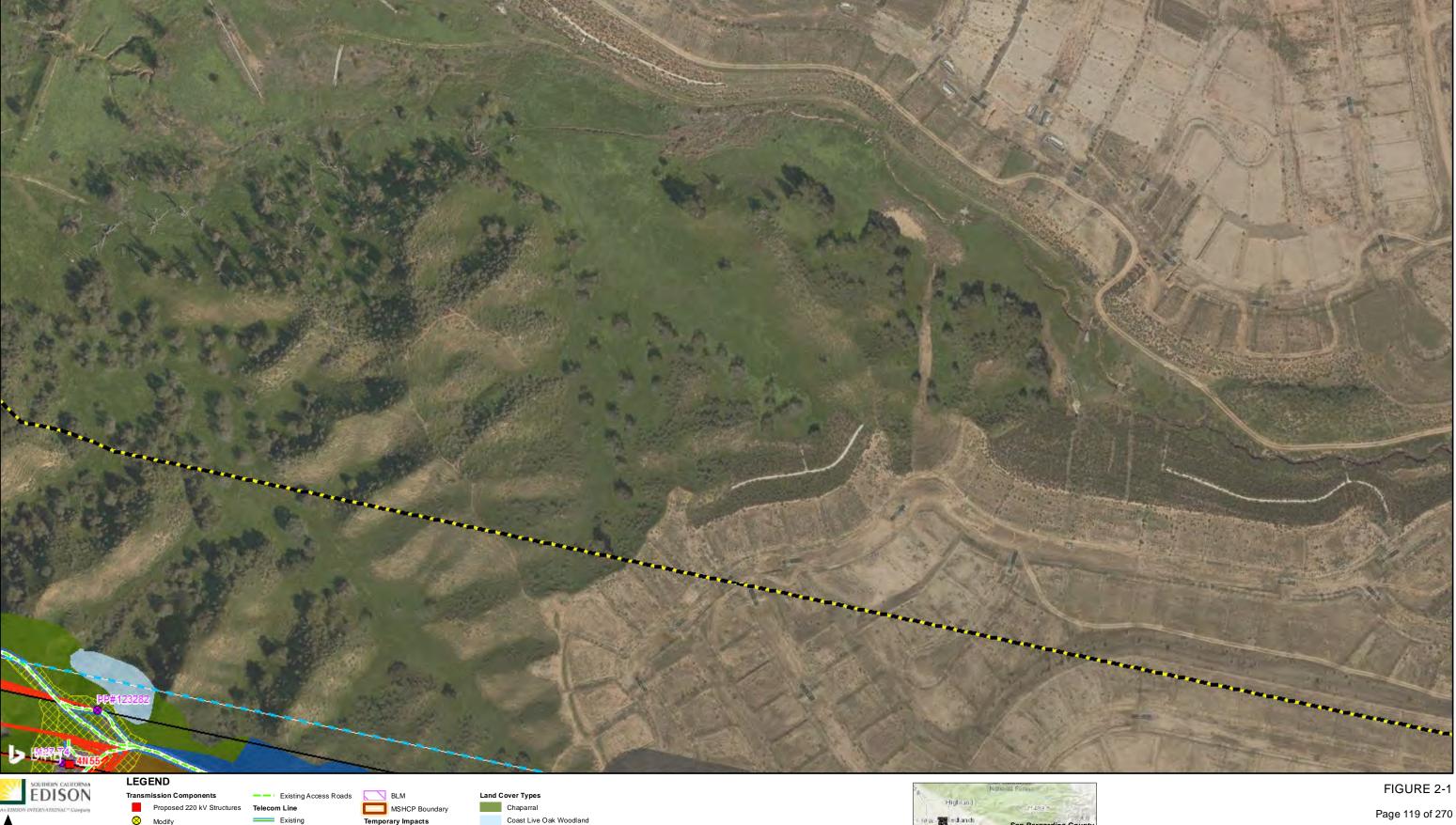
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Temporary Impacts

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Coastal Sage Scrub

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Coast Live Oak Woodland

Coastal Sage Scrub

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Grassland/Forbland

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Potential Road Widening

Guard Pole

Permanent Impacts

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Existing ROW

Study Area

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Riverside County
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Developed/Disturbed

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Developed/Disturbed

Grassland/Forbland

Riparian Woodland

Temporary Impact

Shoo-fly Work Area

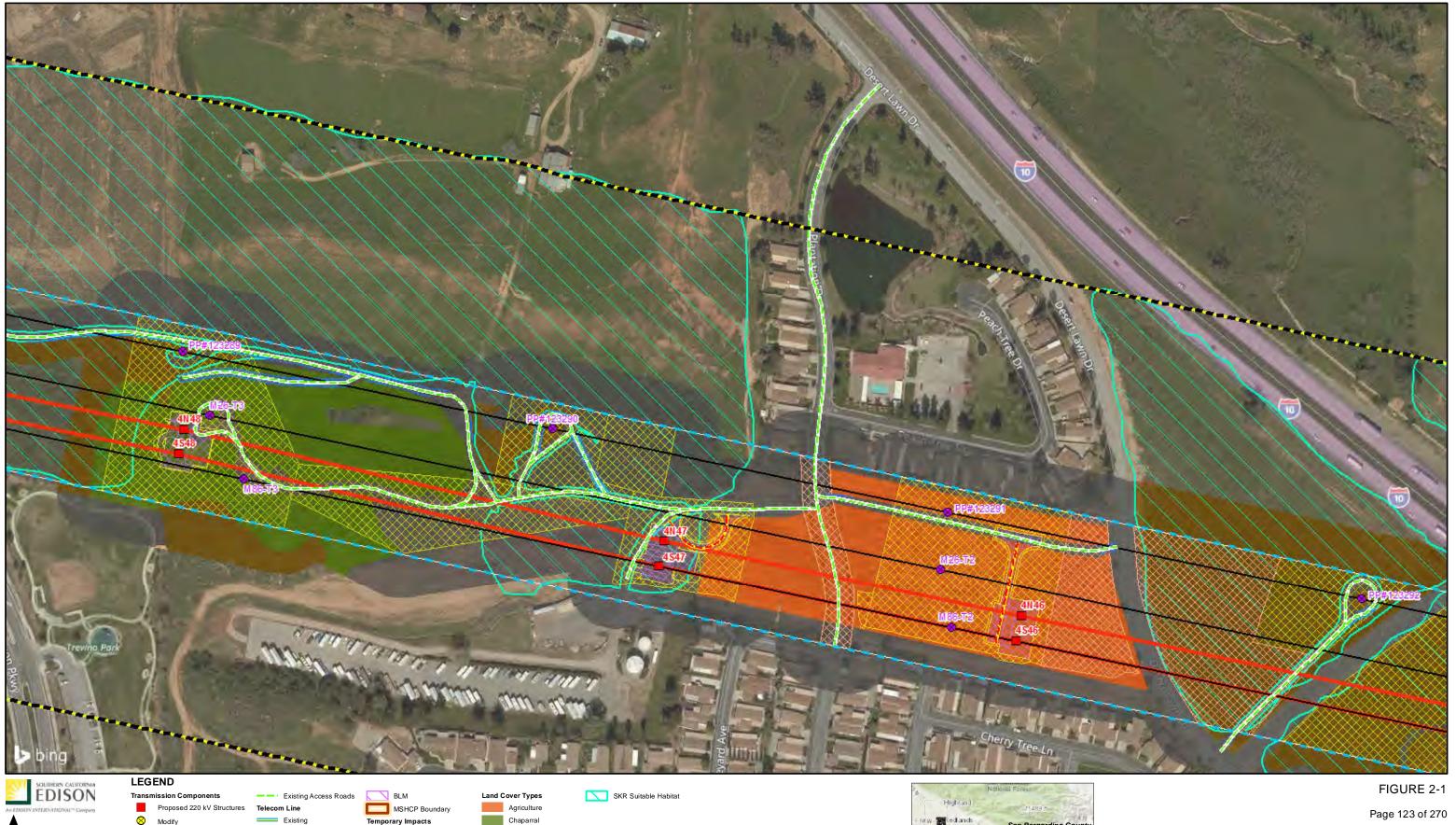
Permanent Impact

Potential Road Widening

Guard Pole

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Developed/Disturbed

Grassland/Forbland

Riparian Woodland

Temporary Impact

Shoo-fly Work Area

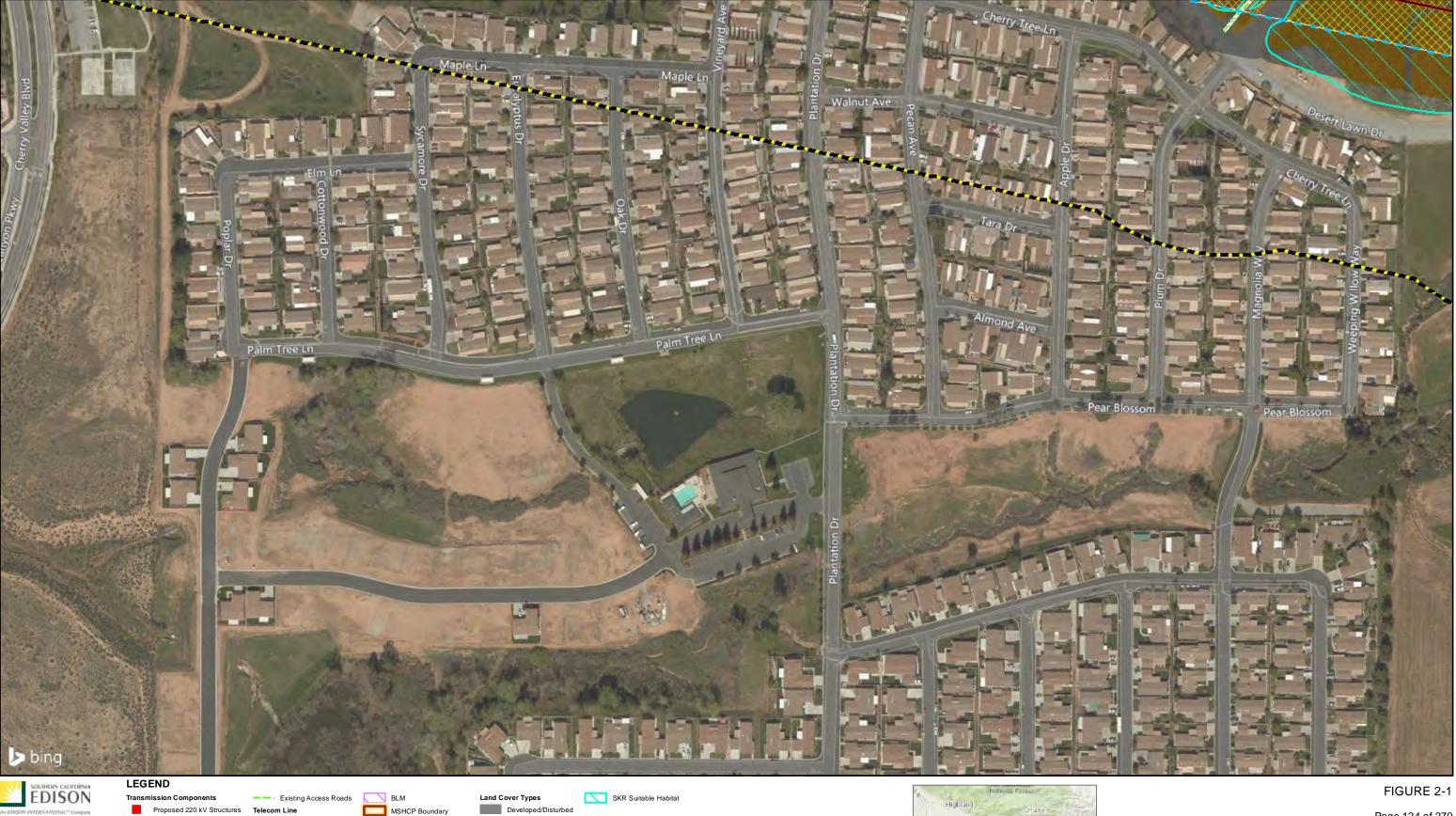
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Potential Road Widening

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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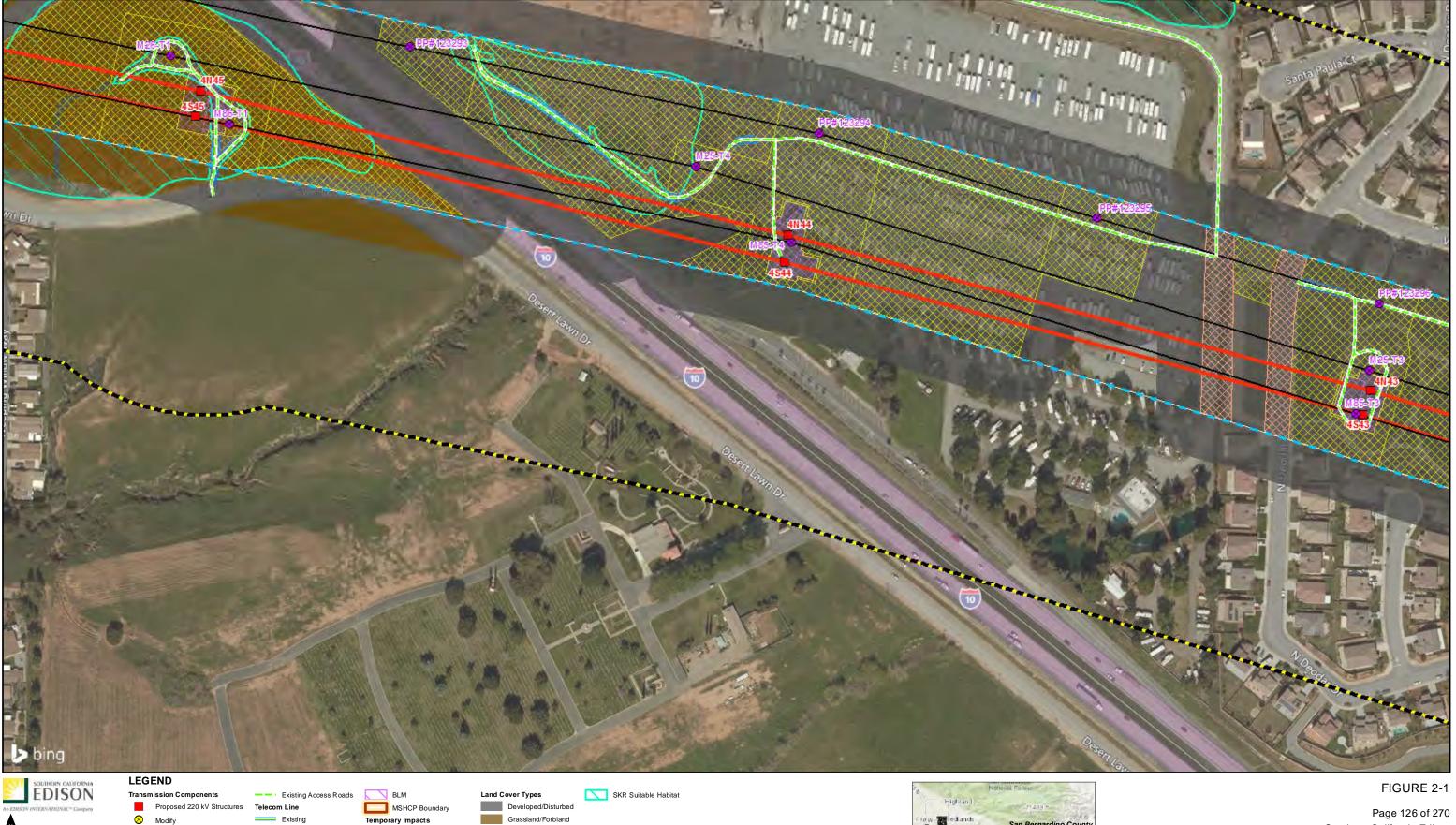
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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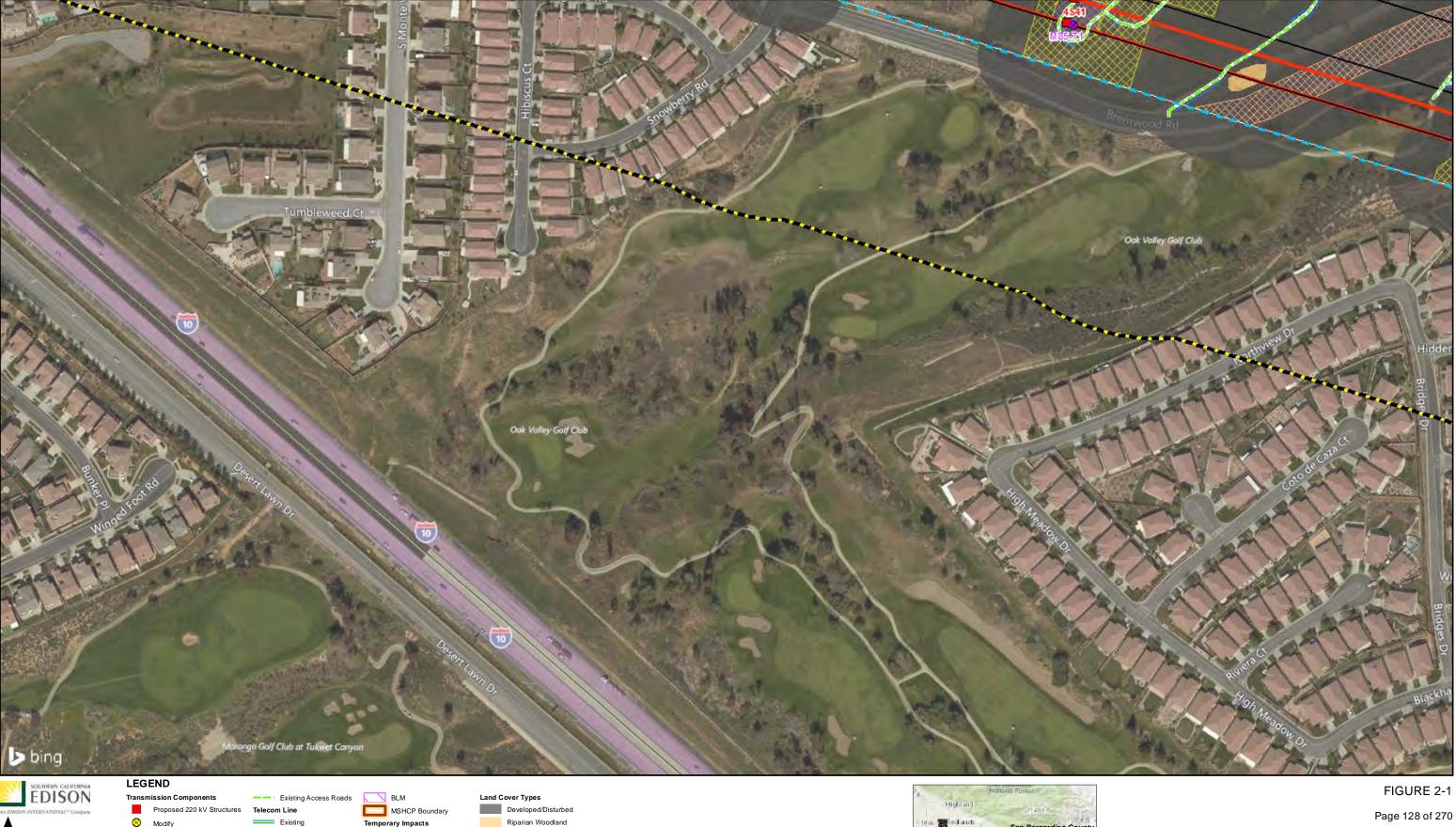
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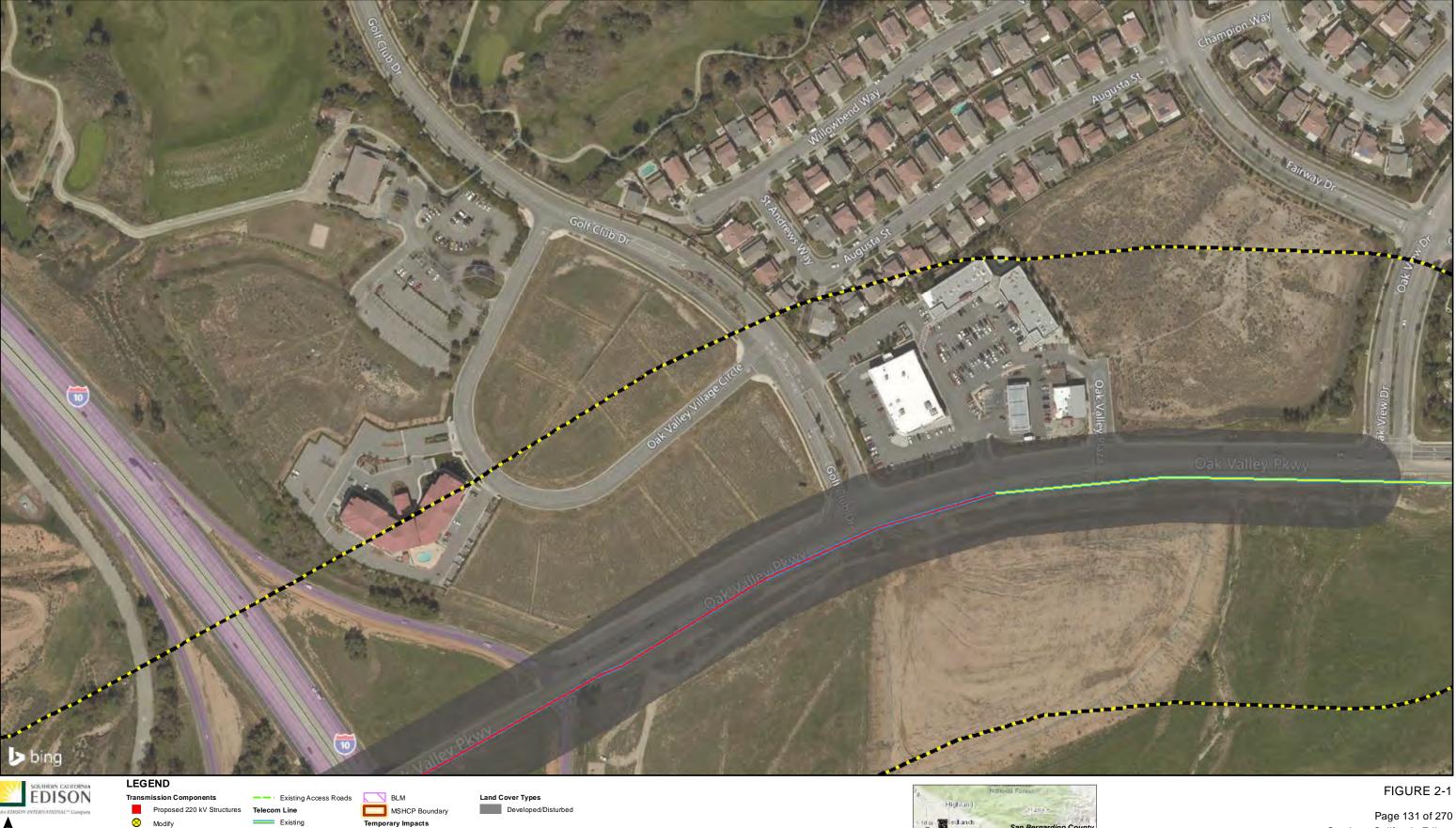
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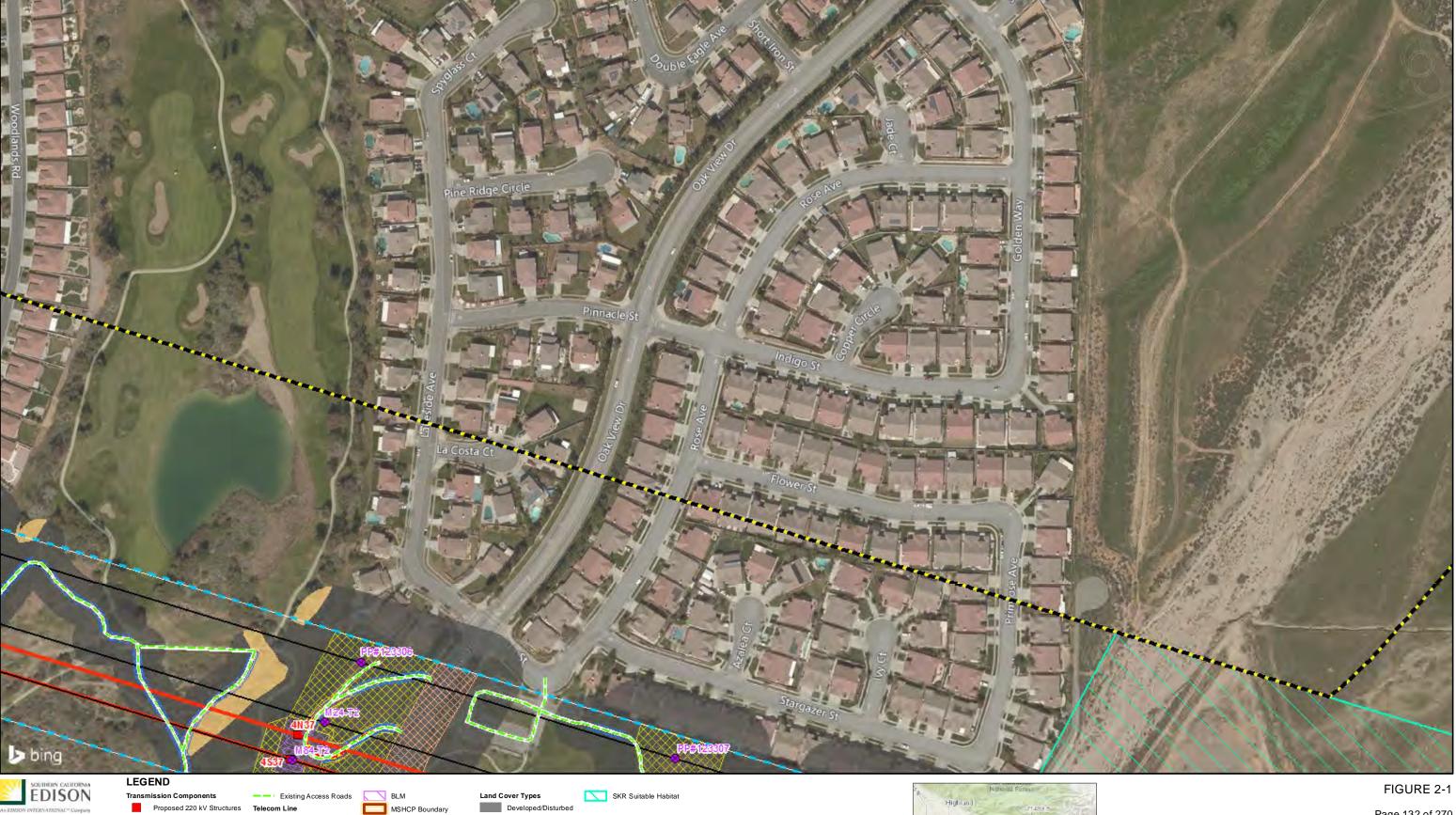
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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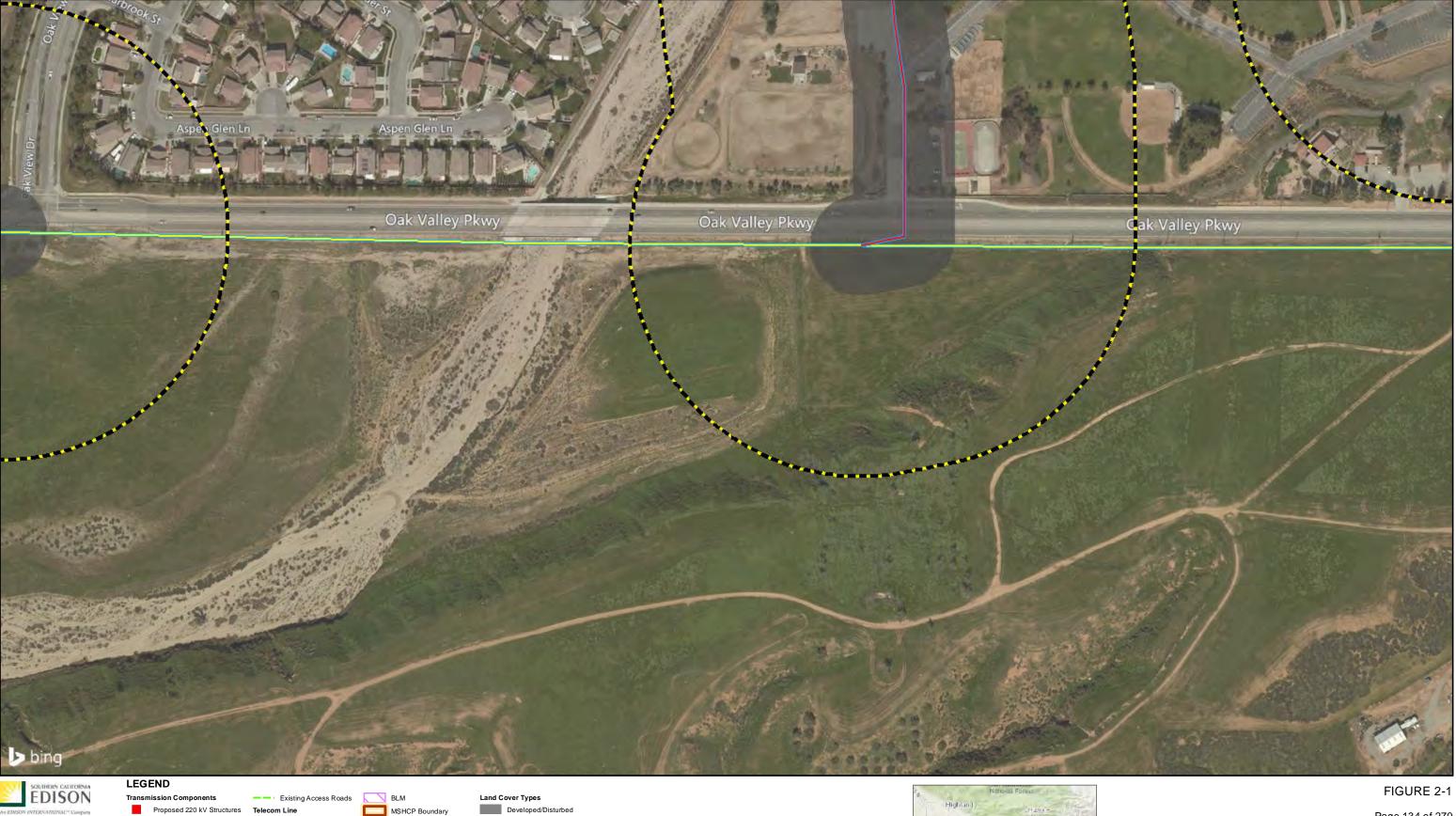
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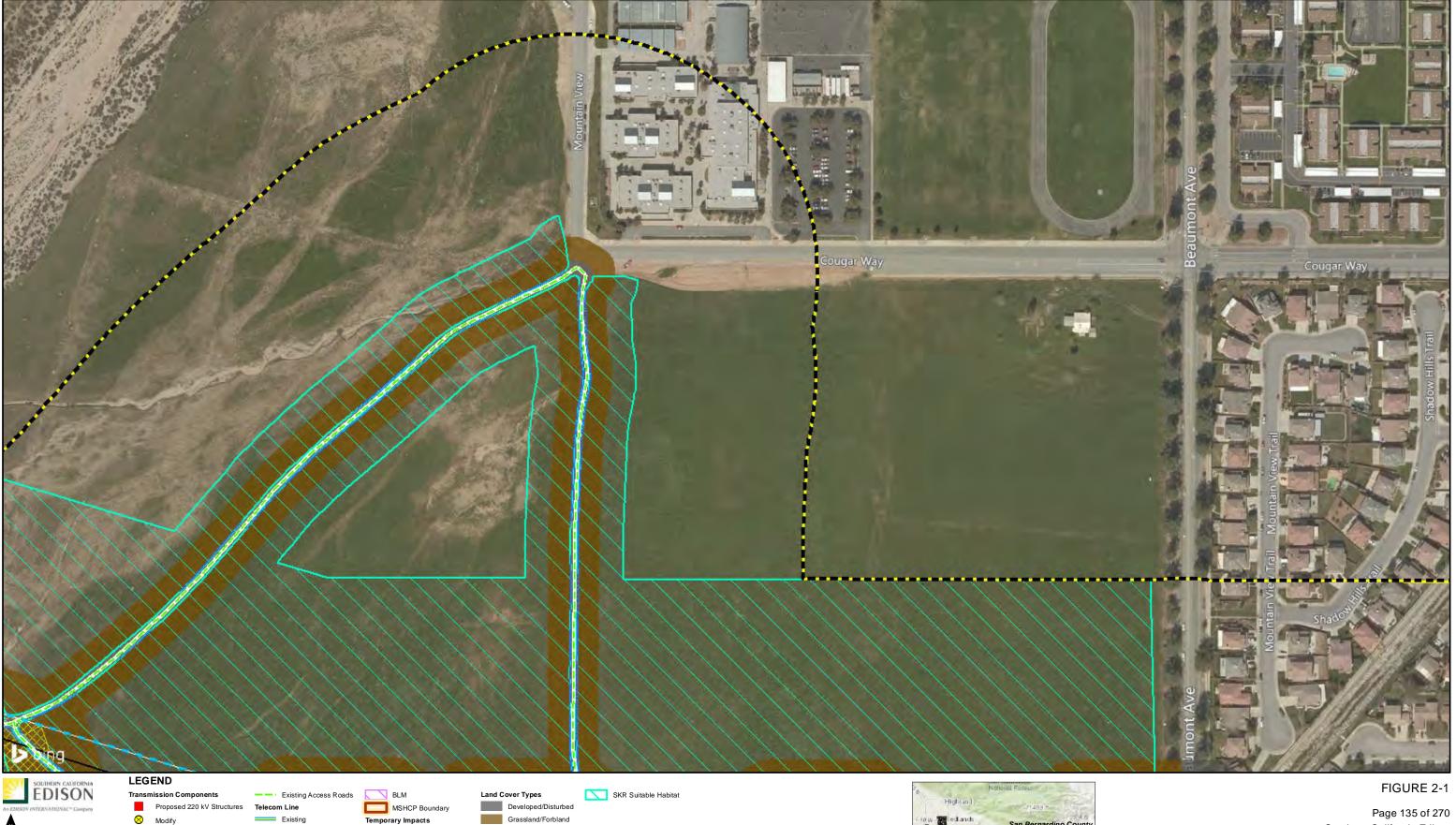
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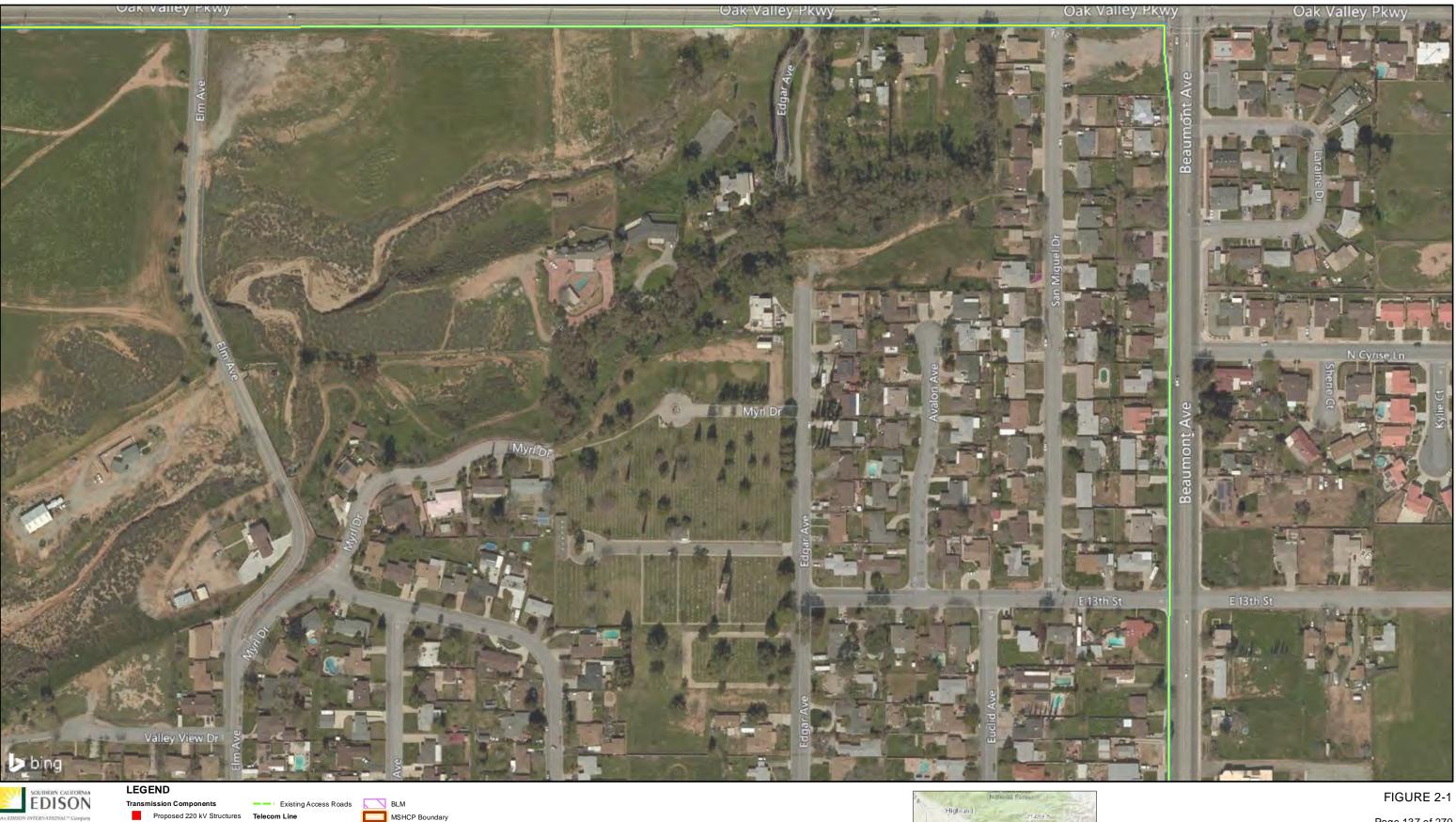


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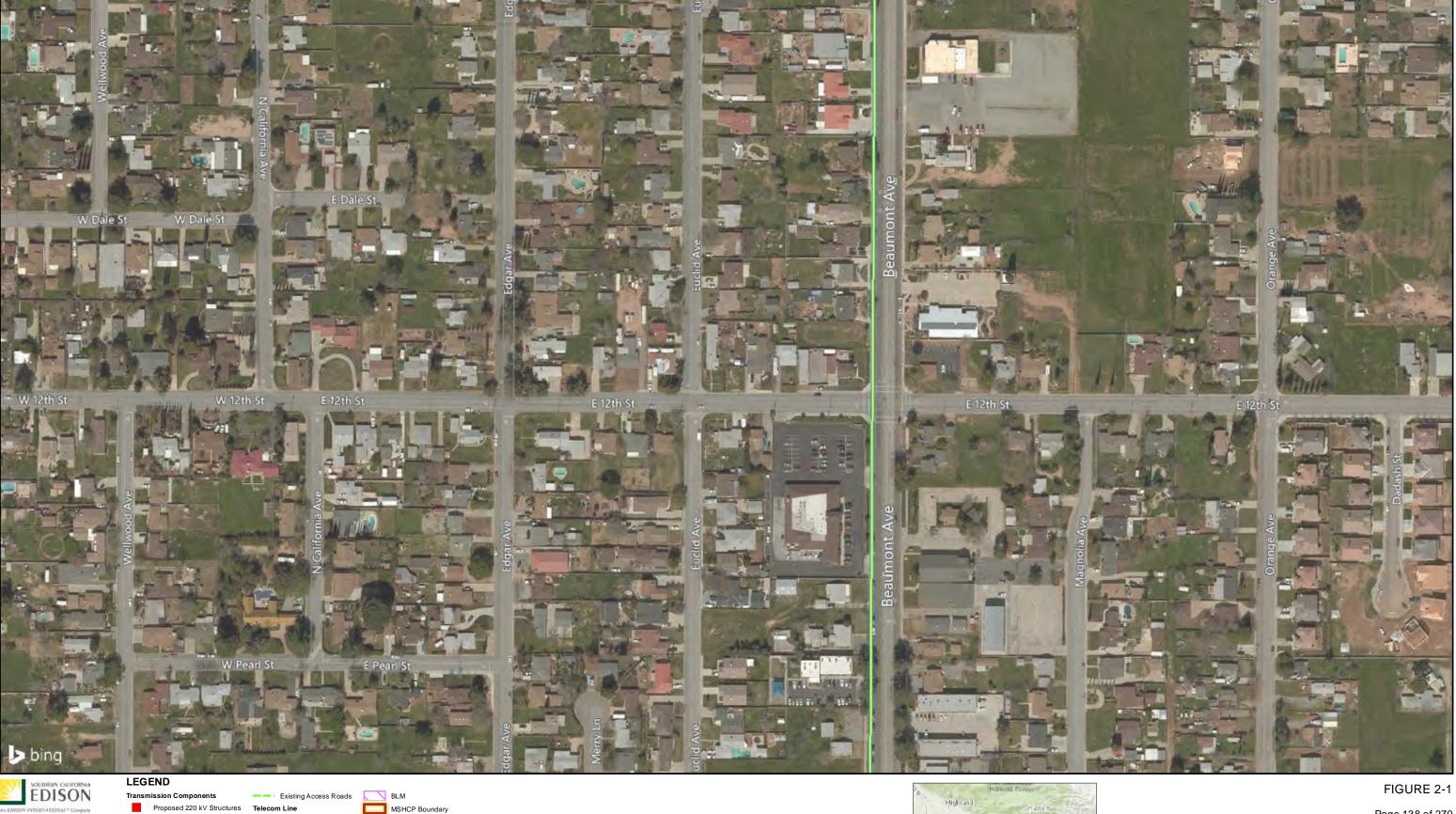
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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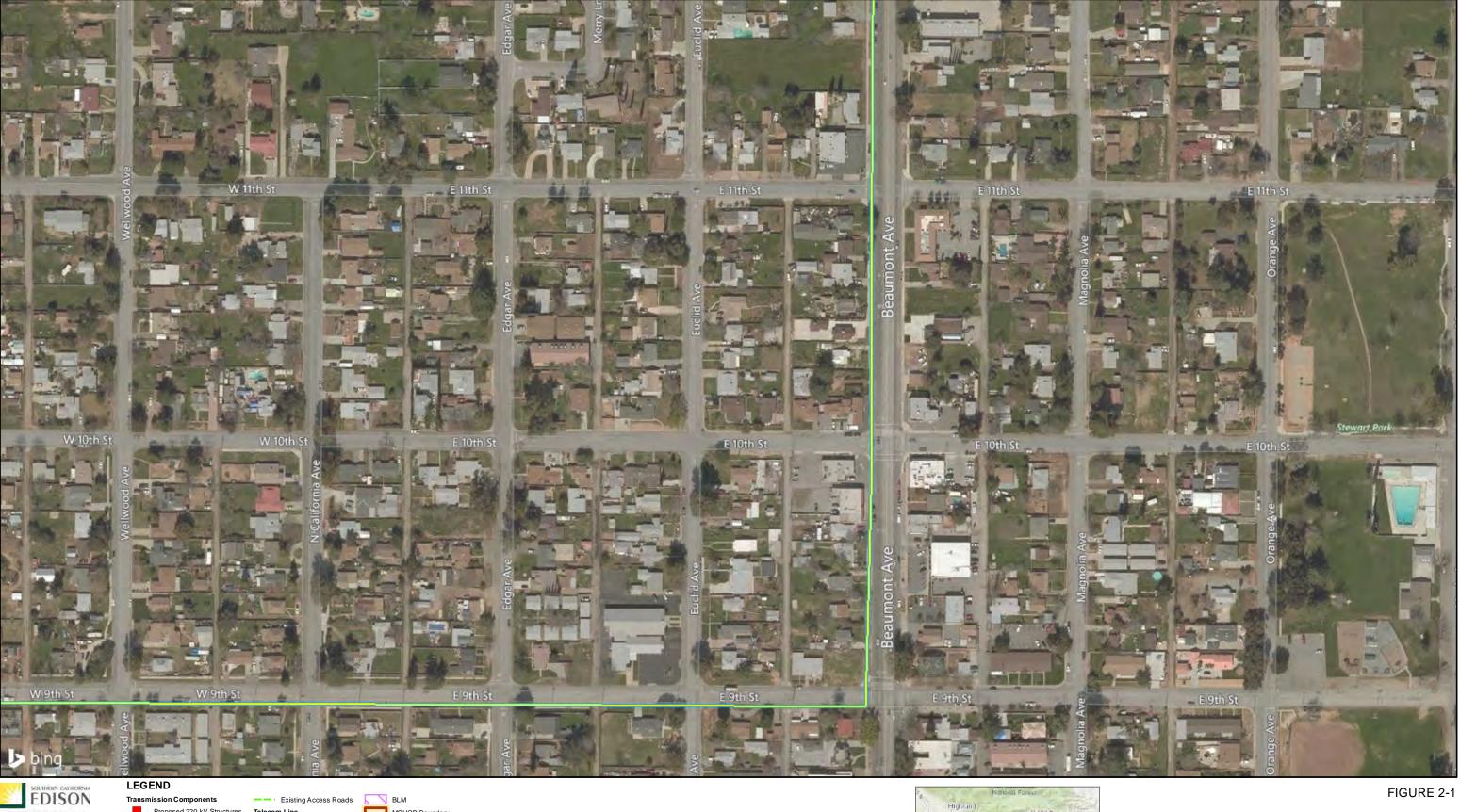
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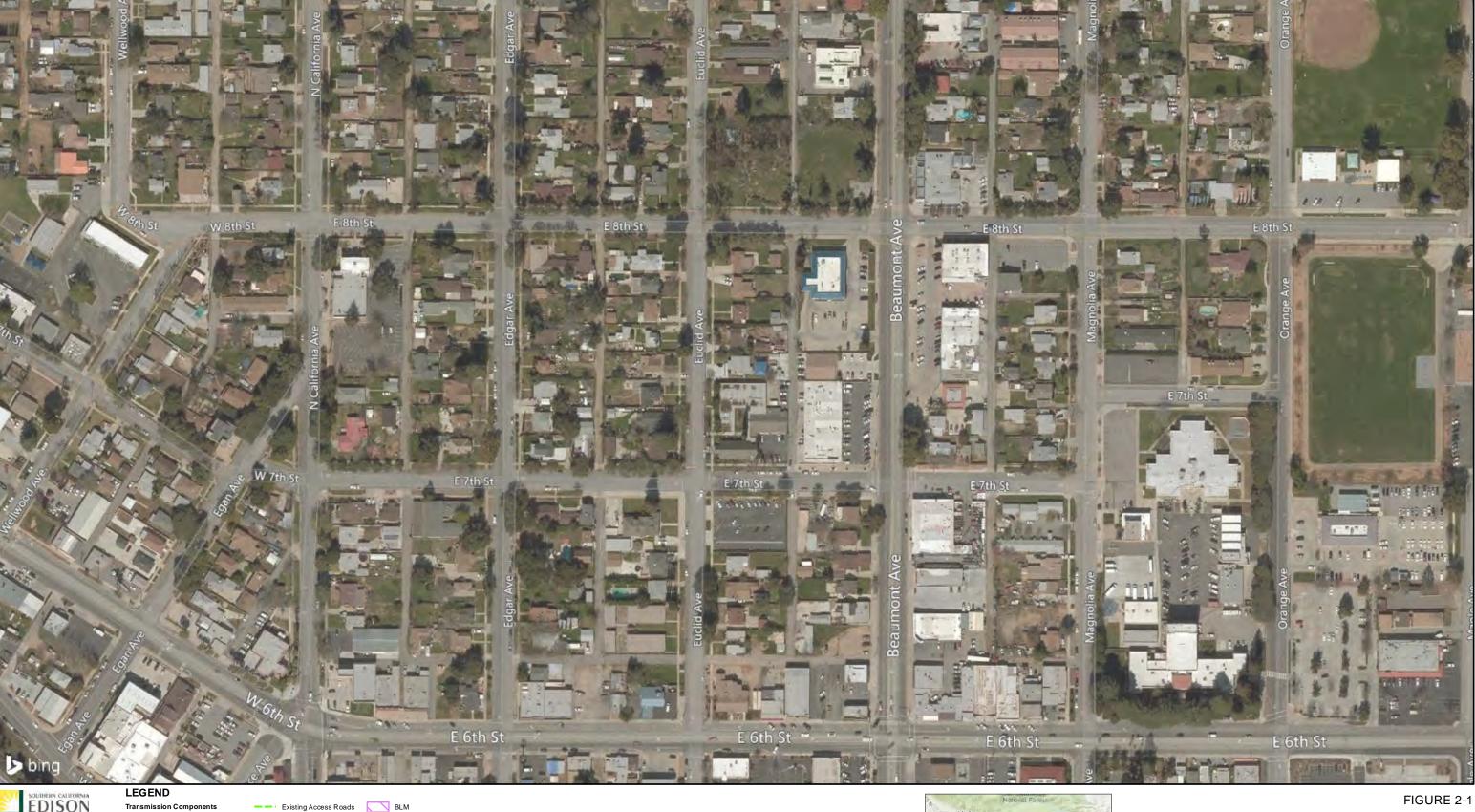
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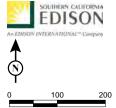
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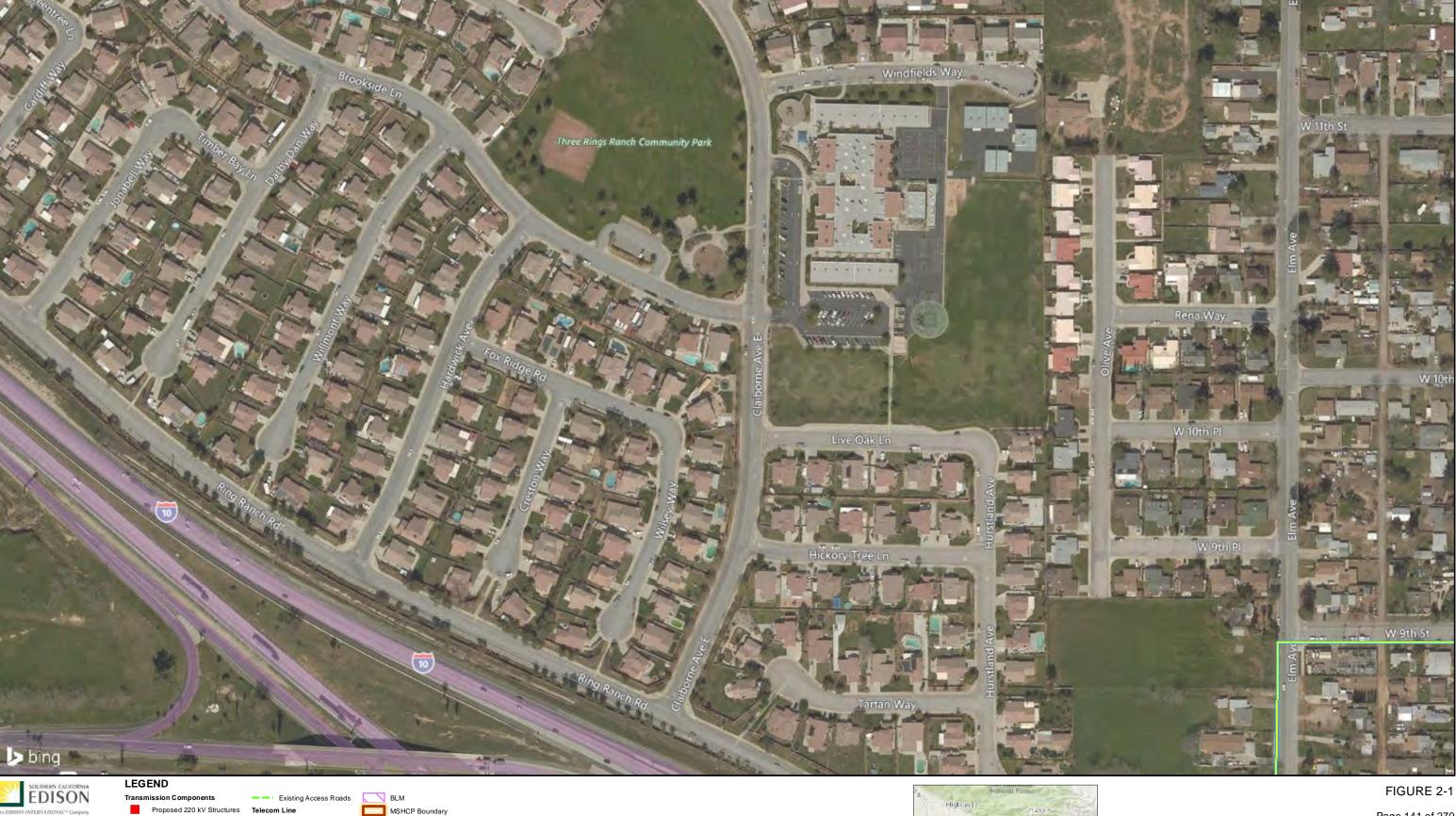
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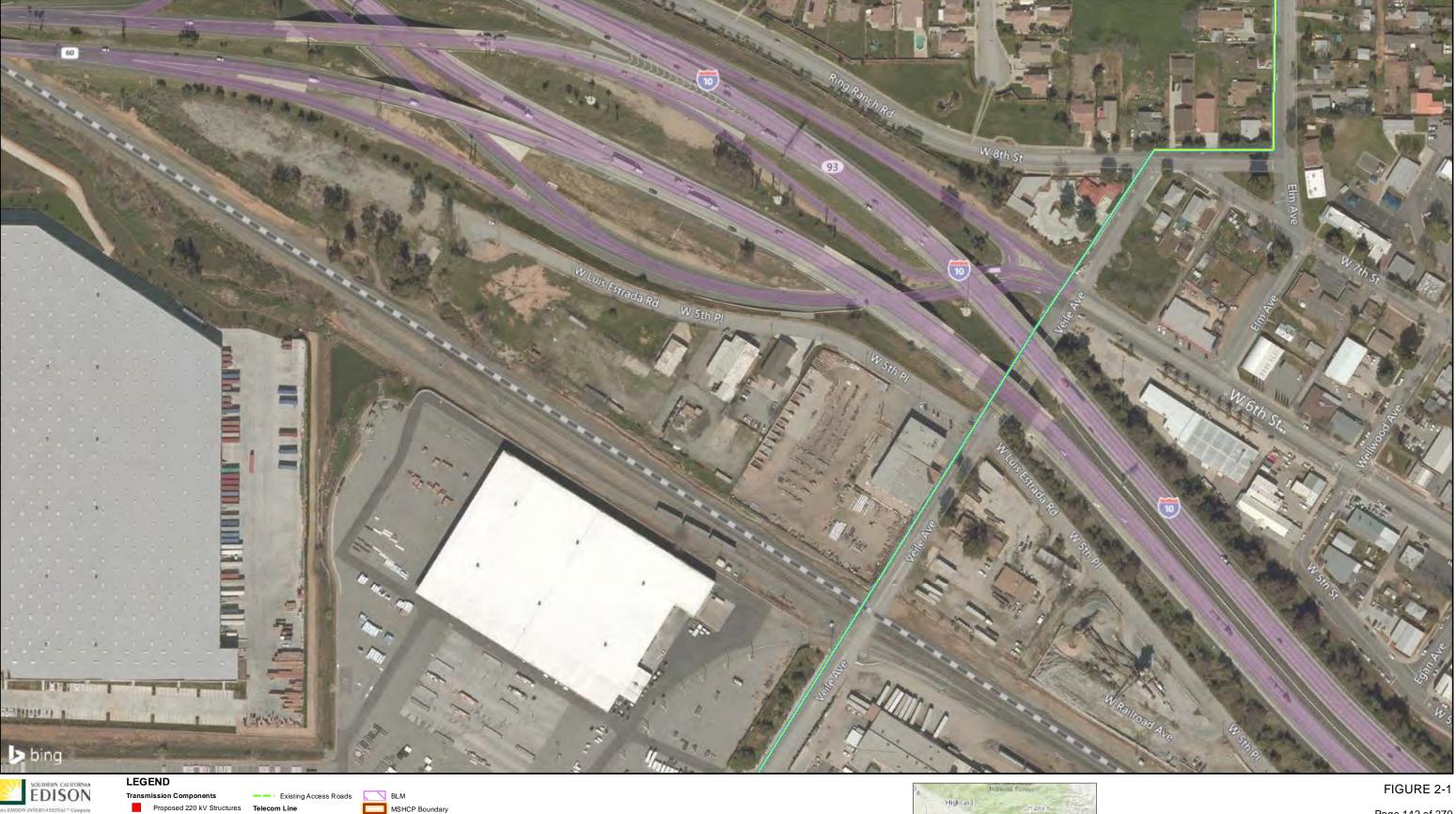
Morongo Reservation Permanent Impact

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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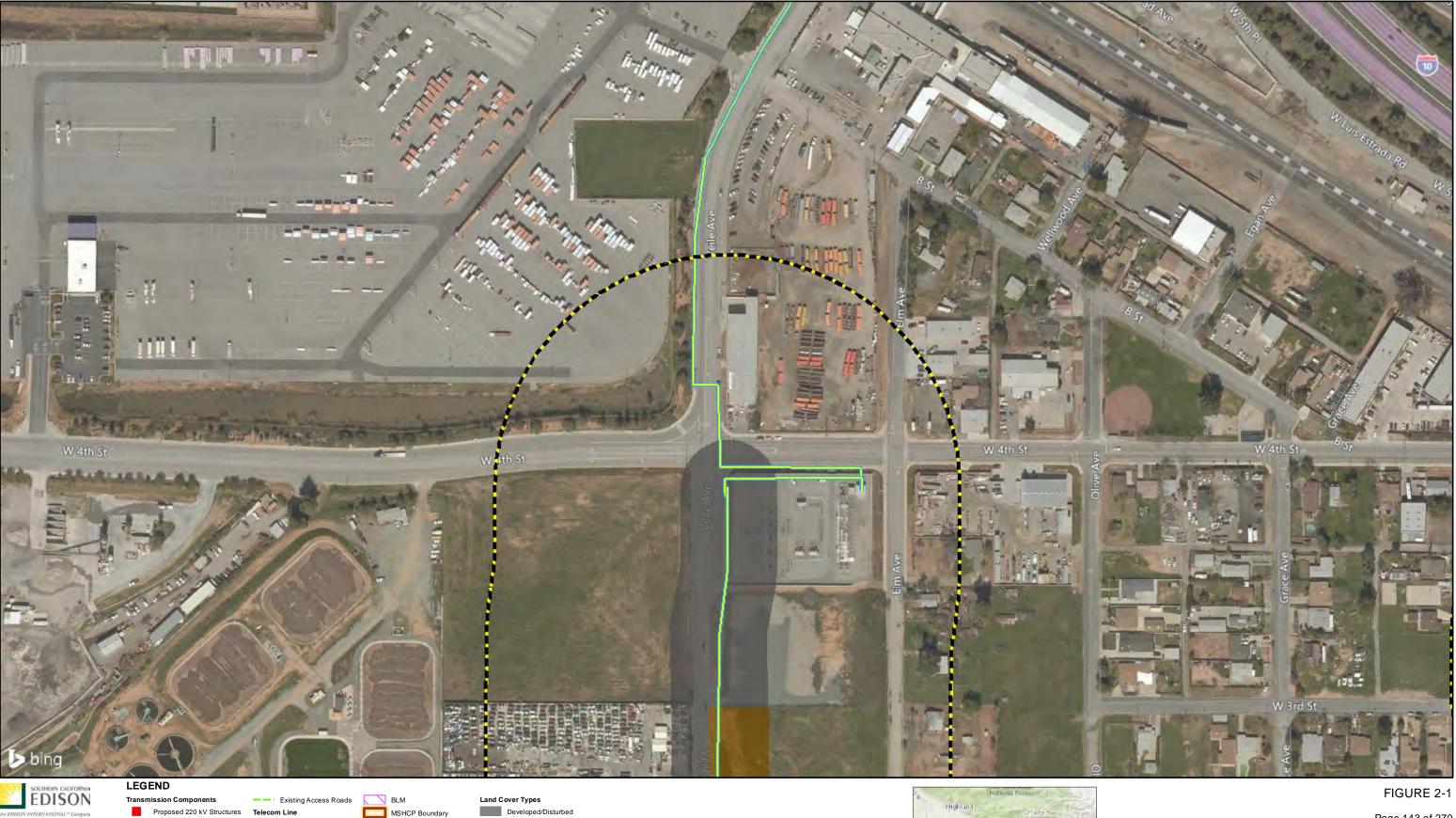
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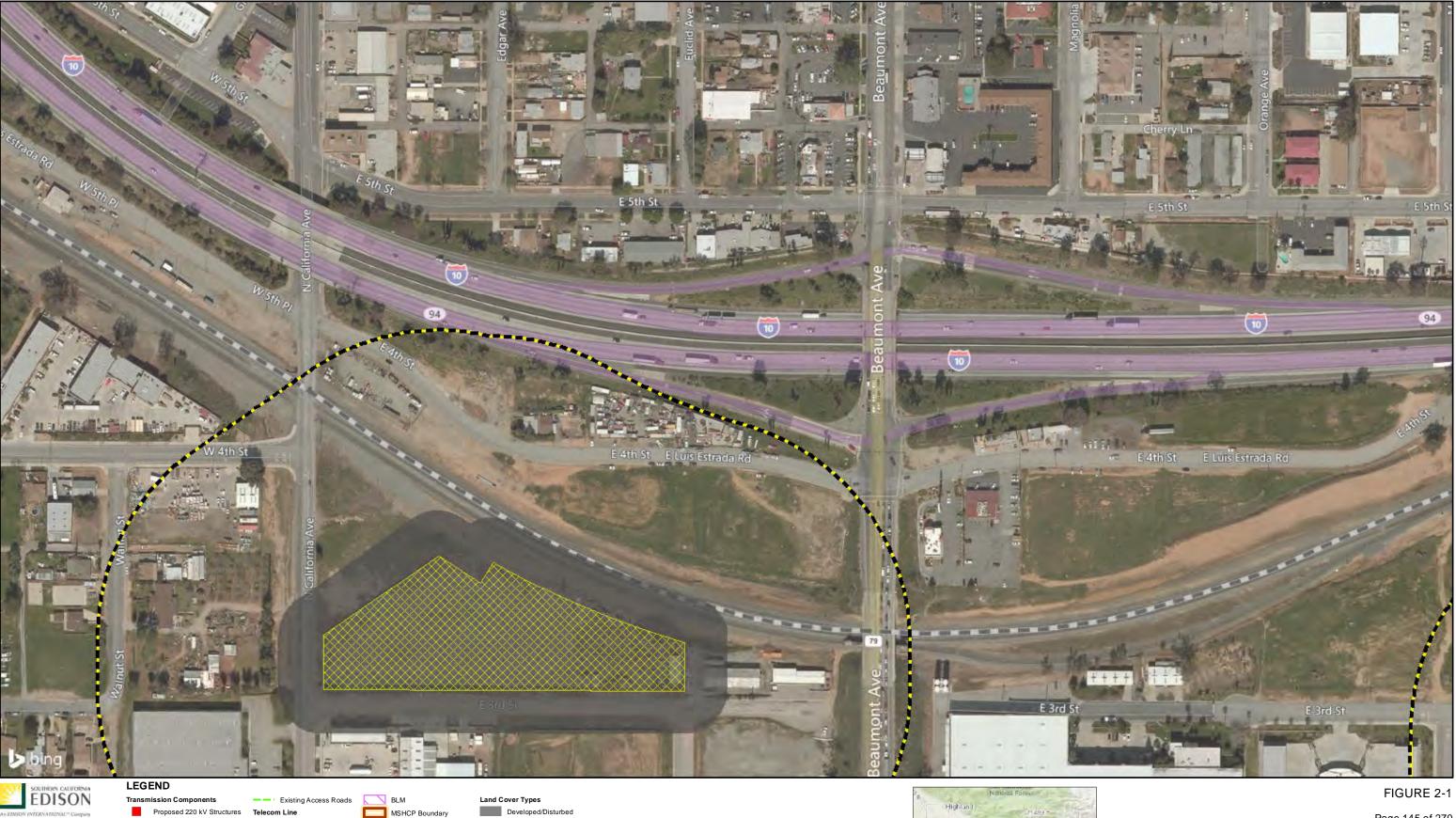
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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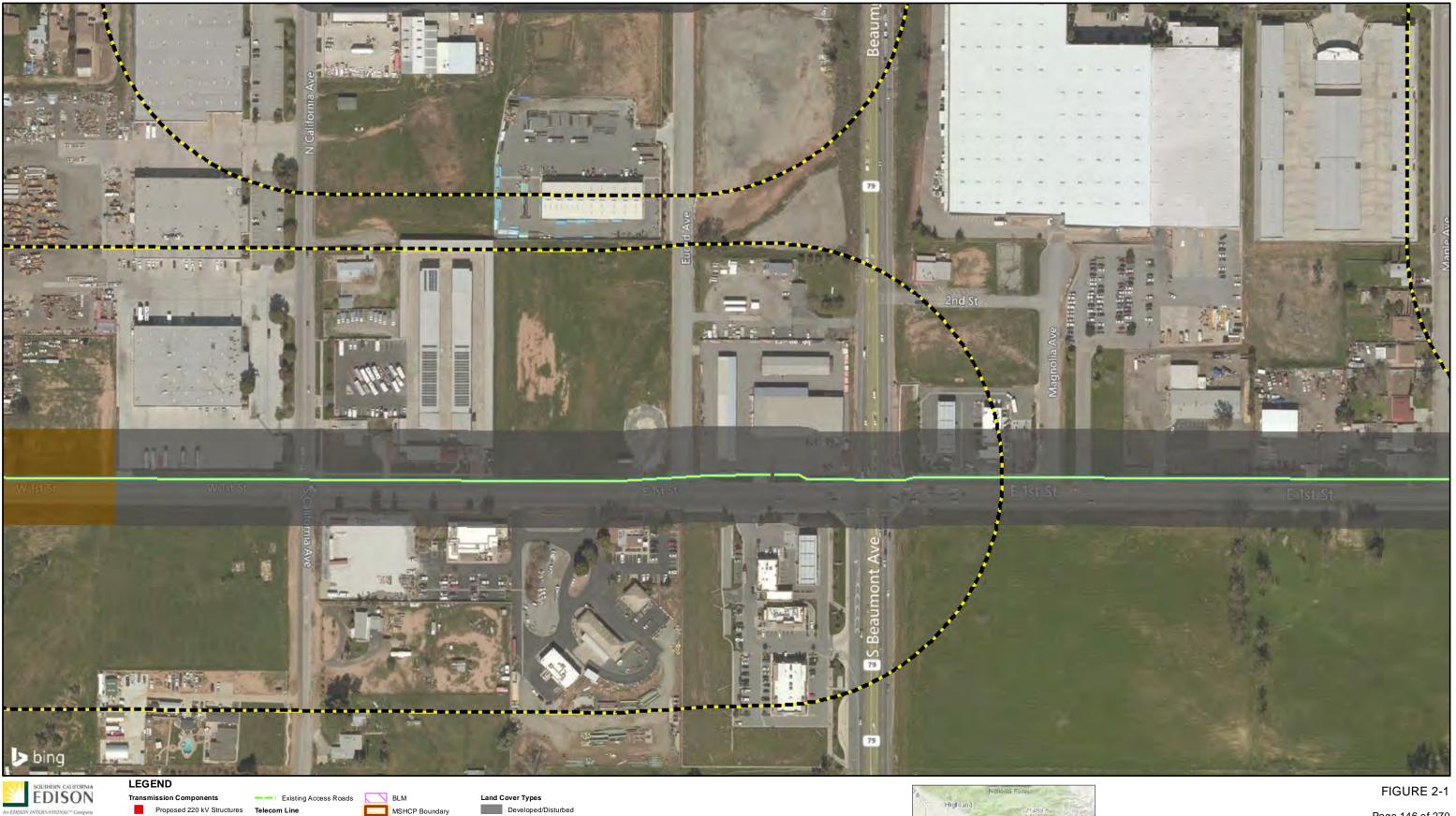
Temporary Impacts

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

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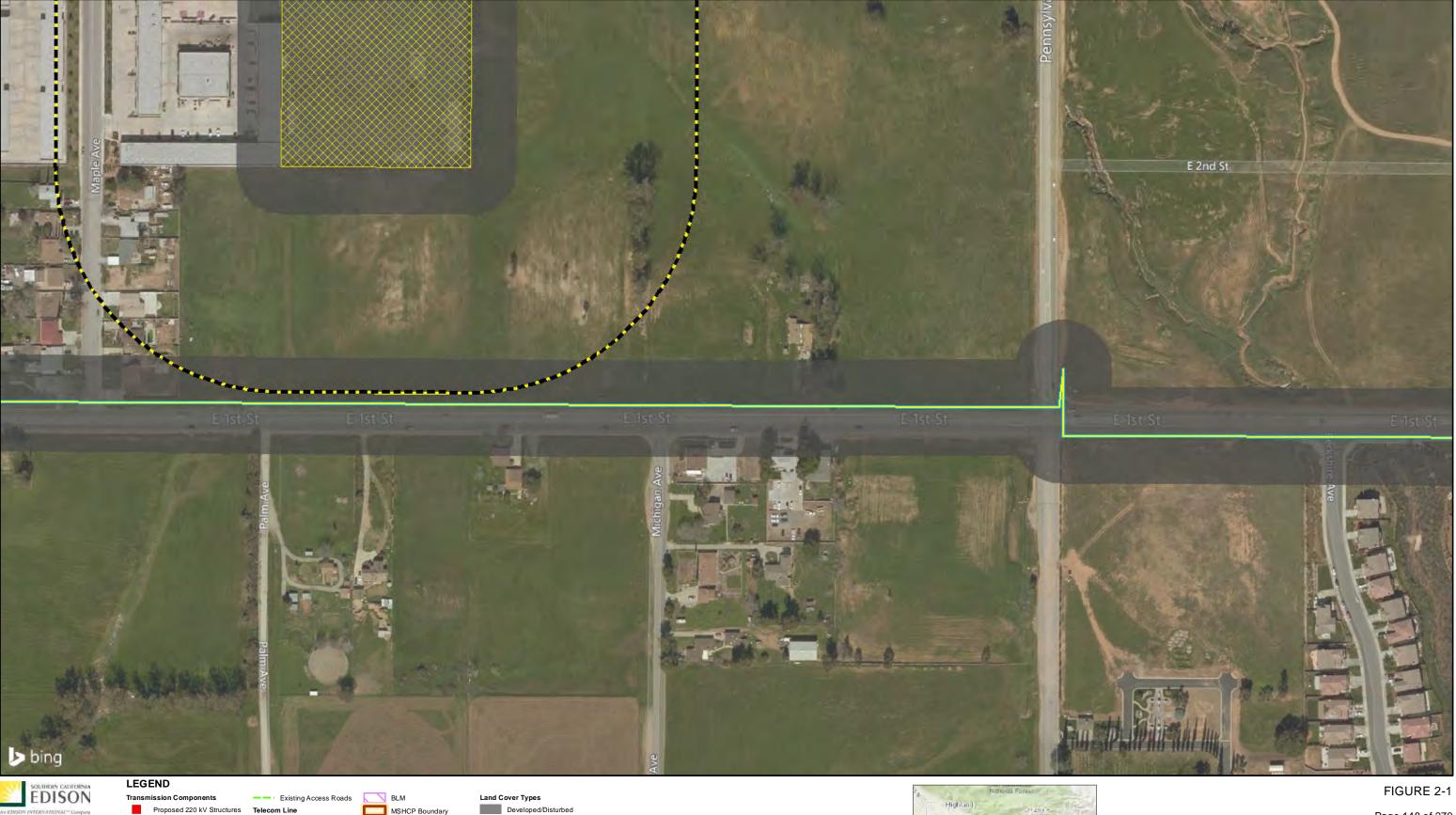
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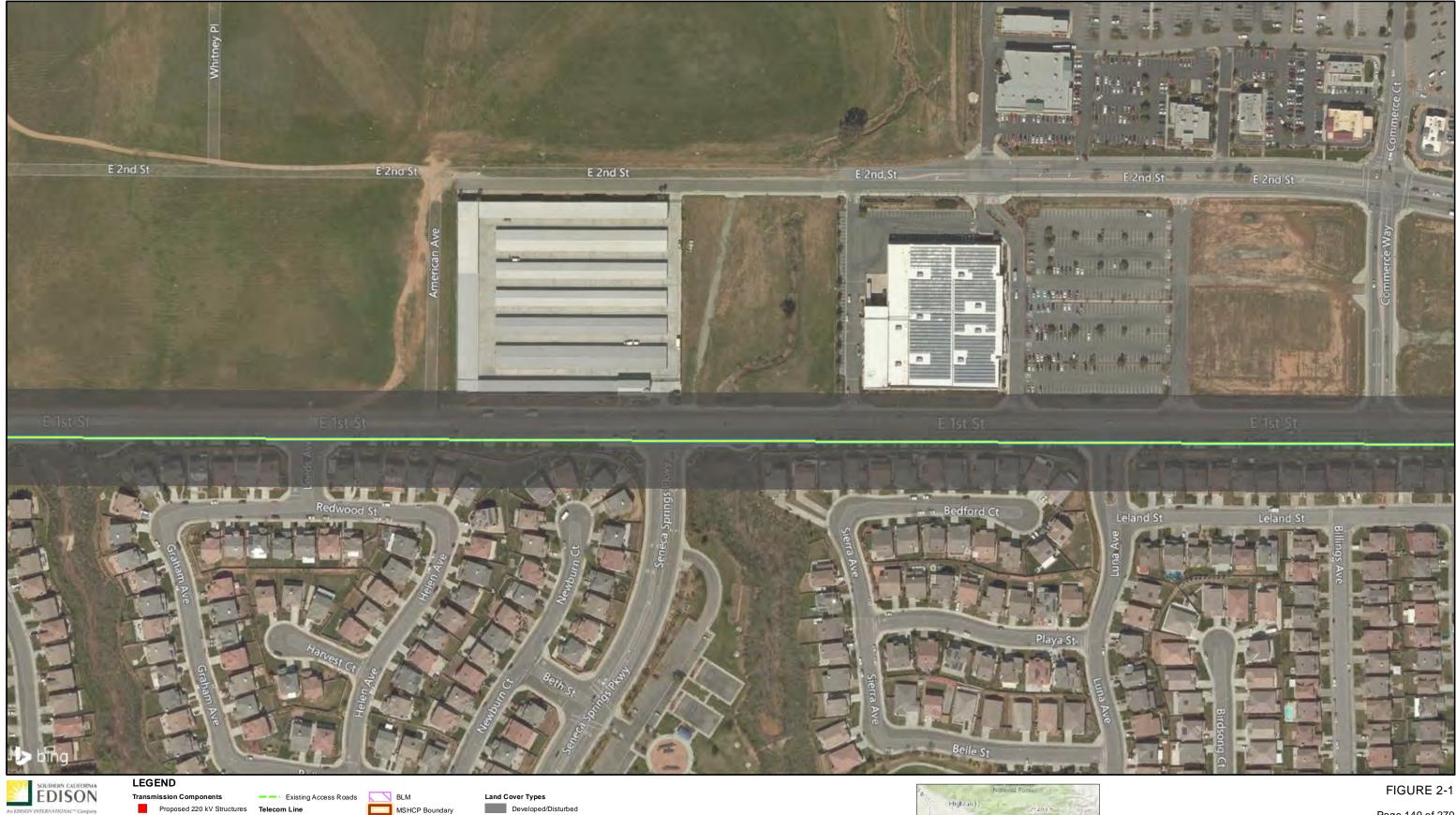
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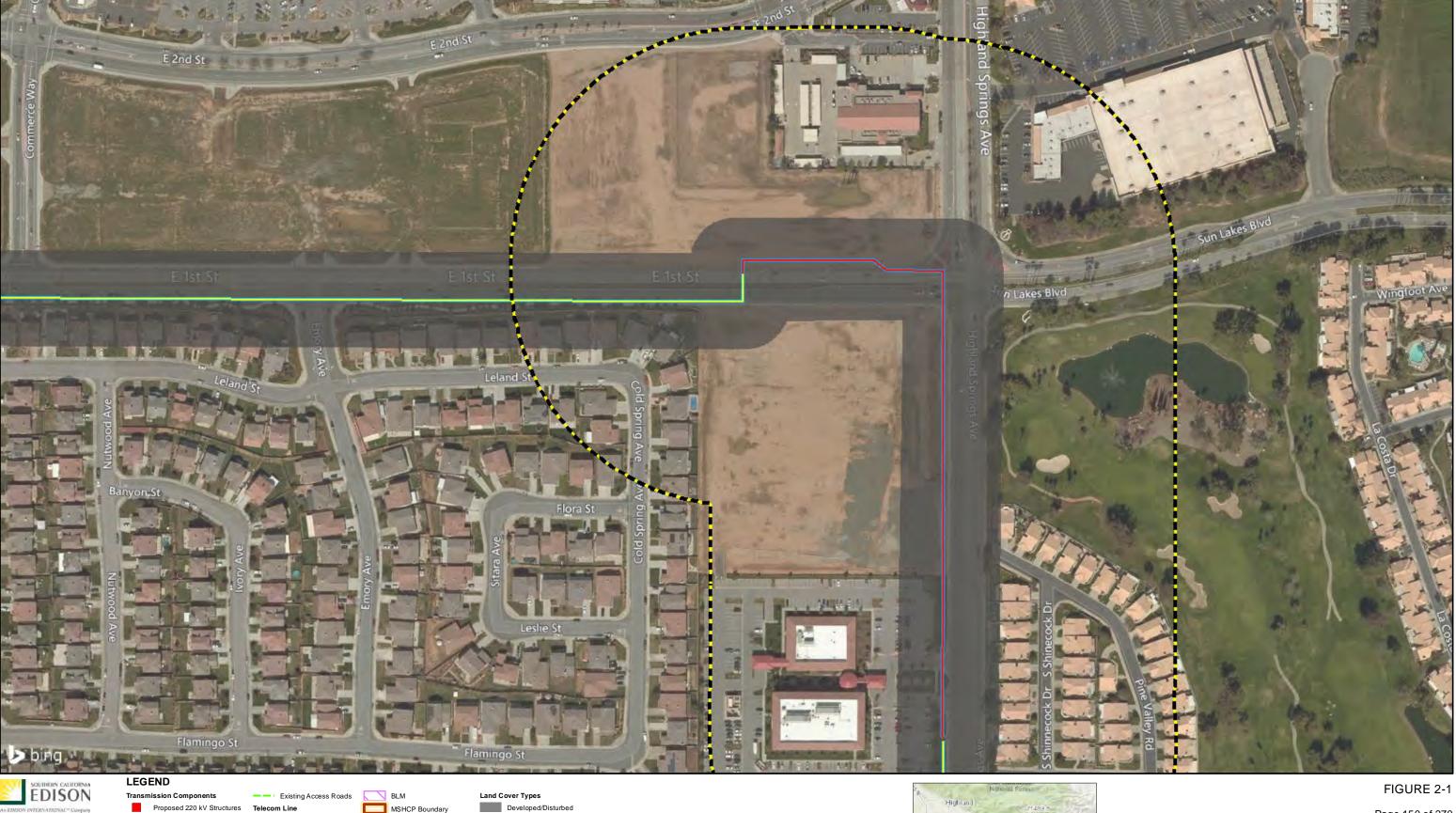
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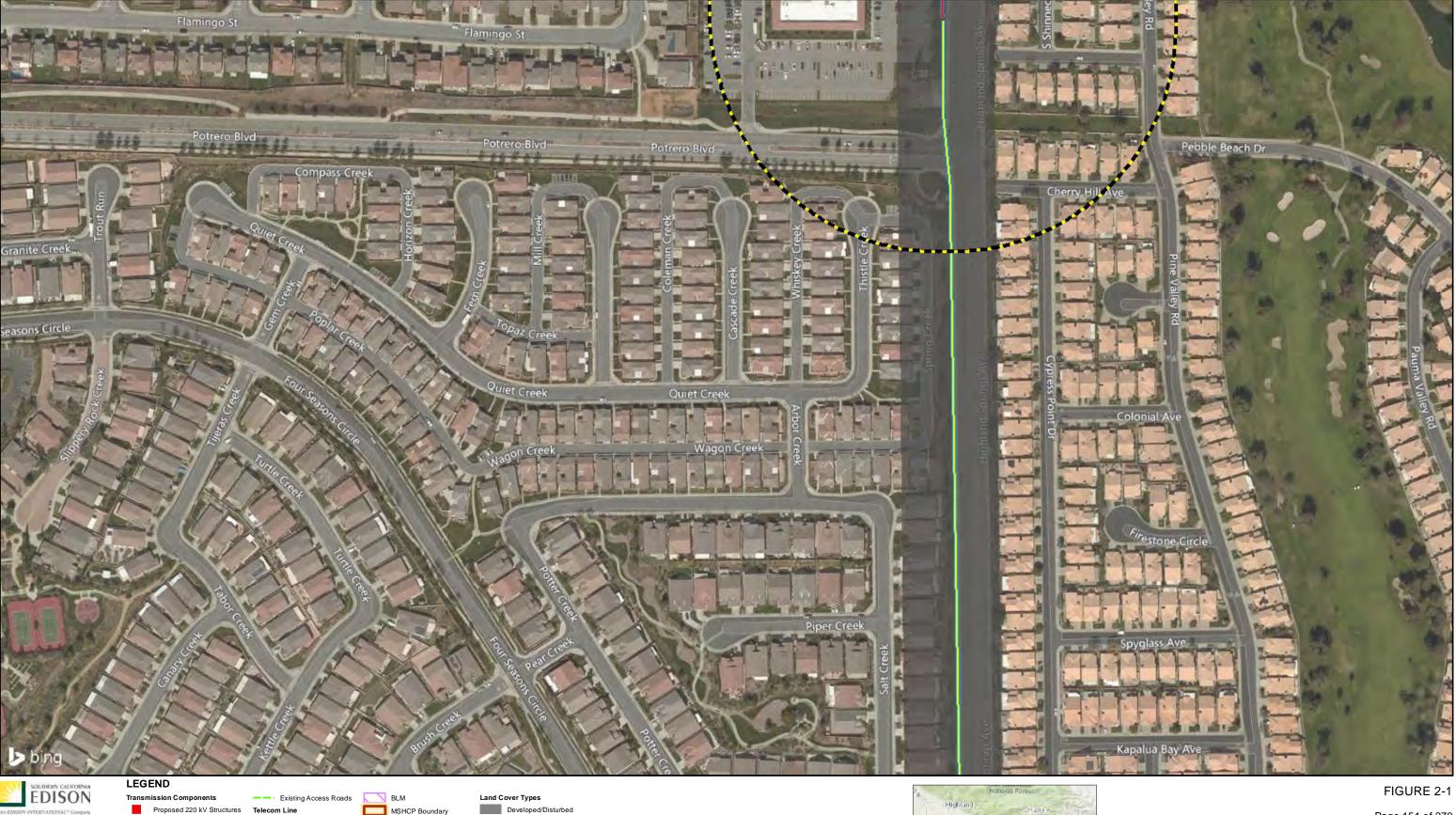
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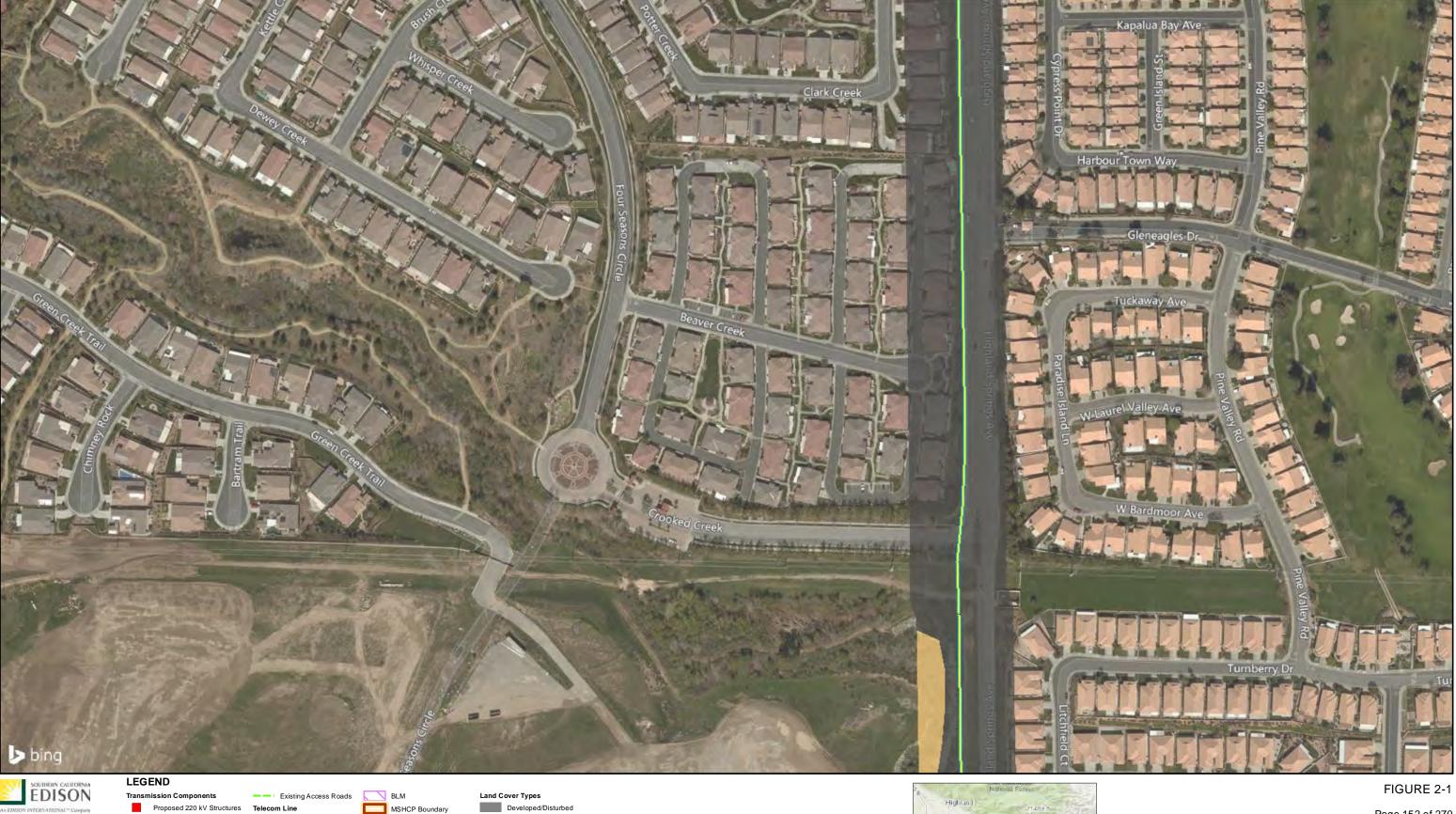
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

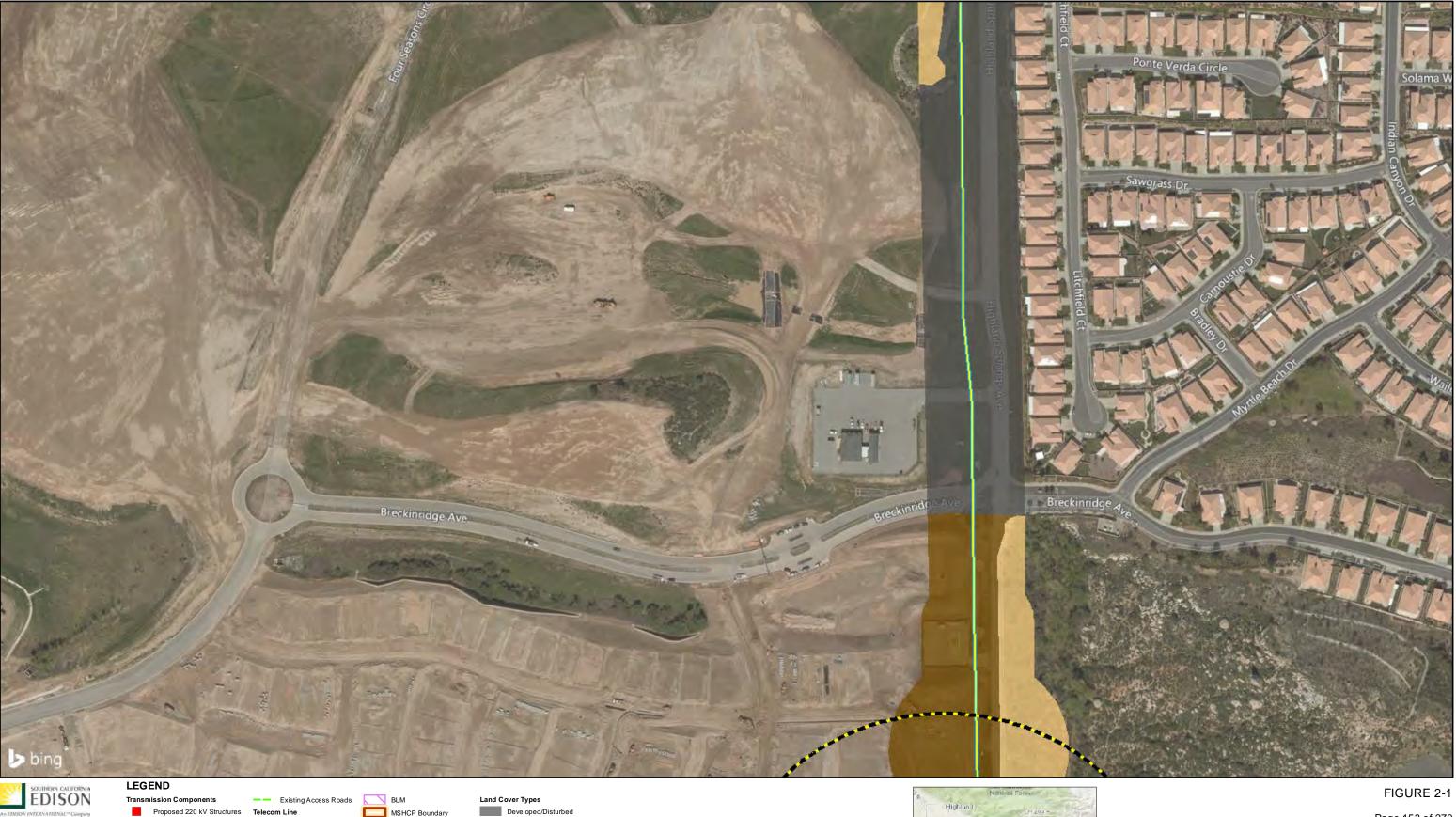
Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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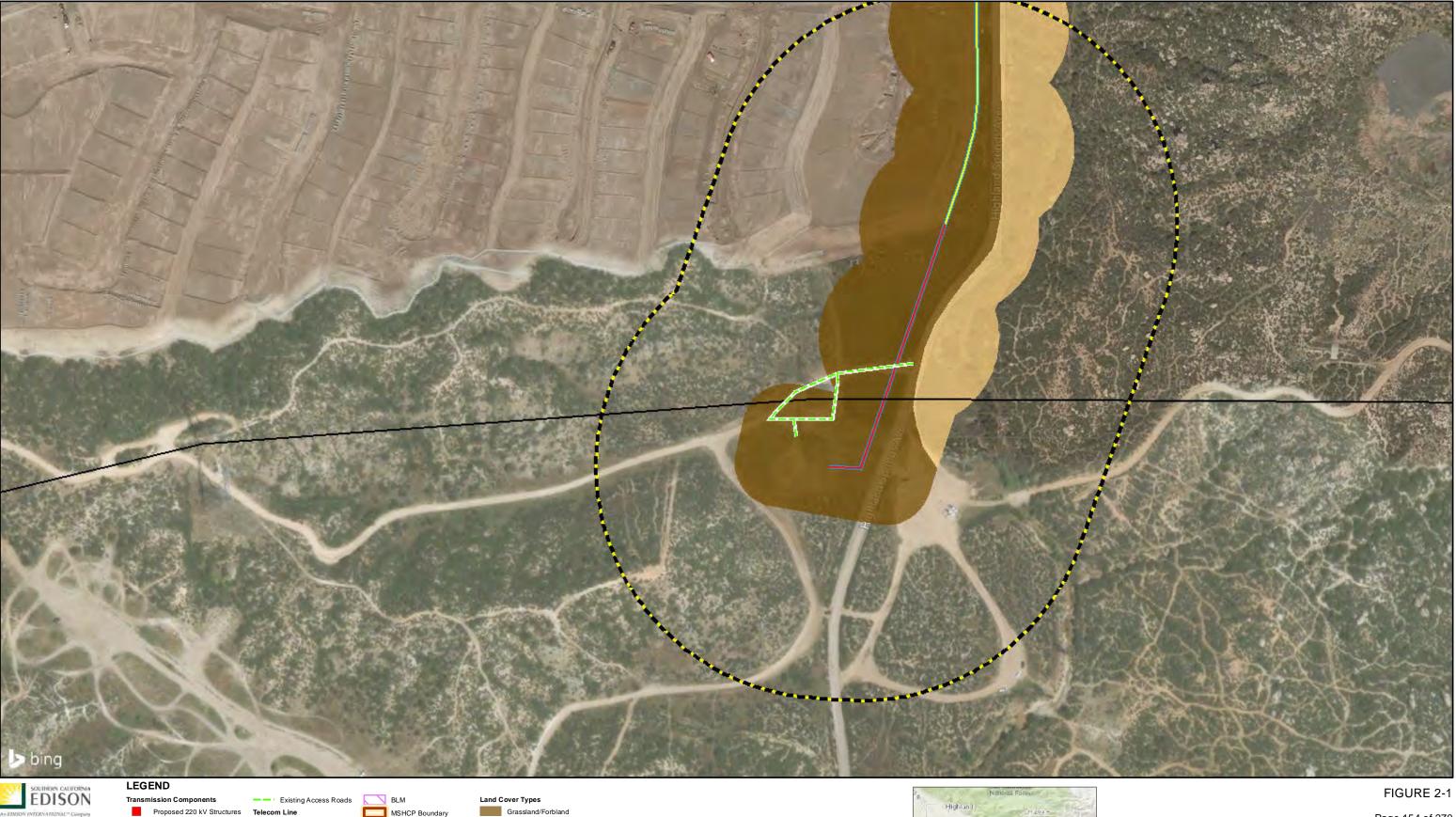
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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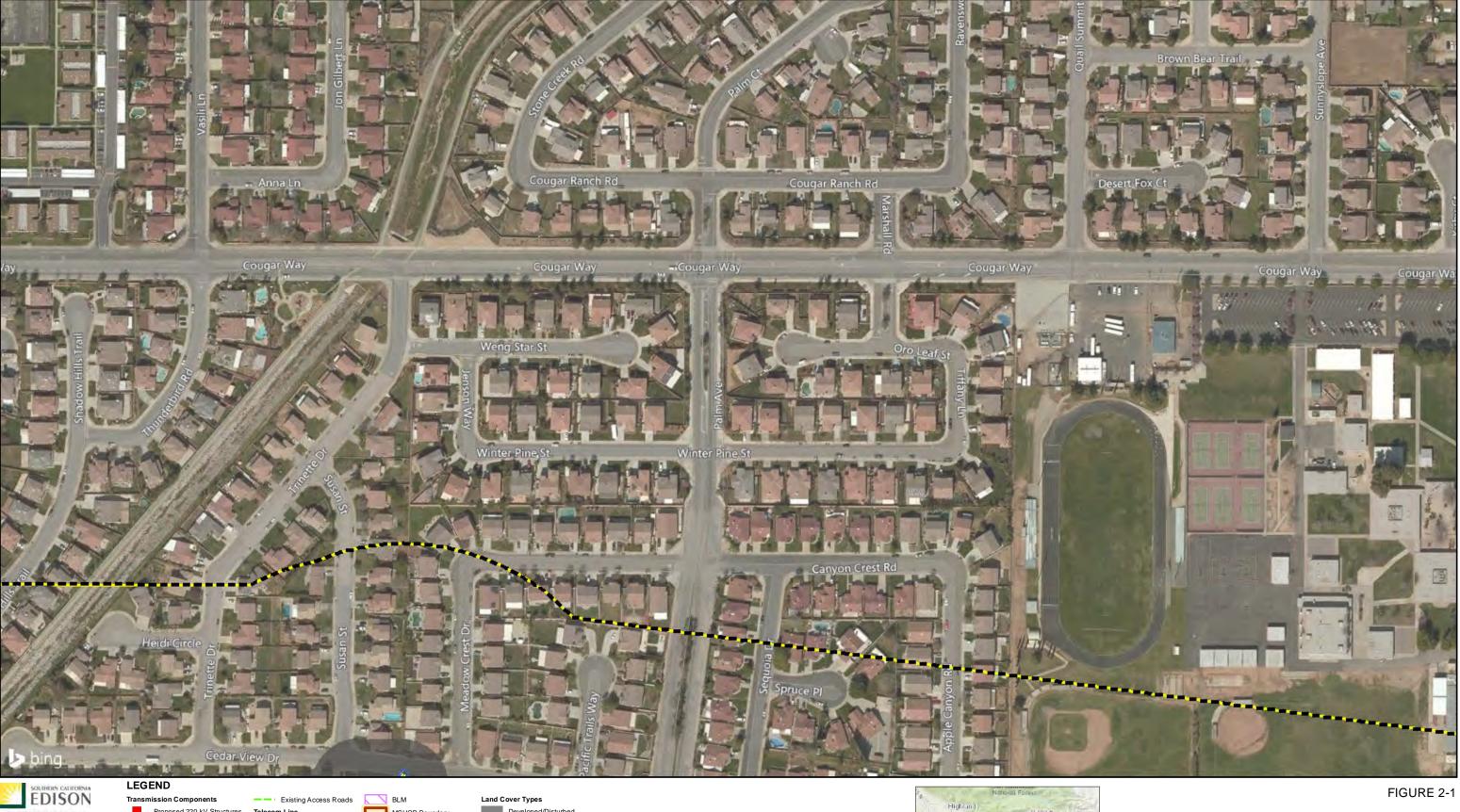
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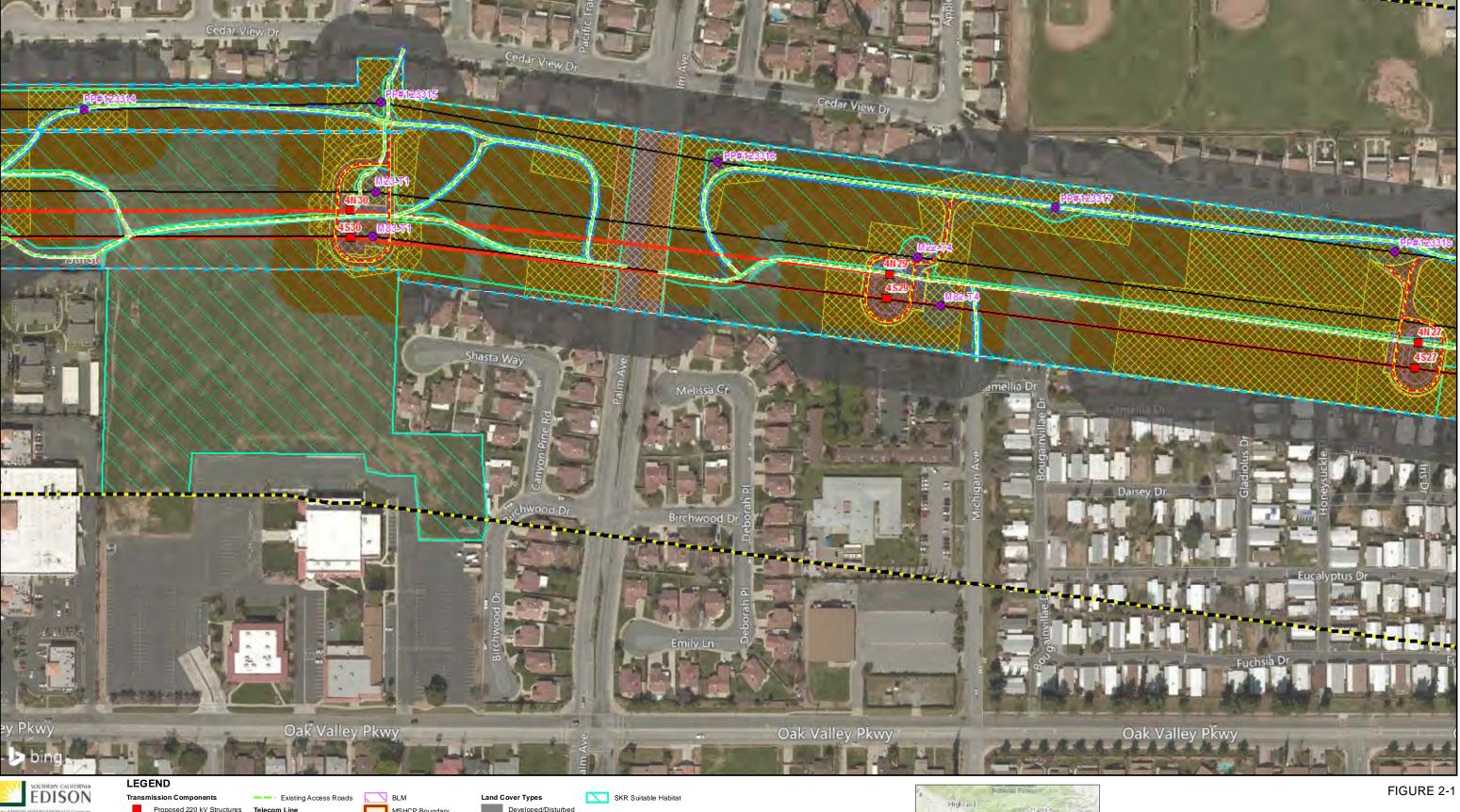
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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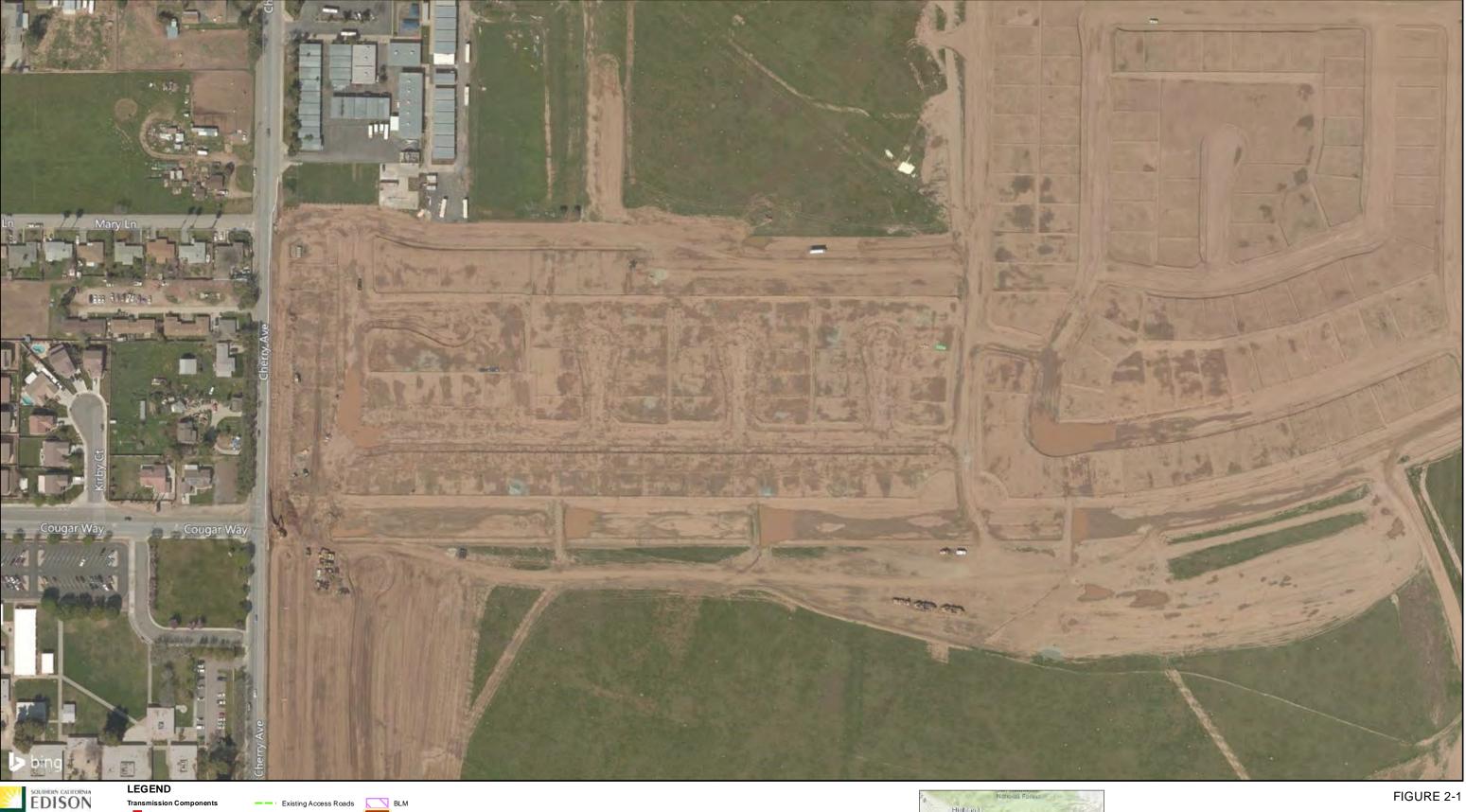
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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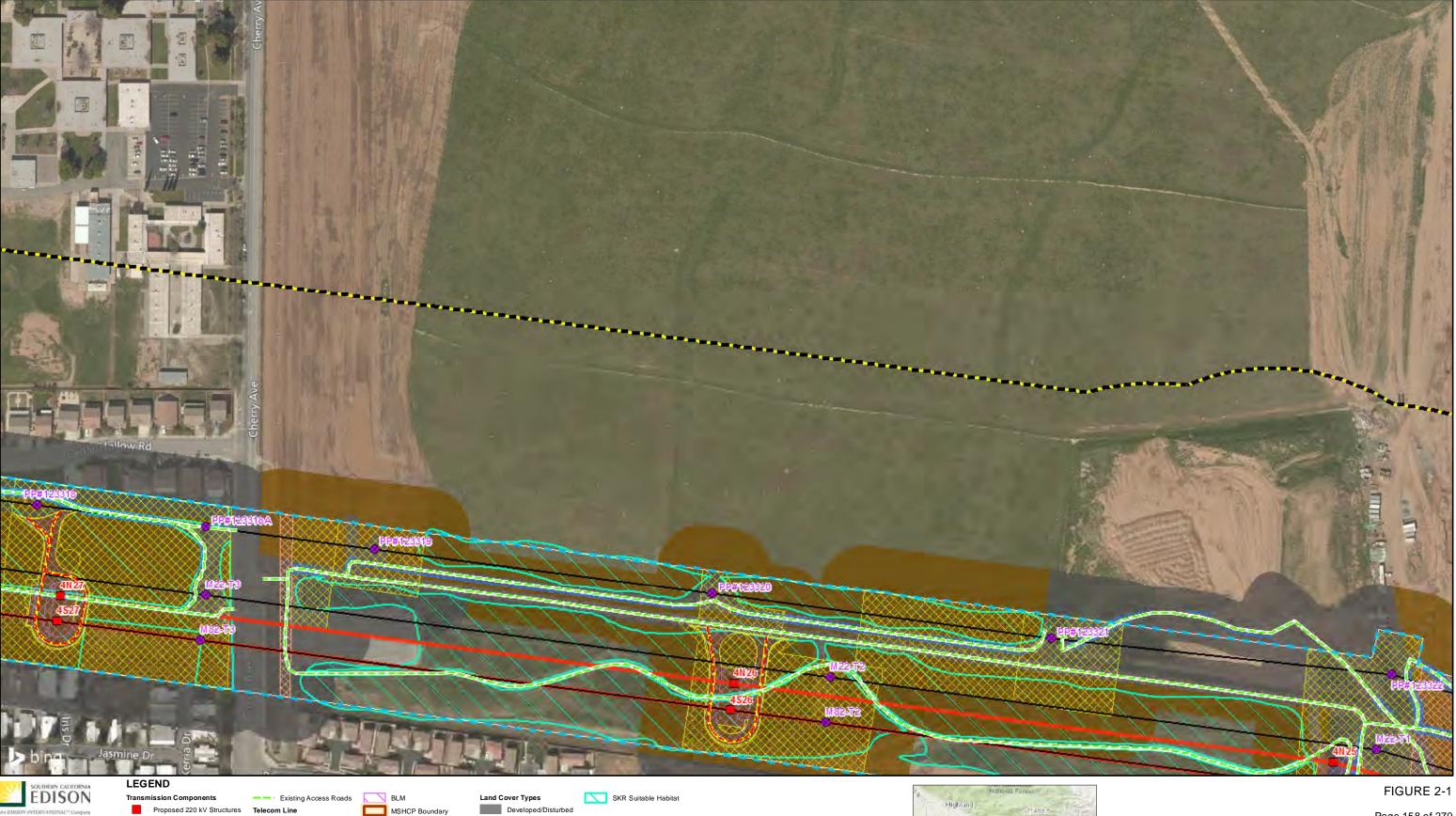
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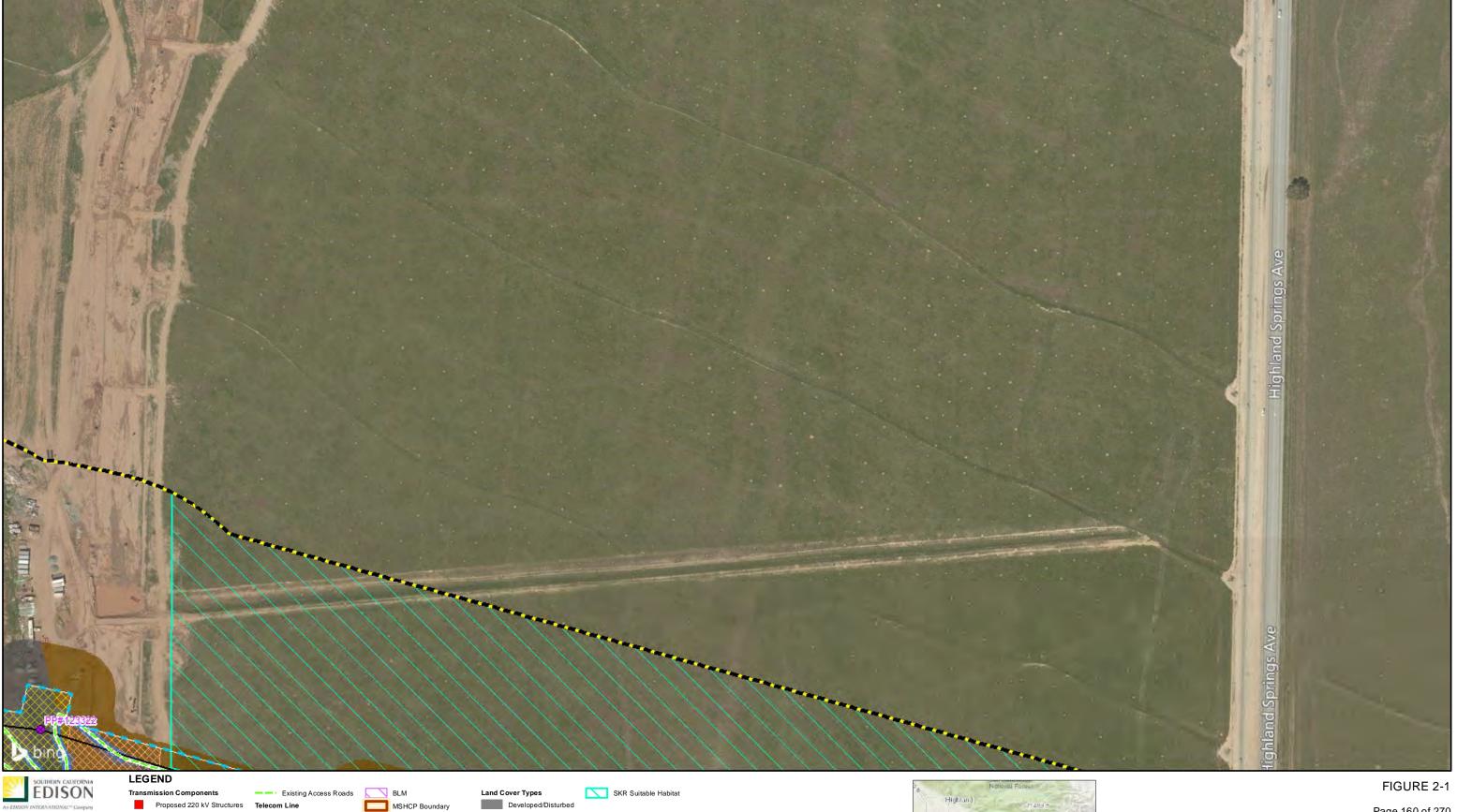
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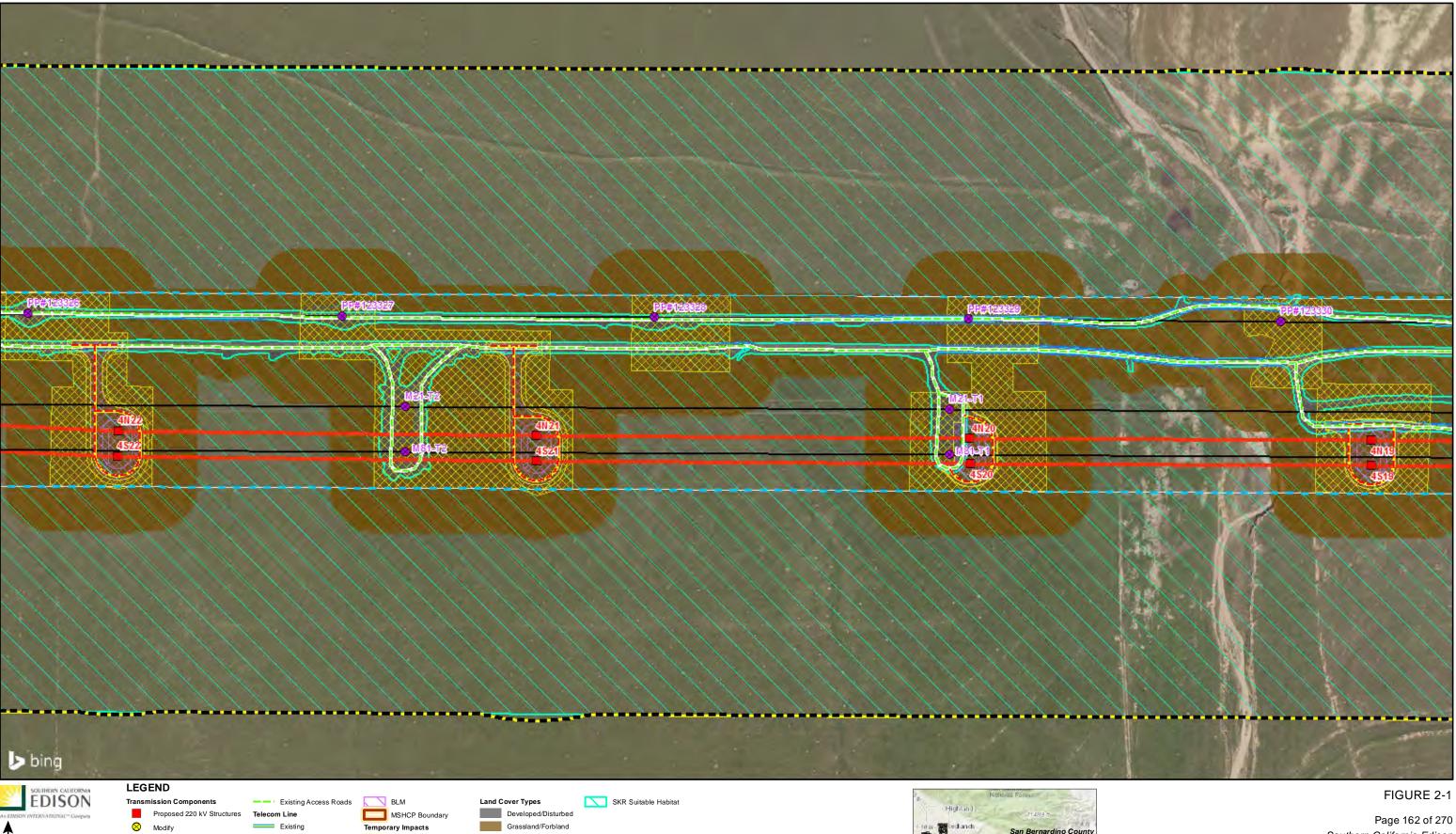
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Note: Project features shown are based on

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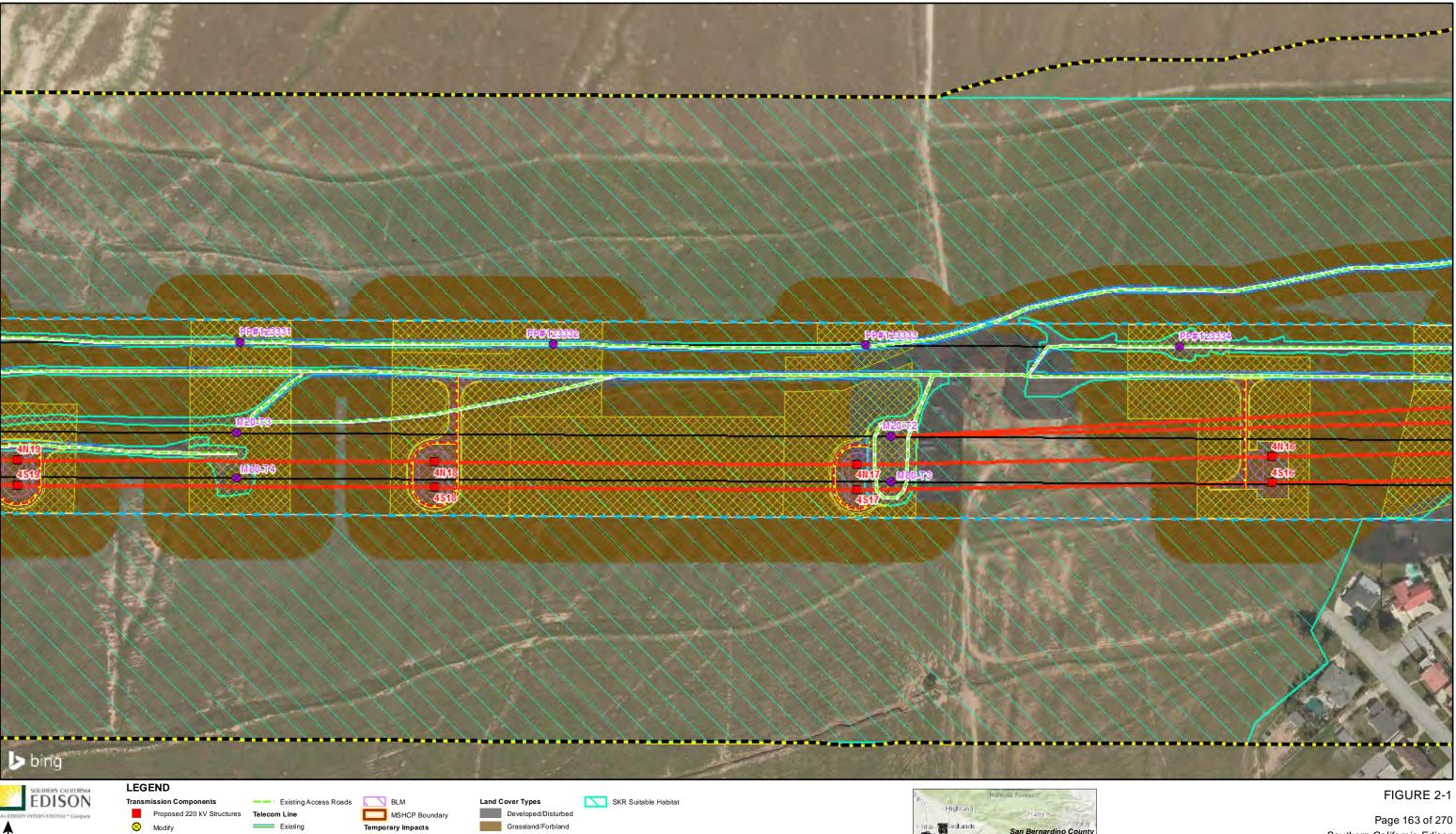
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Note: Project features shown are based on November 11, 2017 engineering design. The

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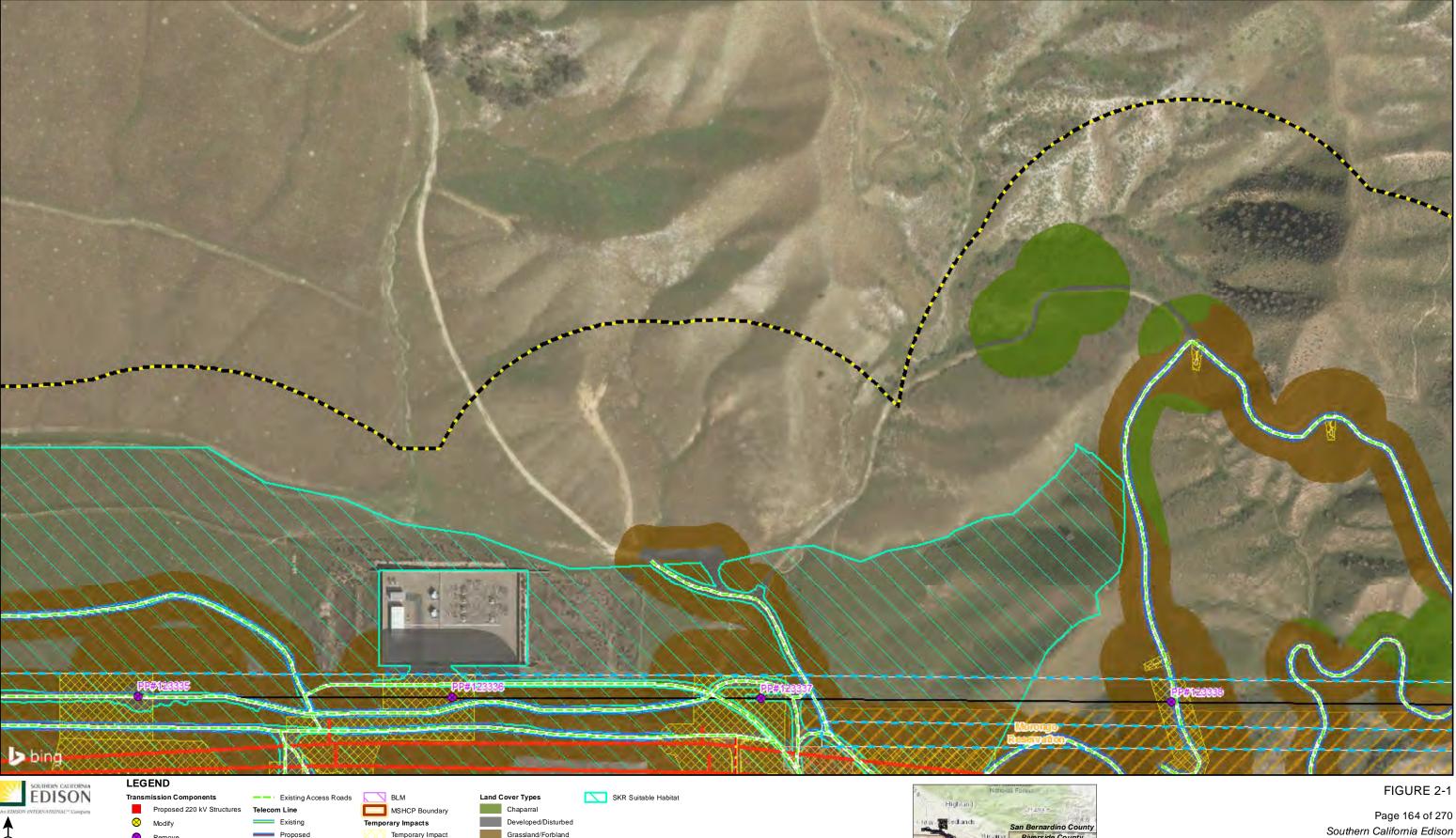
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Proposed

Study Area

Existing ROW

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Shoo-fly Work Area

Permanent Impact

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Guard Pole

Permanent Impacts

Southern California Edison West of Devers Upgrade Project Project Detail and Estimated **Maximum Potential Impacts** Habitat Restoration and Revegetation Plan



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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Grassland/Forbland

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

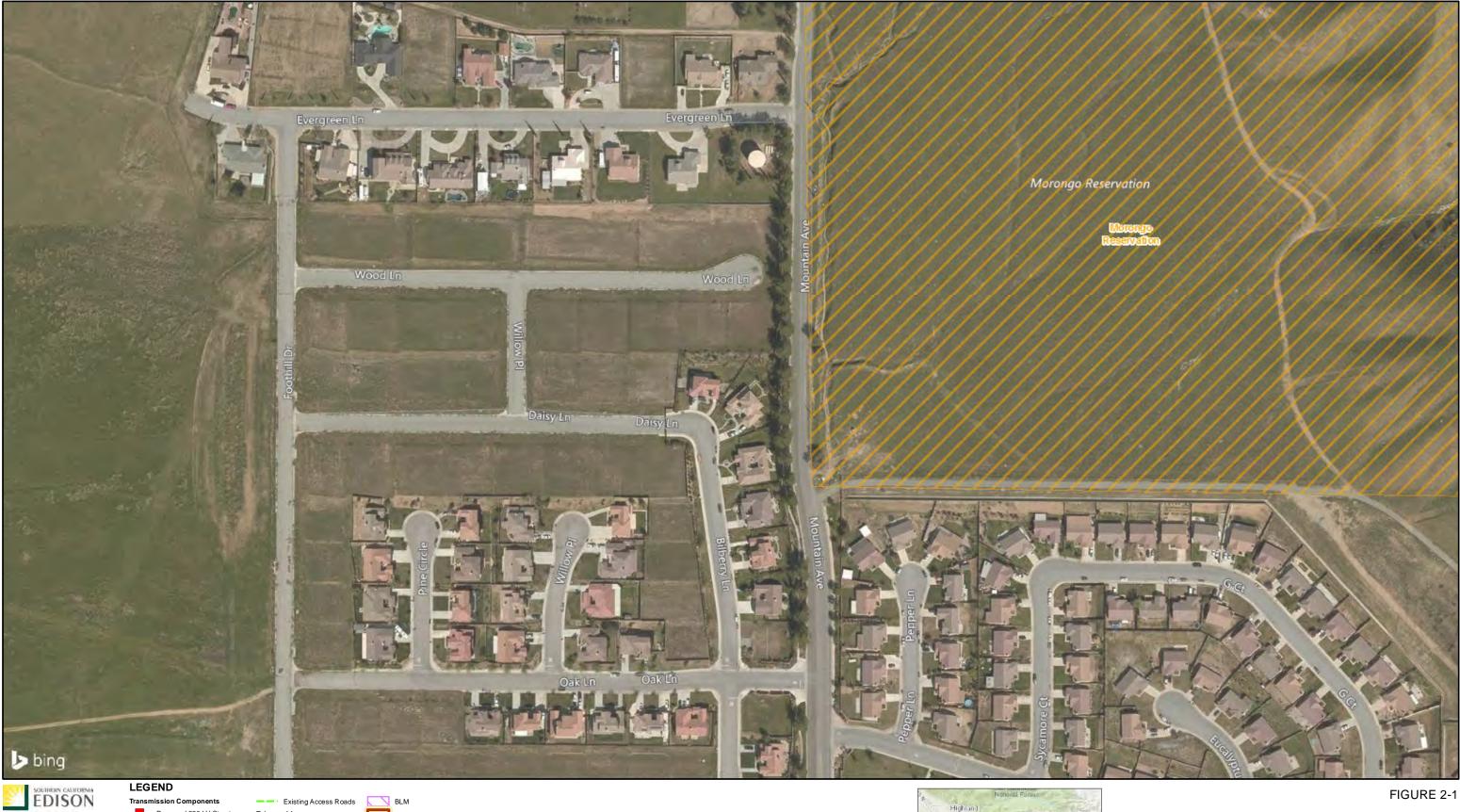
Permanent Impacts

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Existing ROW

Study Area



Existing

Existing ROW Study Area

MSHCP Boundary Temporary Impacts Temporary Impact Guard Pole

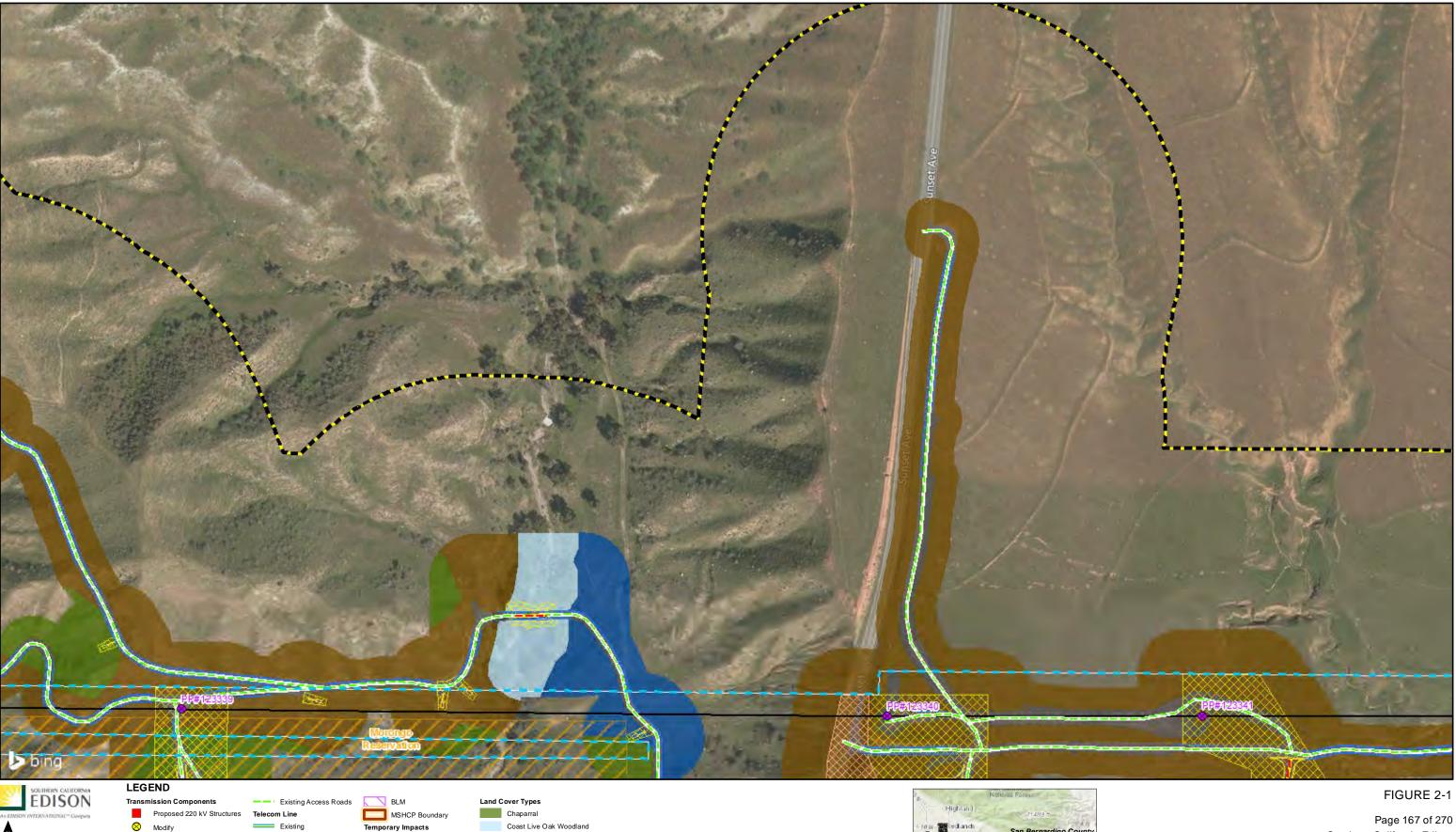
> Shoo-fly Work Area Permanent Impacts Permanent Impact

> > Potential Road Widening

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Coastal Sage Scrub

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Temporary Impact

Shoo-fly Work Area

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Potential Road Widening

Guard Pole

Permanent Impacts

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

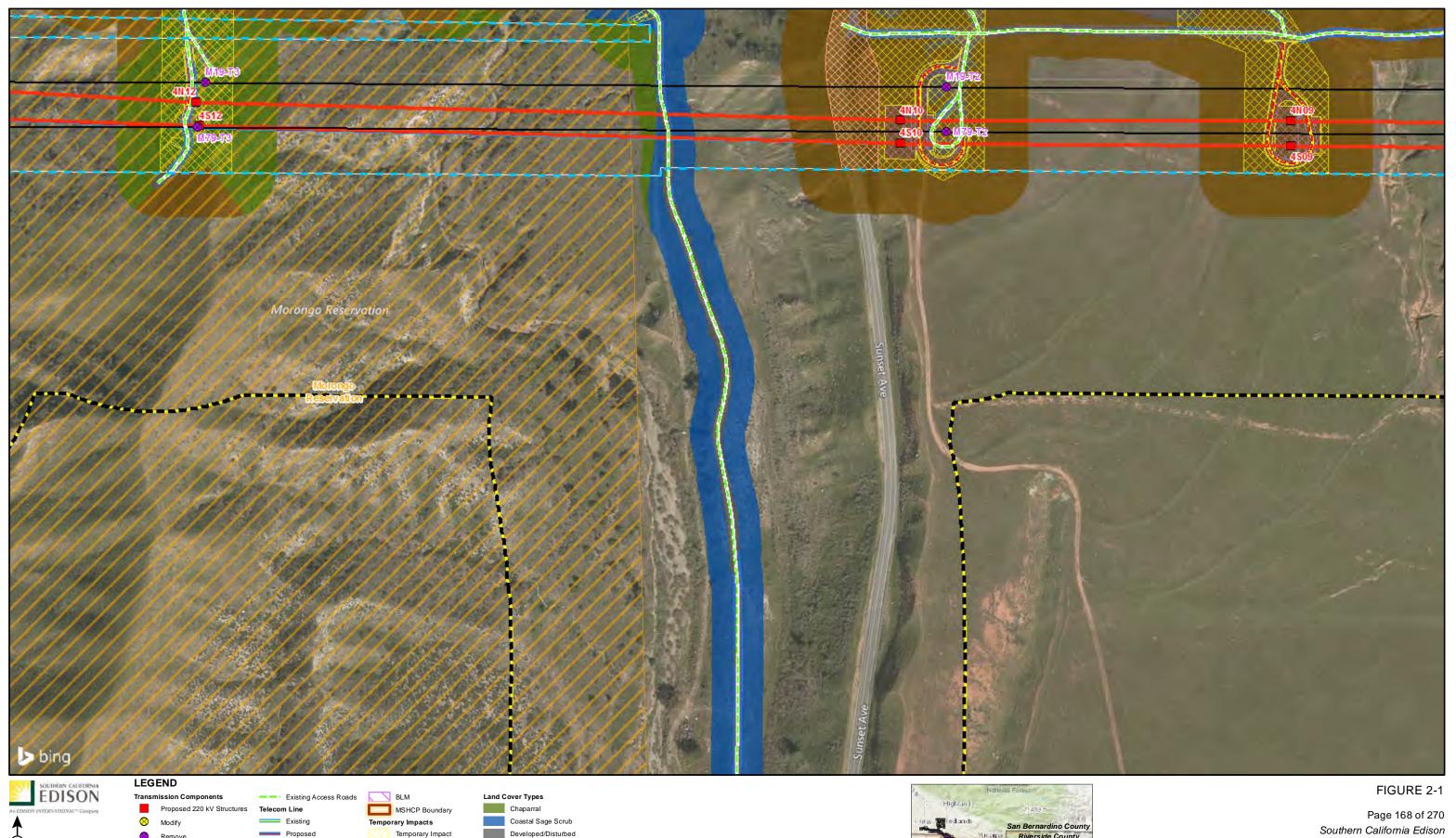
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Proposed 220kV

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Riverside County

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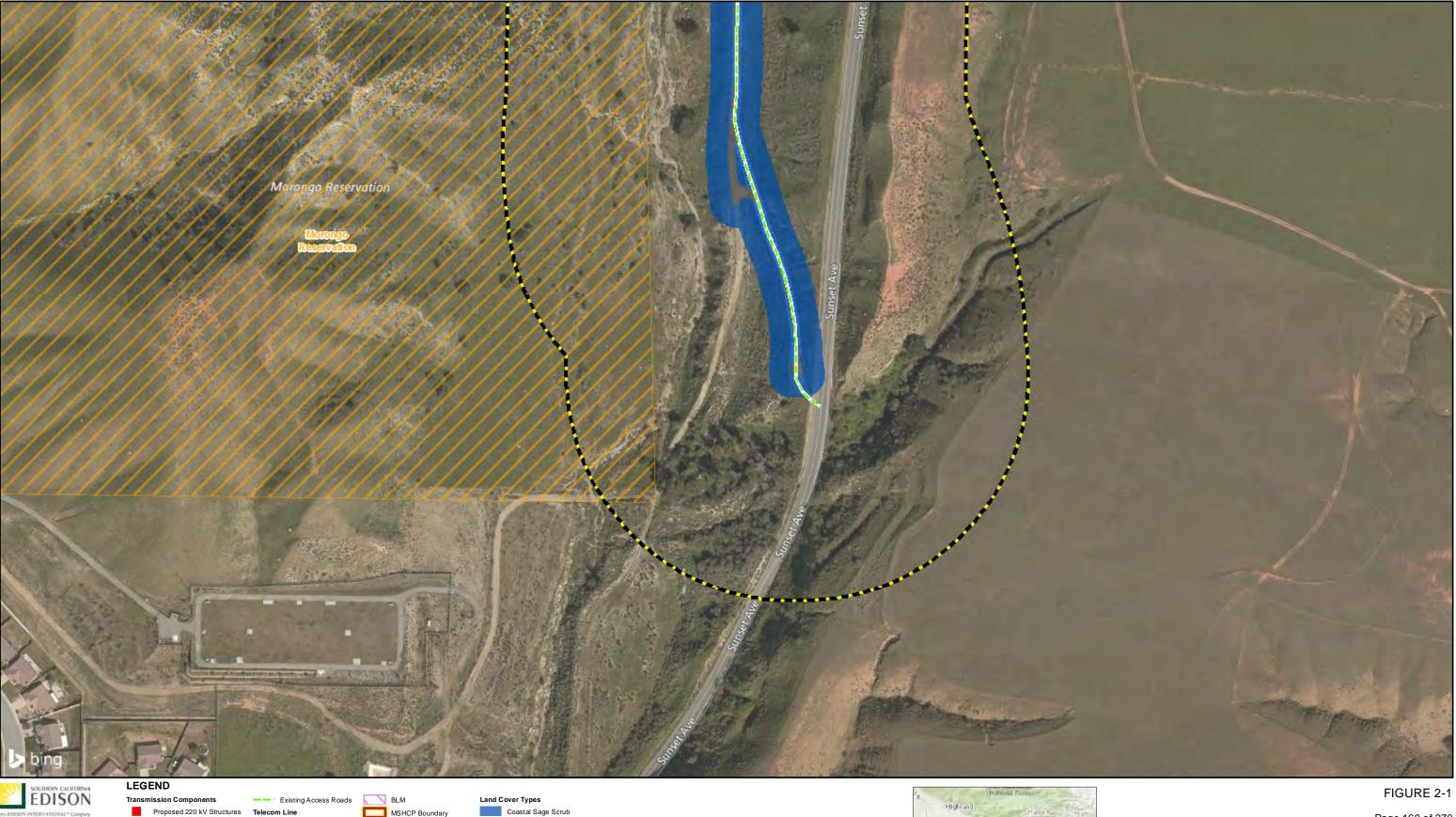
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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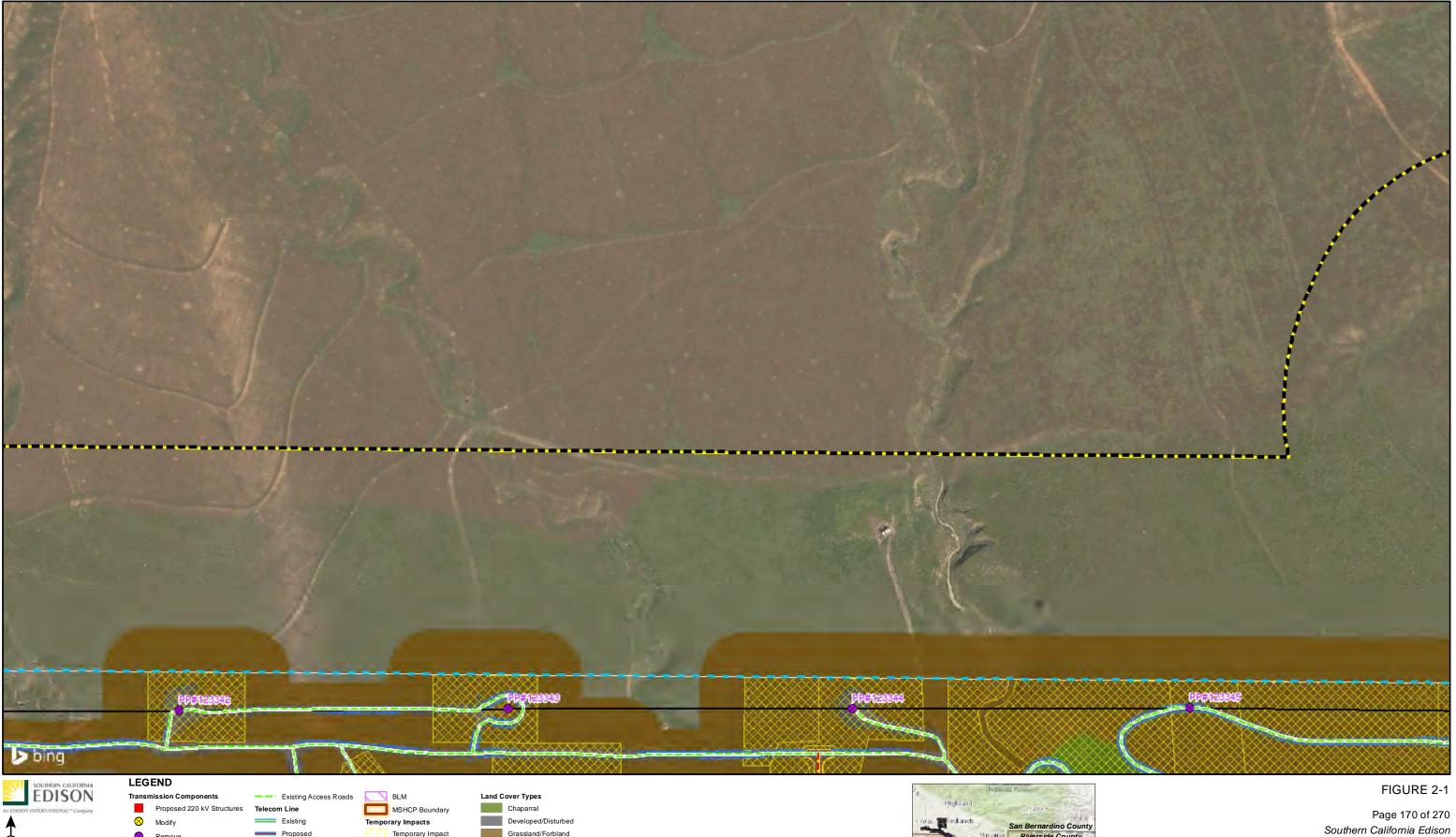
Temporary Impact Guard Pole

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Developed/Disturbed



Note: Project features shown are based on November 11, 2017 engineering design. The

design is subject to refinements prior to the start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid
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Proposed 220kV

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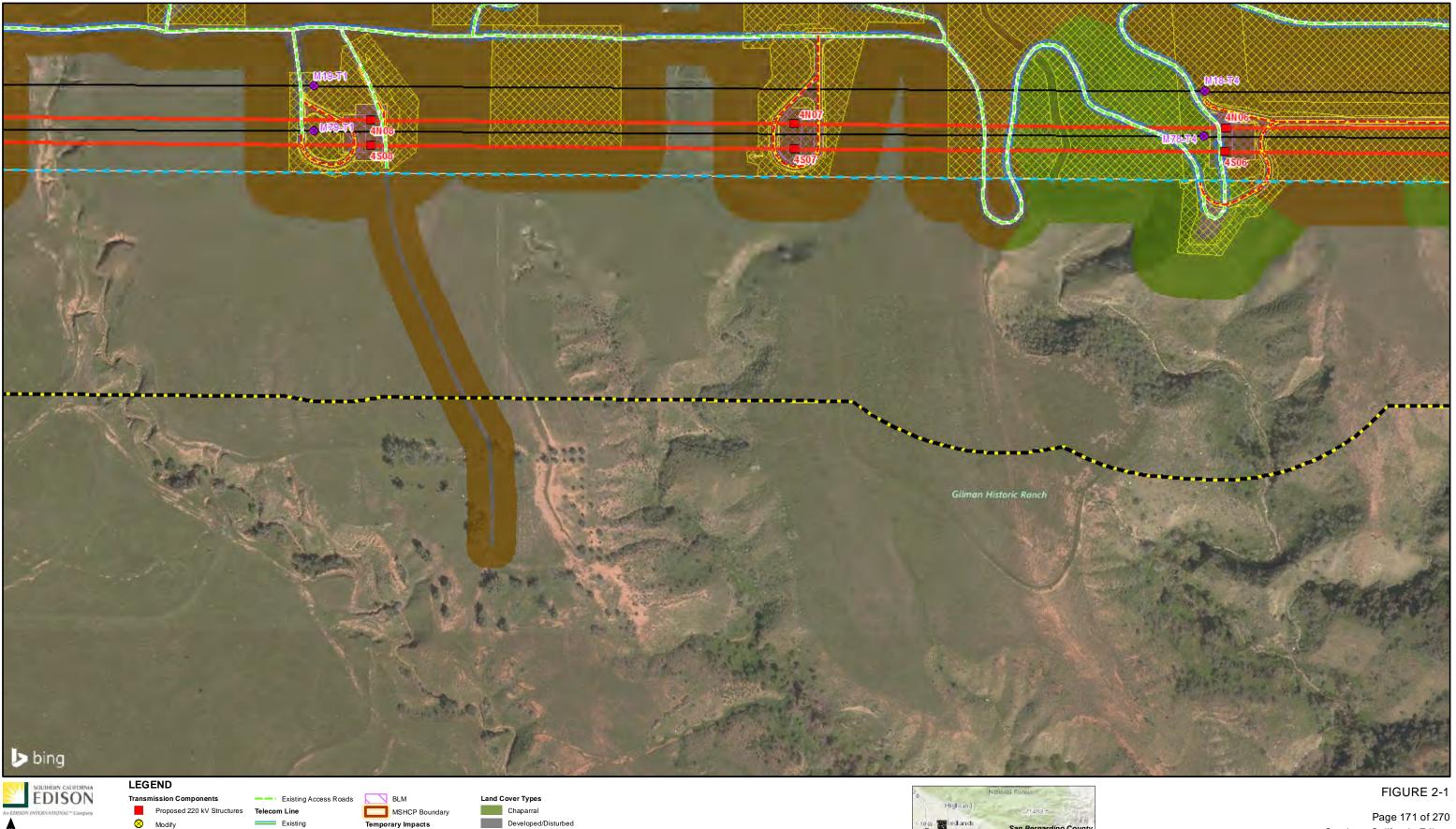
Permanent Impacts

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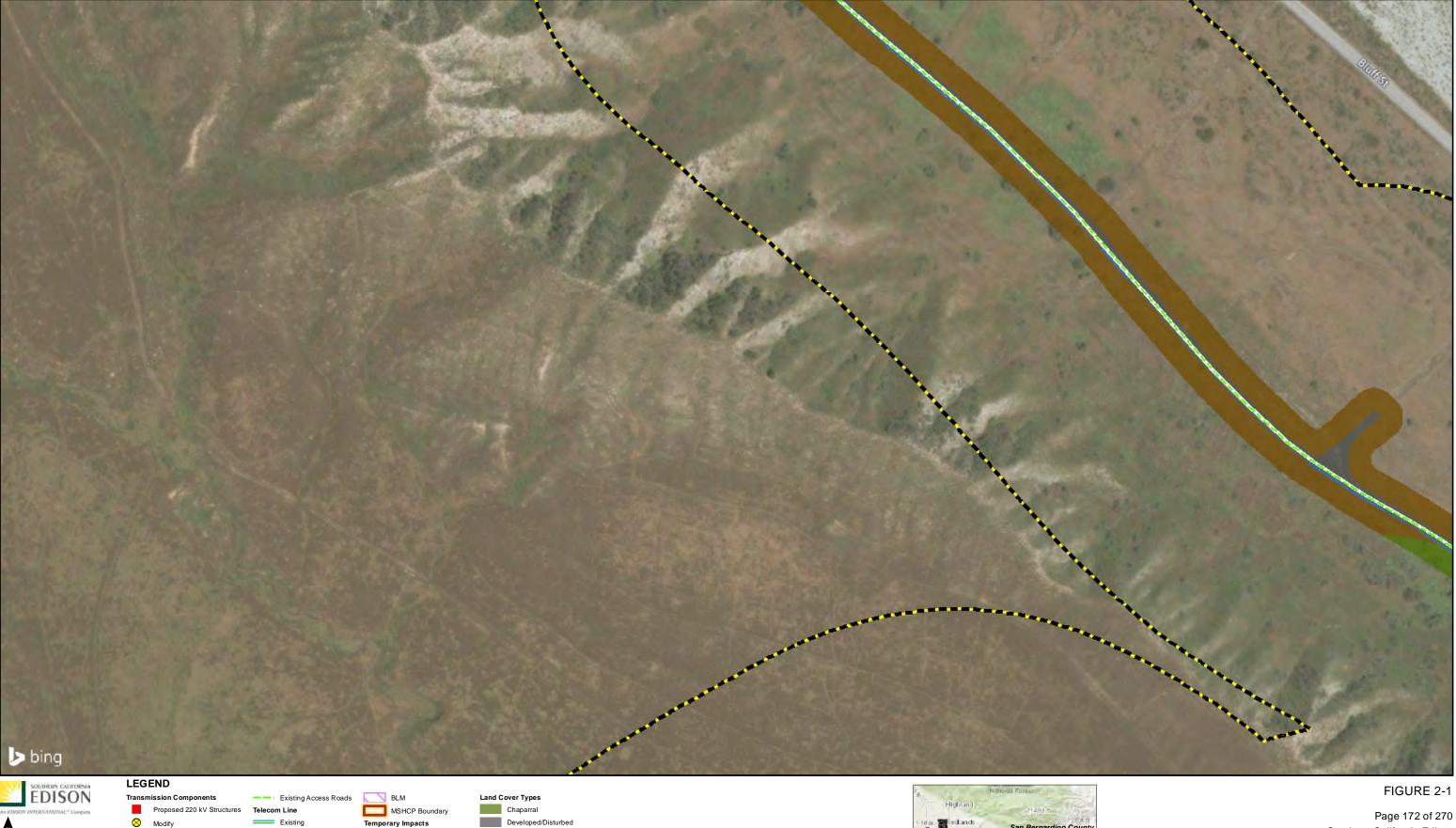
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Proposed

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Temporary Impact

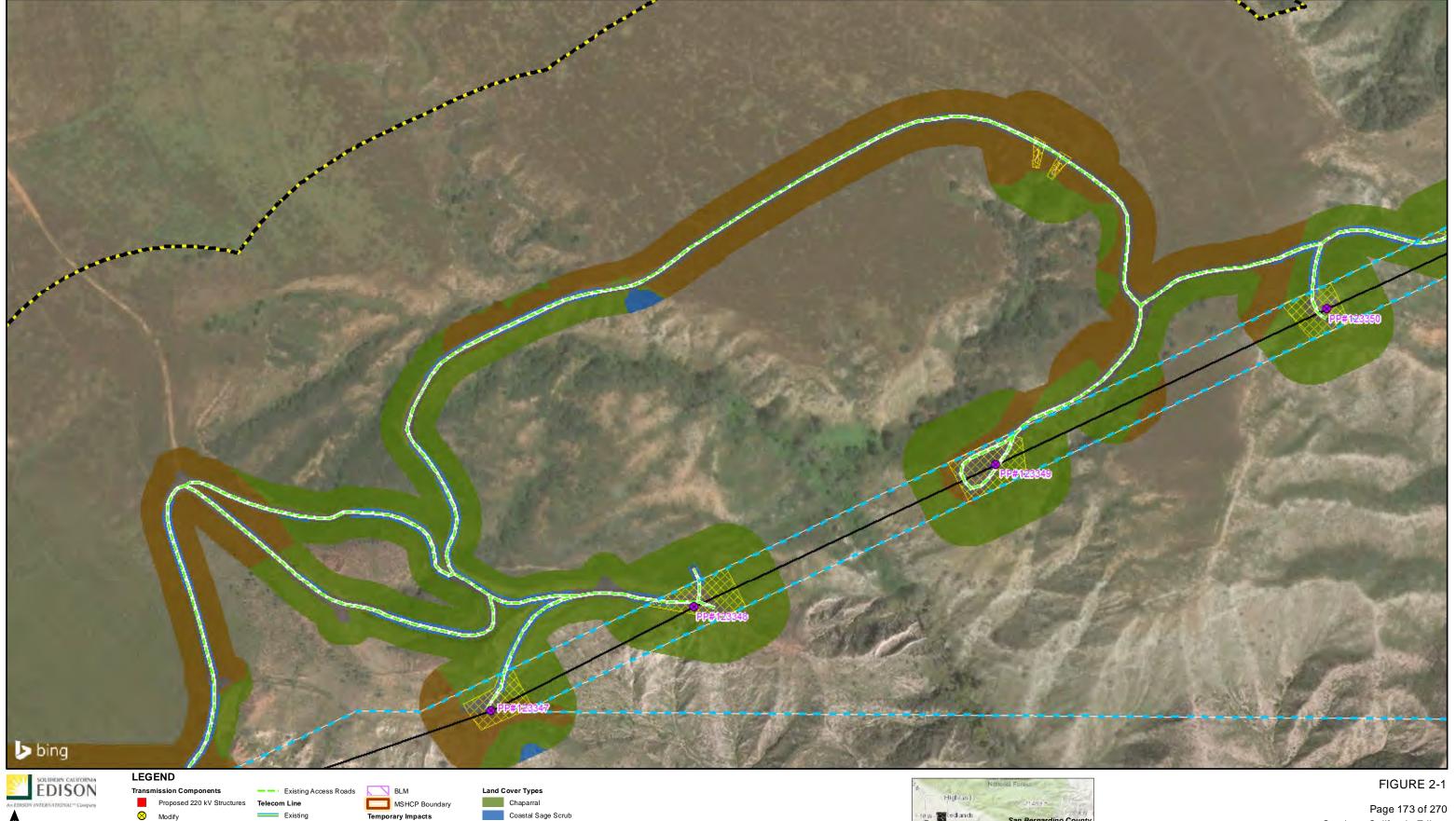
Shoo-fly Work Area

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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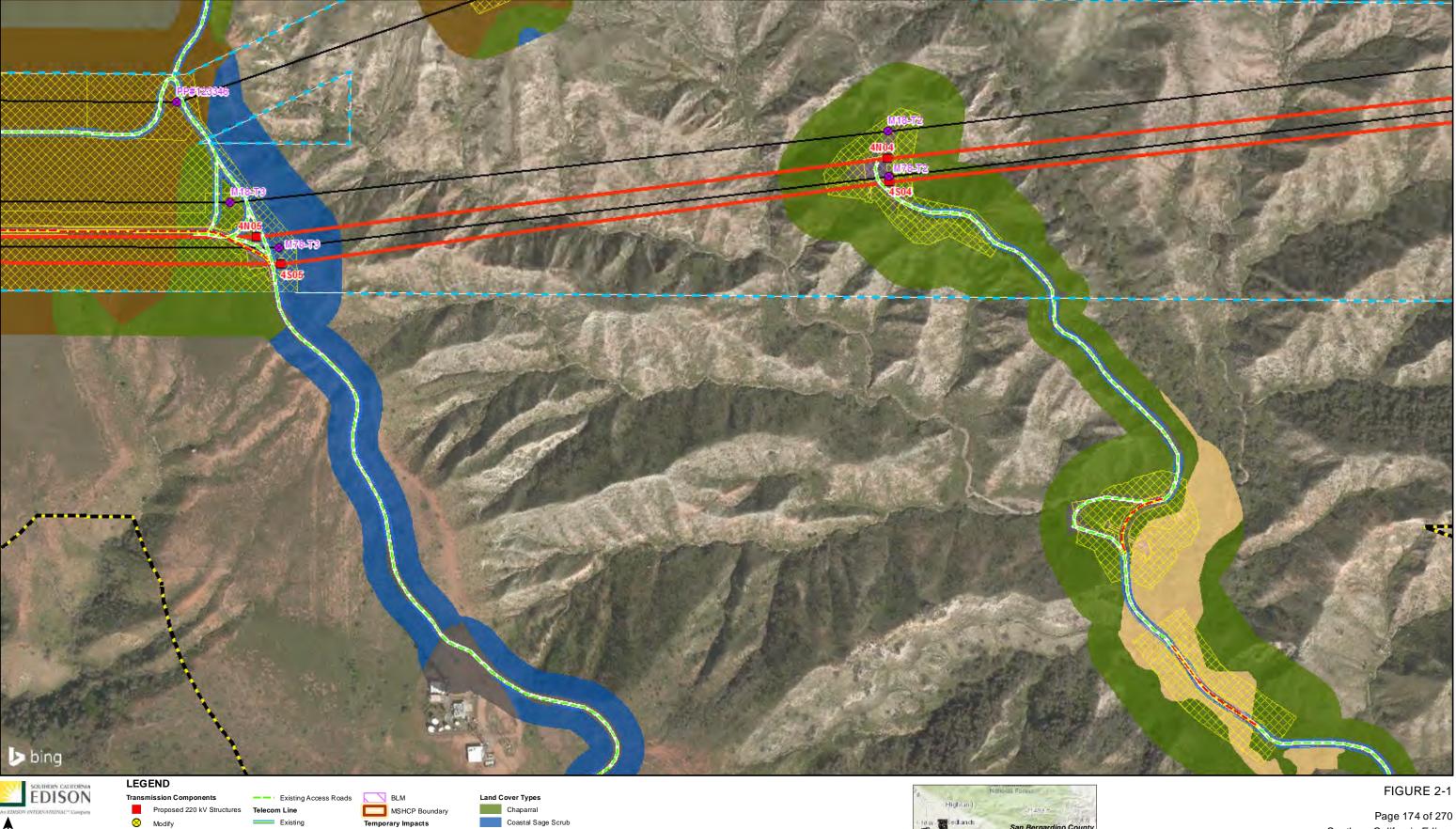
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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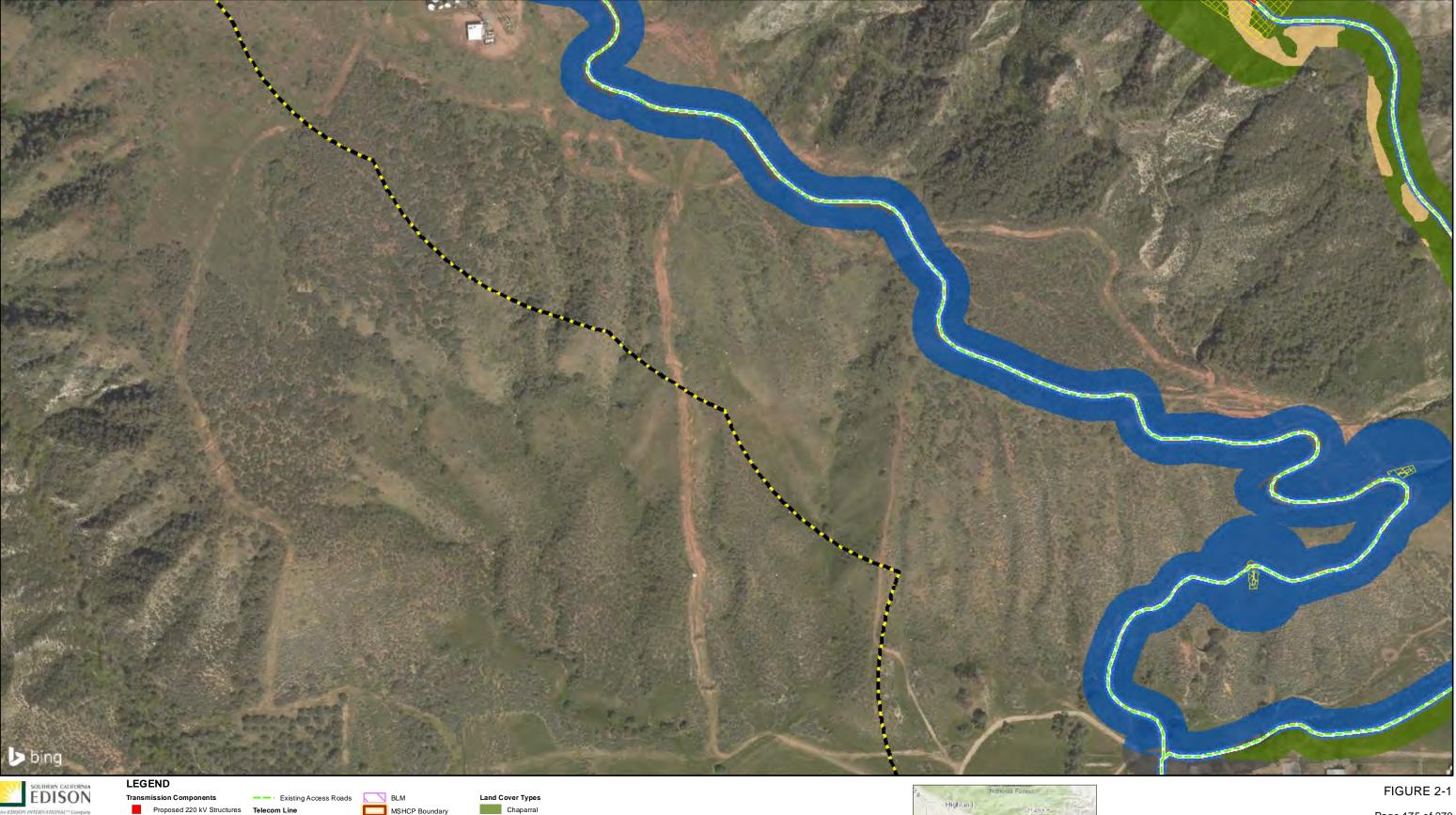
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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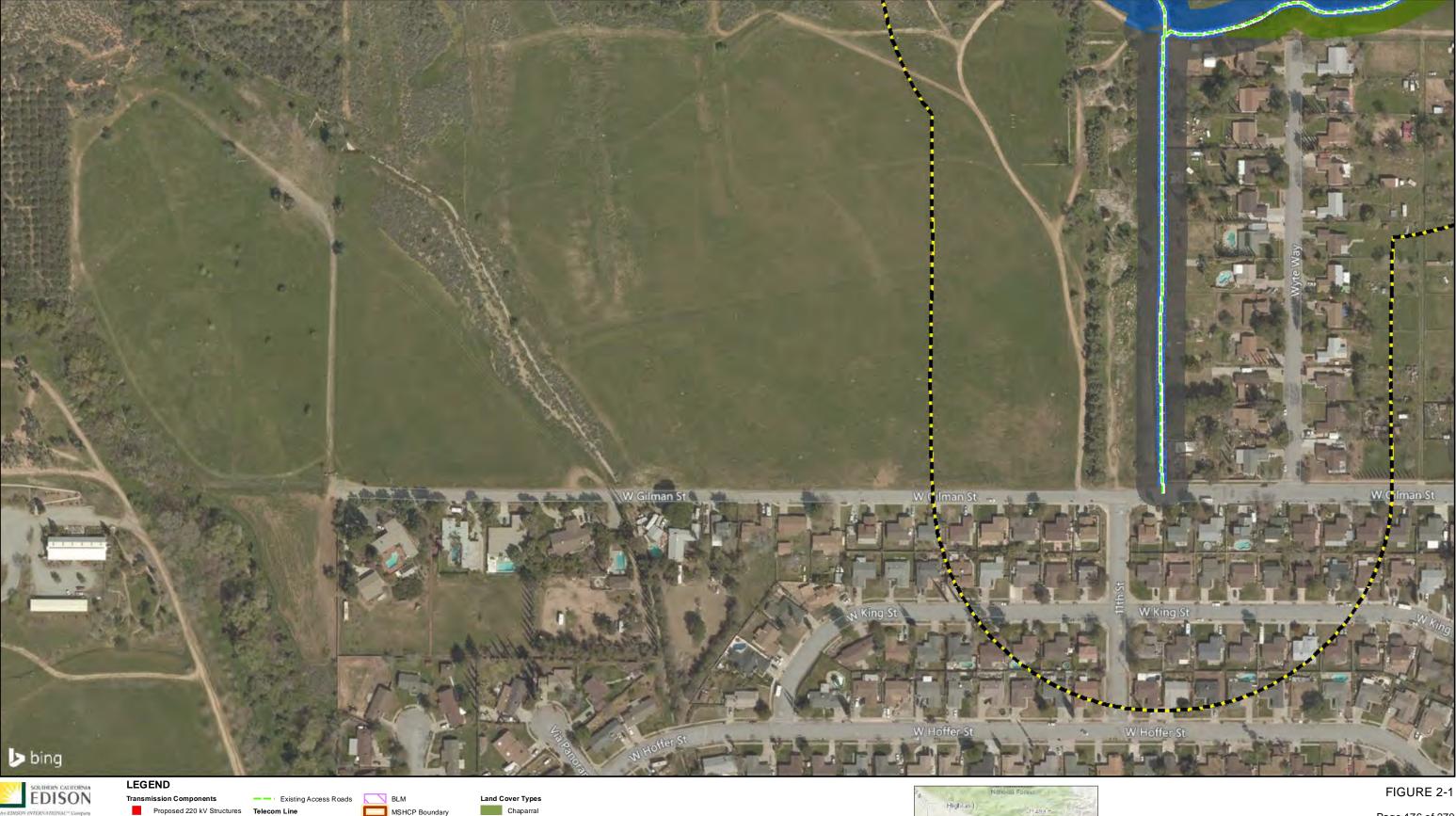
Potential Road Widening

Guard Pole

Coastal Sage Scrub

Developed/Disturbed

Riparian Woodland



0 100 200 Existing 27

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Desert Scrub

Developed/Disturbed

Grassland/Forbland

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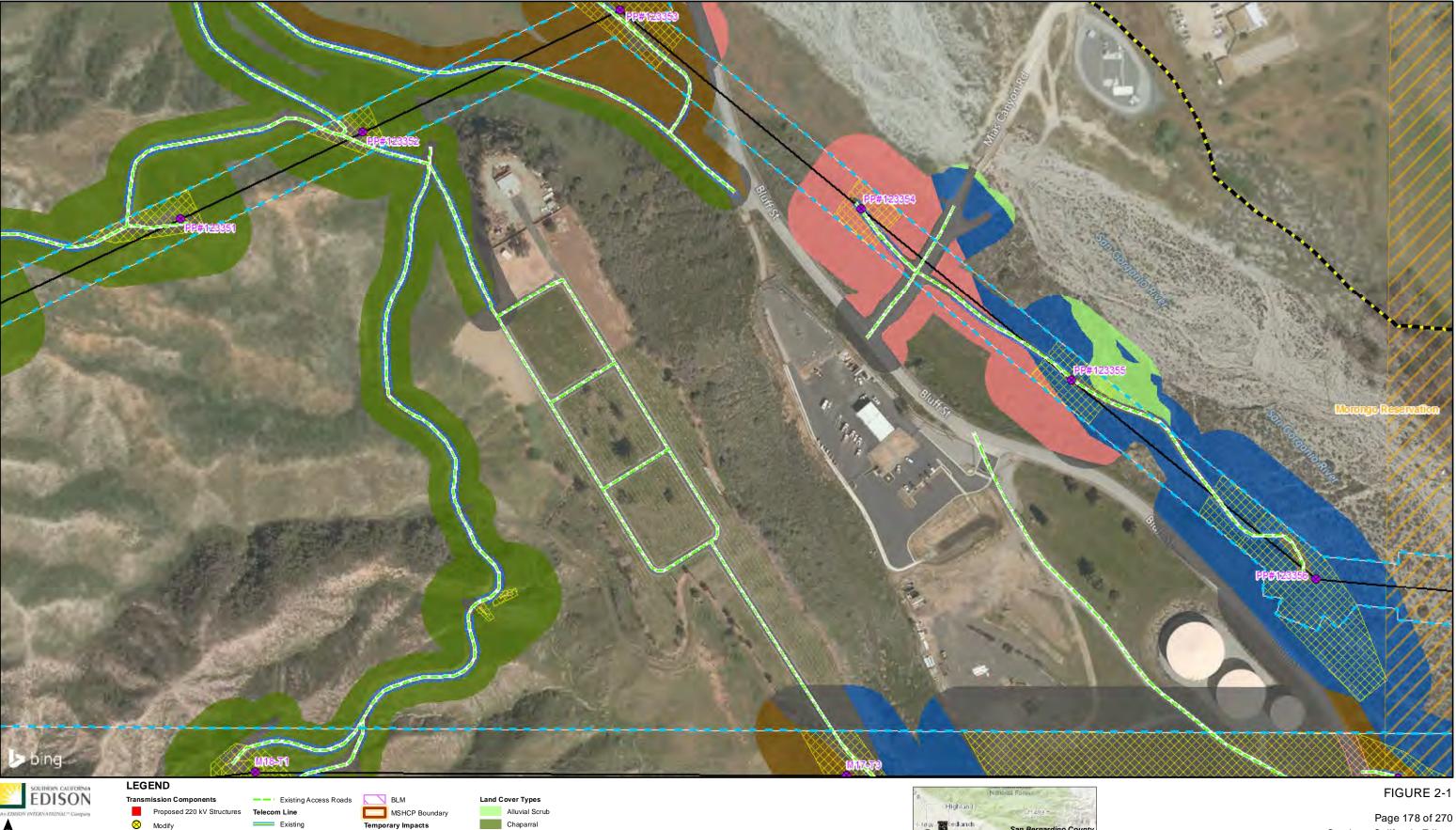
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Desert Scrub

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Temporary Impact

Shoo-fly Work Area

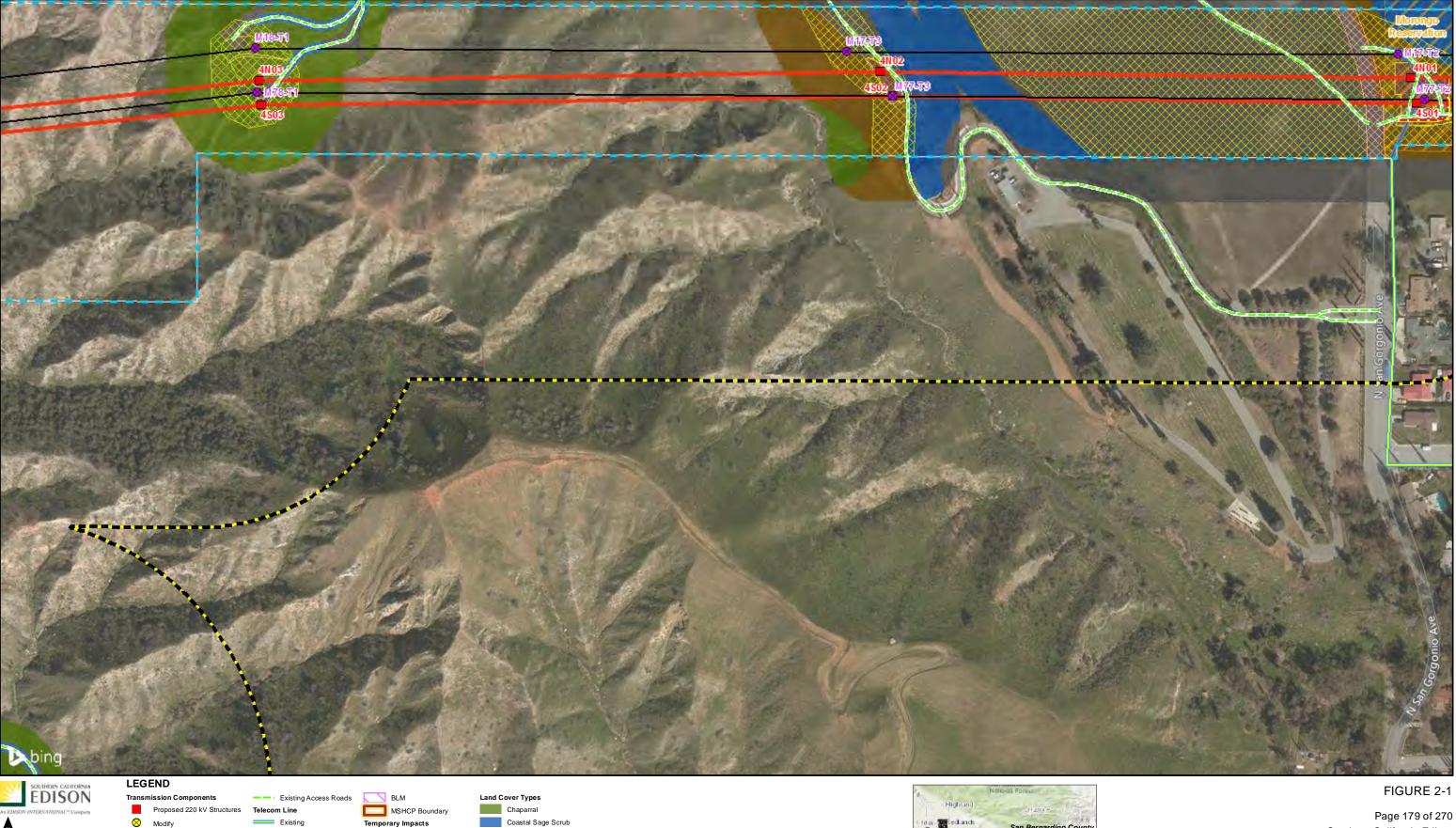
Permanent Impact

Potential Road Widening

Guard Pole

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Temporary Impact

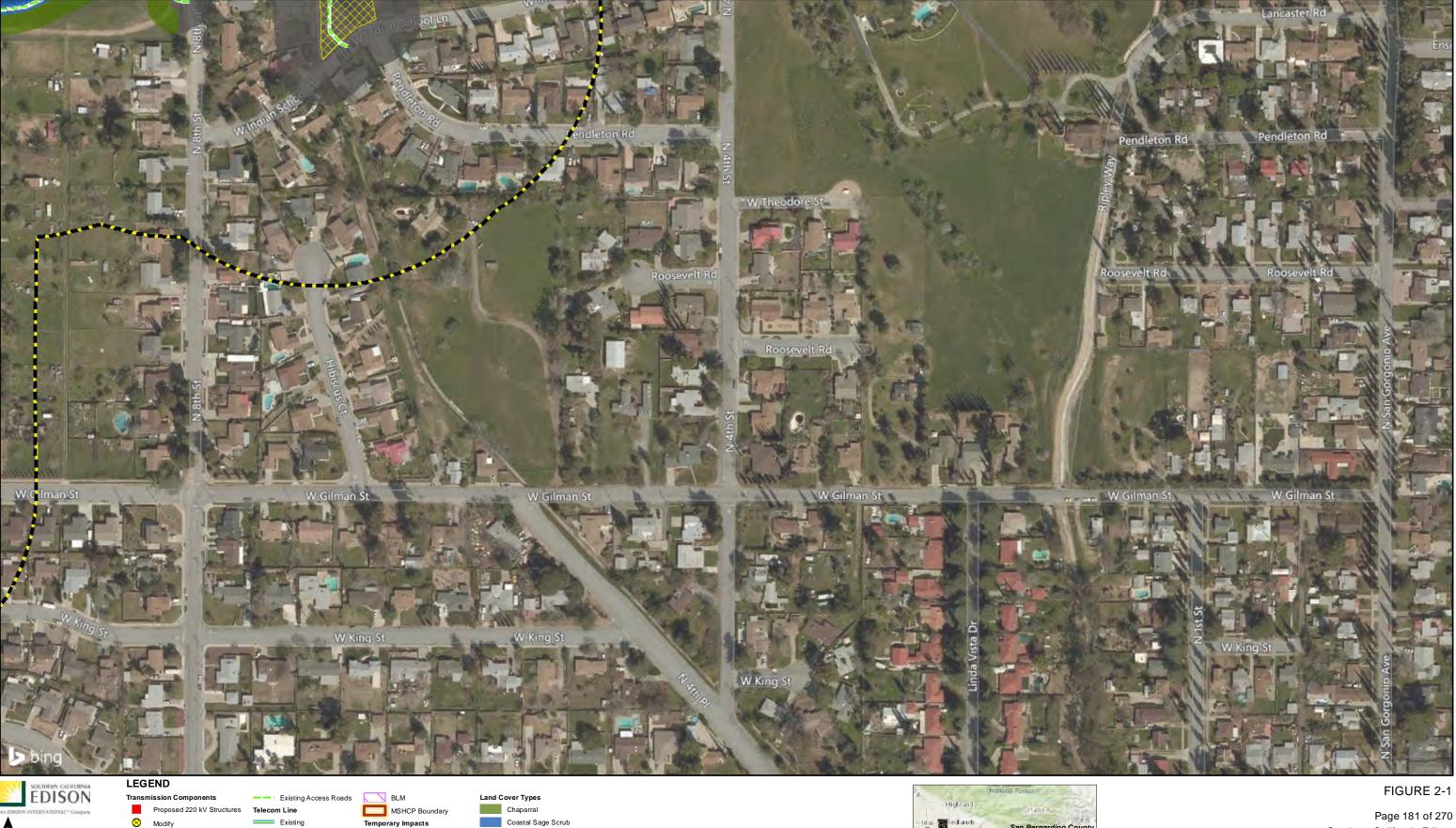
Shoo-fly Work Area

Permanent Impact

Potential Road Widening

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Permanent Impacts



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Developed/Disturbed

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Potential Road Widening

Permanent Impacts

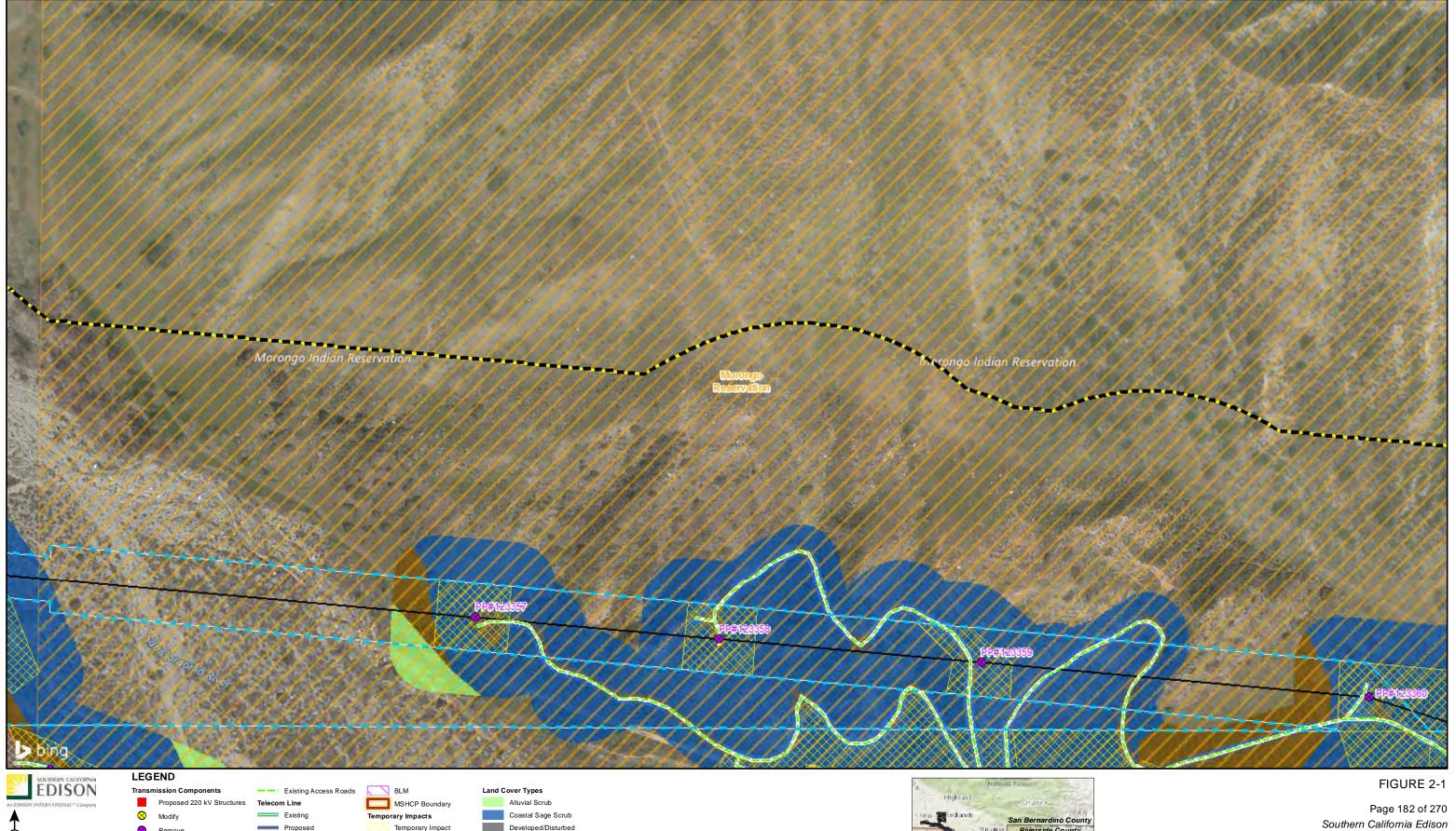
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Land Use

Existing ROW

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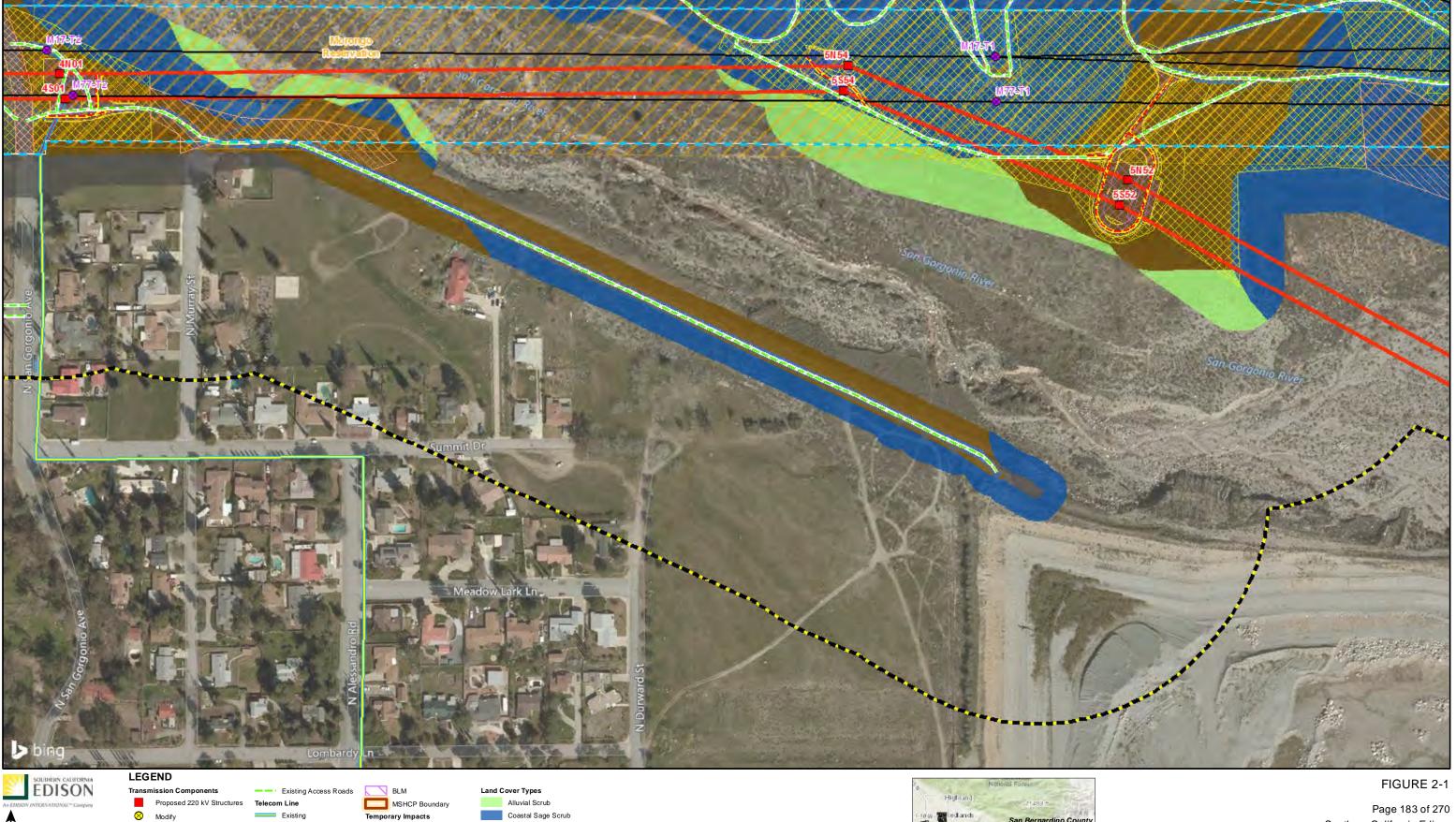
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Developed/Disturbed

Grassland/Forbland

Temporary Impact

Shoo-fly Work Area

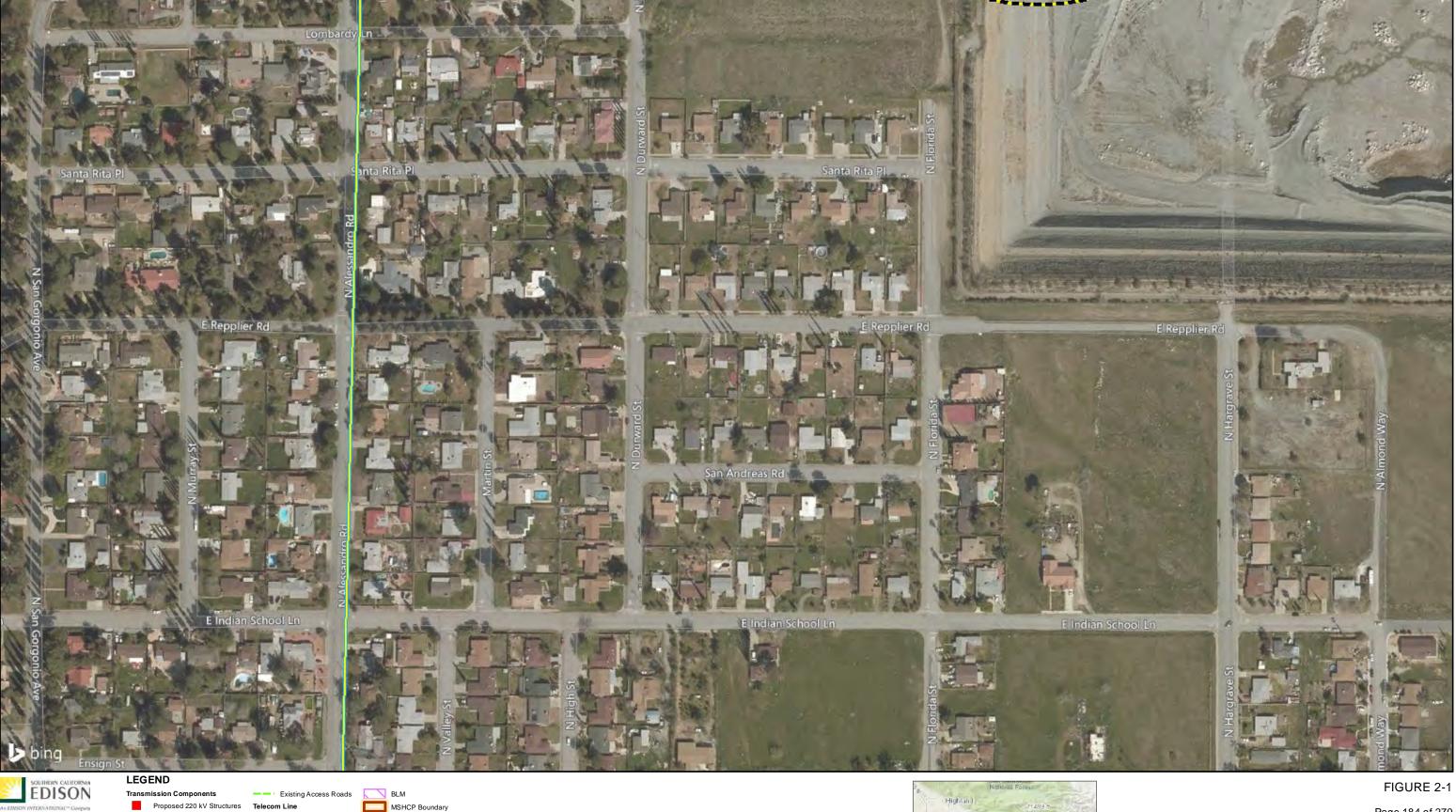
Permanent Impact

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction. Highland
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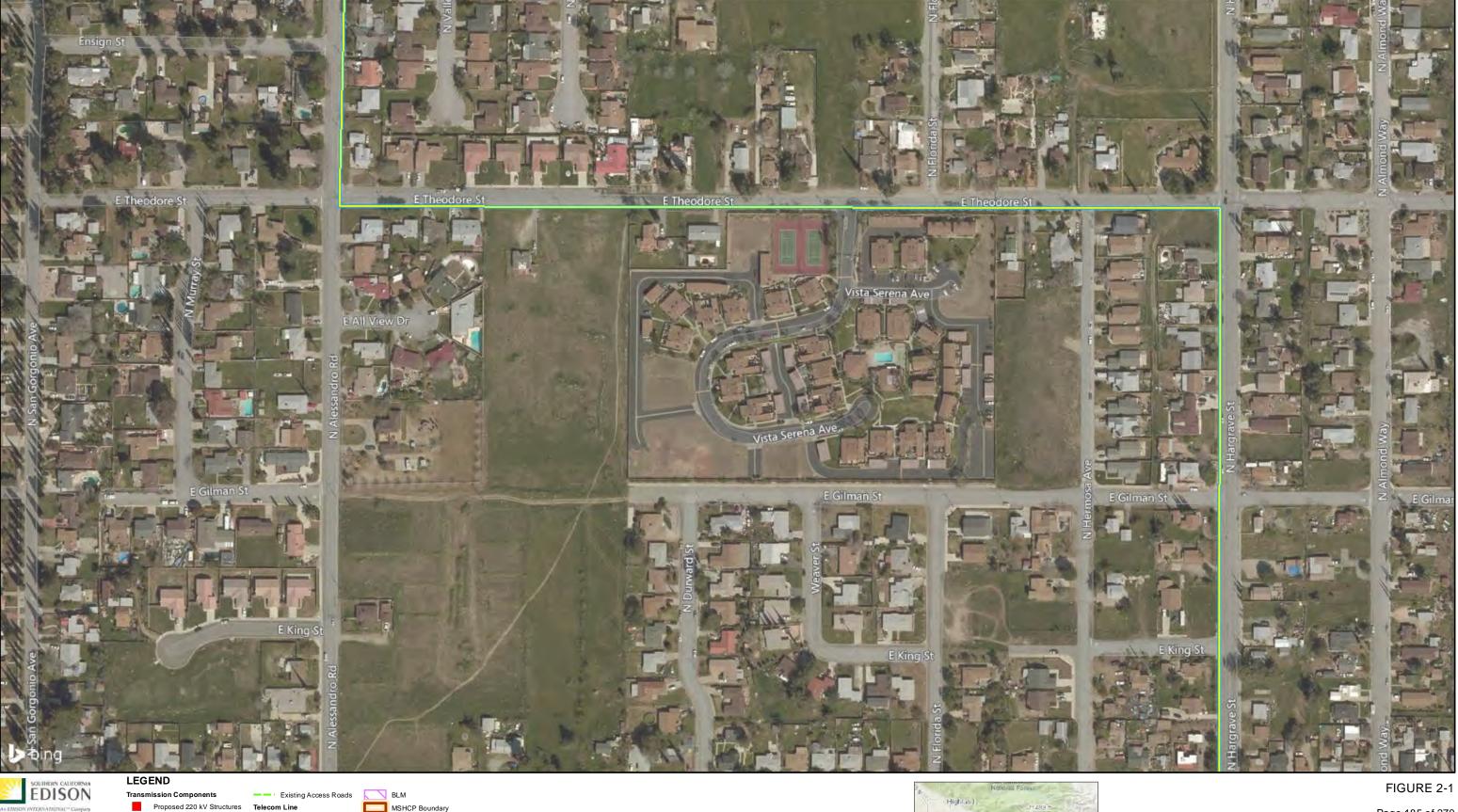
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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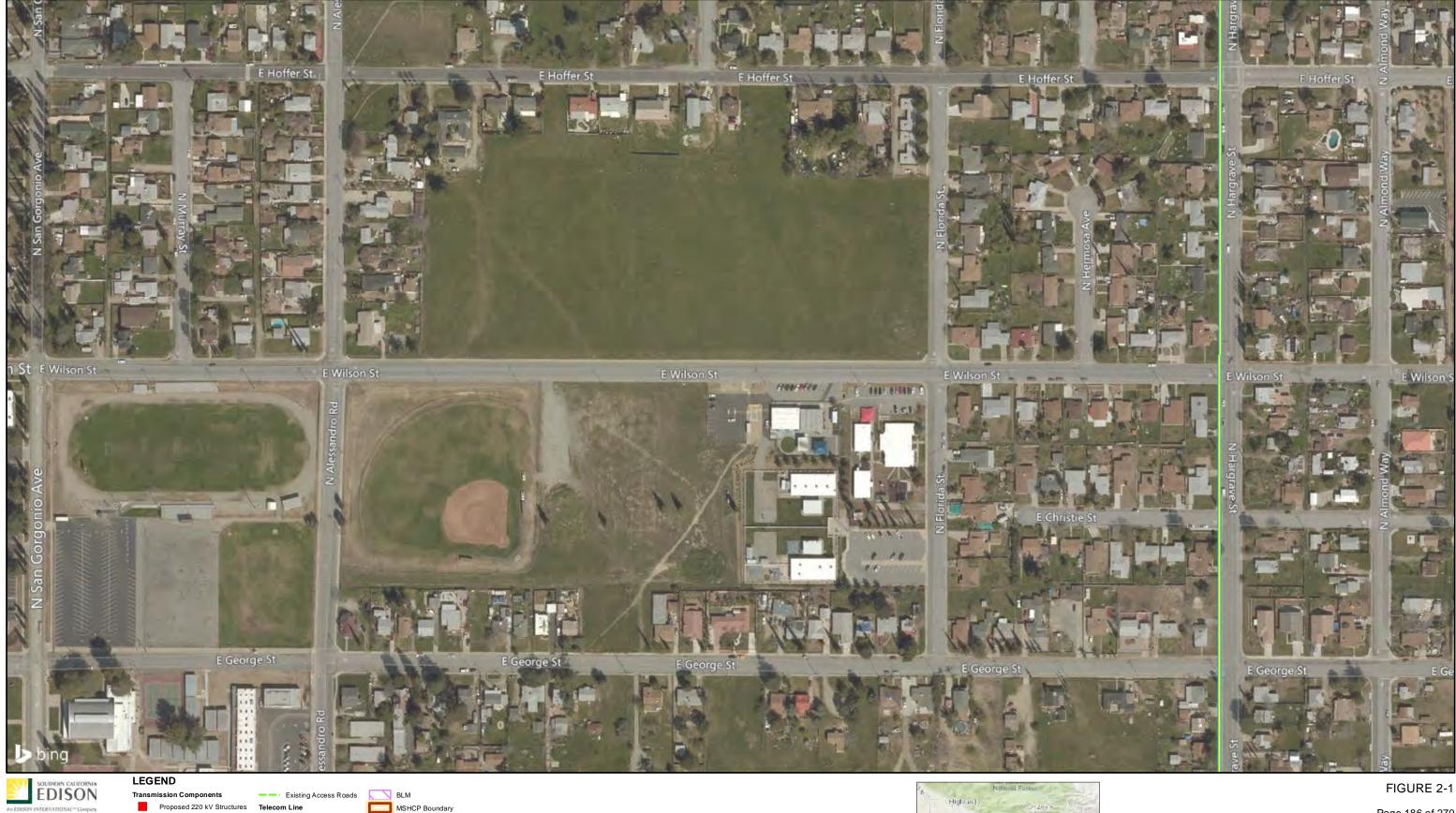
Shoo-fly Work Area

Permanent Impact

Potential Road Widening

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction. Highland
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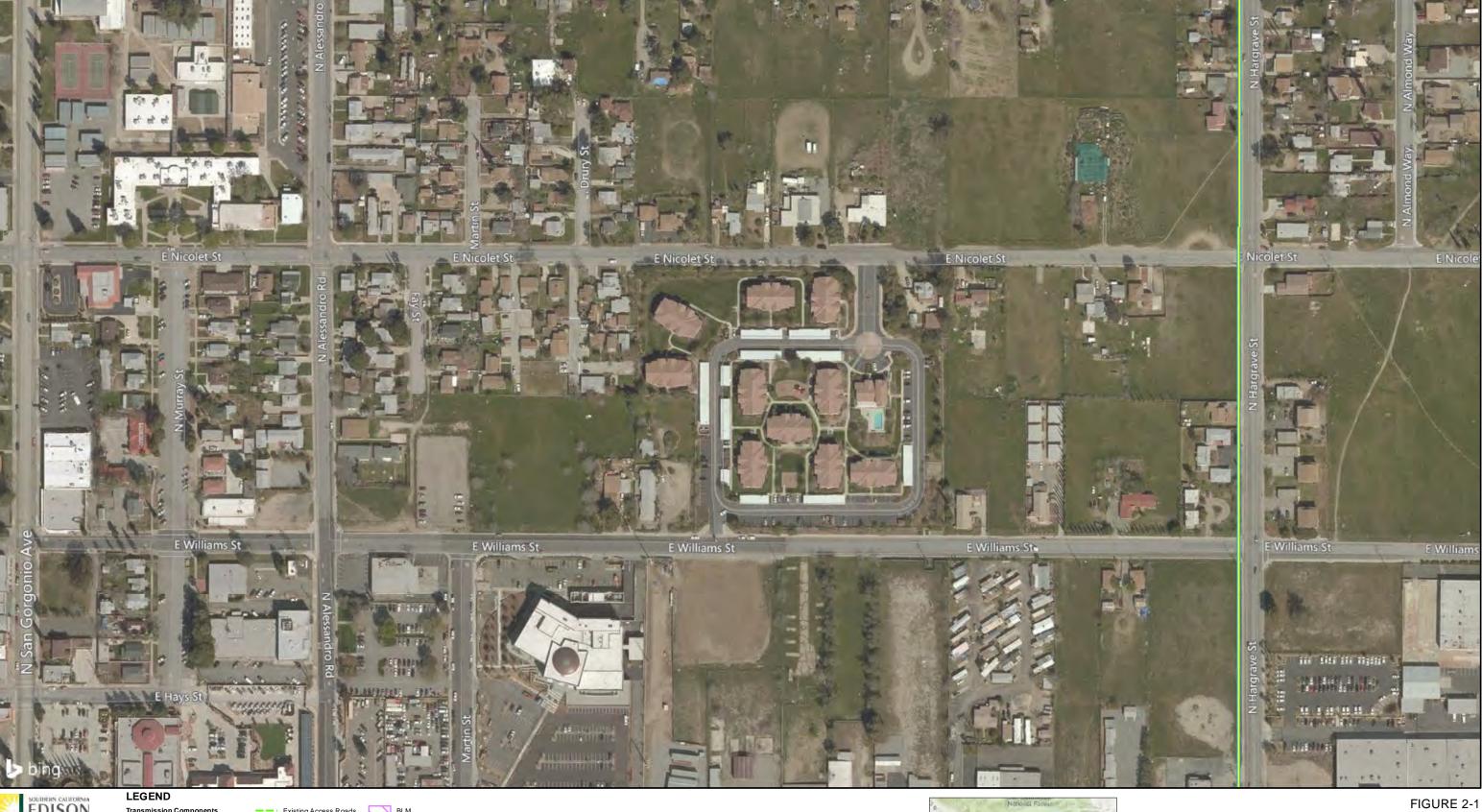
Permanent Impacts

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Shoo-fly Work Area

Permanent Impact

Potential Road Widening





Proposed 220 kV Structures

Modify

Remove Existing

Existing 220kV
Proposed 220kV

Existing Access Roads
Telecom Line
Existing

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Permanent Impact

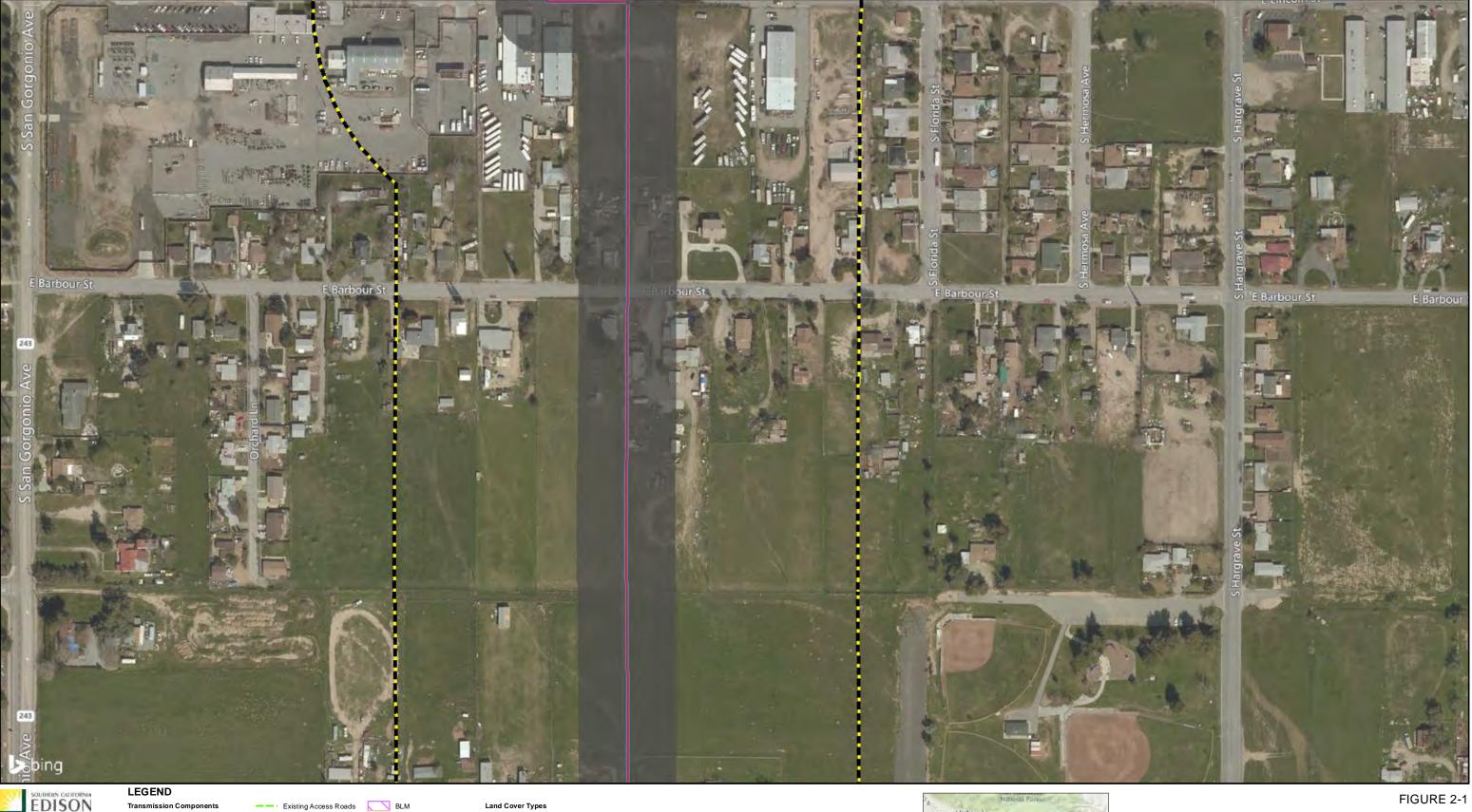
Potential Road Widening

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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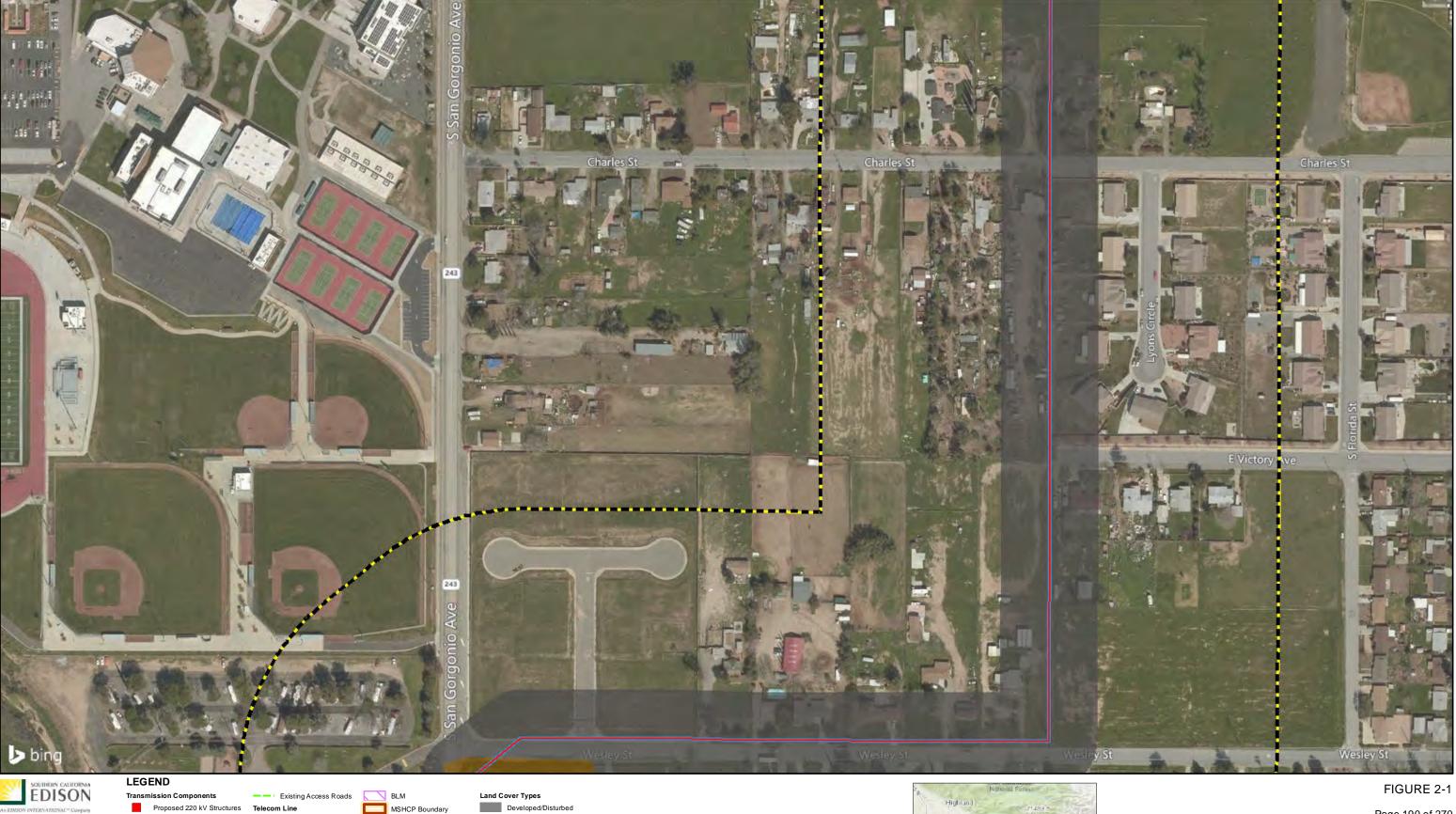
Shoo-fly Work Area Permanent Impacts Permanent Impact

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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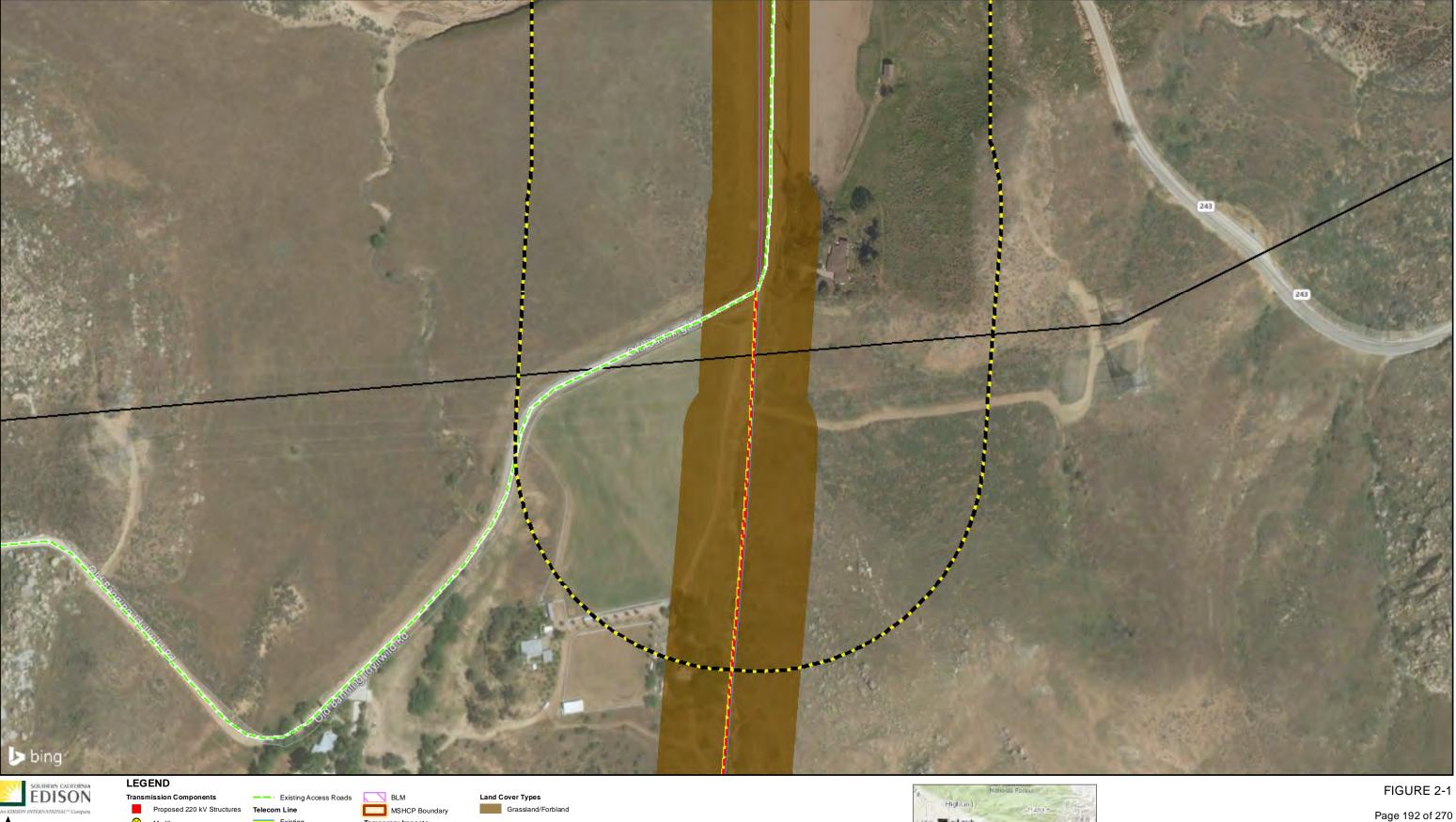
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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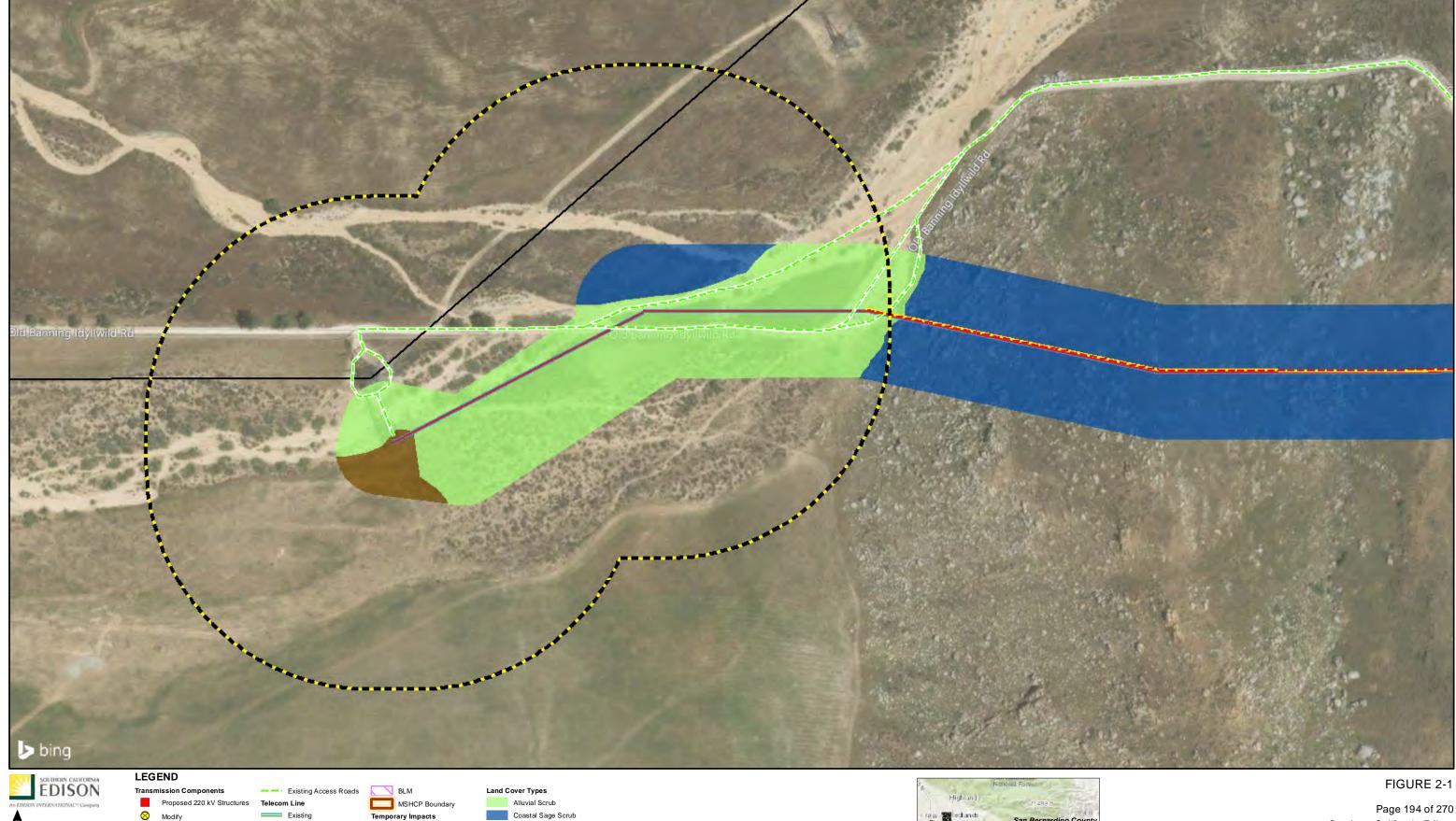
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Existing ROW

Grassland/Forbland

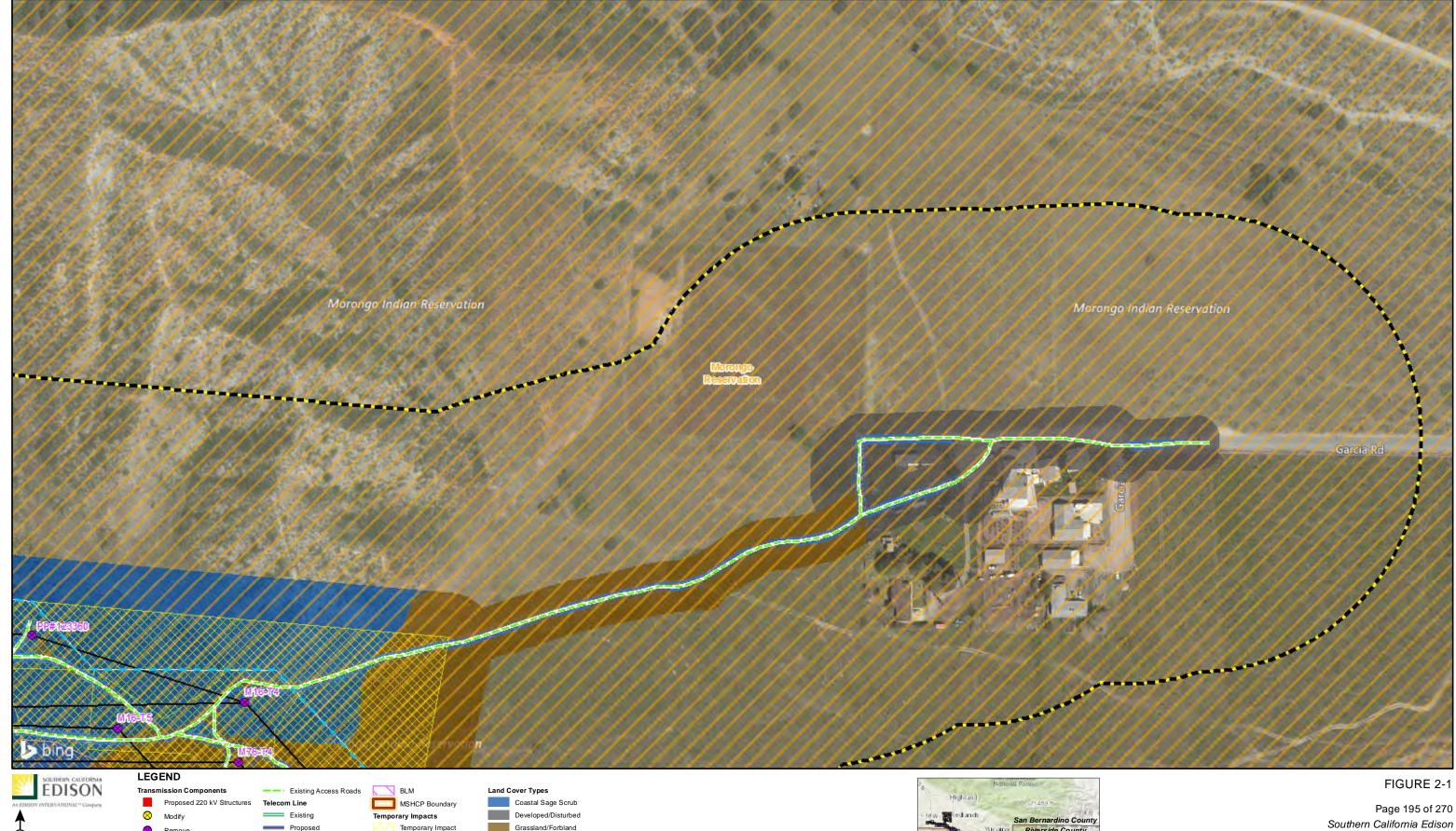
Temporary Impact Guard Pole

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Land Use

Existing ROW

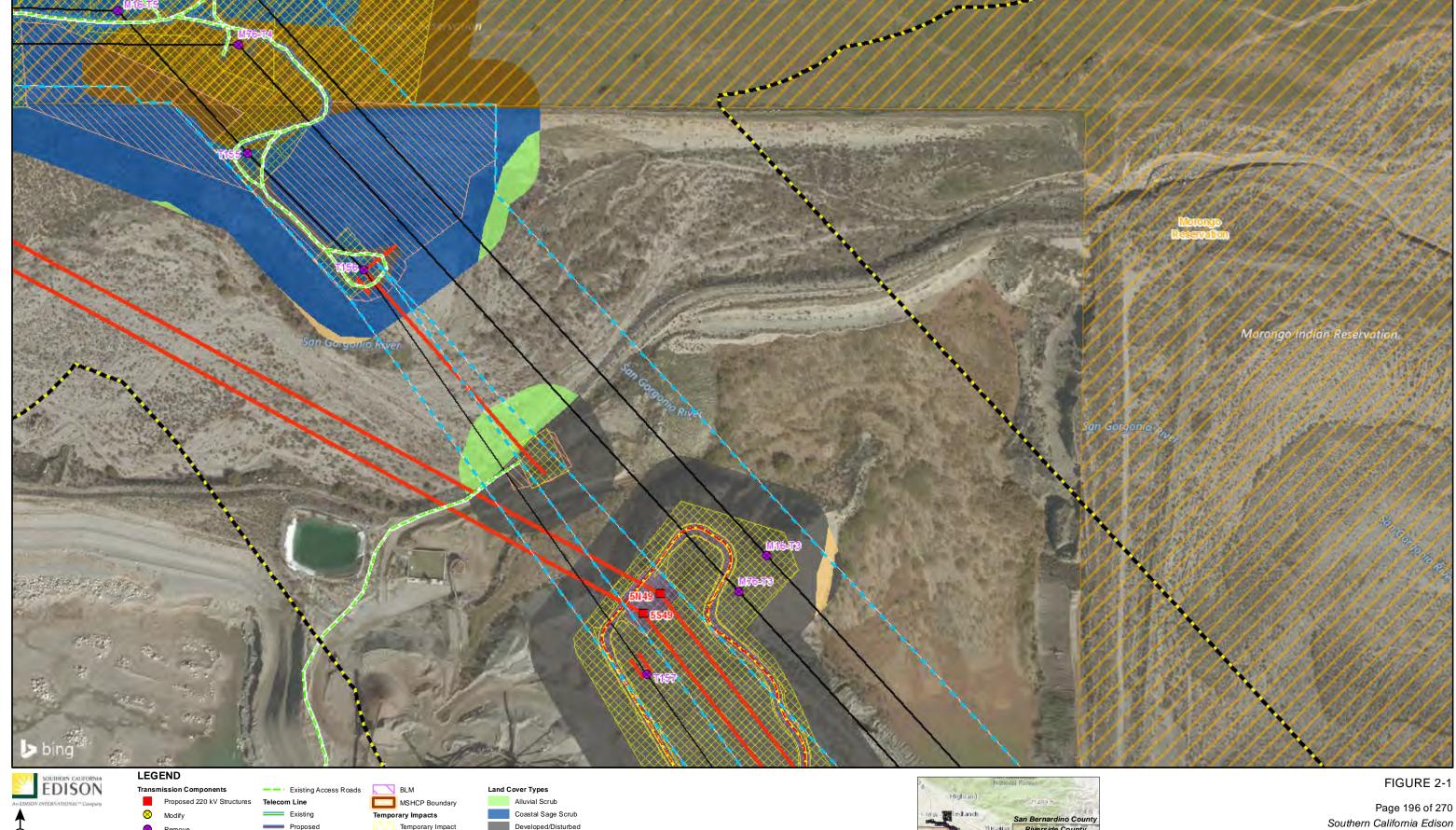
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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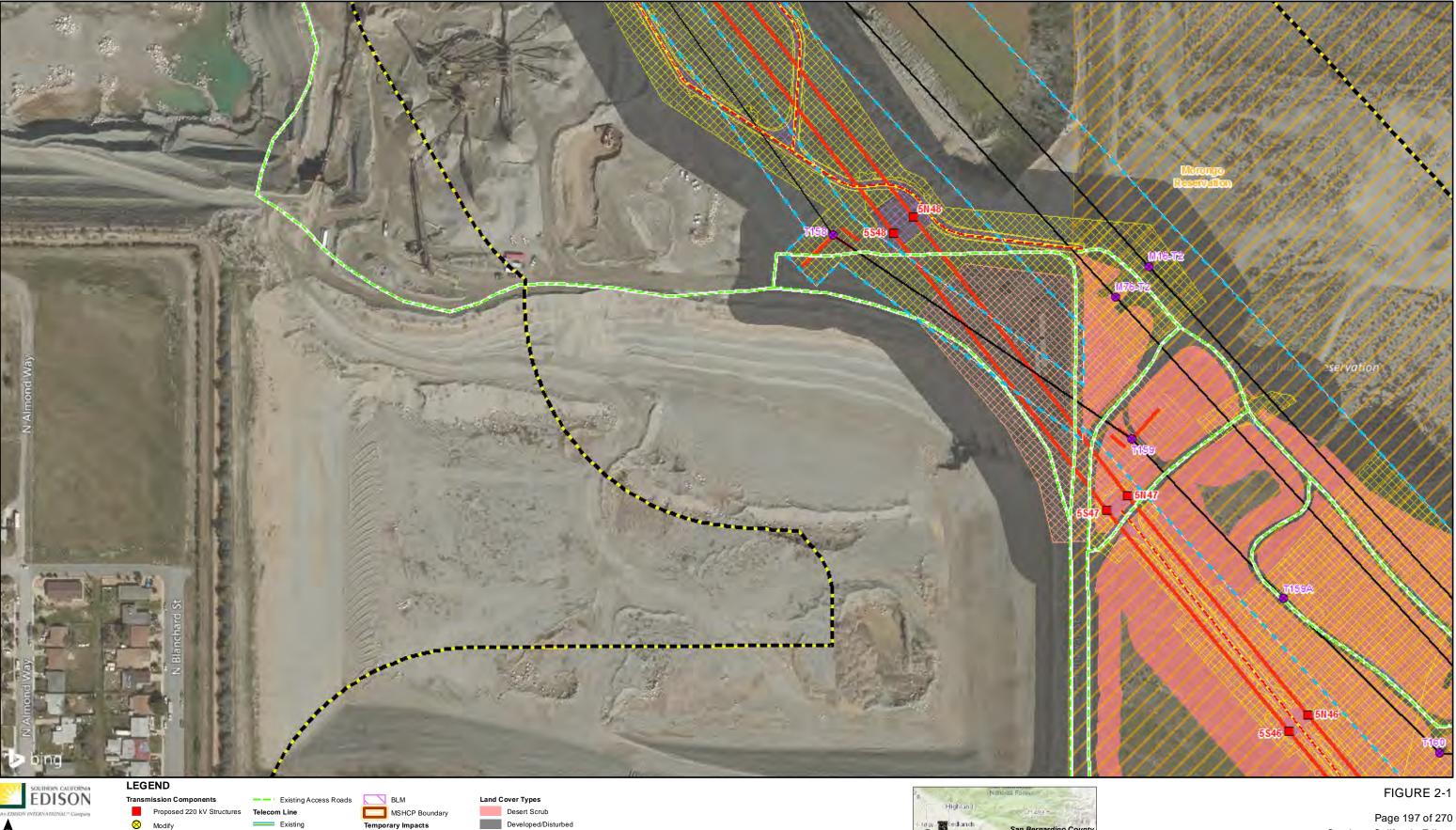
Riparian Woodland

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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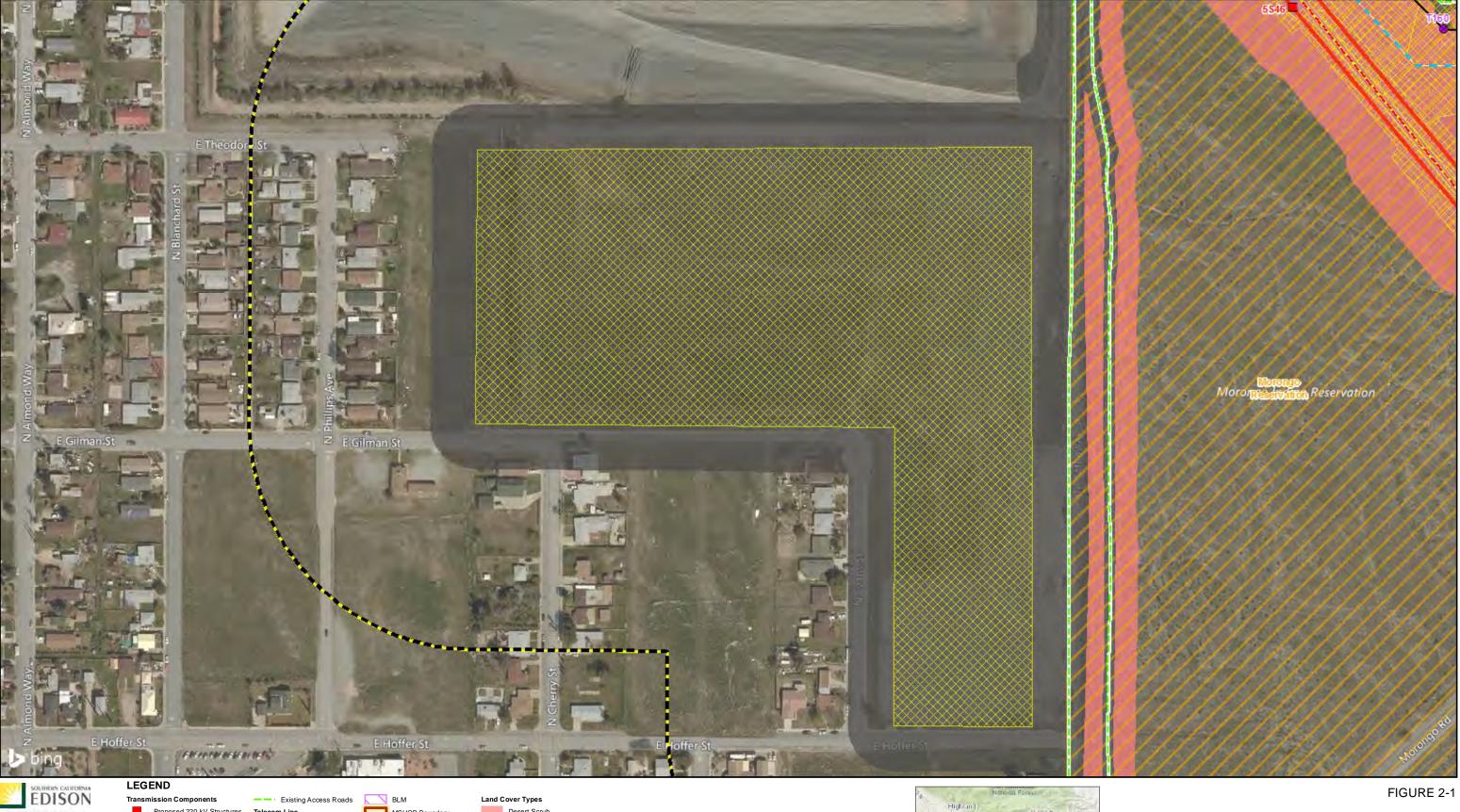
Temporary Impact Guard Pole

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Proposed 220 kV Structures

Existing

Proposed Existing ROW Study Area

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Potential Road Widening

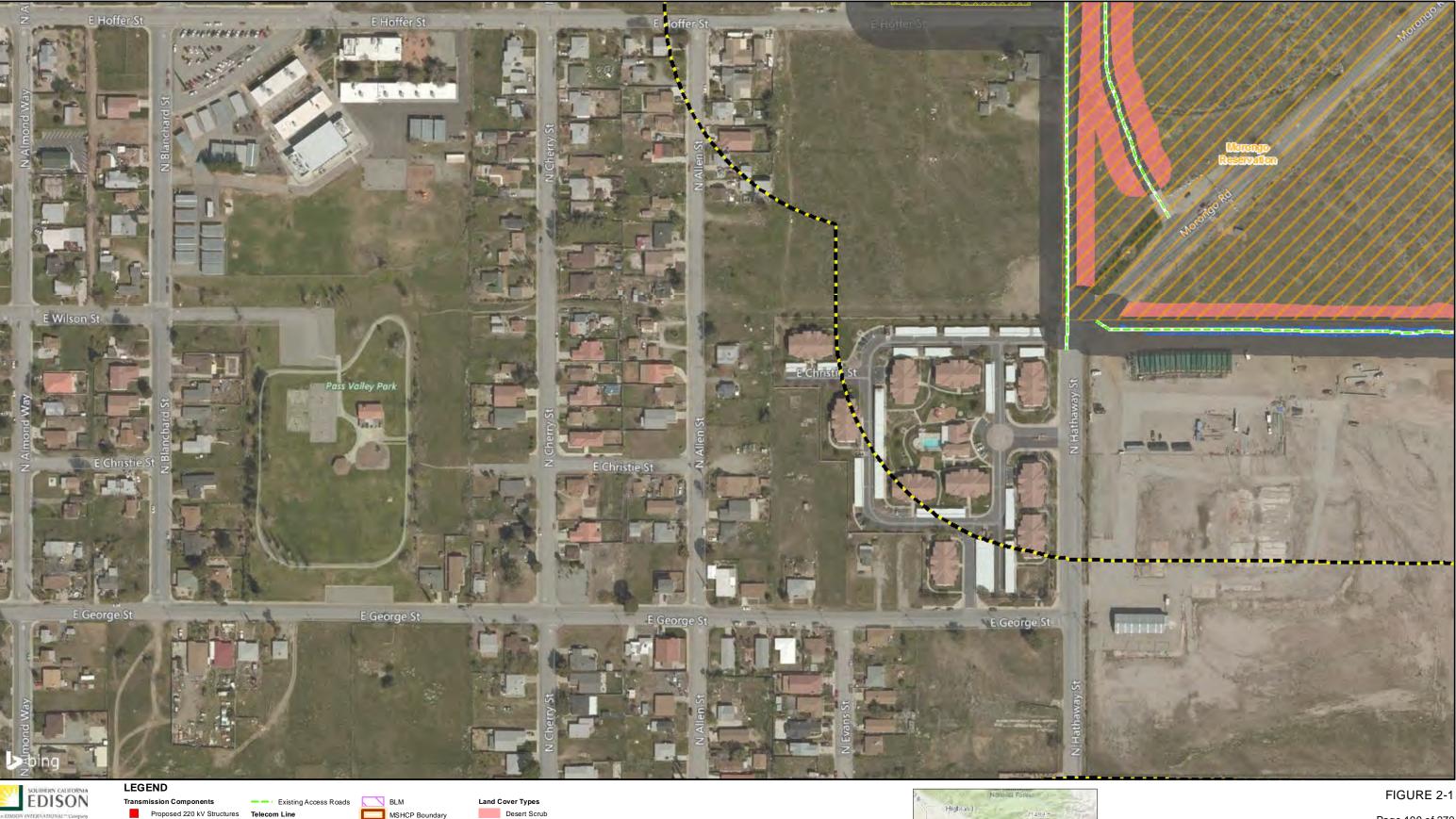
Shoo-fly Work Area Permanent Impacts Permanent Impact

Desert Scrub Developed/Disturbed

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Permanent Impacts

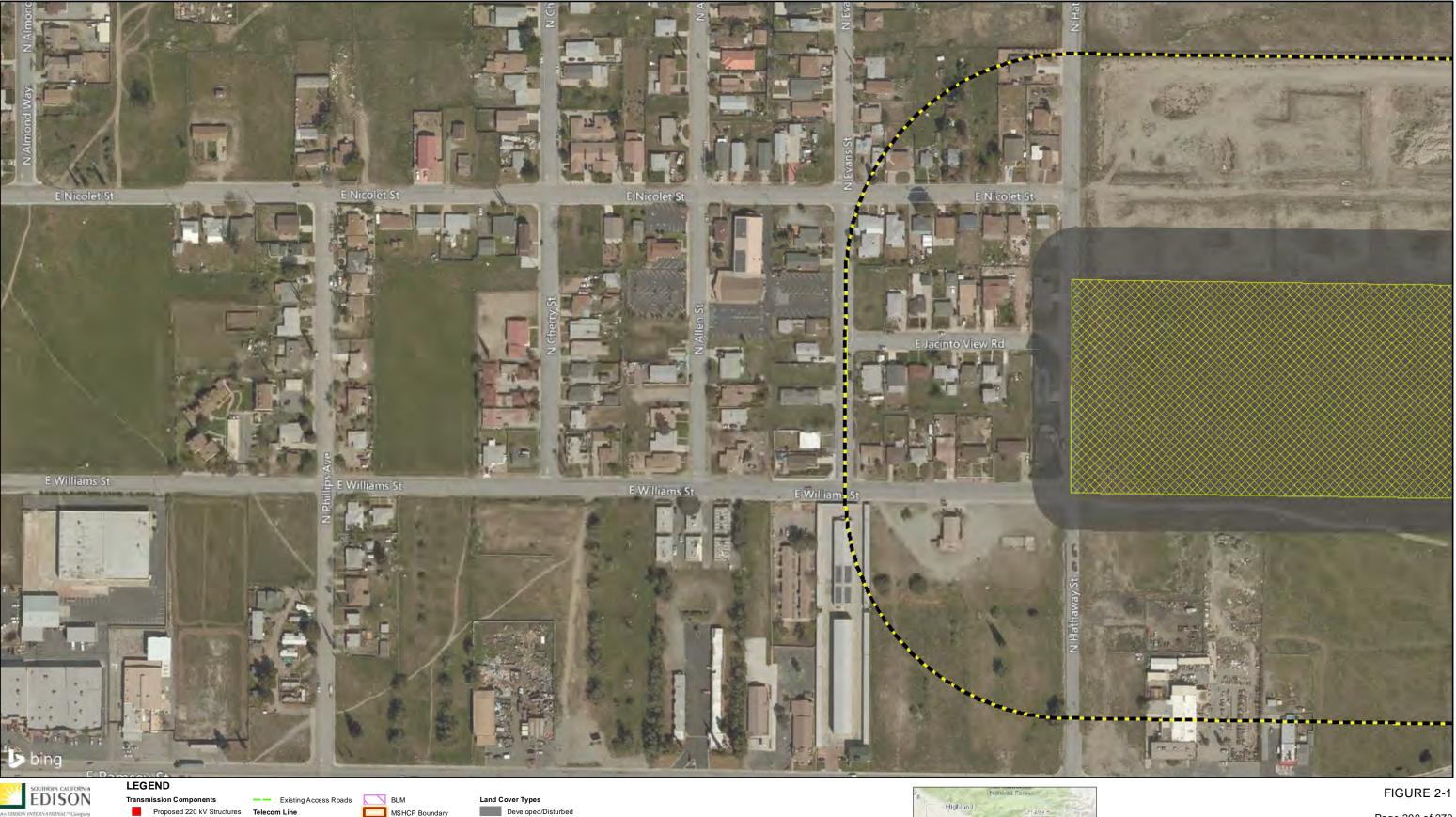
Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Developed/Disturbed



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

Highland

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San Bernardino County

Riverside County

Mindra County

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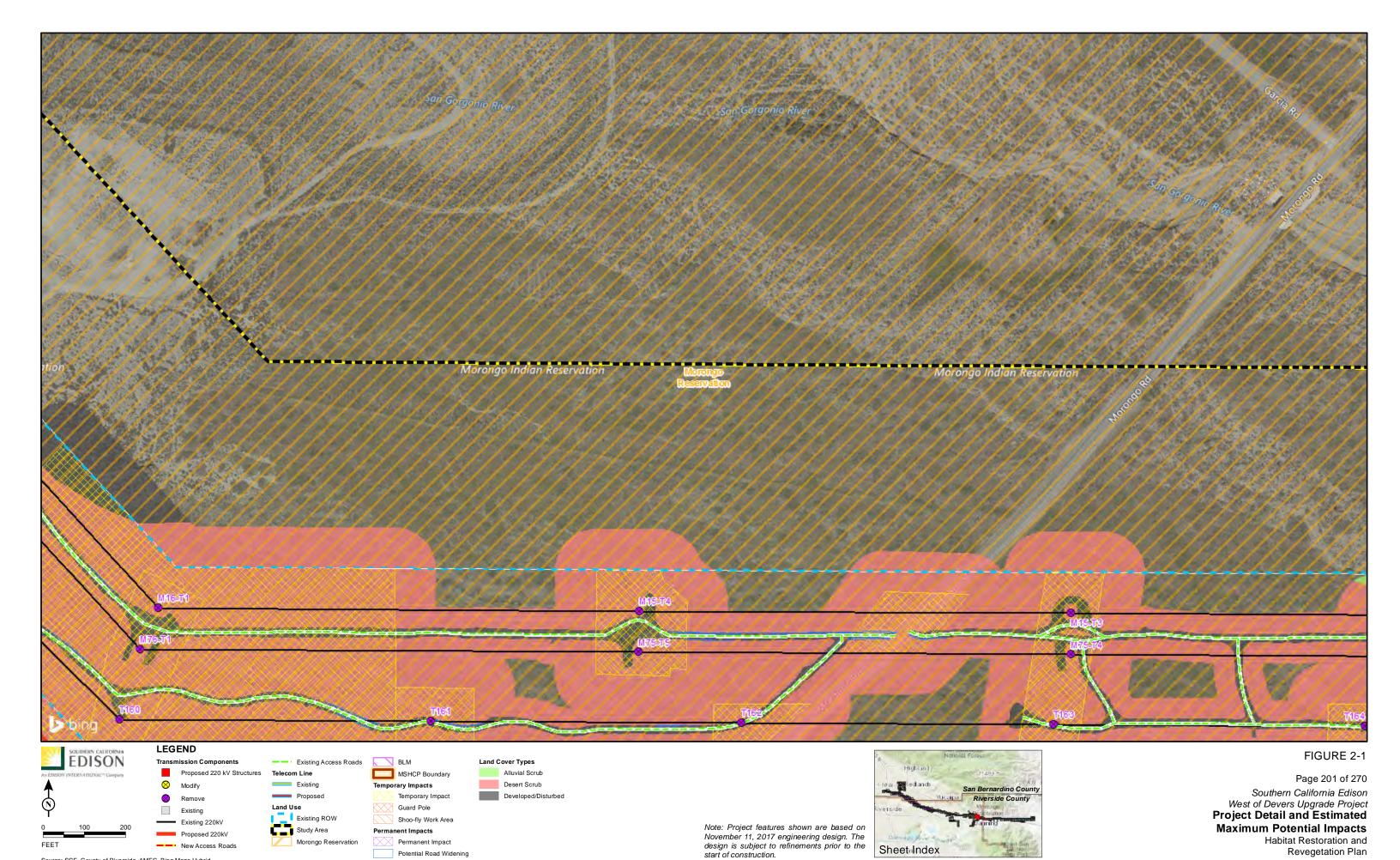
Temporary Impacts

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Temporary Impact Guard Pole

Shoo-fly Work Area

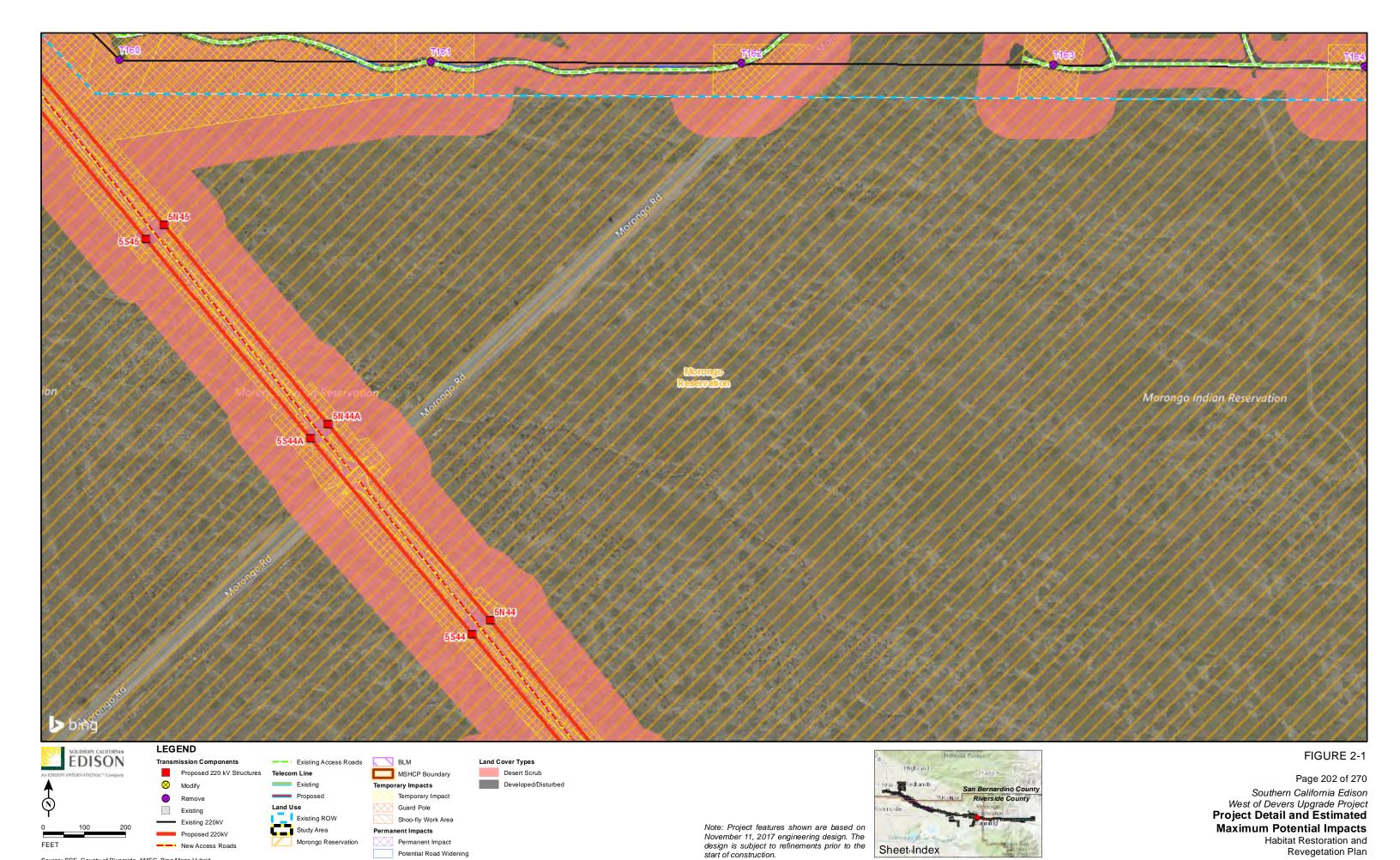
Permanent Impact



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

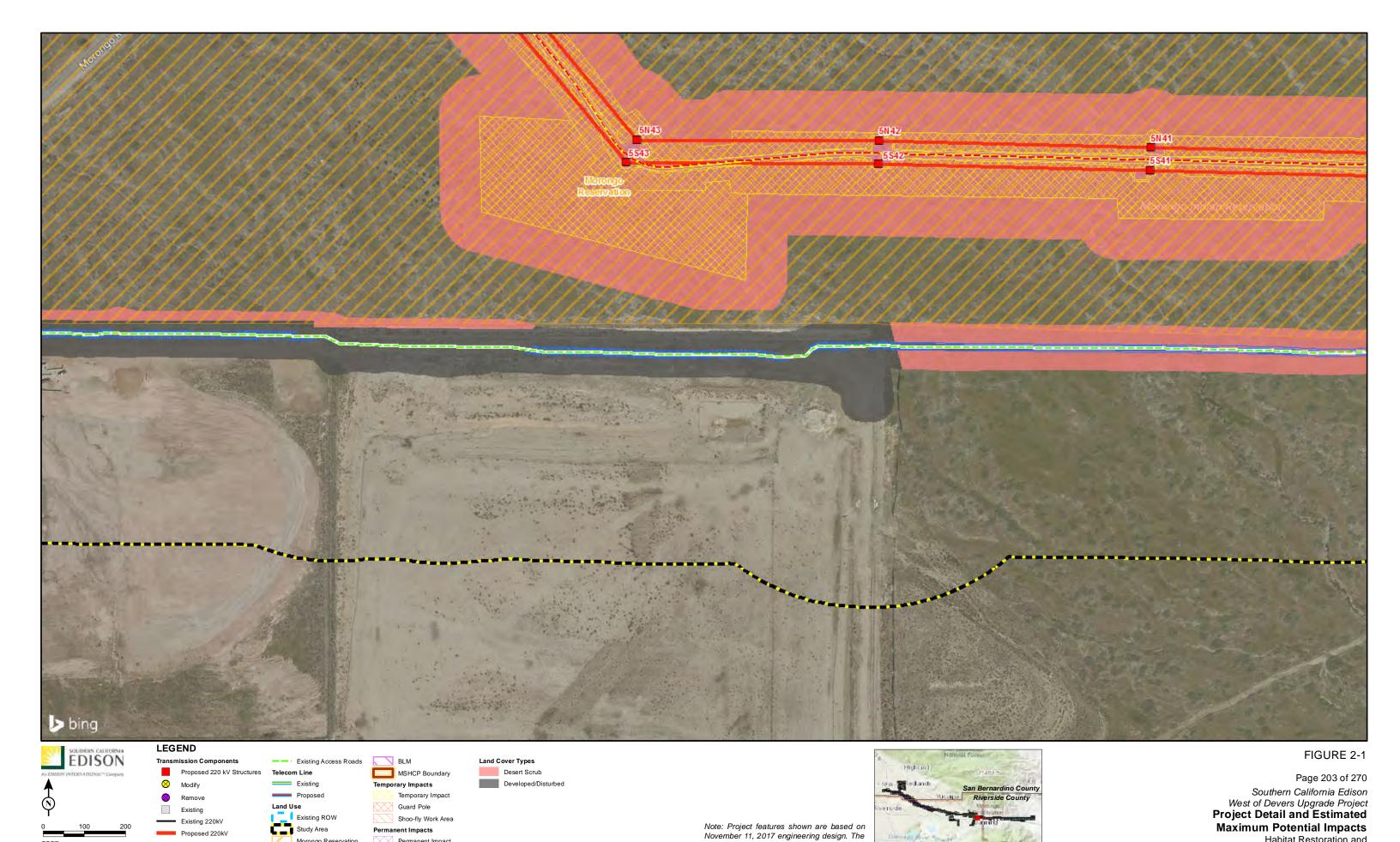
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)



design is subject to refinements prior to the start of construction.

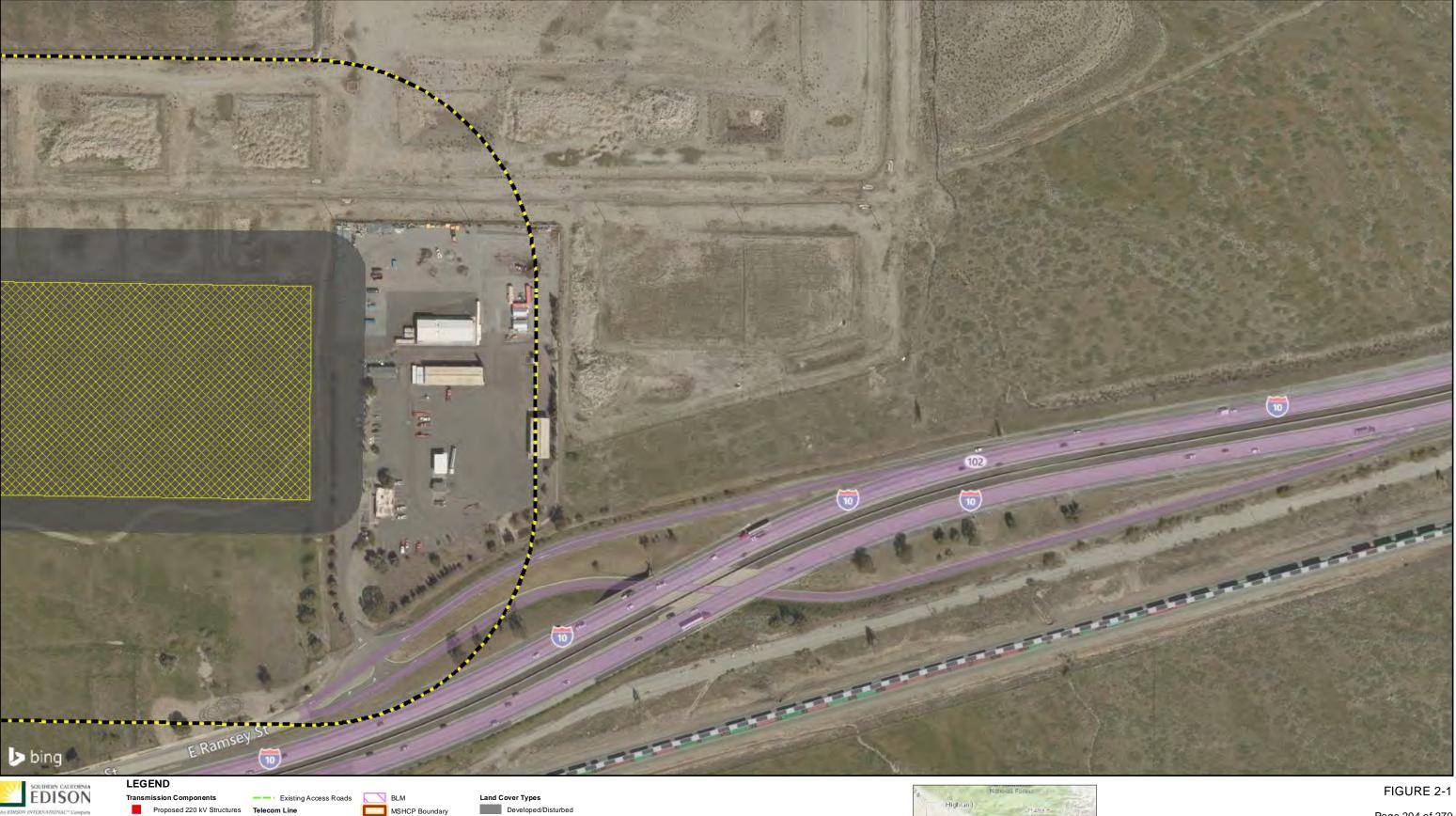
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Potential Road Widening Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Permanent Impact

Proposed 220kV

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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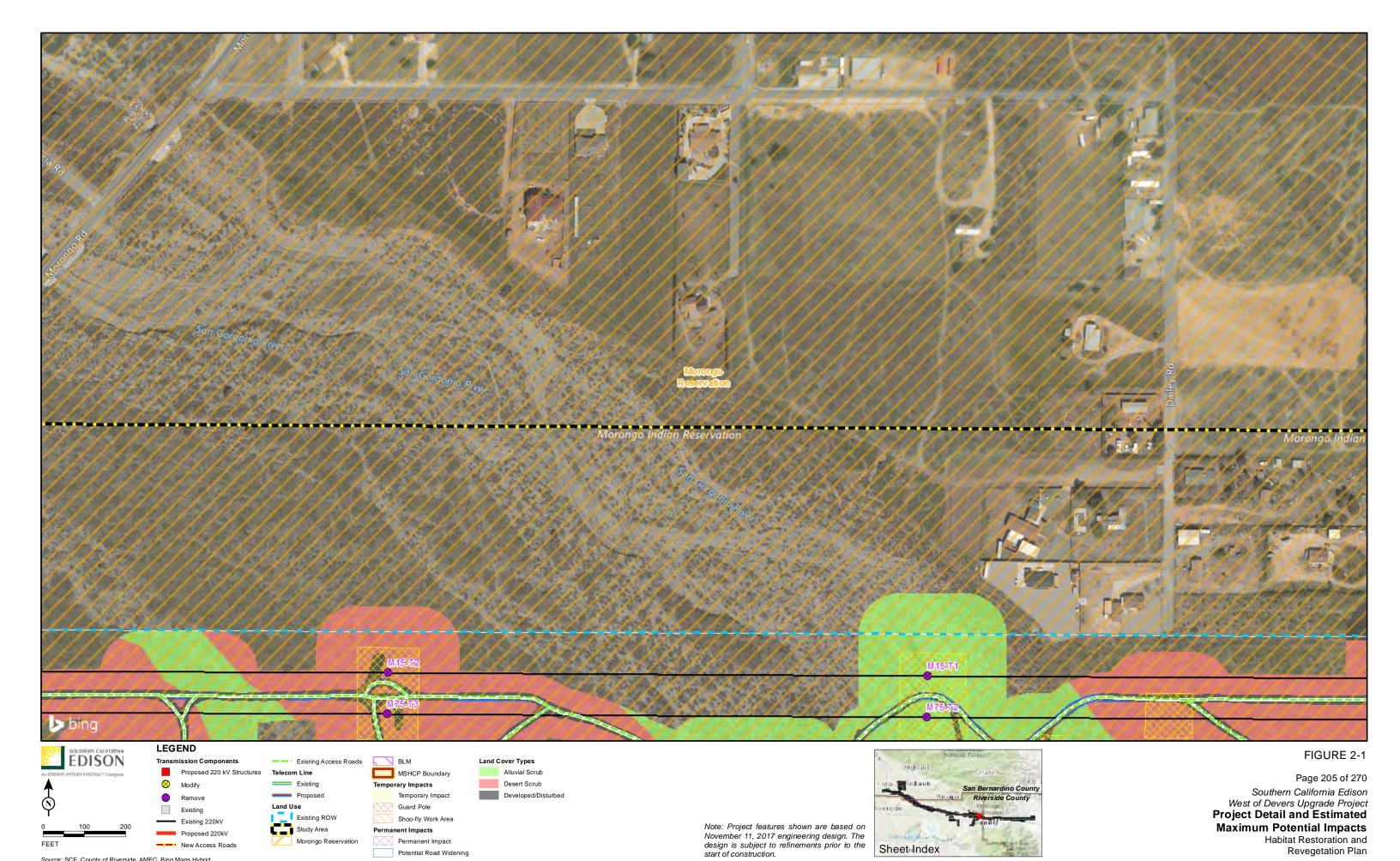
Temporary Impacts

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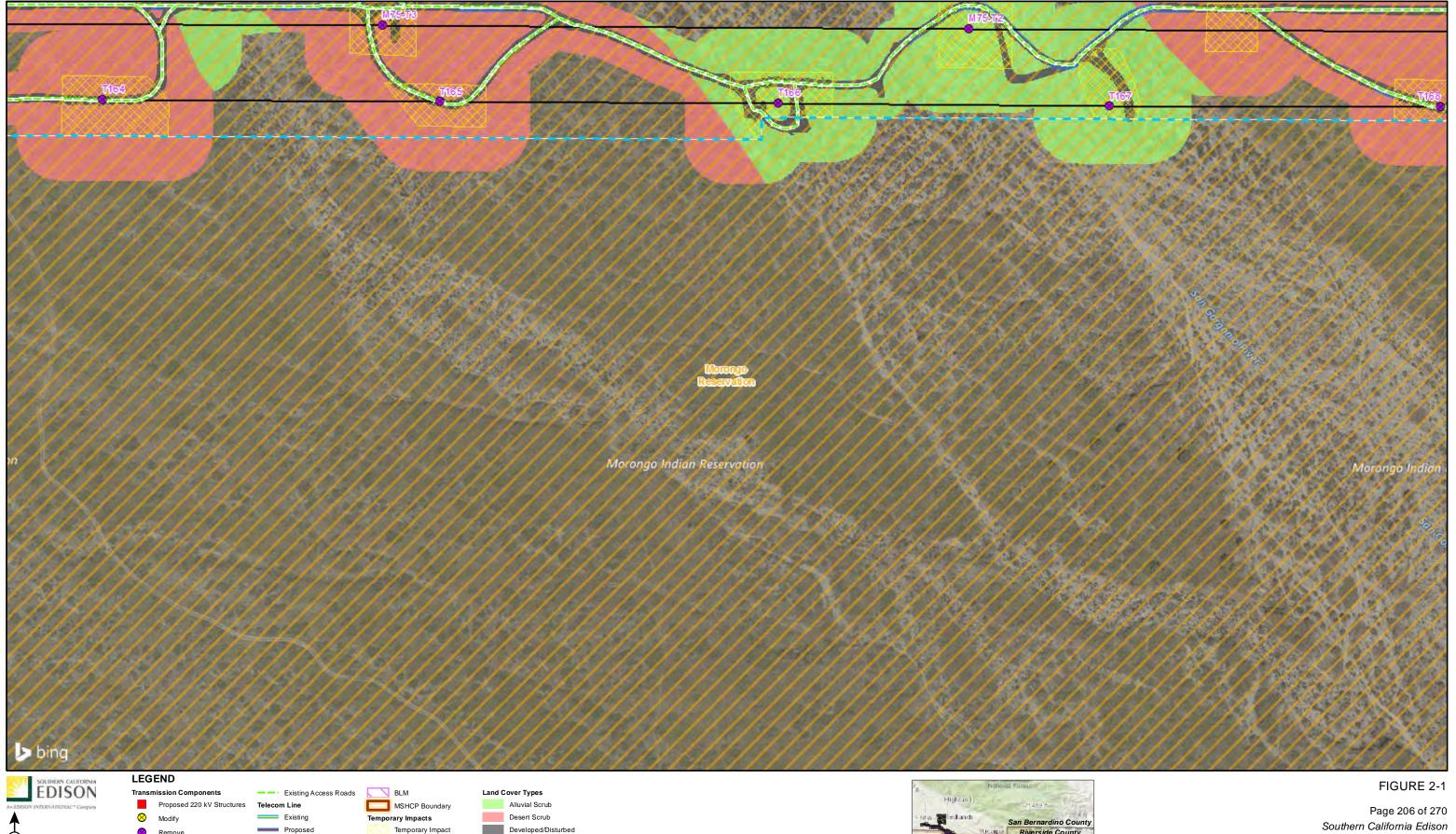
Temporary Impact Guard Pole

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Existing 220kV

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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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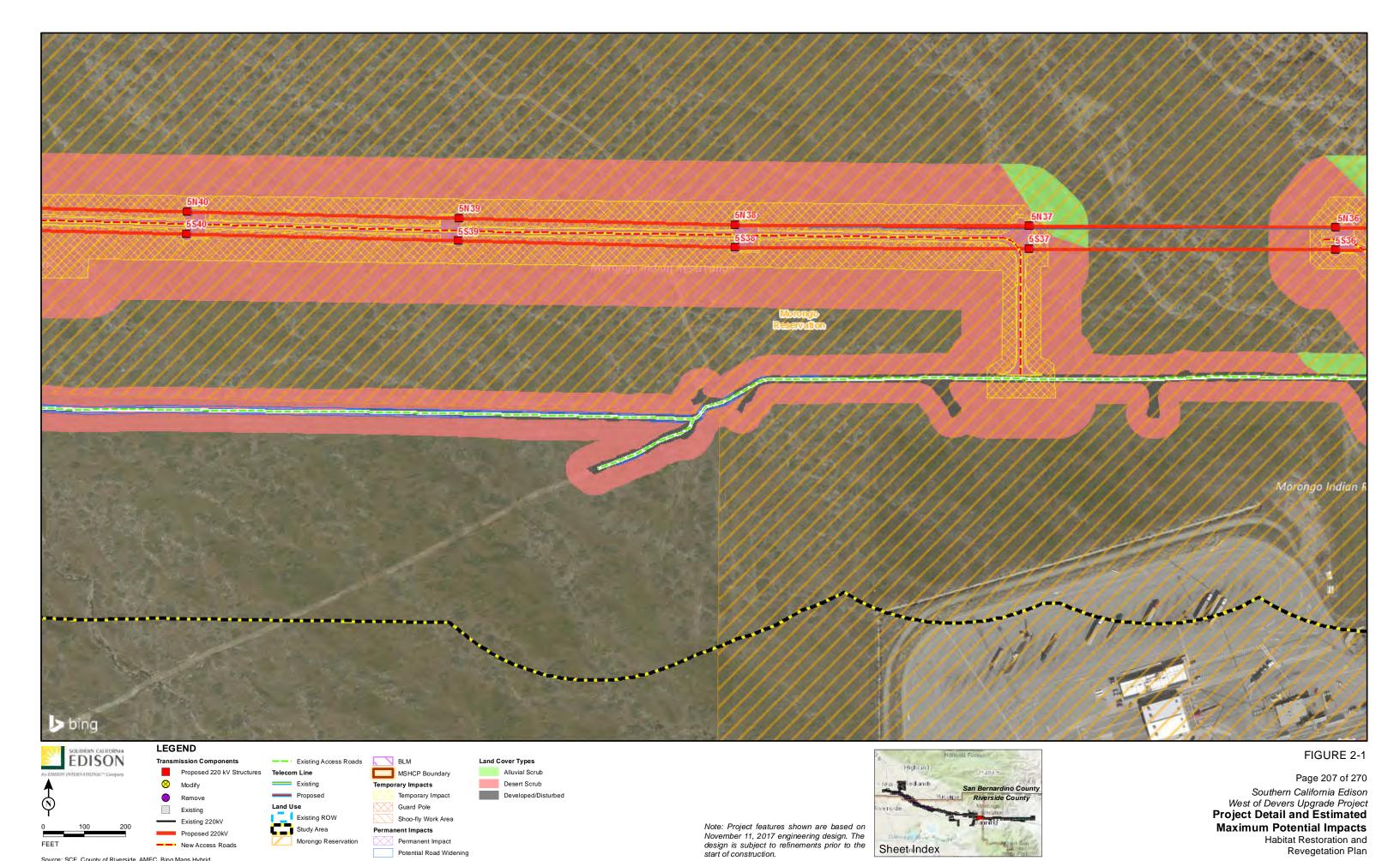
Study Area

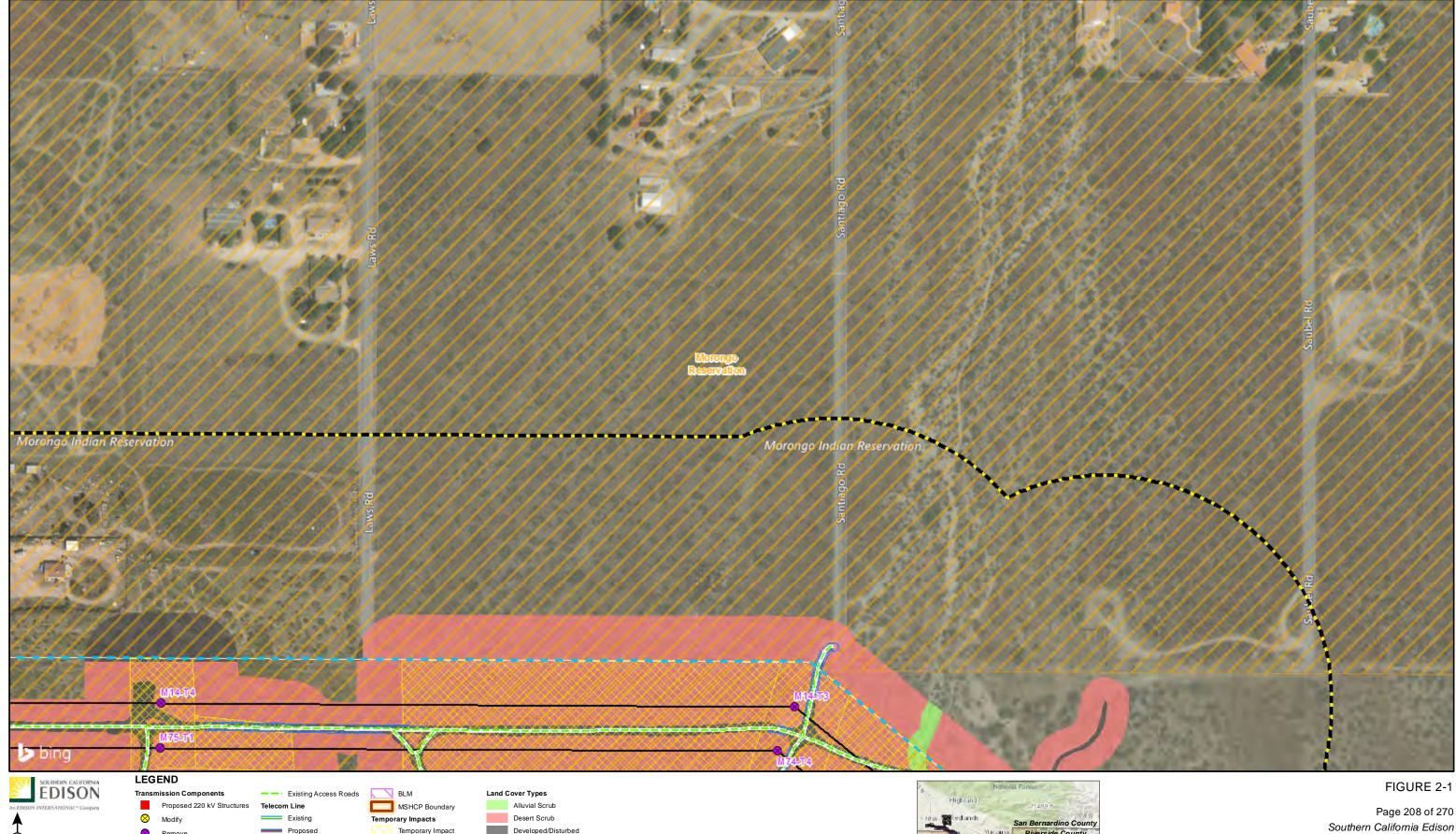
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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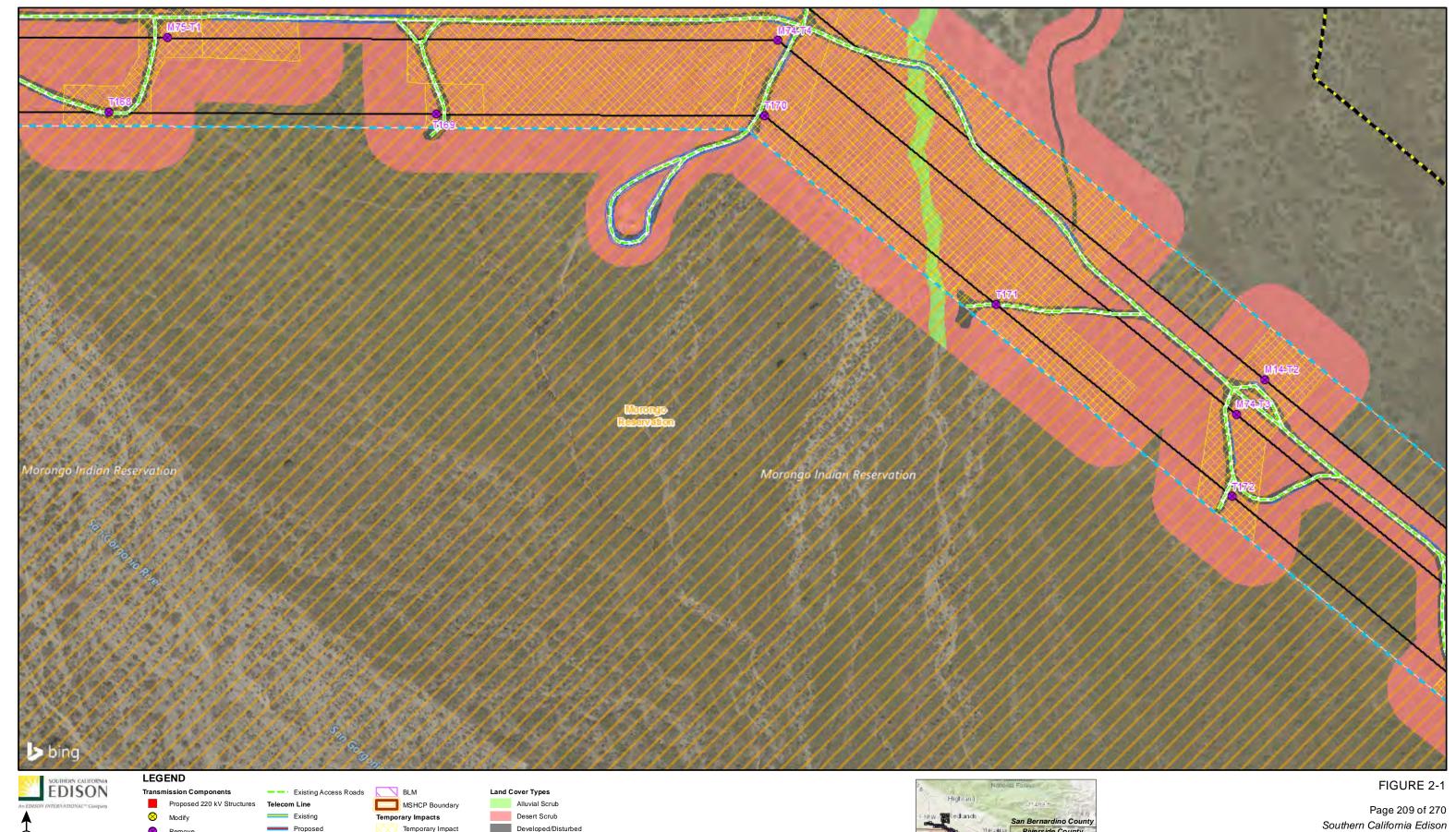
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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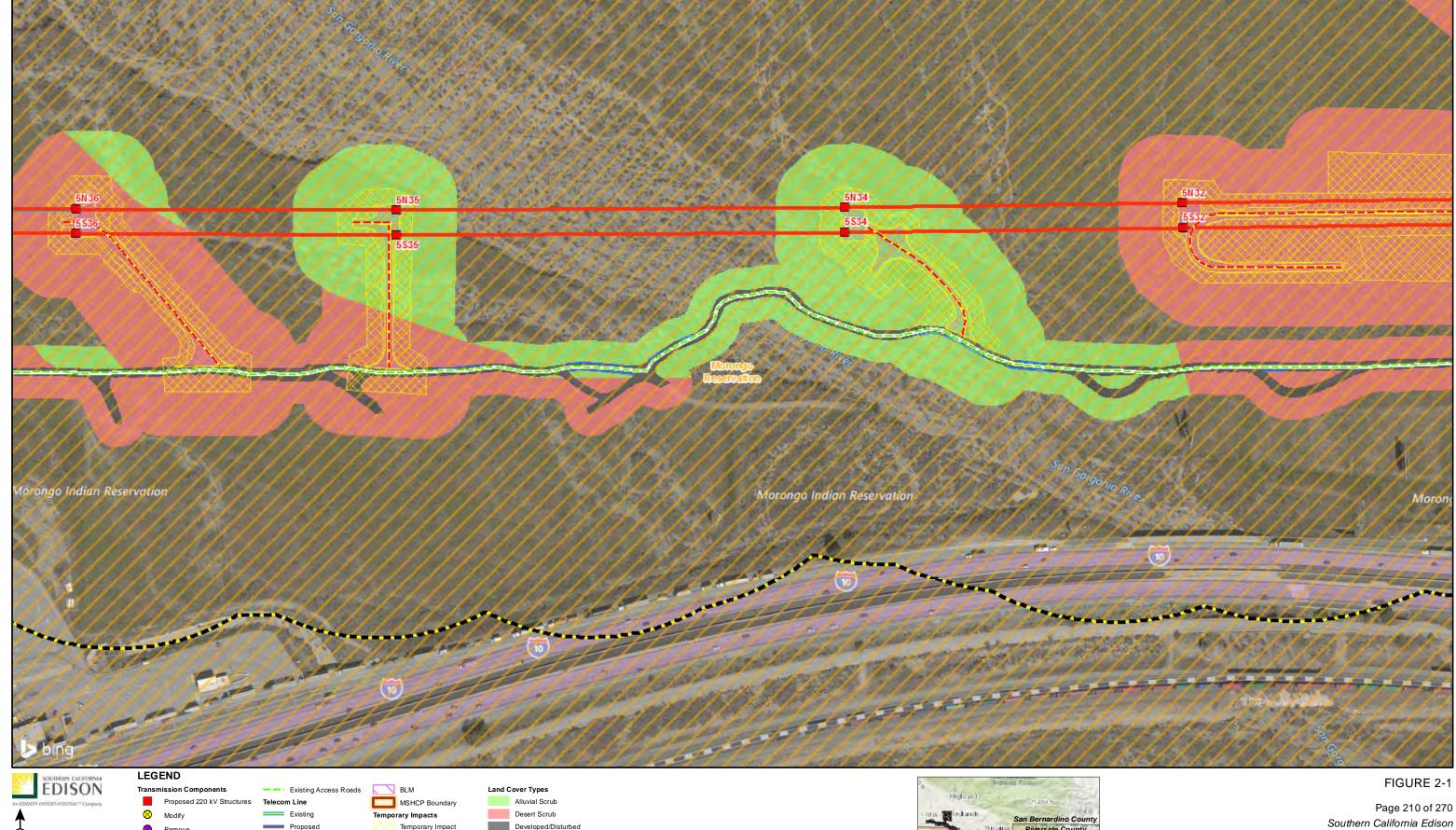
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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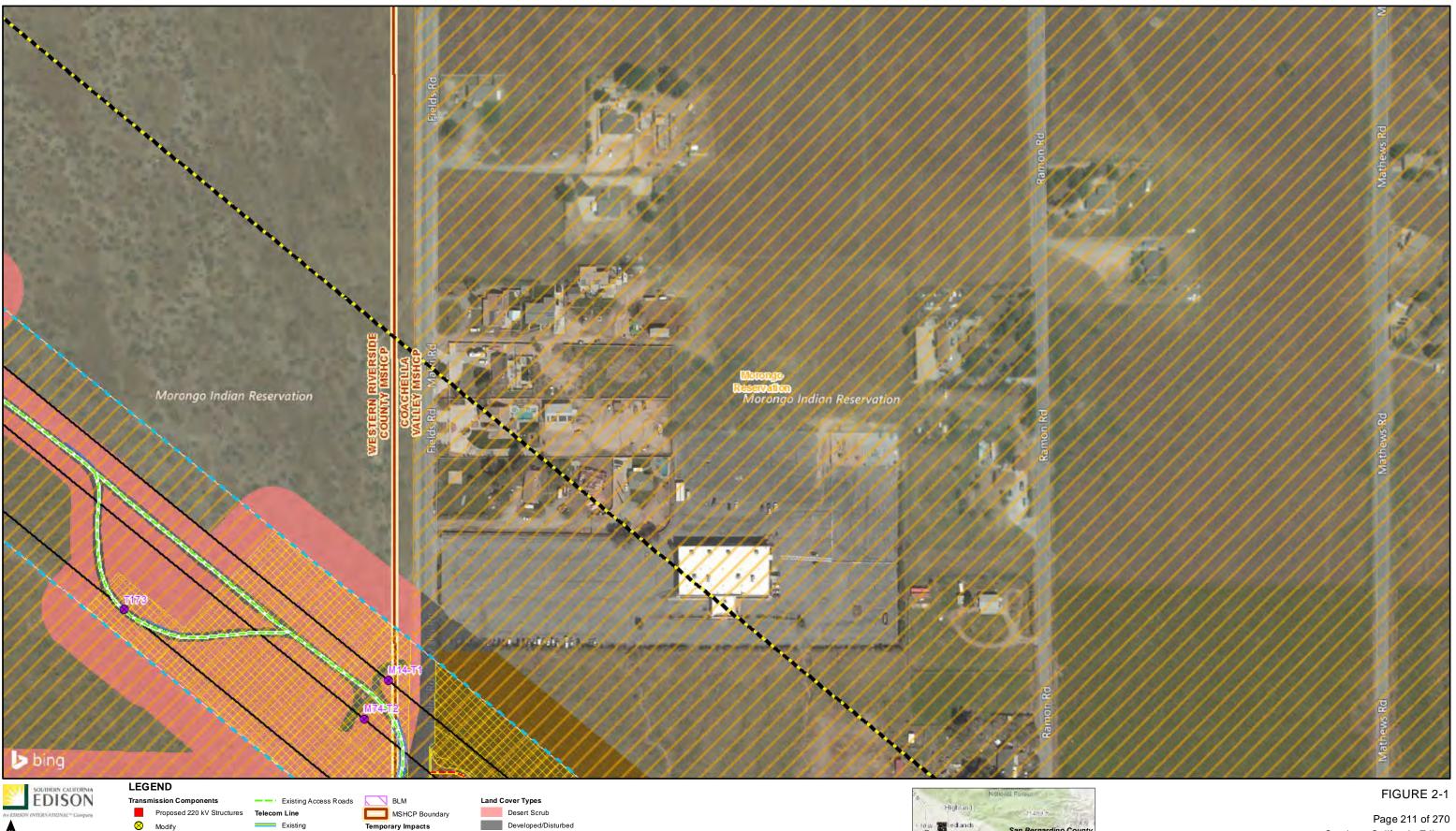
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

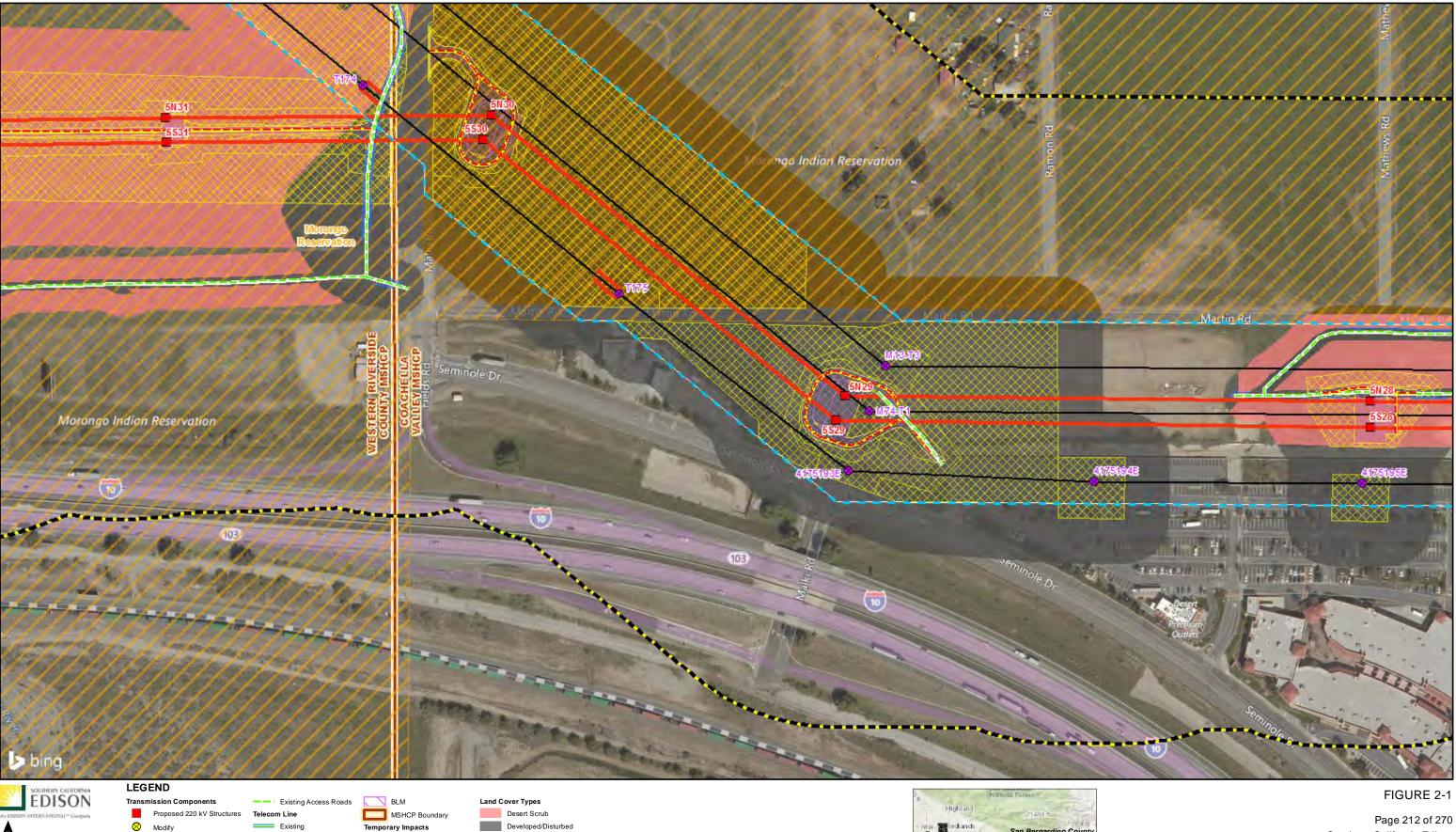
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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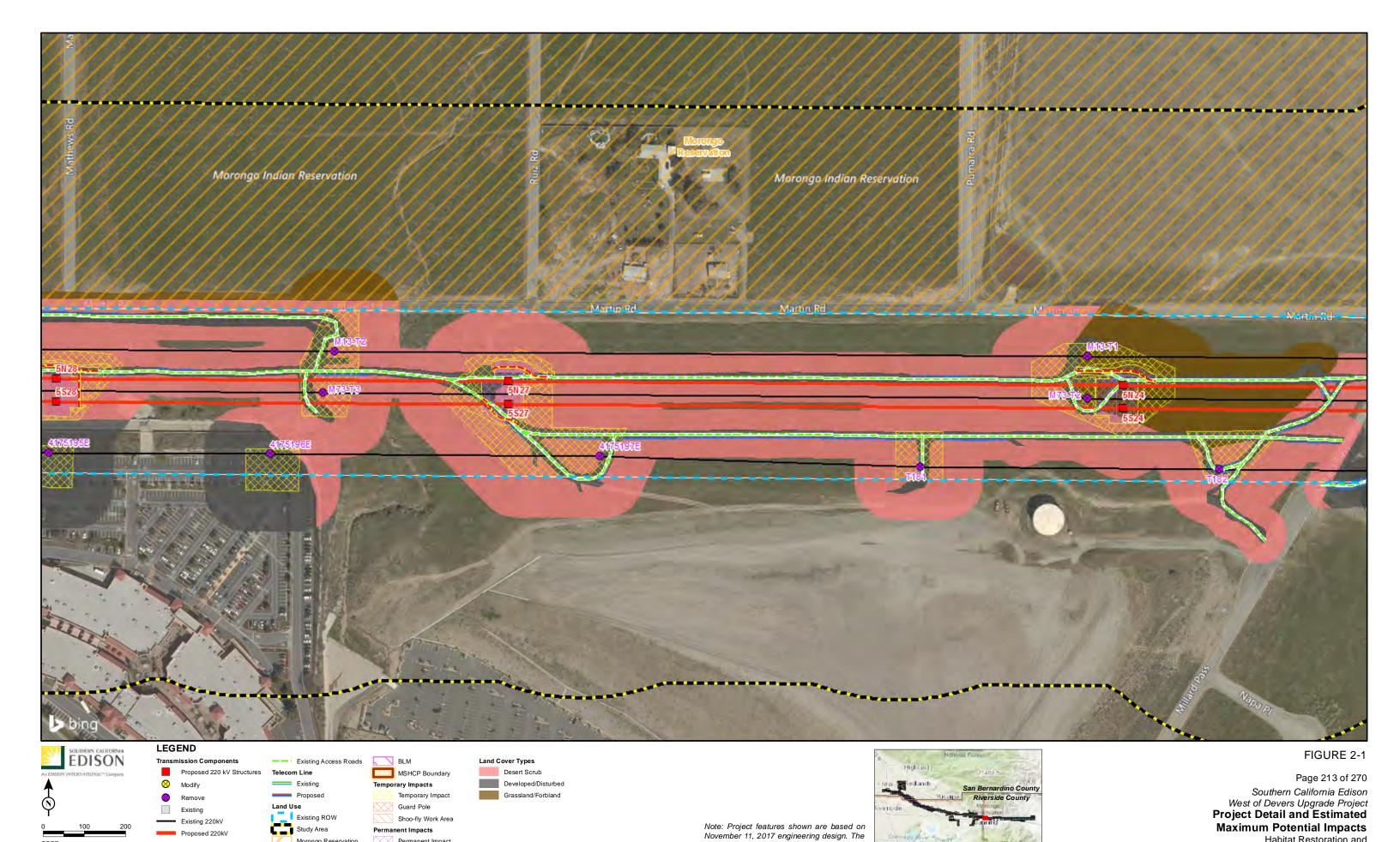
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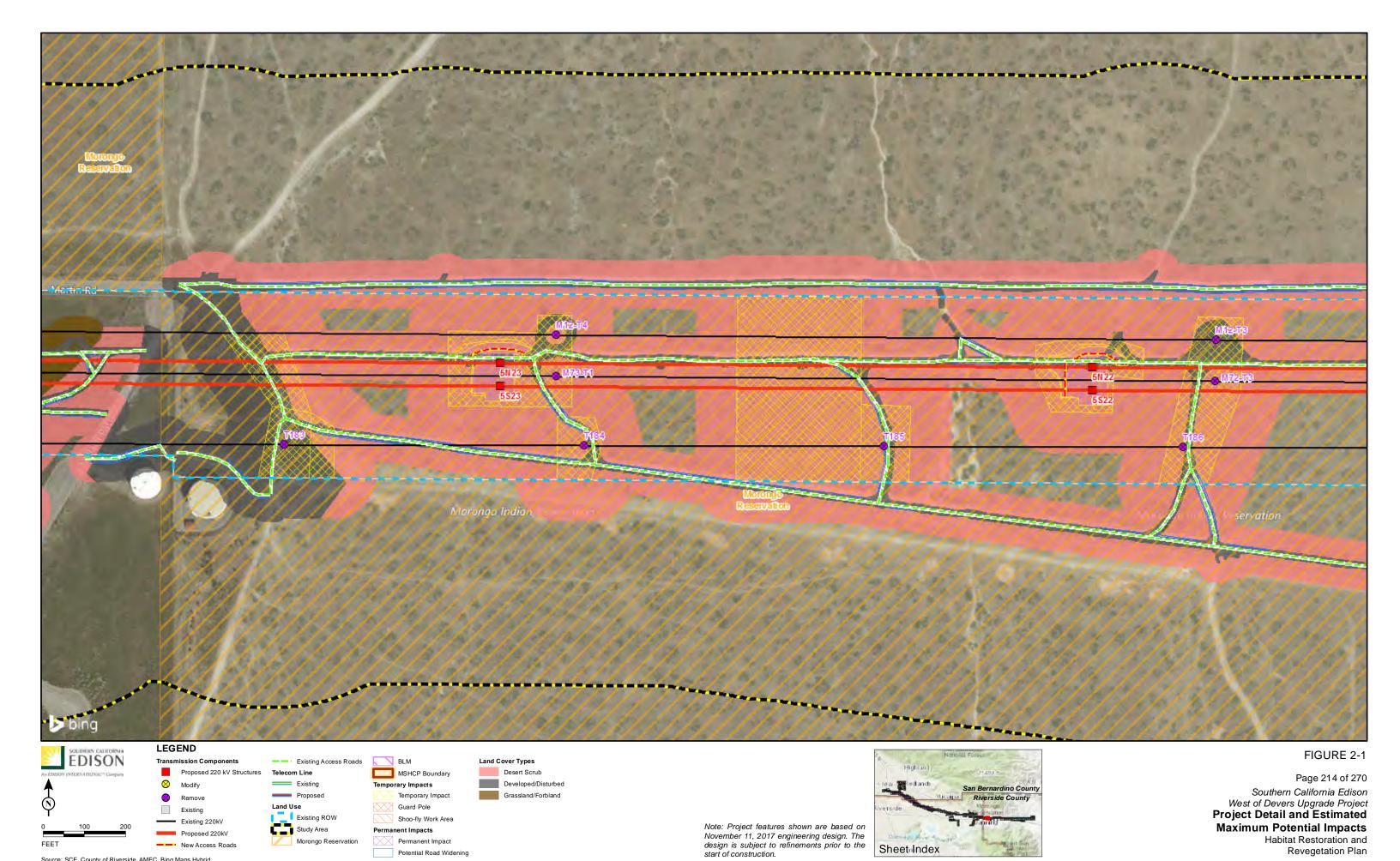
design is subject to refinements prior to the start of construction.

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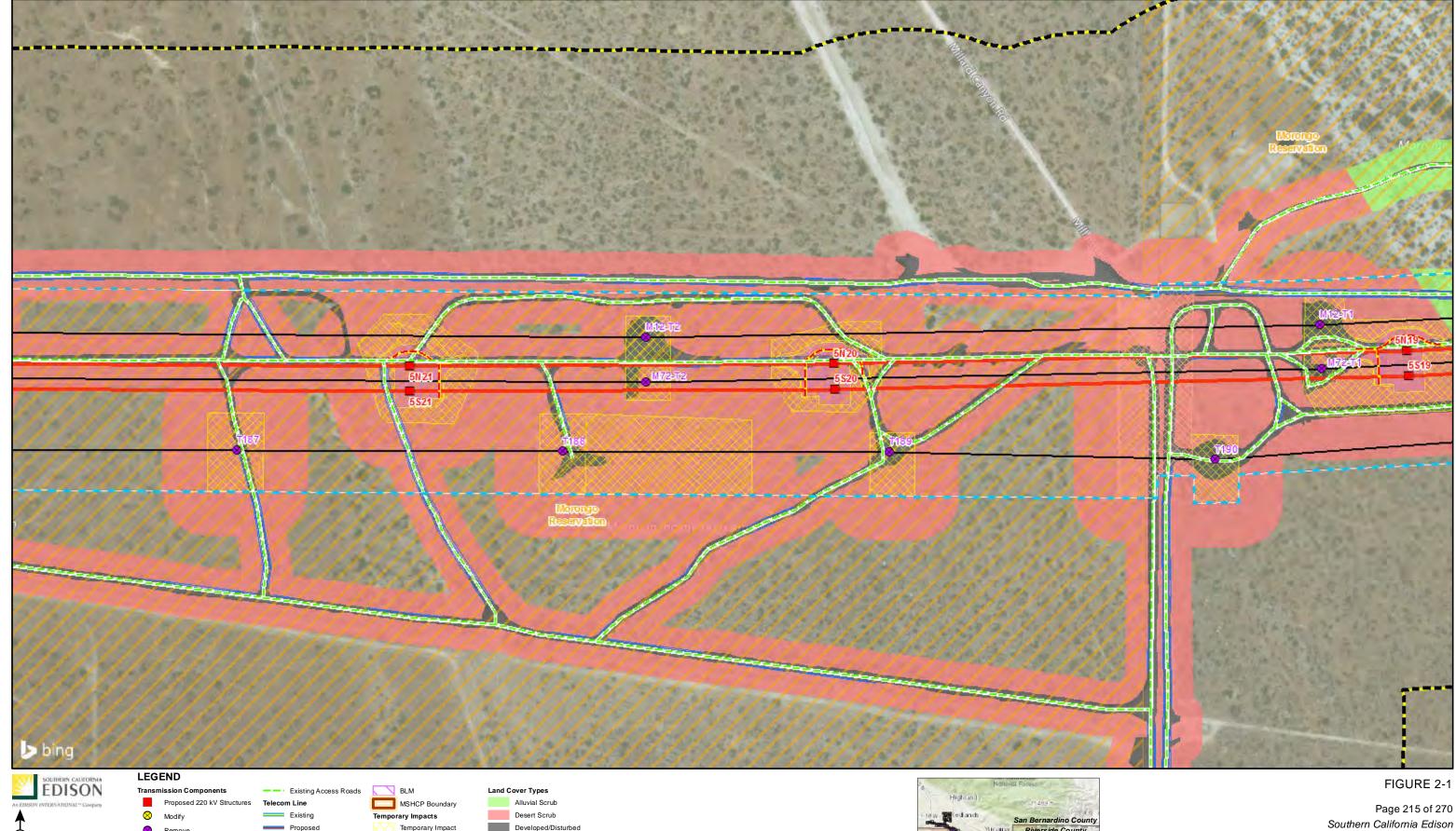
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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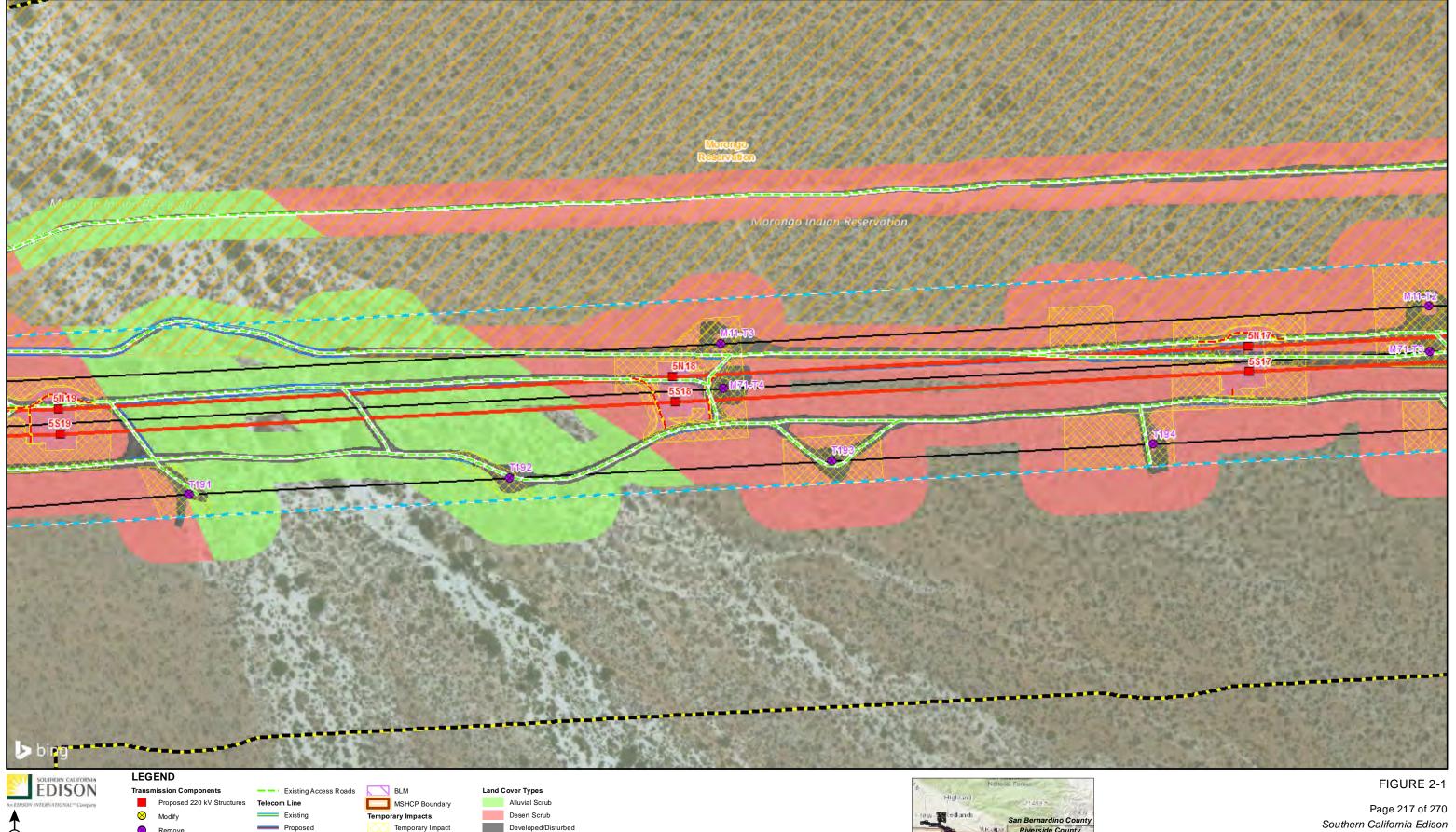
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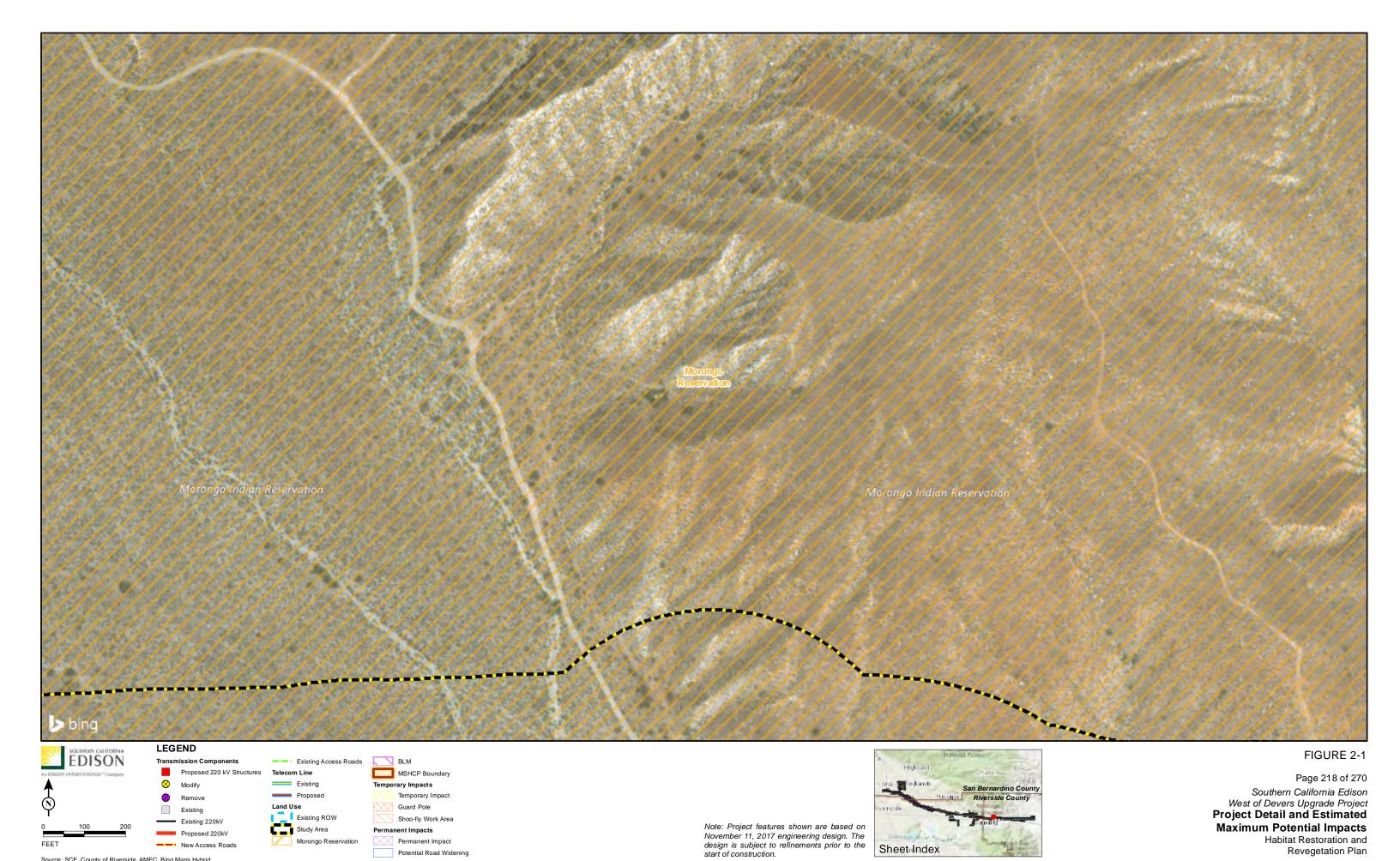
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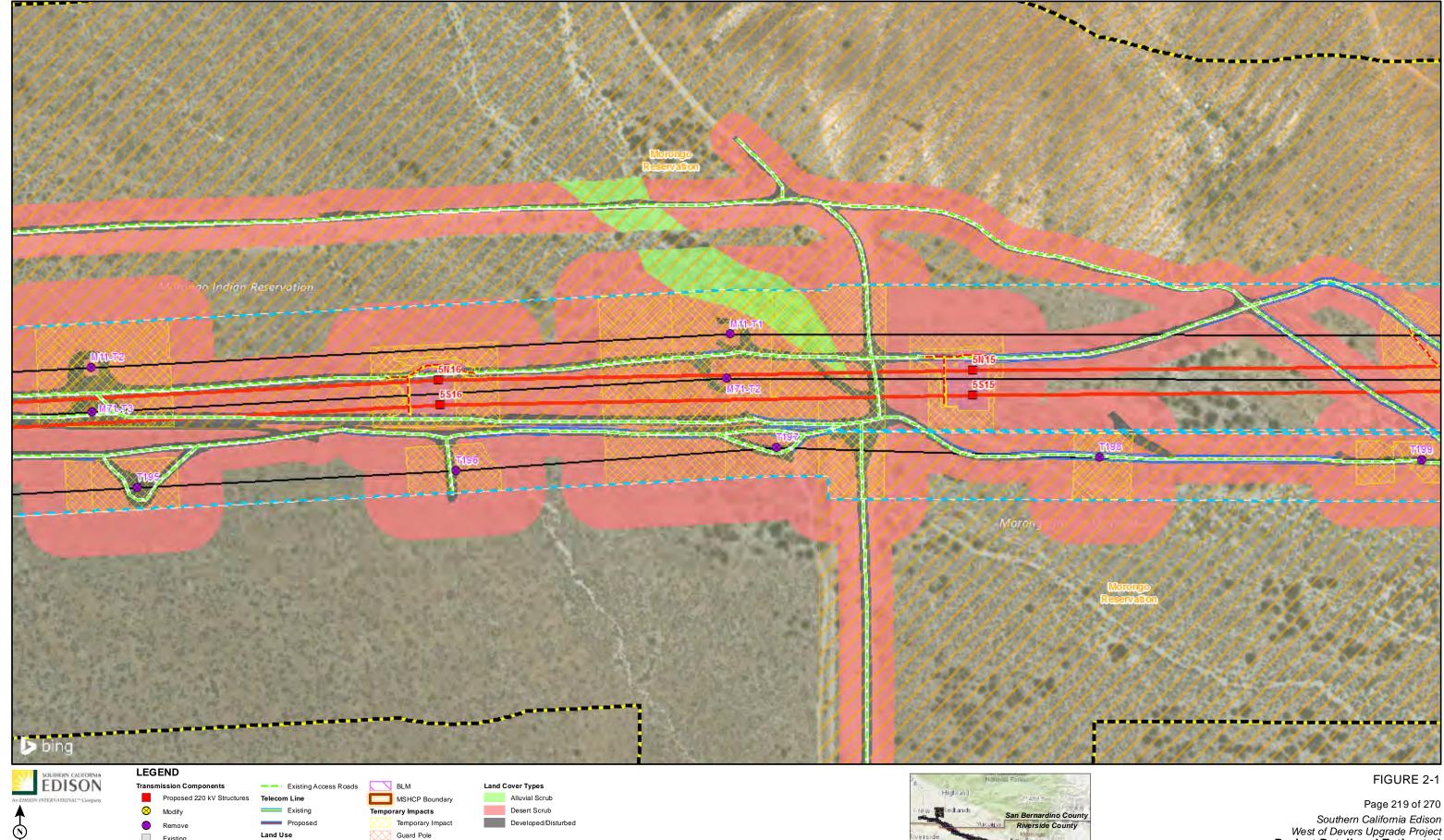
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Potential Road Widening Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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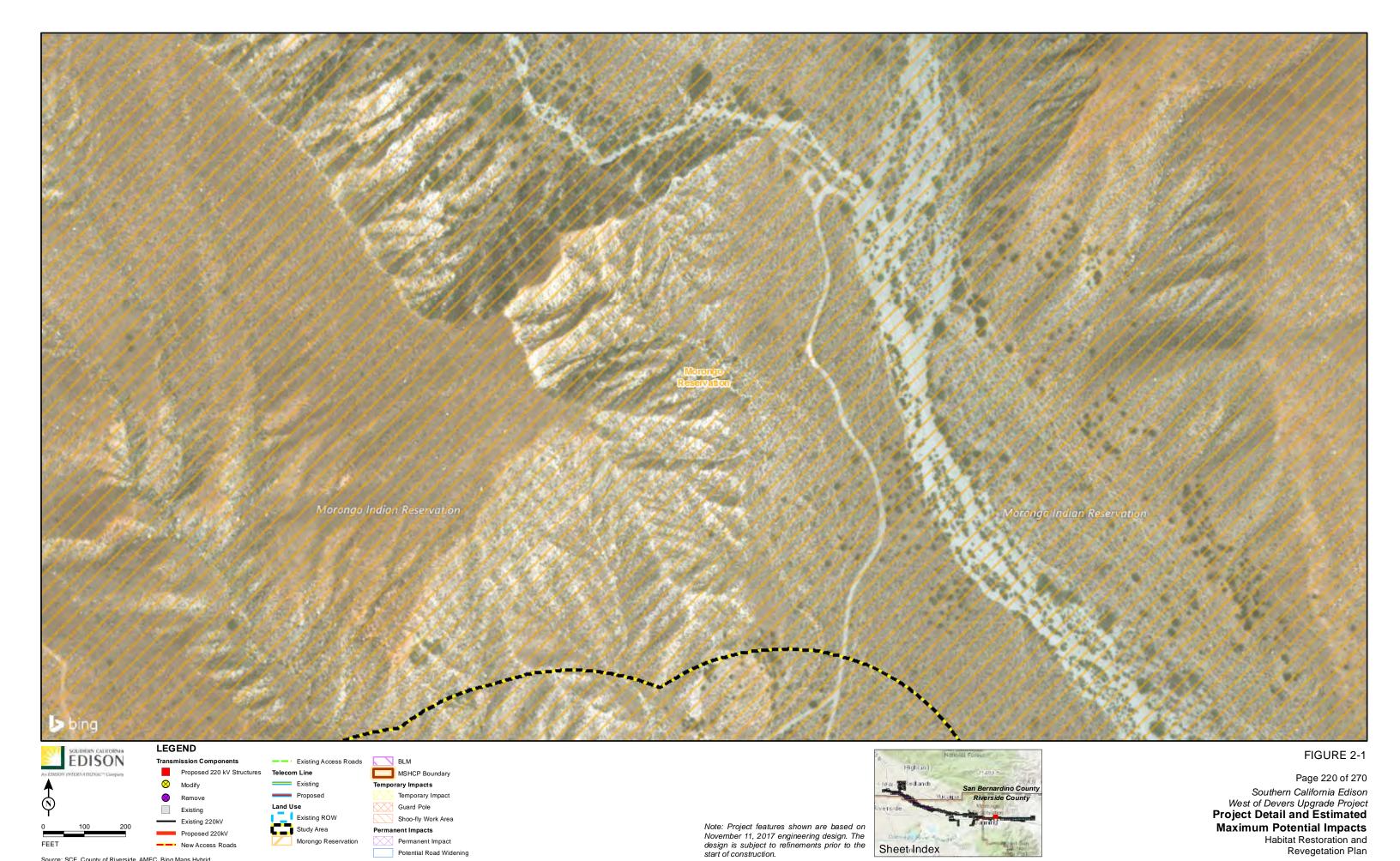
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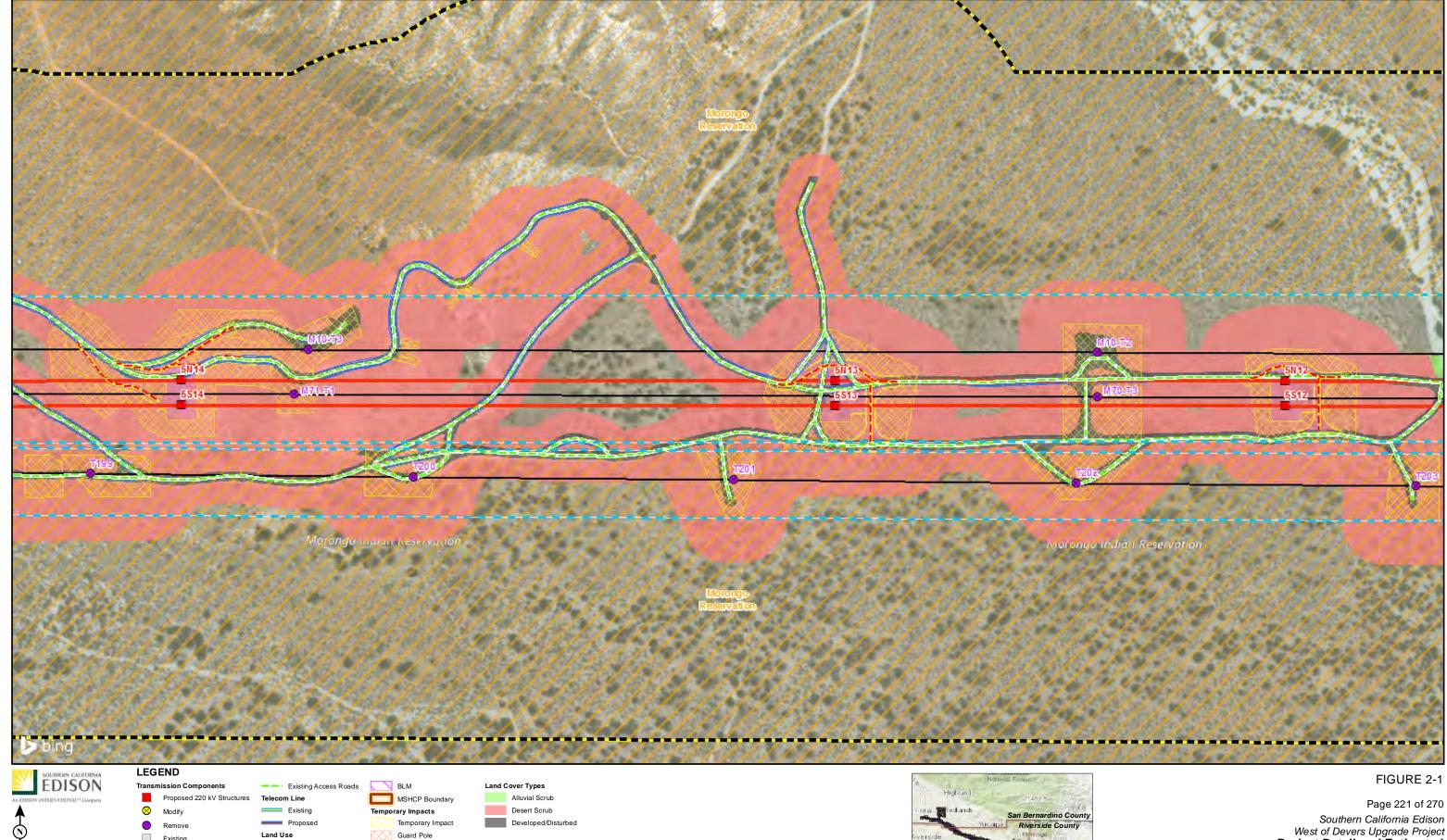
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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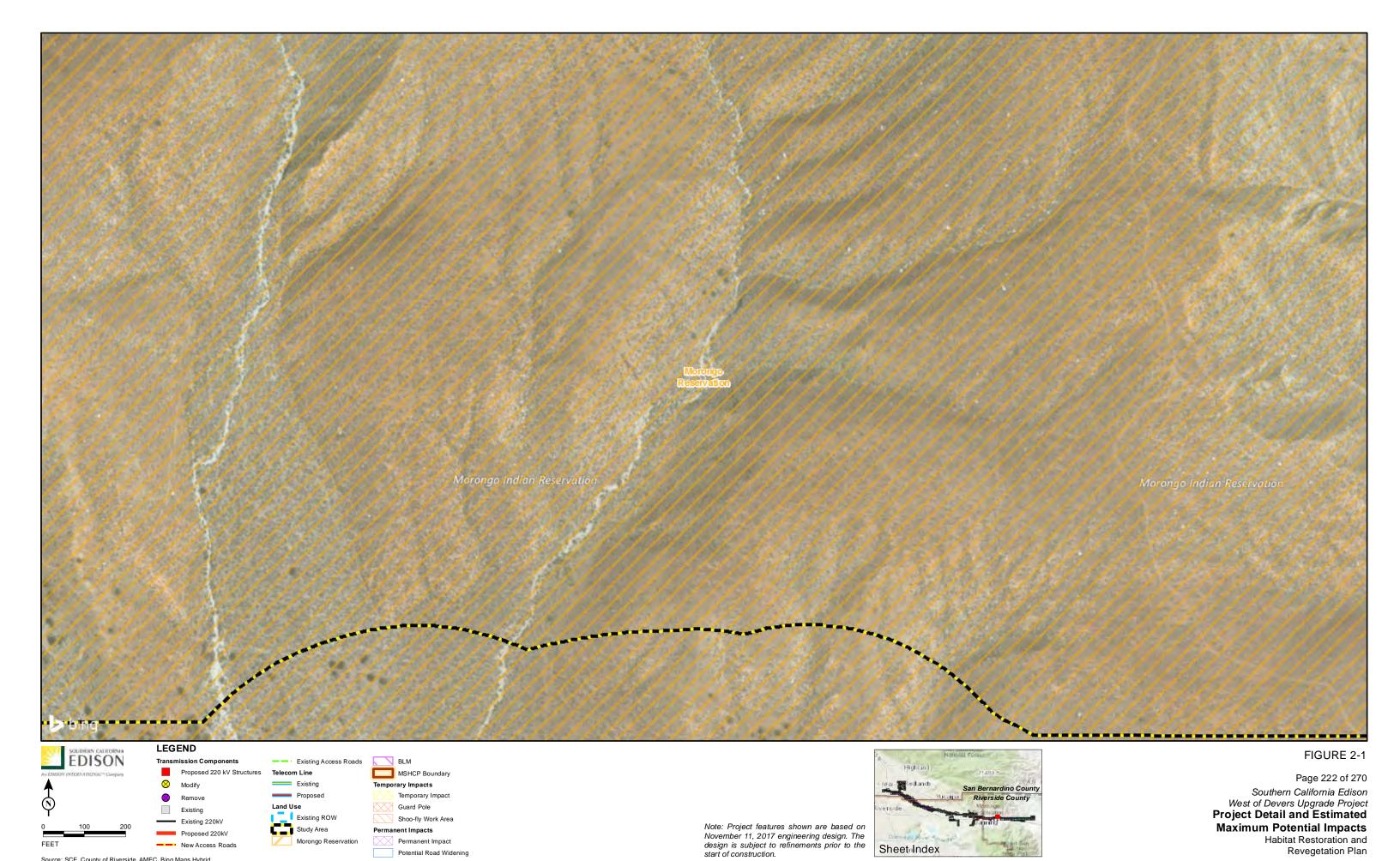
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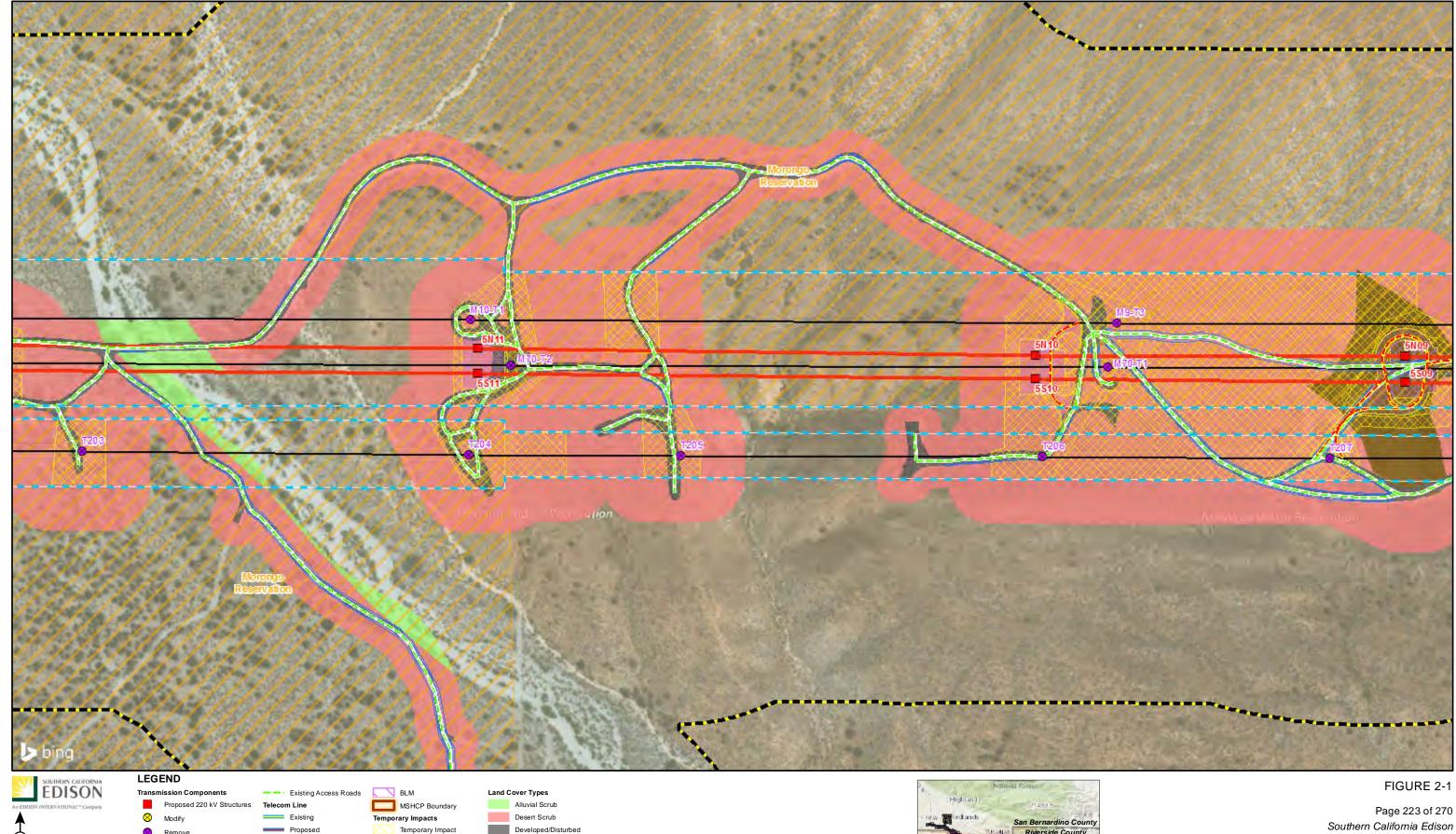


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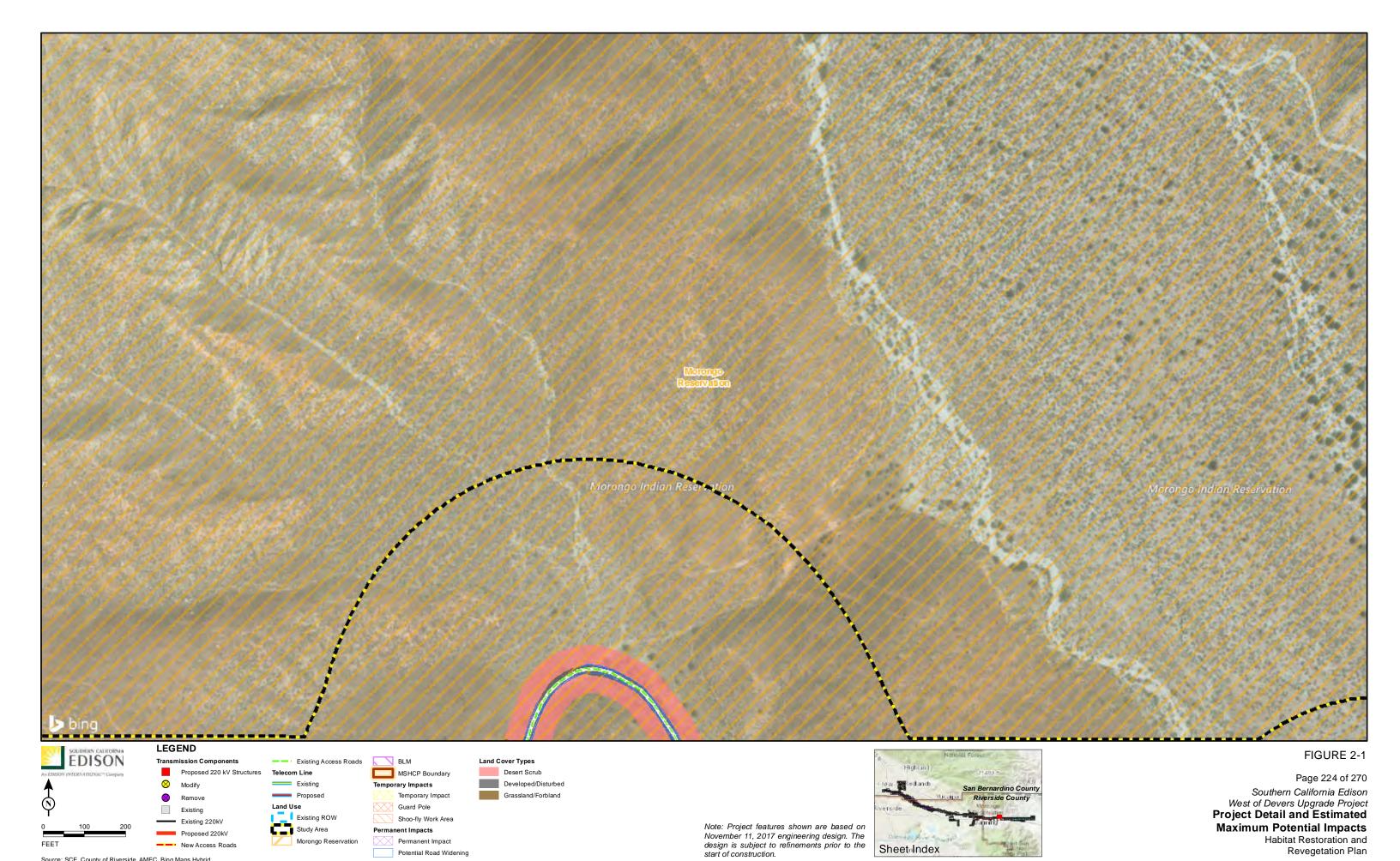
Grassland/Forbland

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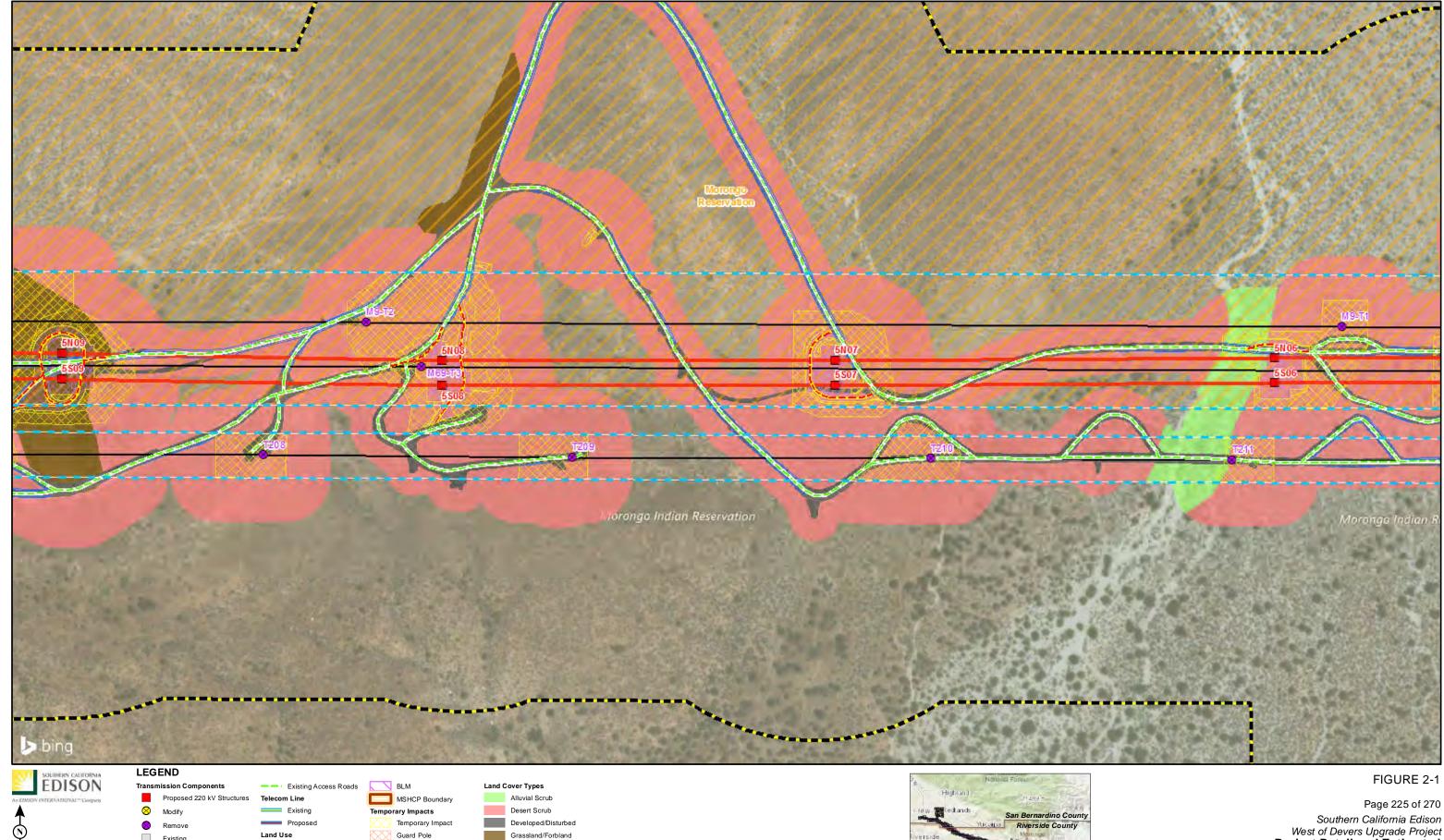
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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)



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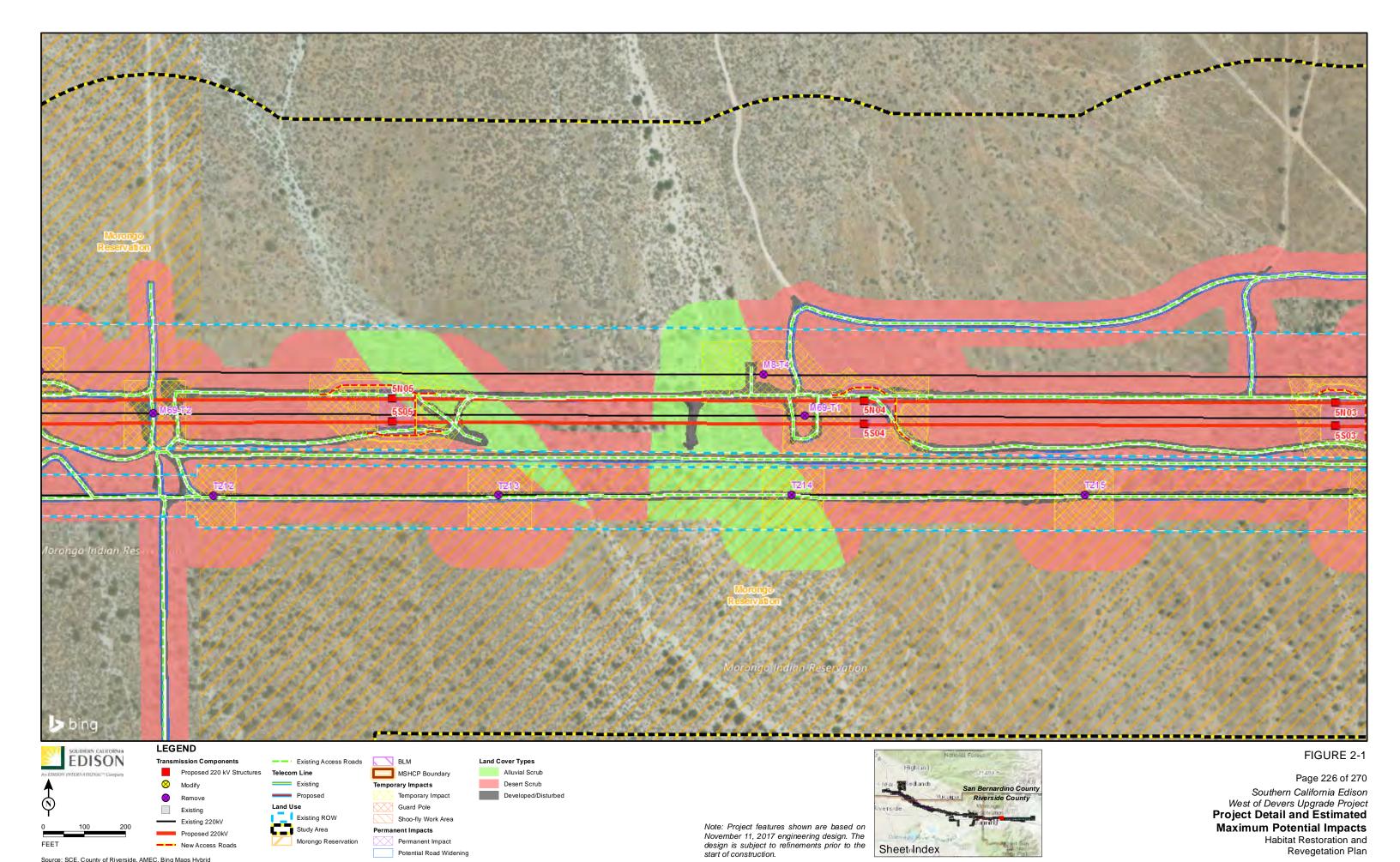
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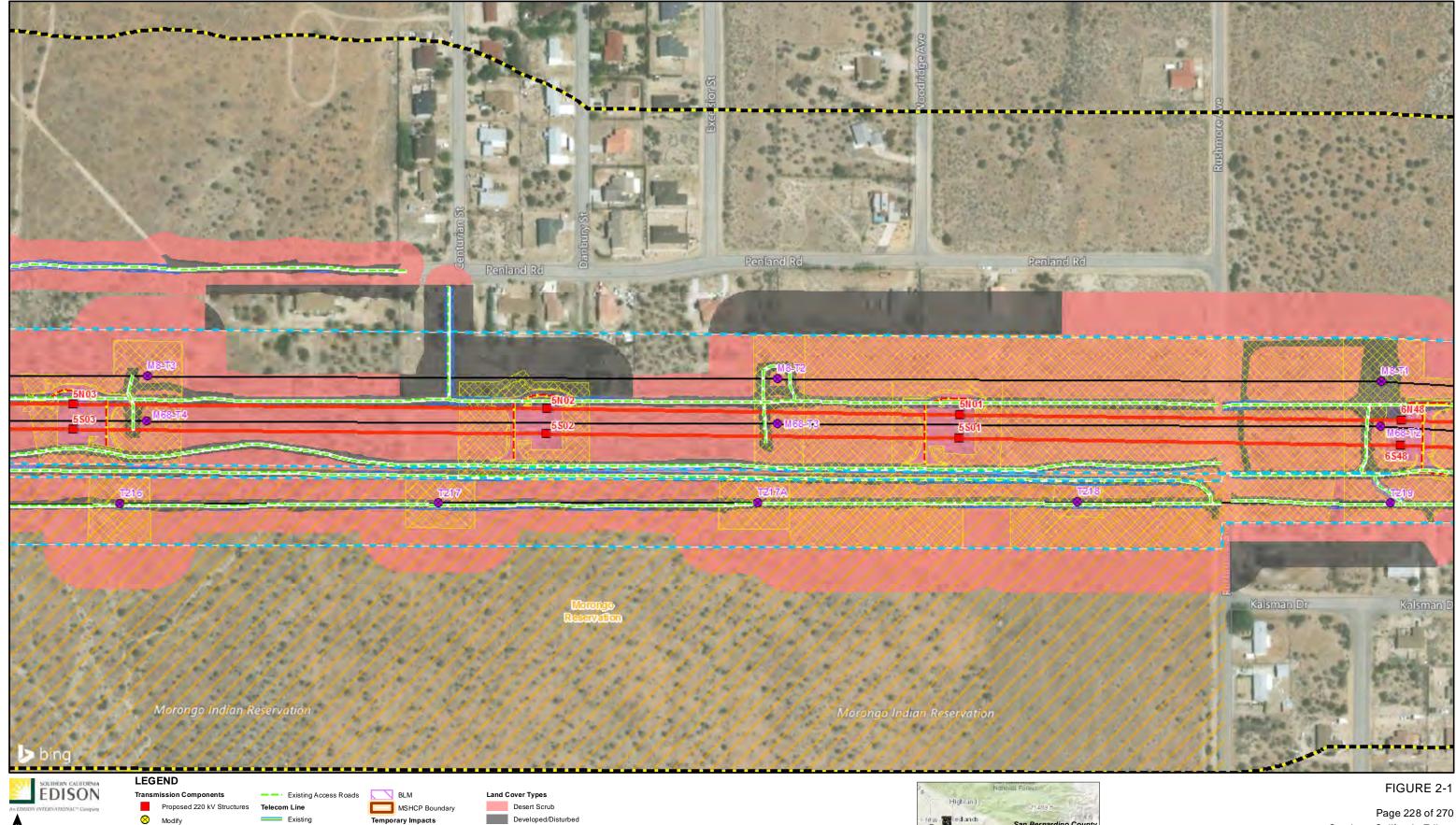
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Existing ROW

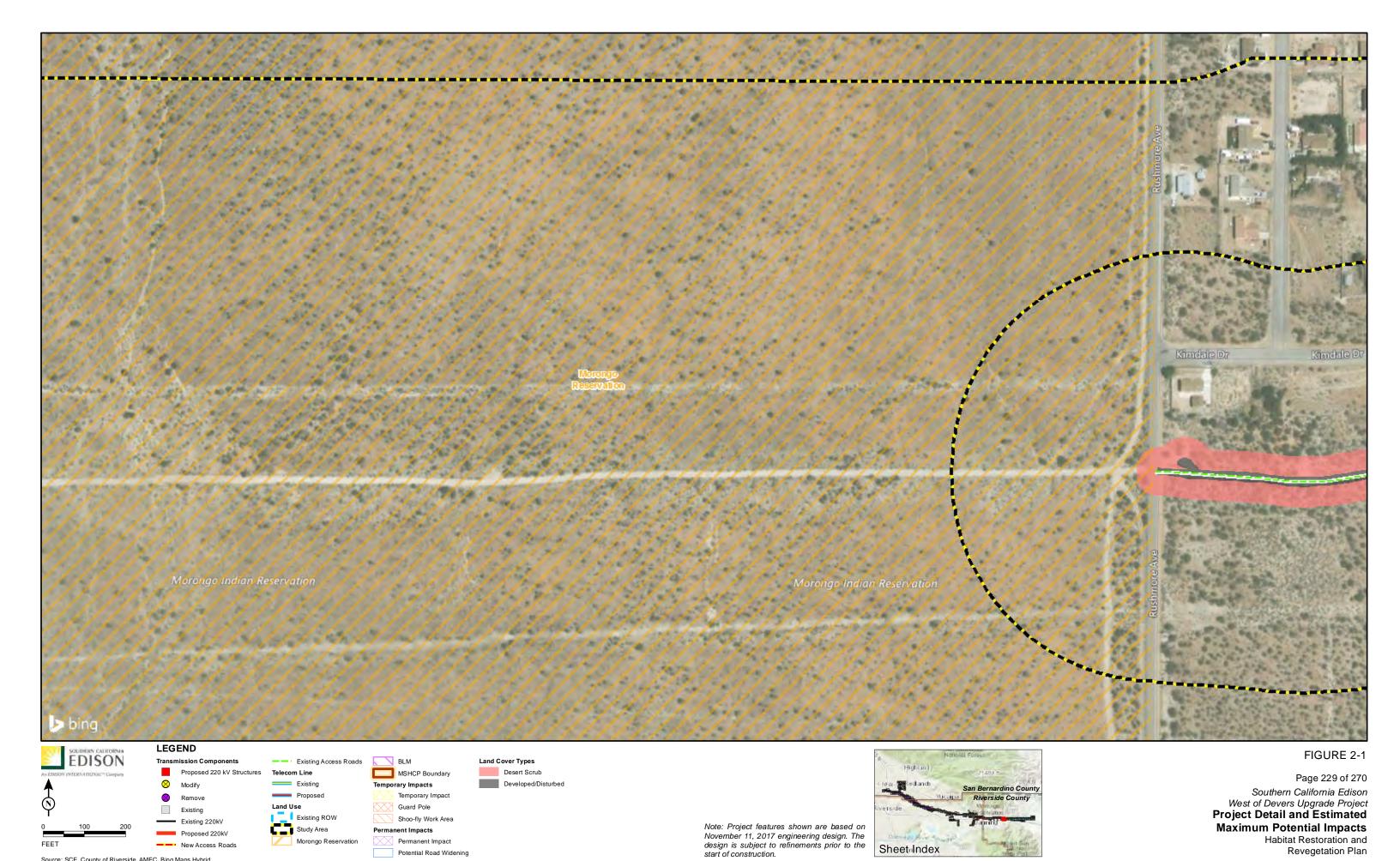
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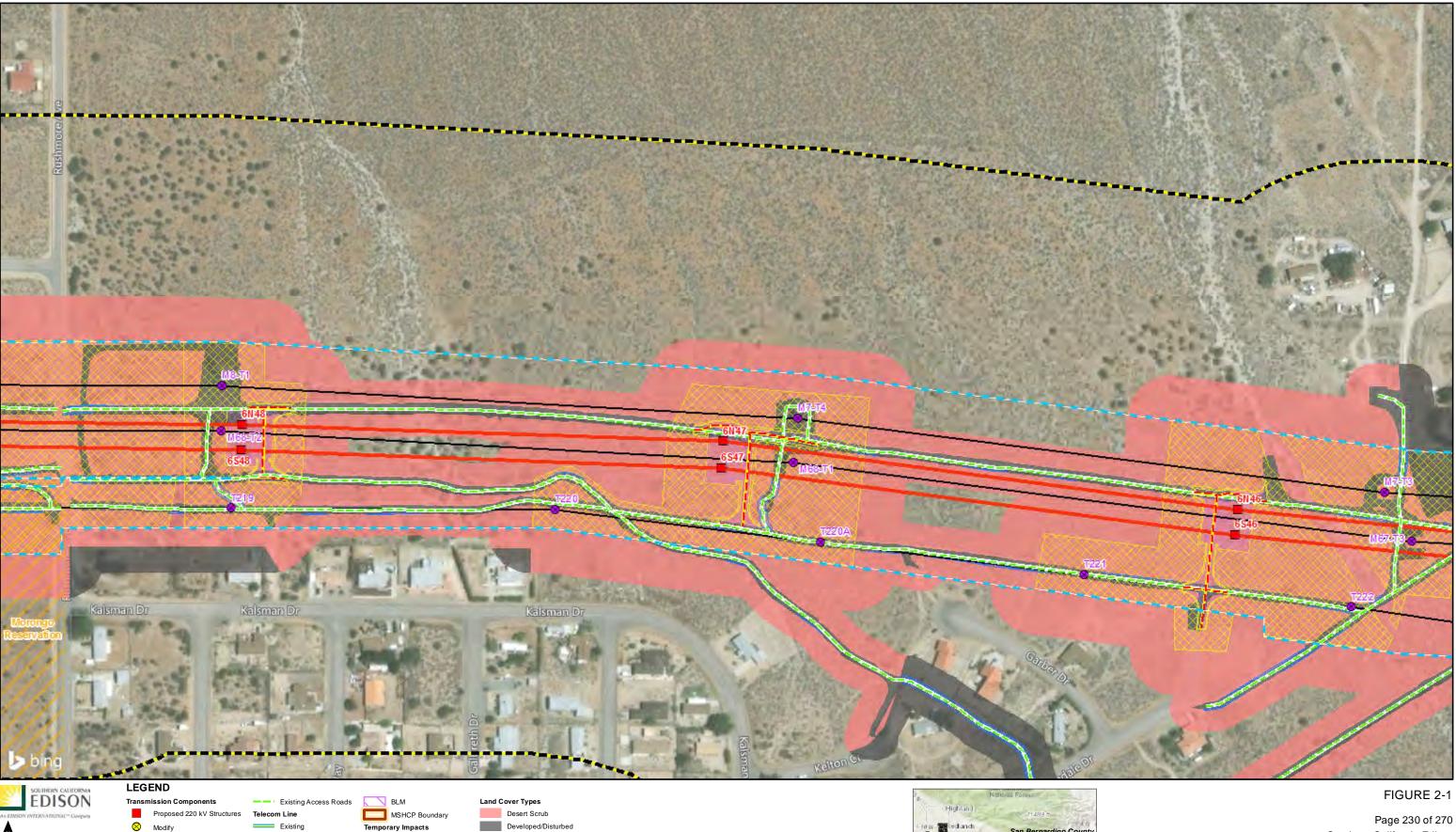


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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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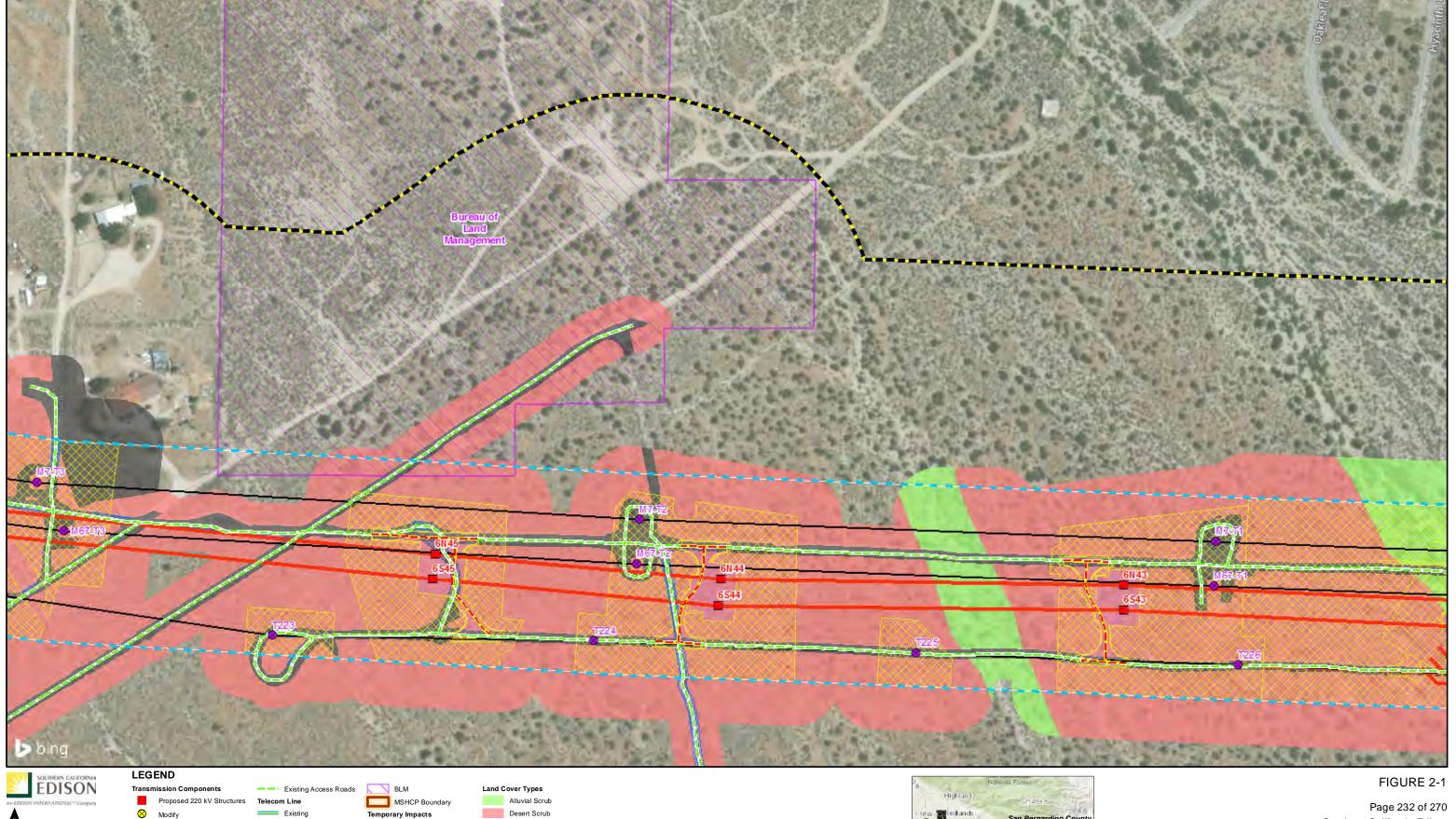
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Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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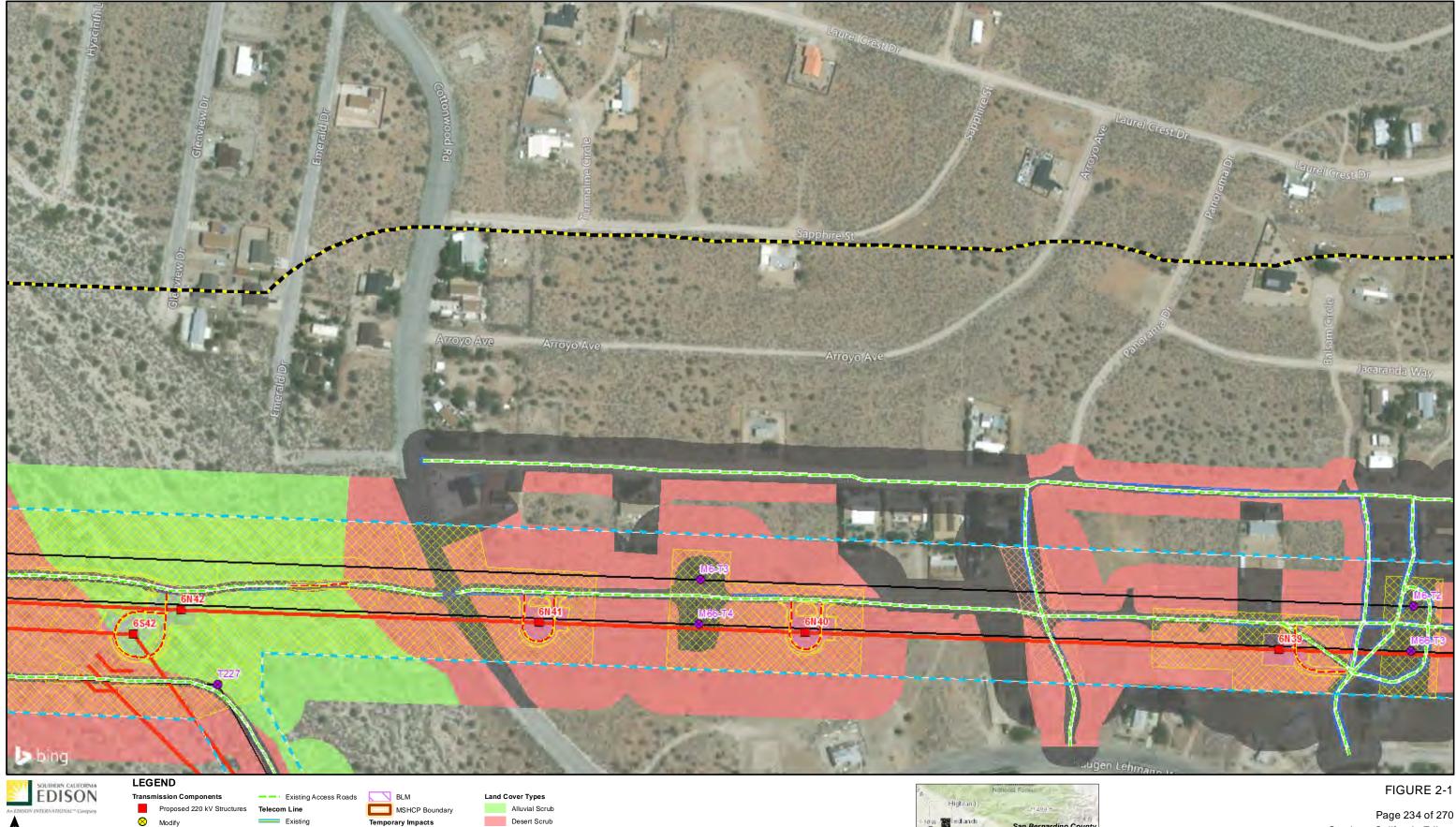
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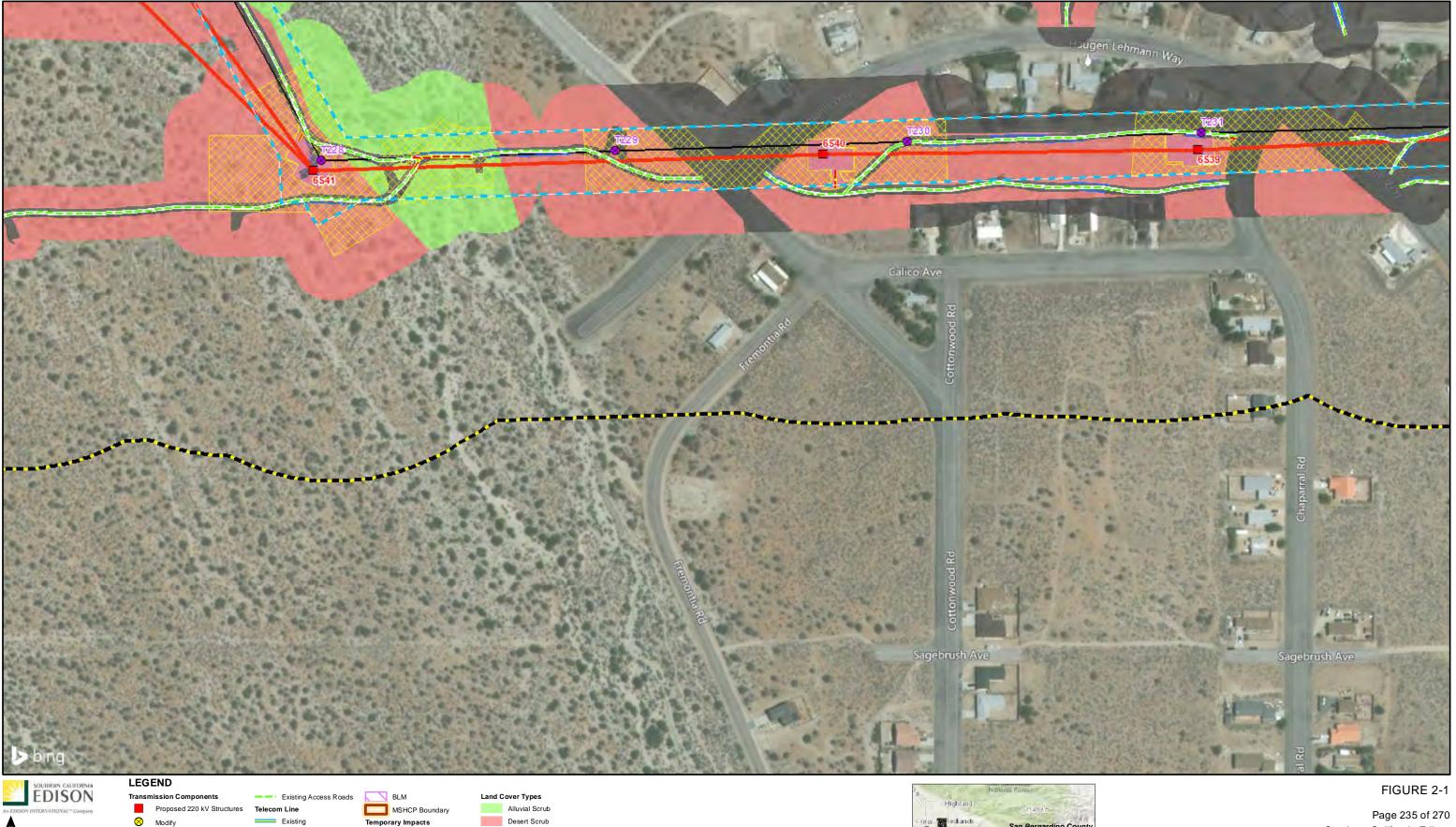
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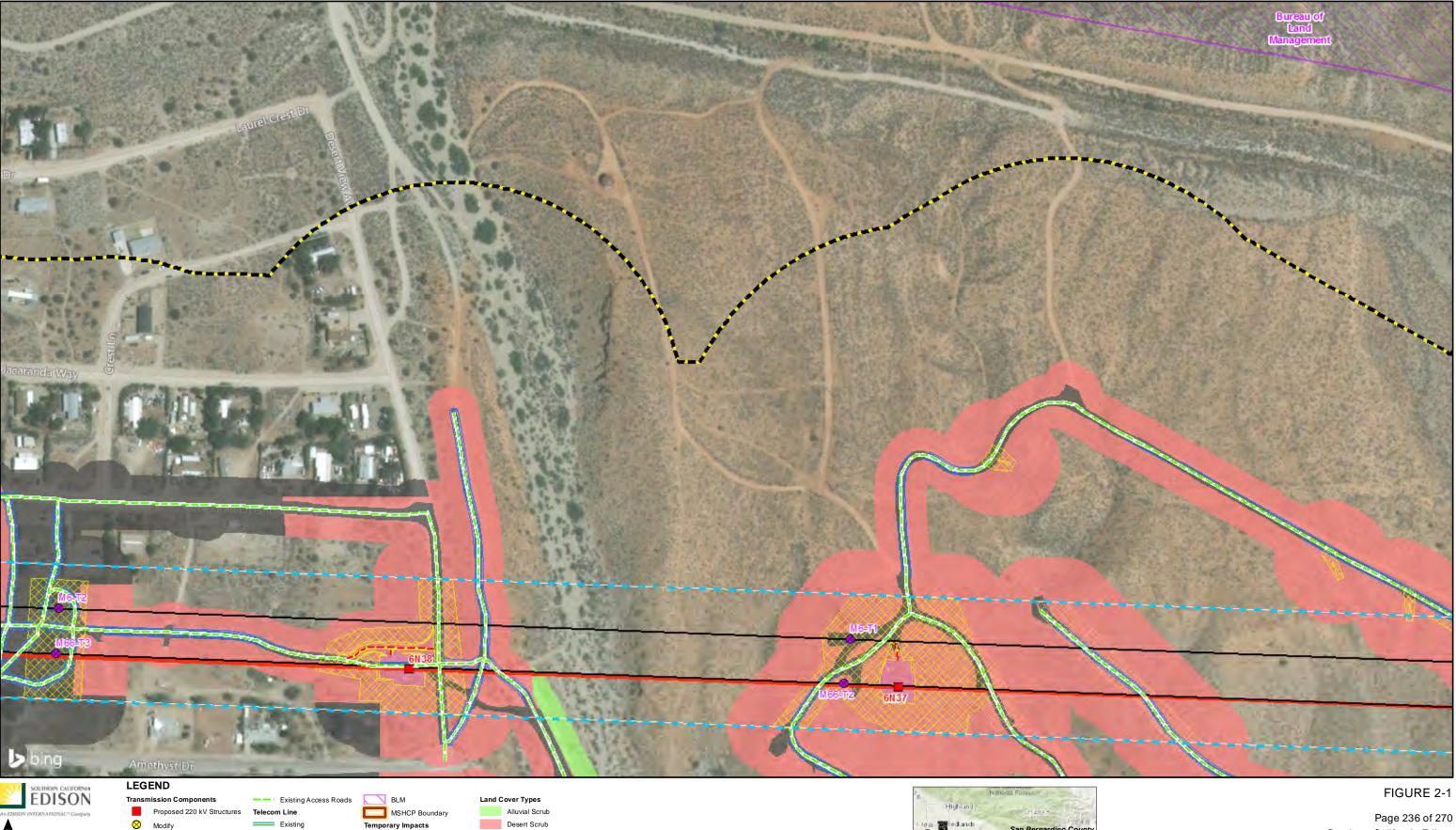
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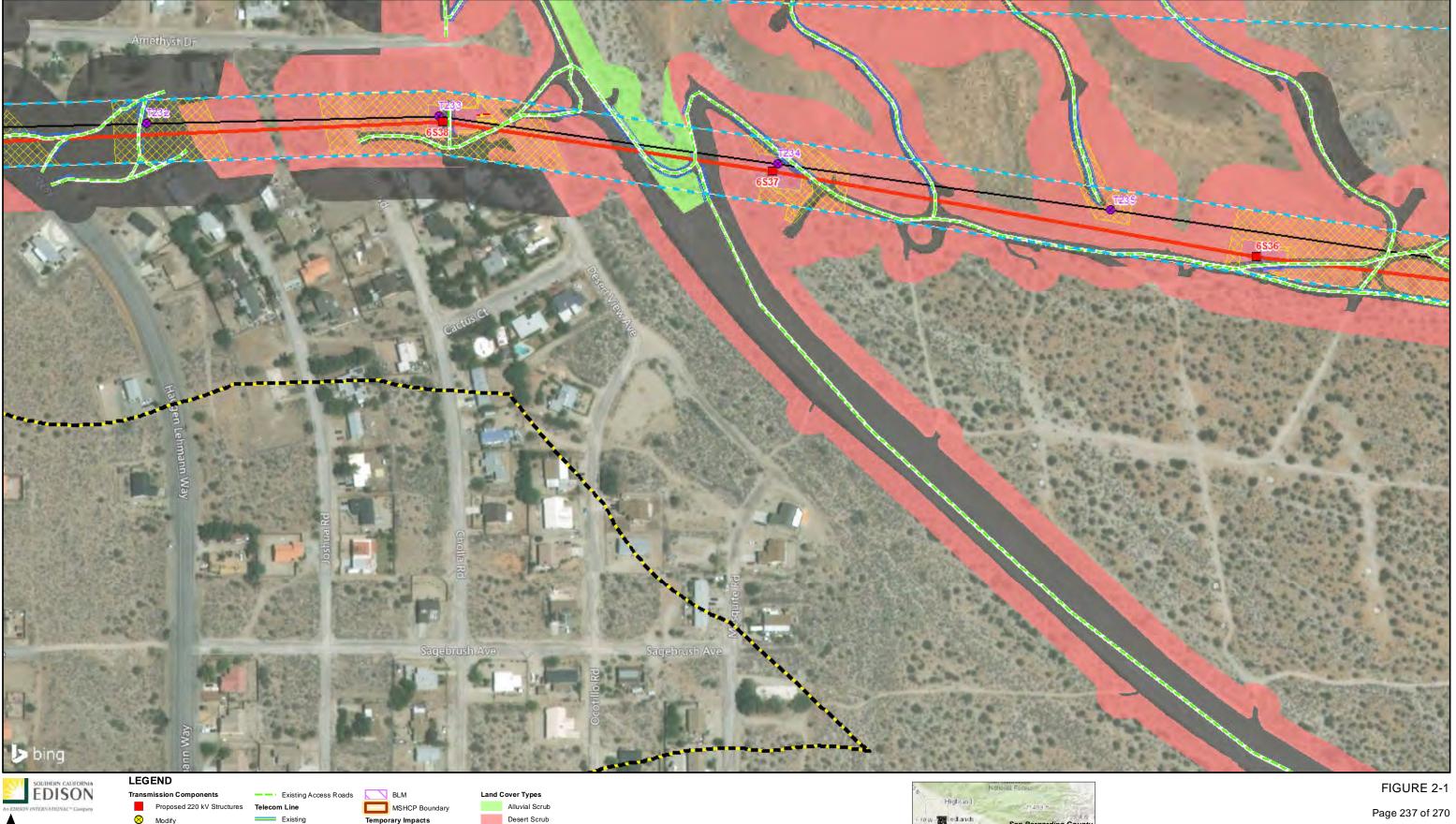
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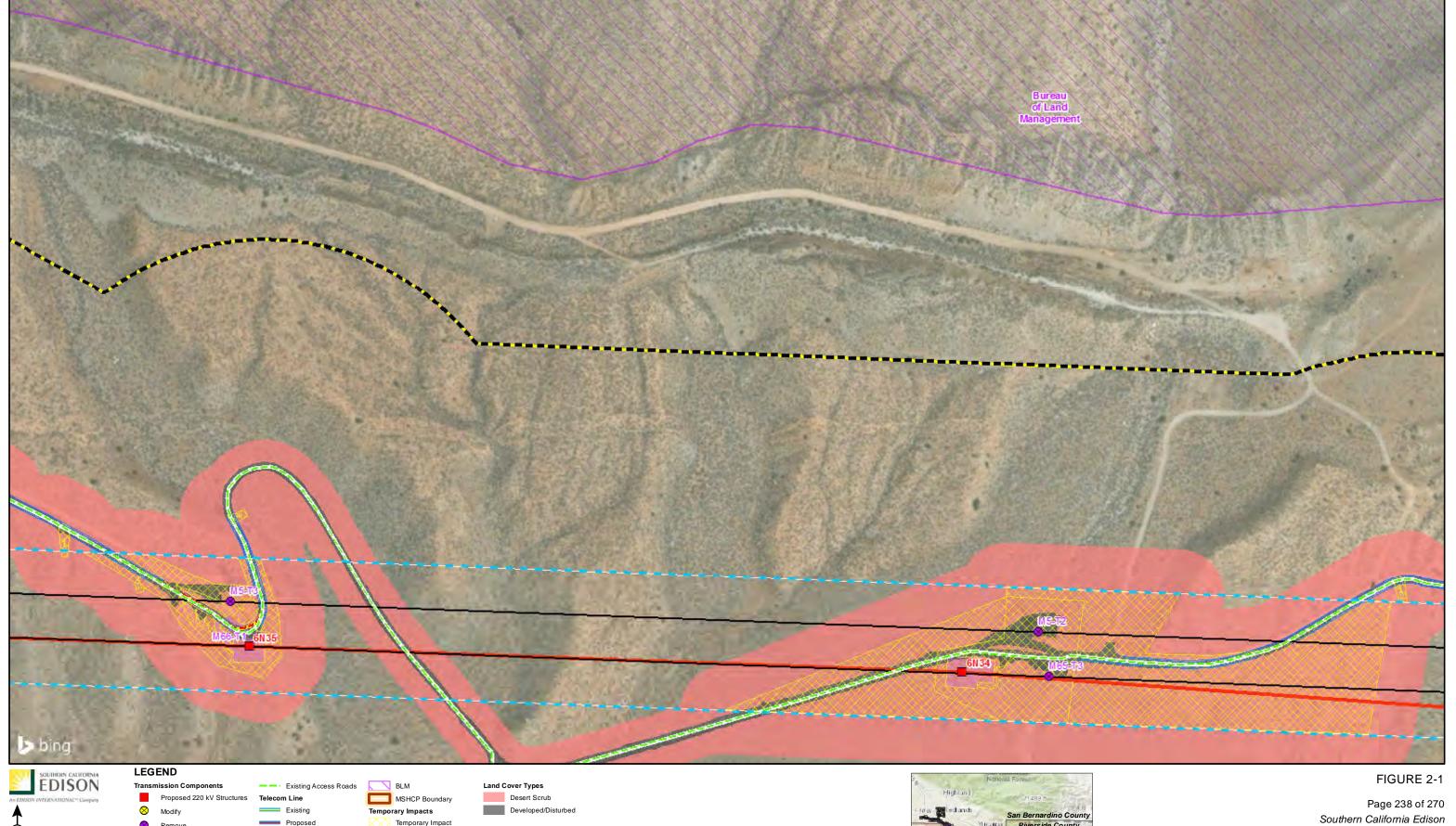
Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Land Use

Existing ROW

Study Area

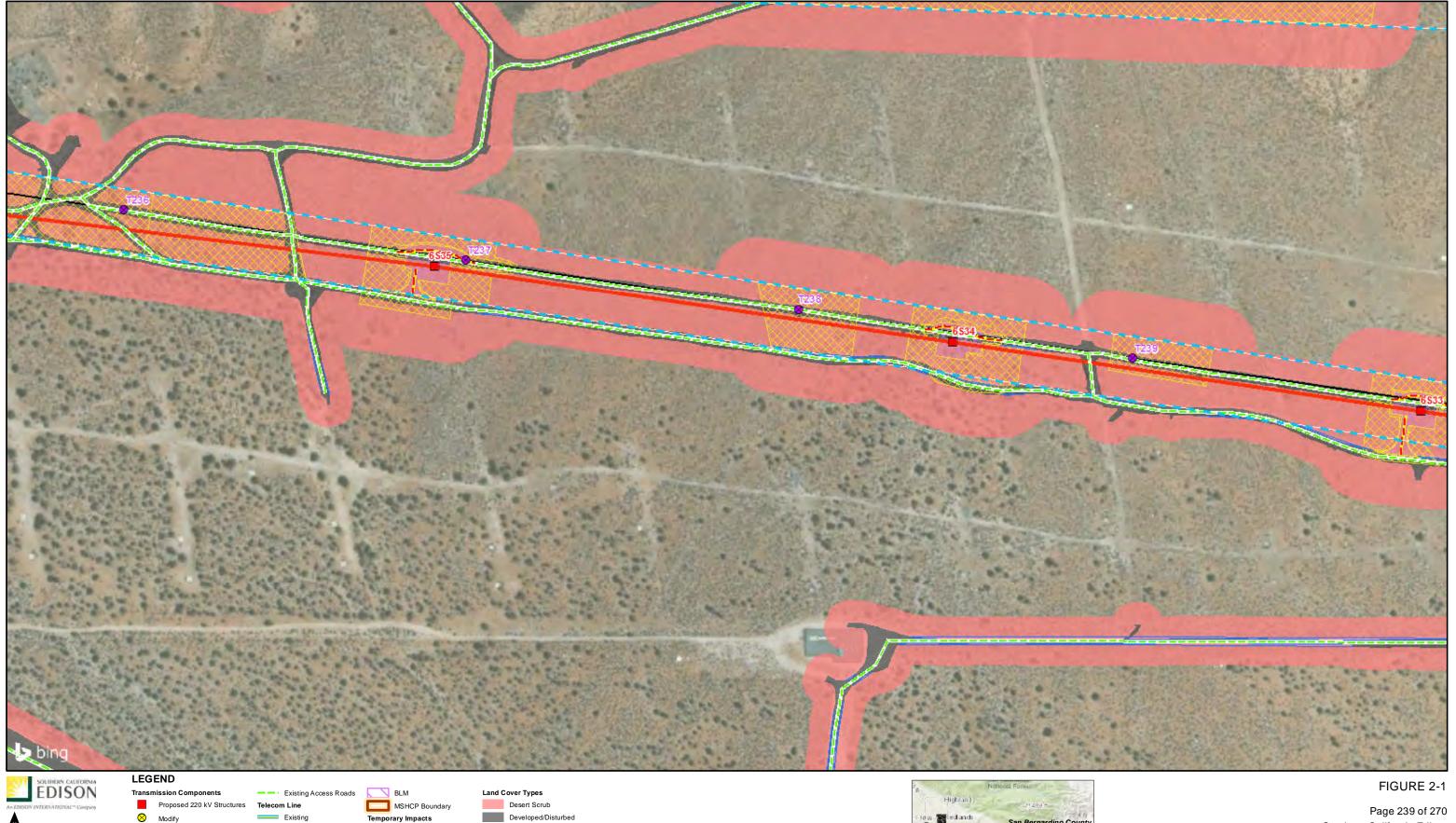
Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact

Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.



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Southern California Edison
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Existing ROW

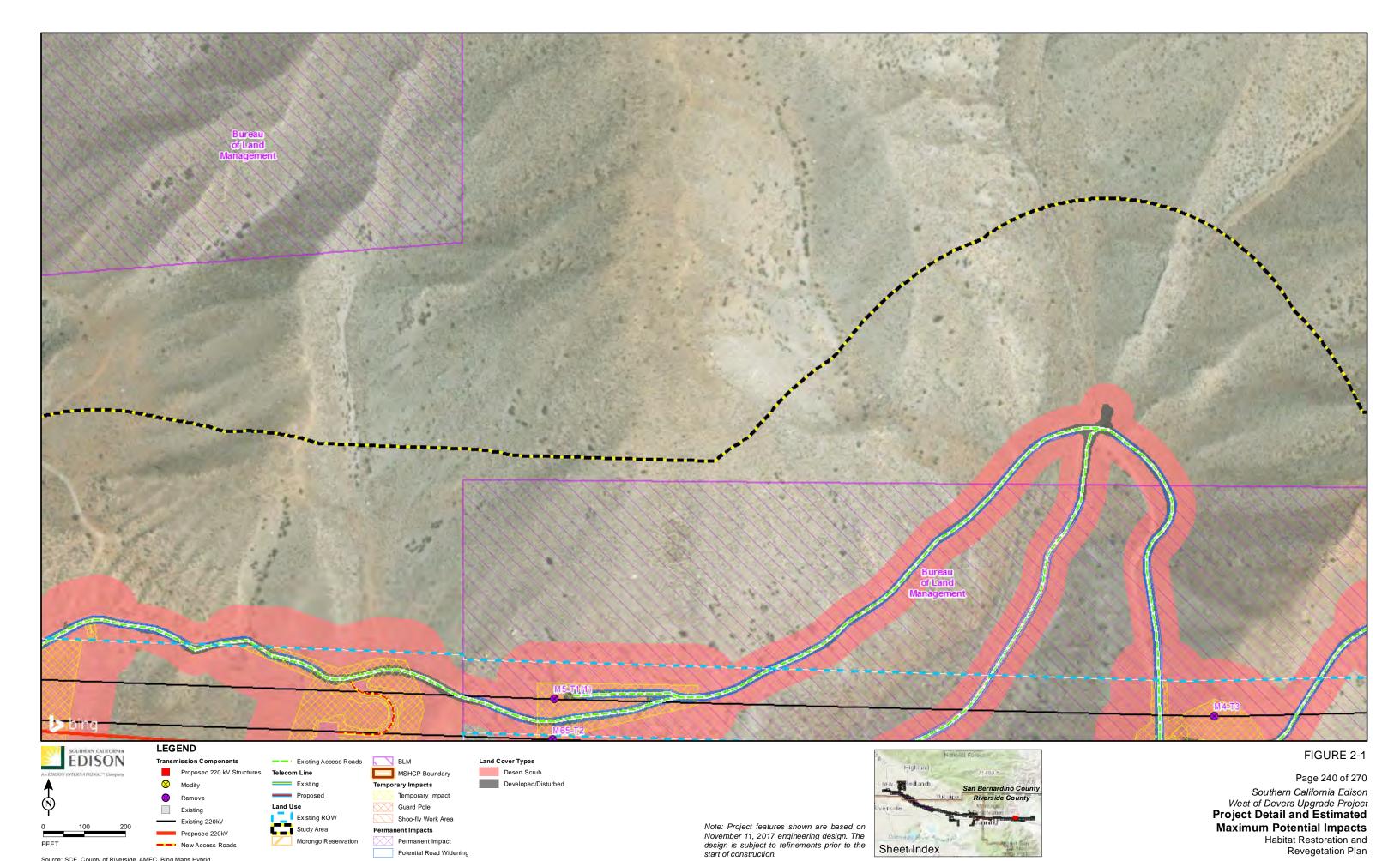
Study Area

Temporary Impact Guard Pole

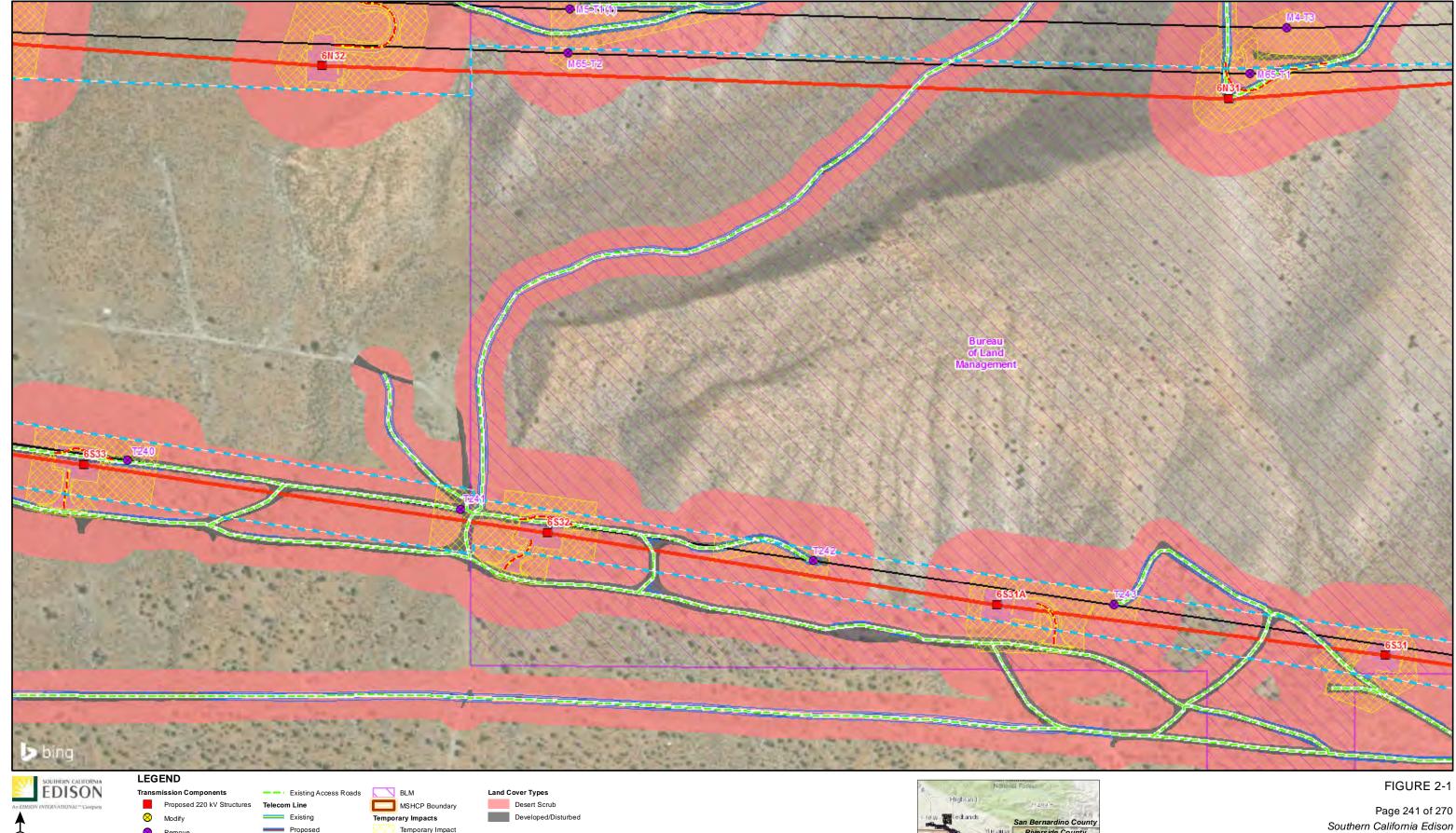
Shoo-fly Work Area

Permanent Impact

Potential Road Widening



ch2m:



Note: Project features shown are based on November 11, 2017 engineering design. The

design is subject to refinements prior to the start of construction.

Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

San Bernardino County
Riverside County

Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
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Revegetation Plan

Land Use

Existing ROW

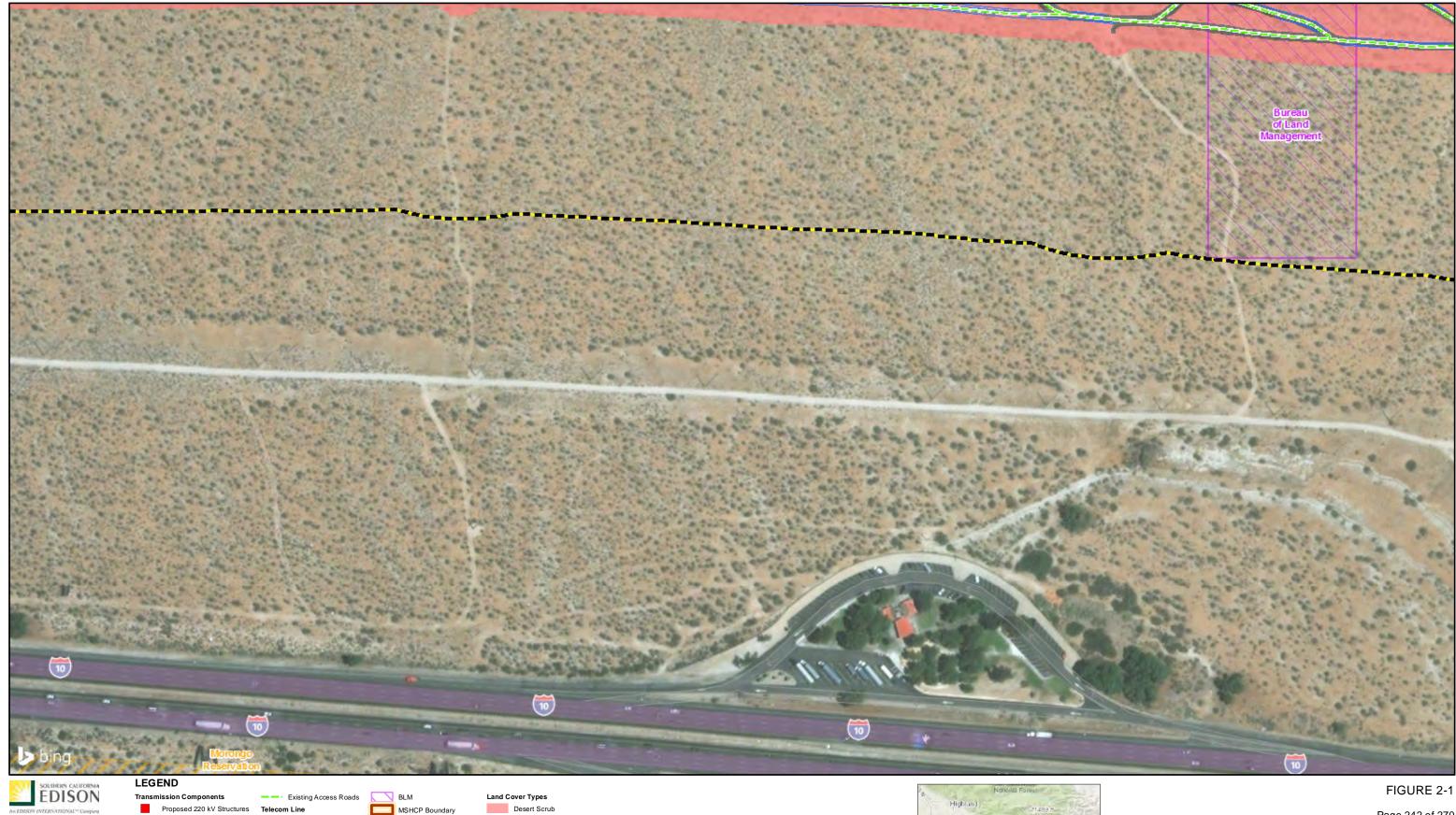
Study Area

Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact



Developed/Disturbed

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

Highland

Highland

San Bernardino County

Riverside County

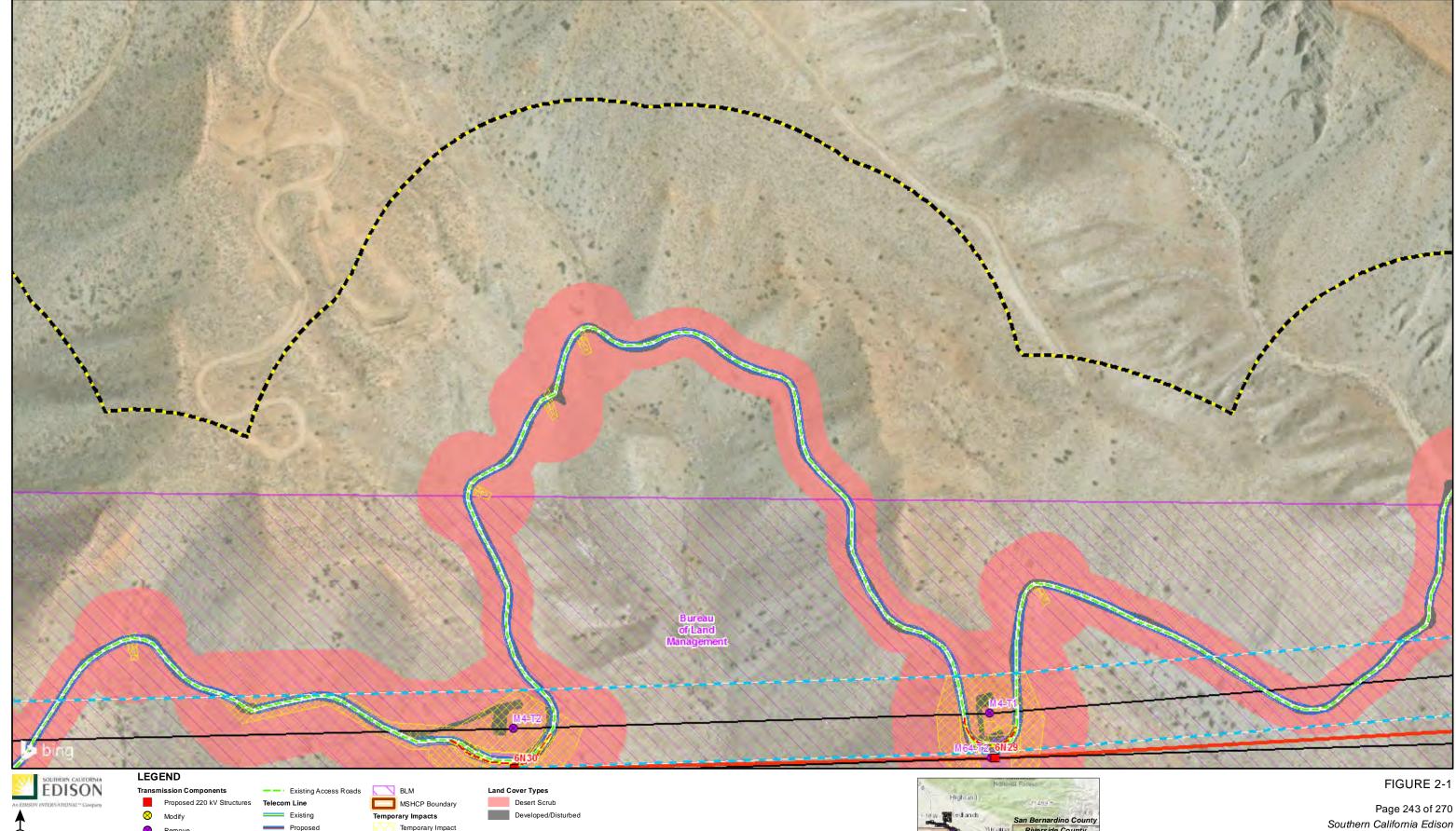
Streets of County

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Existing ROW

Study Area



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Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Land Use

Existing ROW

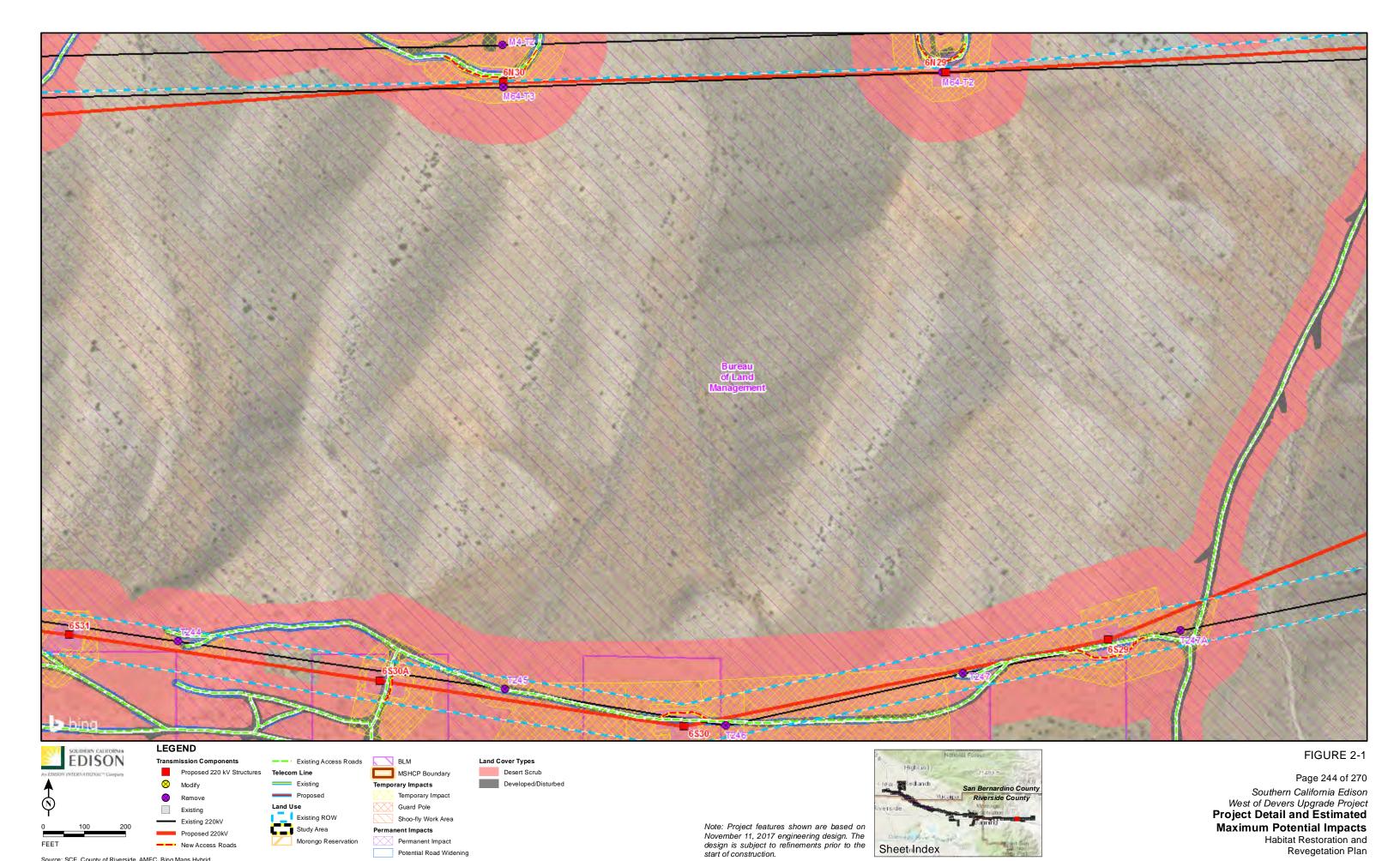
Study Area

Guard Pole

Permanent Impacts

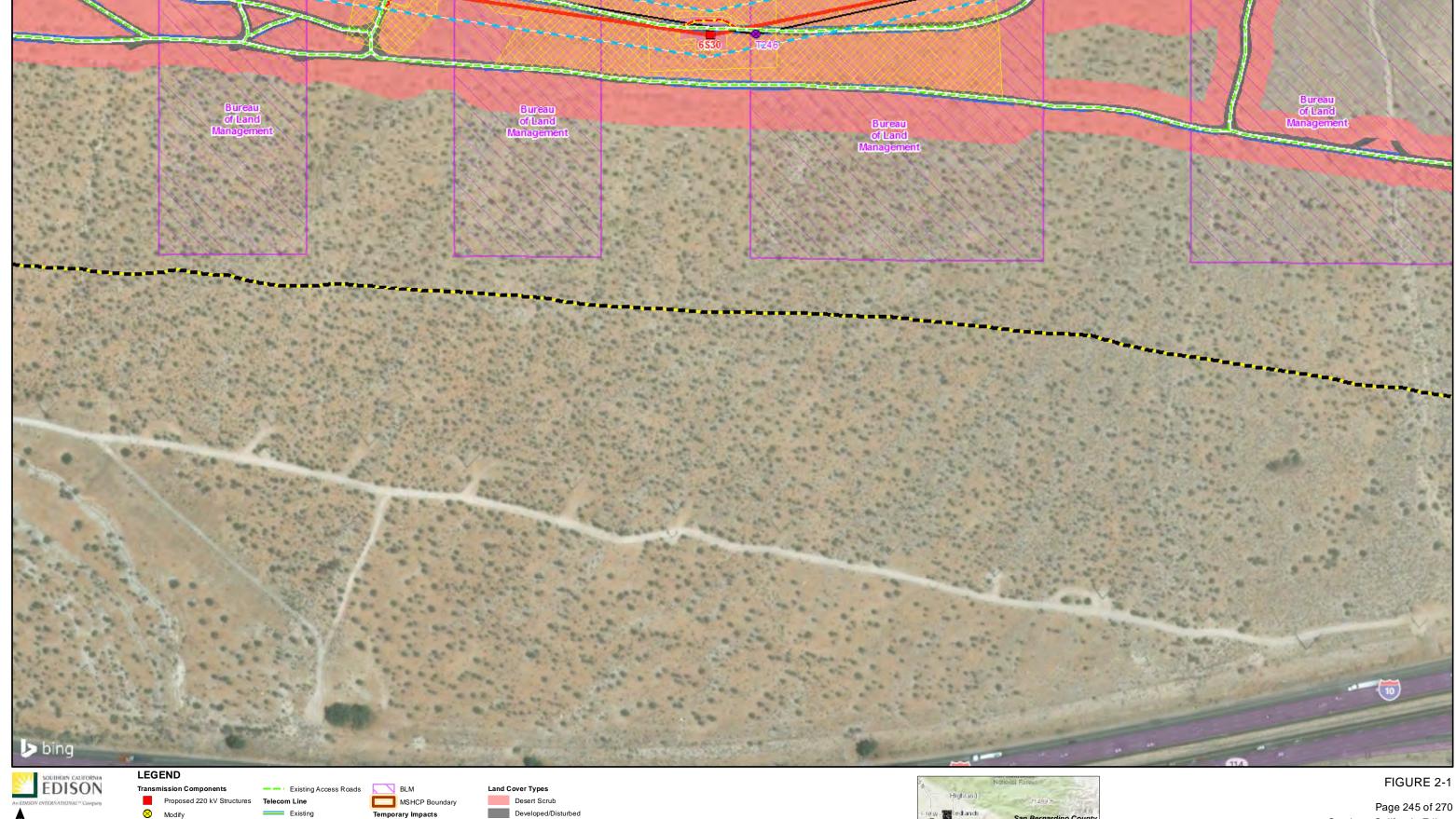
Shoo-fly Work Area

Permanent Impact



Sheet Index

Permanent Impact



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Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
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Habitat Restoration and
Revegetation Plan

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Existing ROW

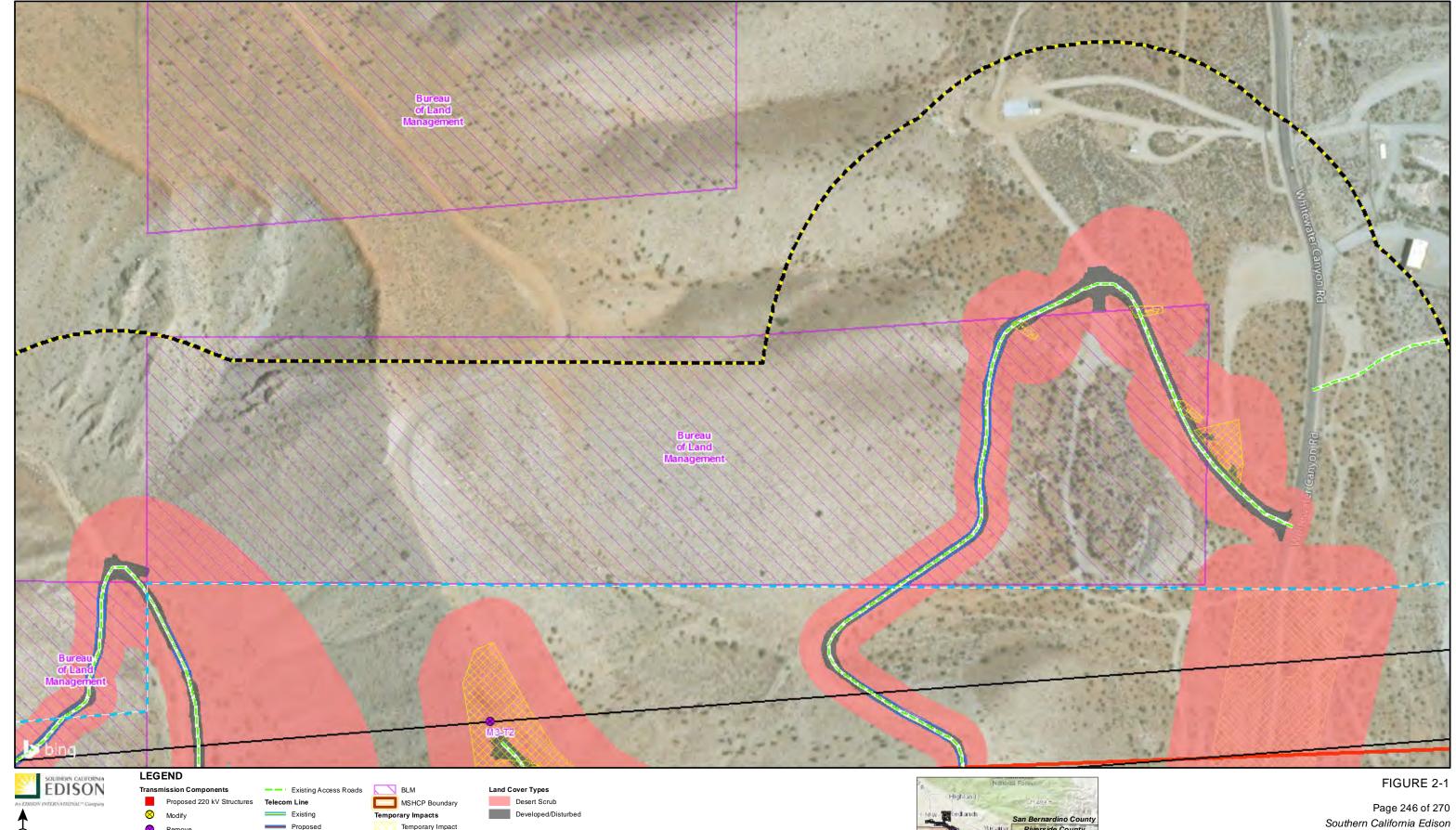
Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

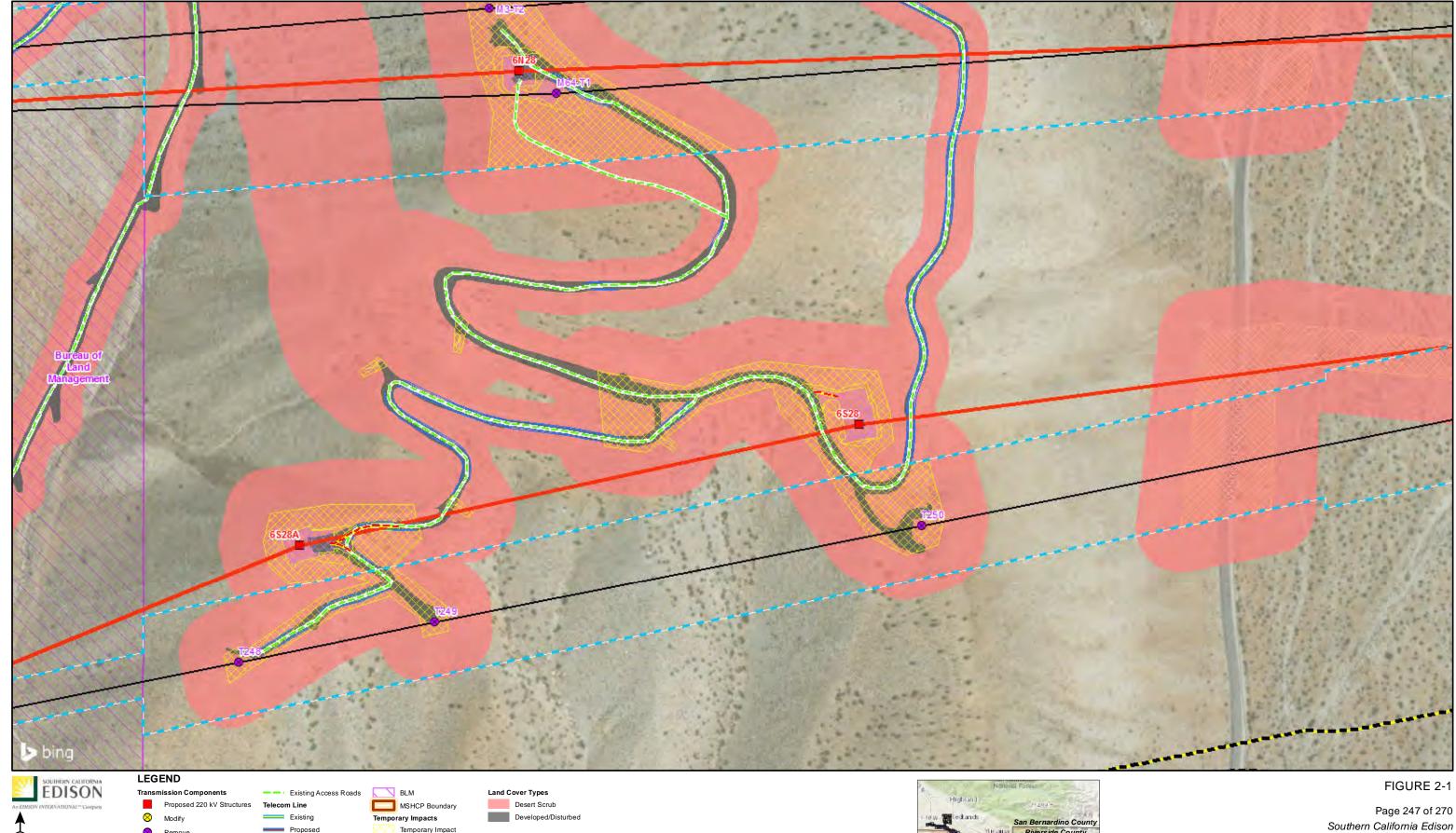
Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact

Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Sheet Index

Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts

Habitat Restoration and Revegetation Plan

Existing ROW

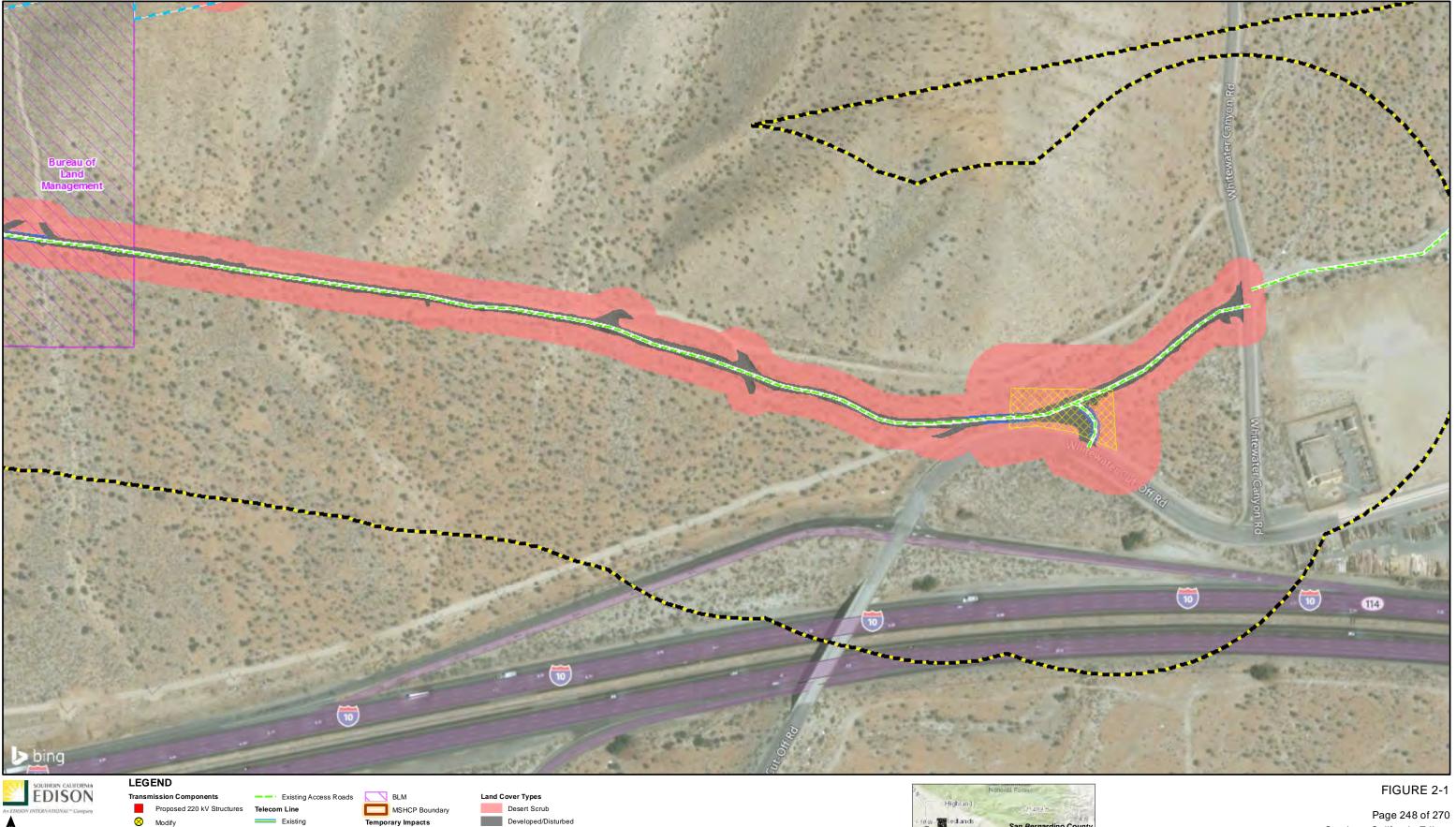
Study Area

Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Proposed

Study Area

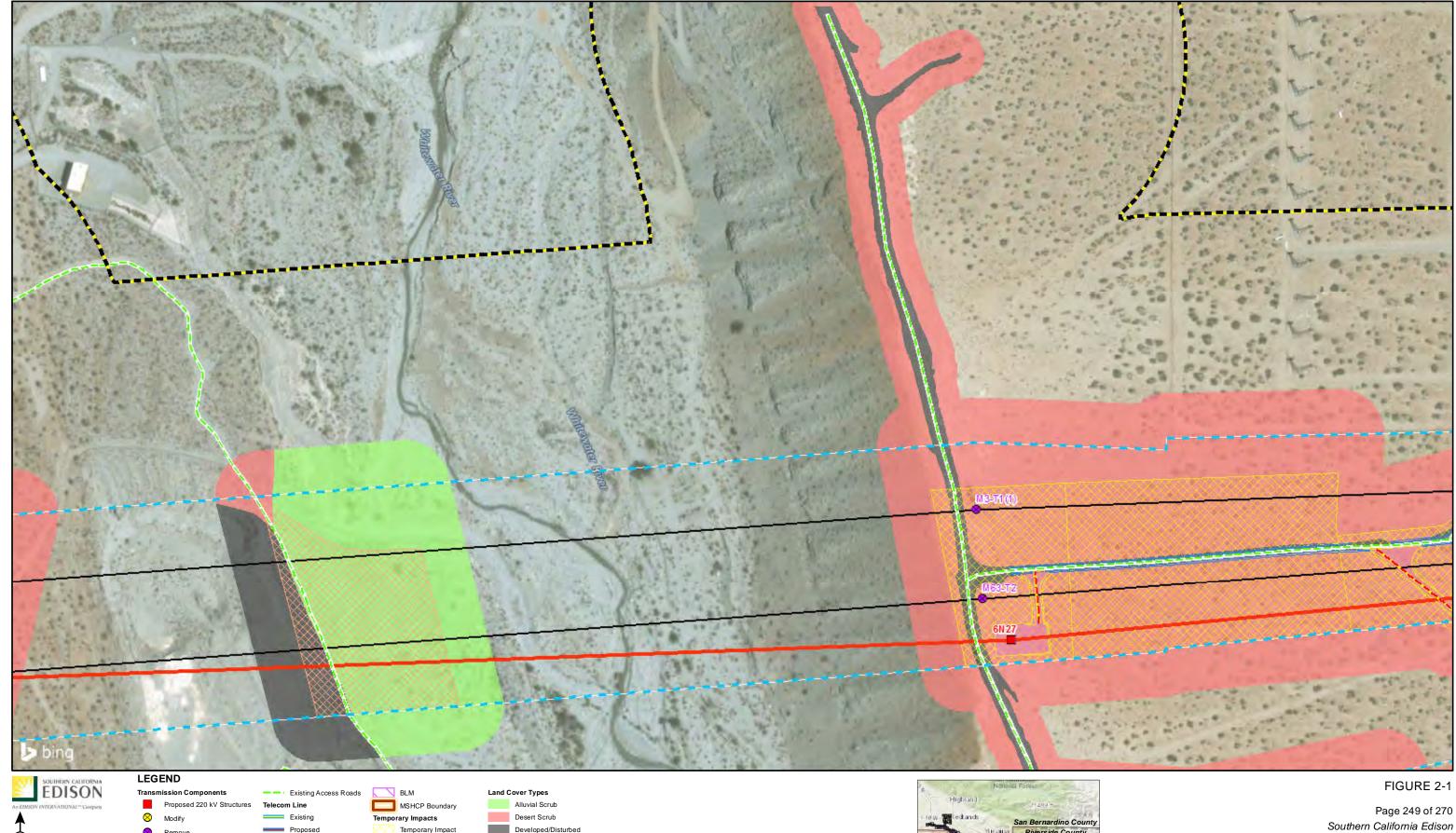
Existing ROW

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Southern California Edison
West of Devers Upgrade Project
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Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Existing ROW

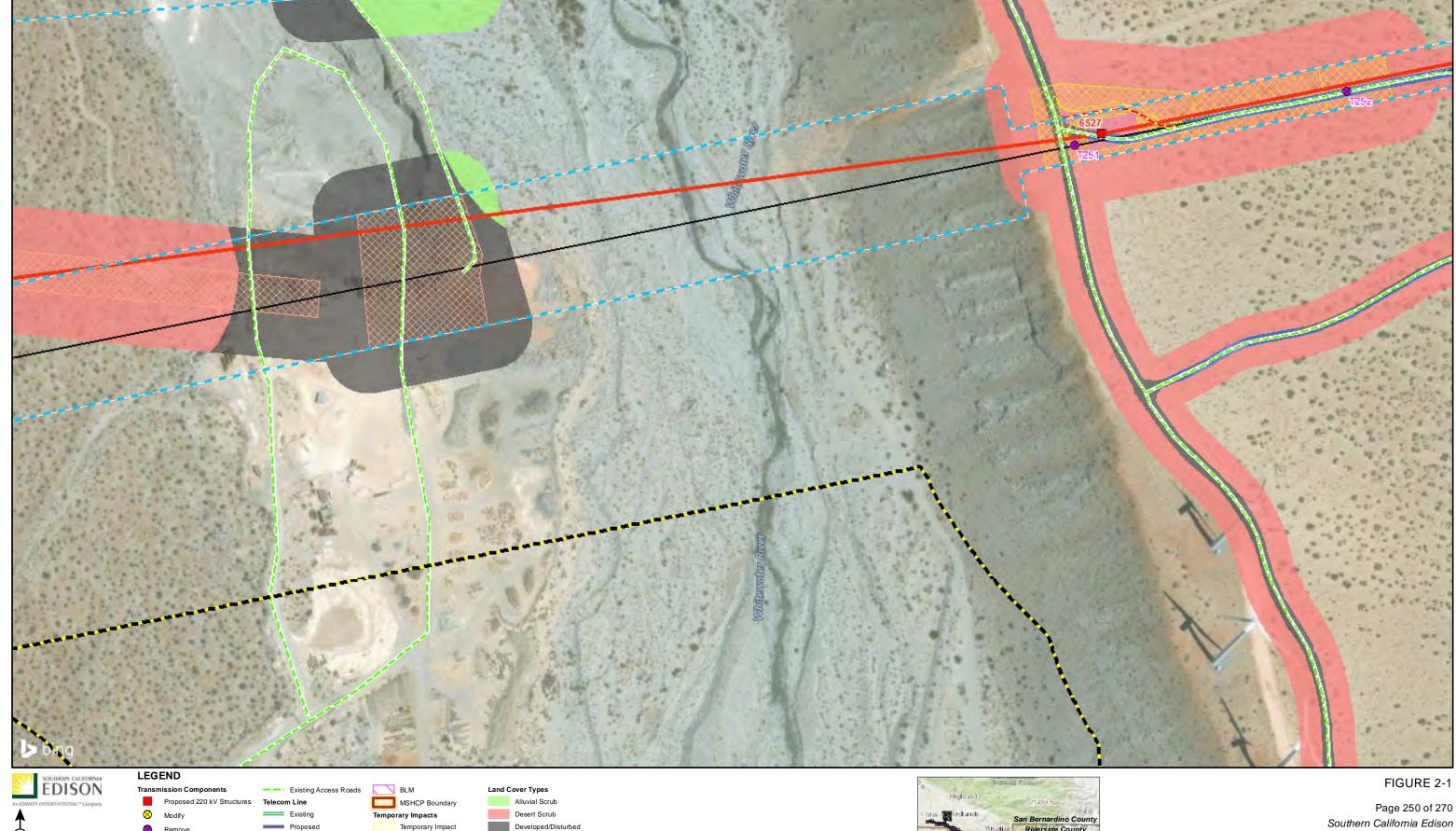
Study Area

Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Land Use

Existing ROW

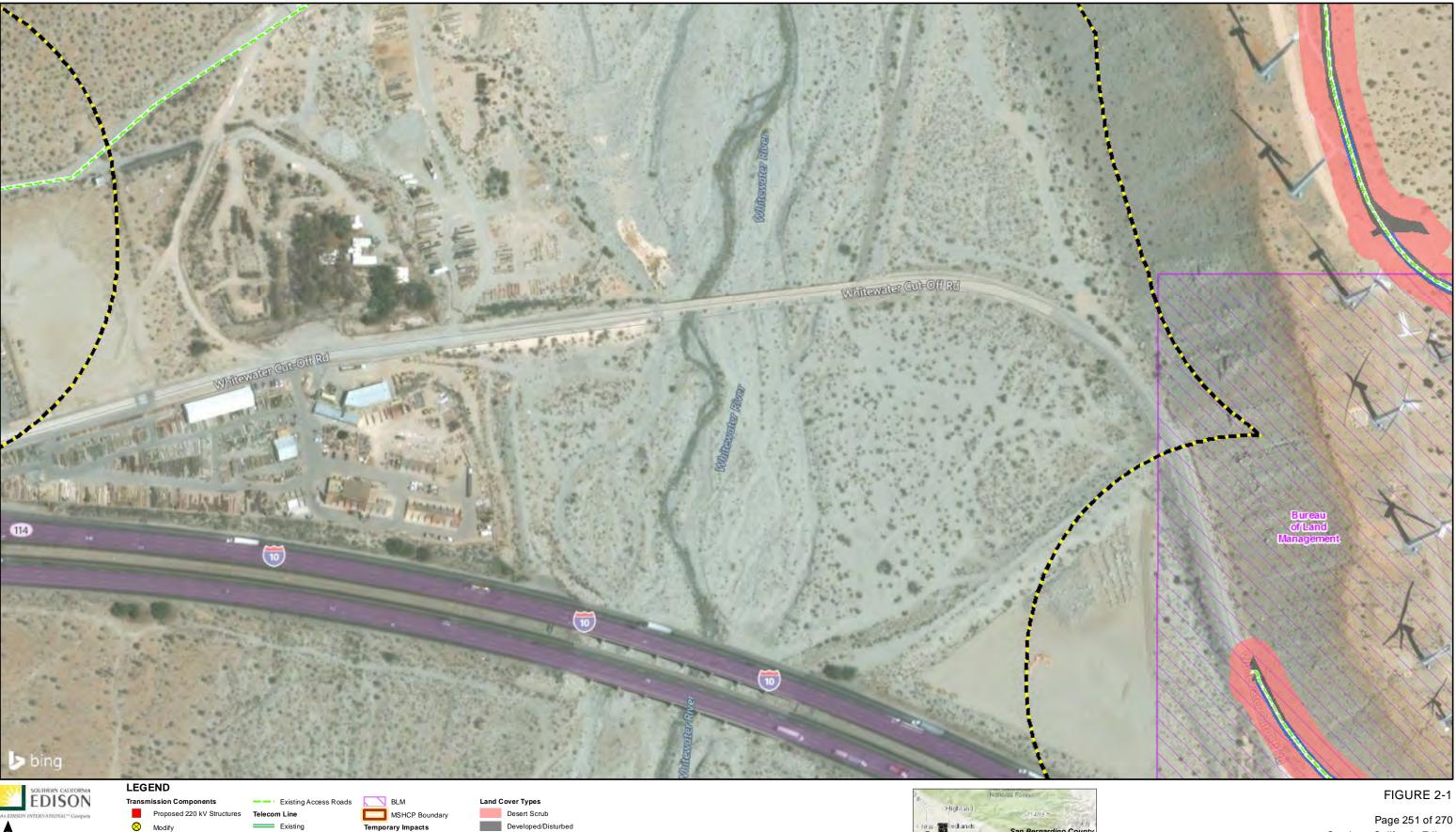
Study Area

Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Existing ROW

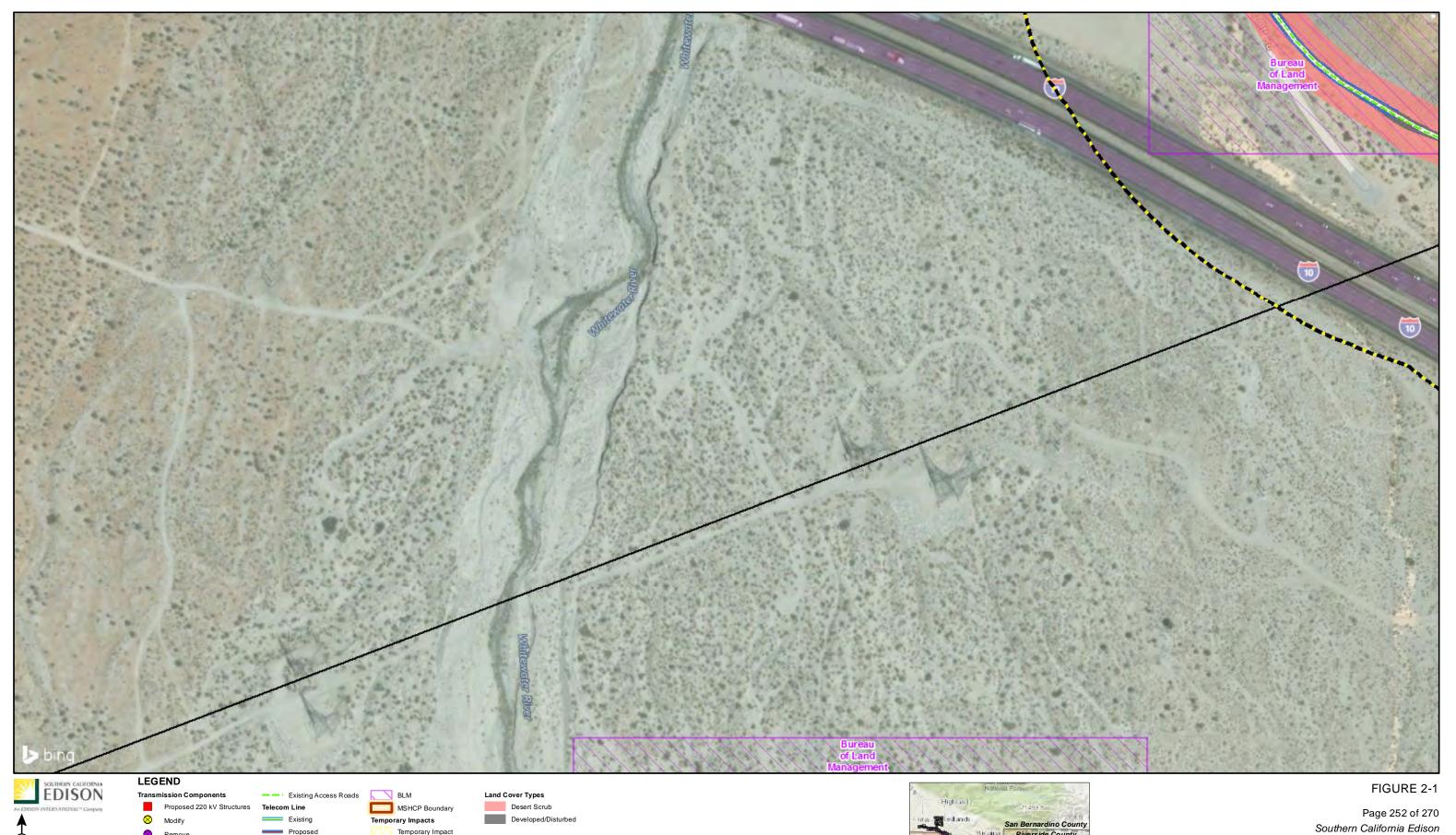
Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Land Use

Existing ROW

Study Area

Guard Pole

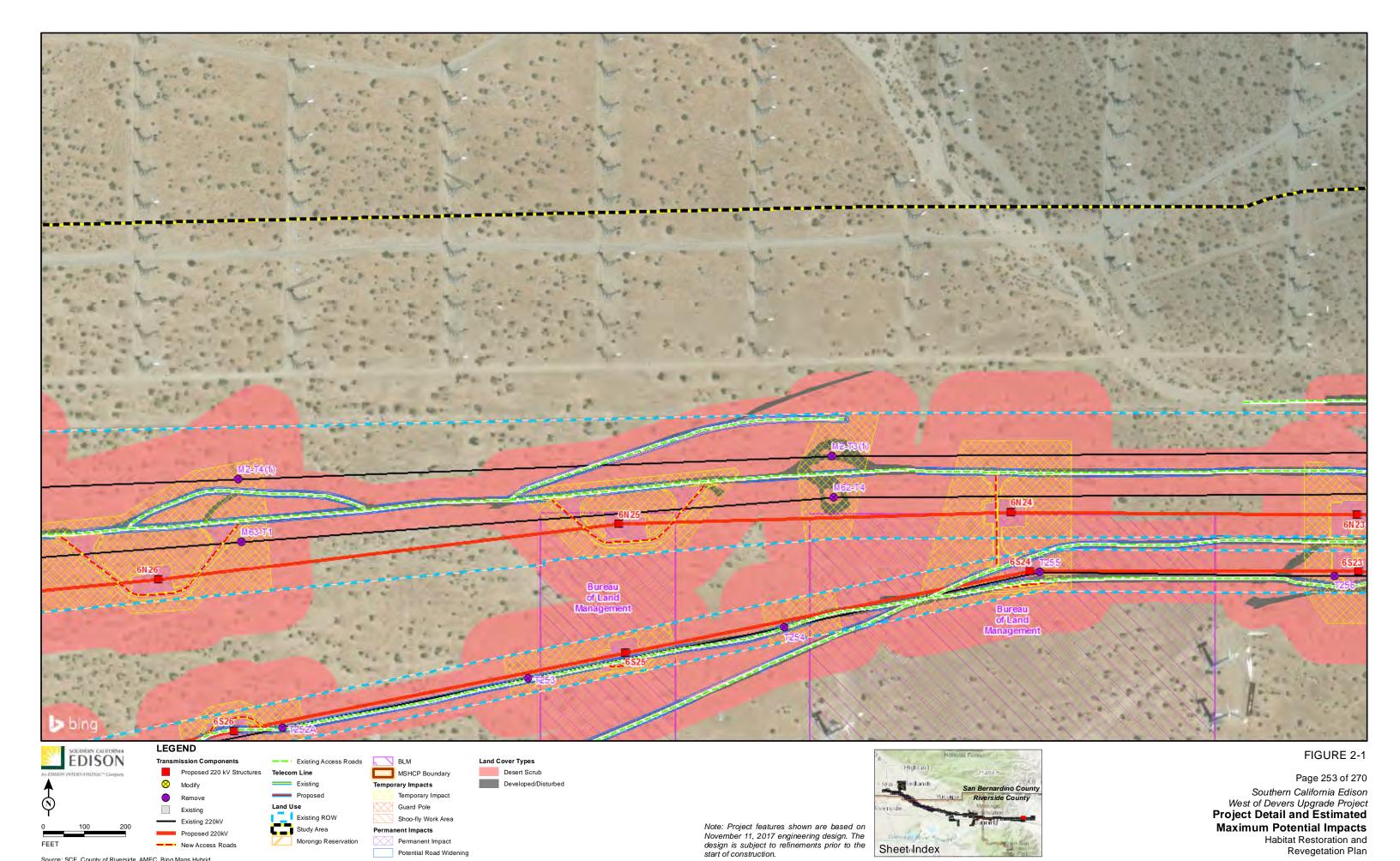
Permanent Impacts

Shoo-fly Work Area

Permanent Impact

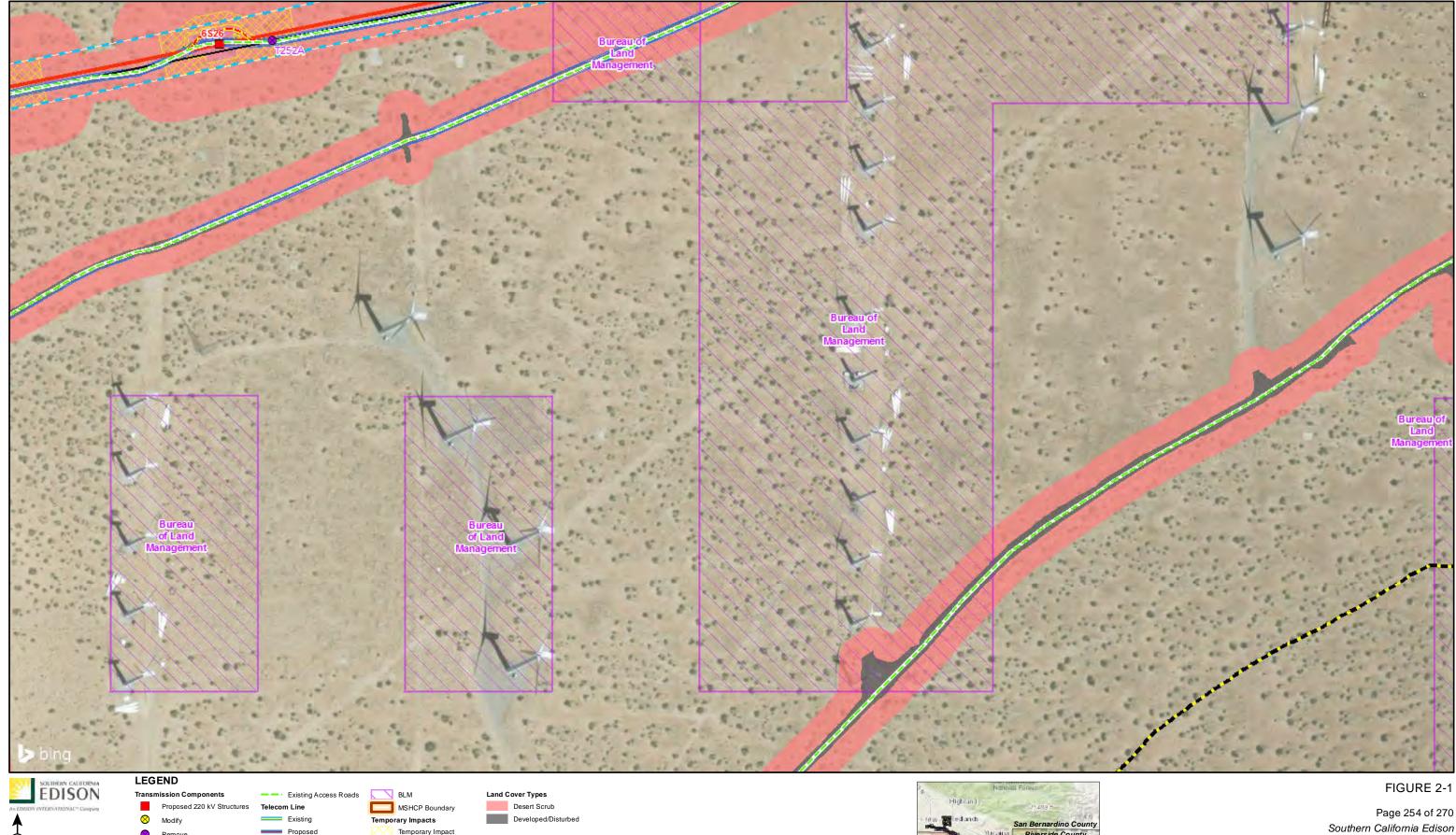
Potential Road Widening

Southern California Edison West of Devers Upgrade Project Project Detail and Estimated Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Sheet Index

Ch2m:



Sheet Index

Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Existing ROW

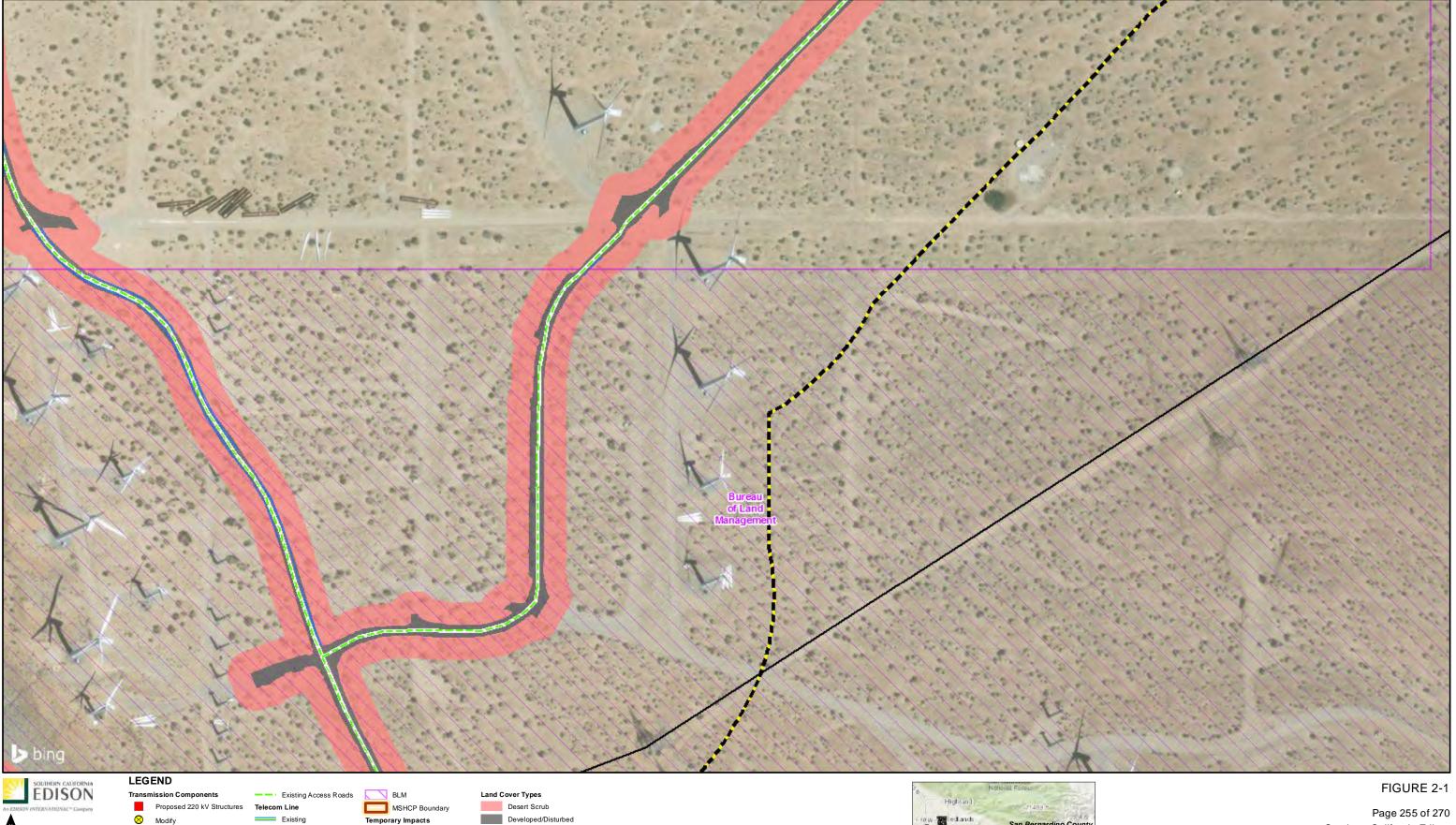
Study Area

Guard Pole

Permanent Impacts

Shoo-fly Work Area

Permanent Impact



Note: Project features shown are based on November 11, 2017 engineering design. The

design is subject to refinements prior to the start of construction.

Existing ROW

Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Permanent Impacts

Sheet Index

Southern California Edison West of Devers Upgrade Project Project Detail and Estimated **Maximum Potential Impacts** Habitat Restoration and Revegetation Plan

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Potential Road Widening

San Bernardino County
Riverside County

West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Proposed

Study Area

Existing ROW

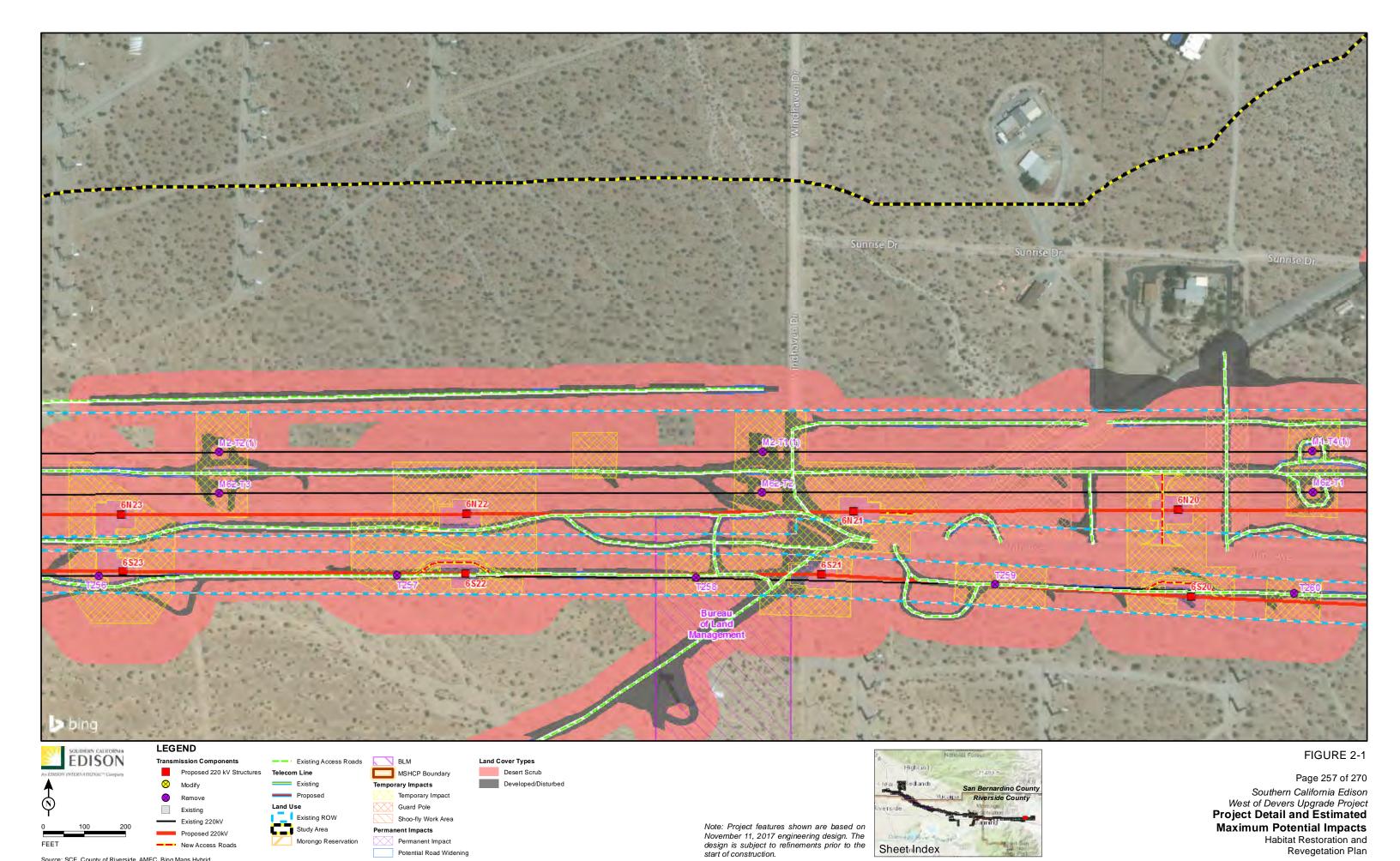
Land Use

Temporary Impact

Shoo-fly Work Area

Permanent Impact

Guard Pole



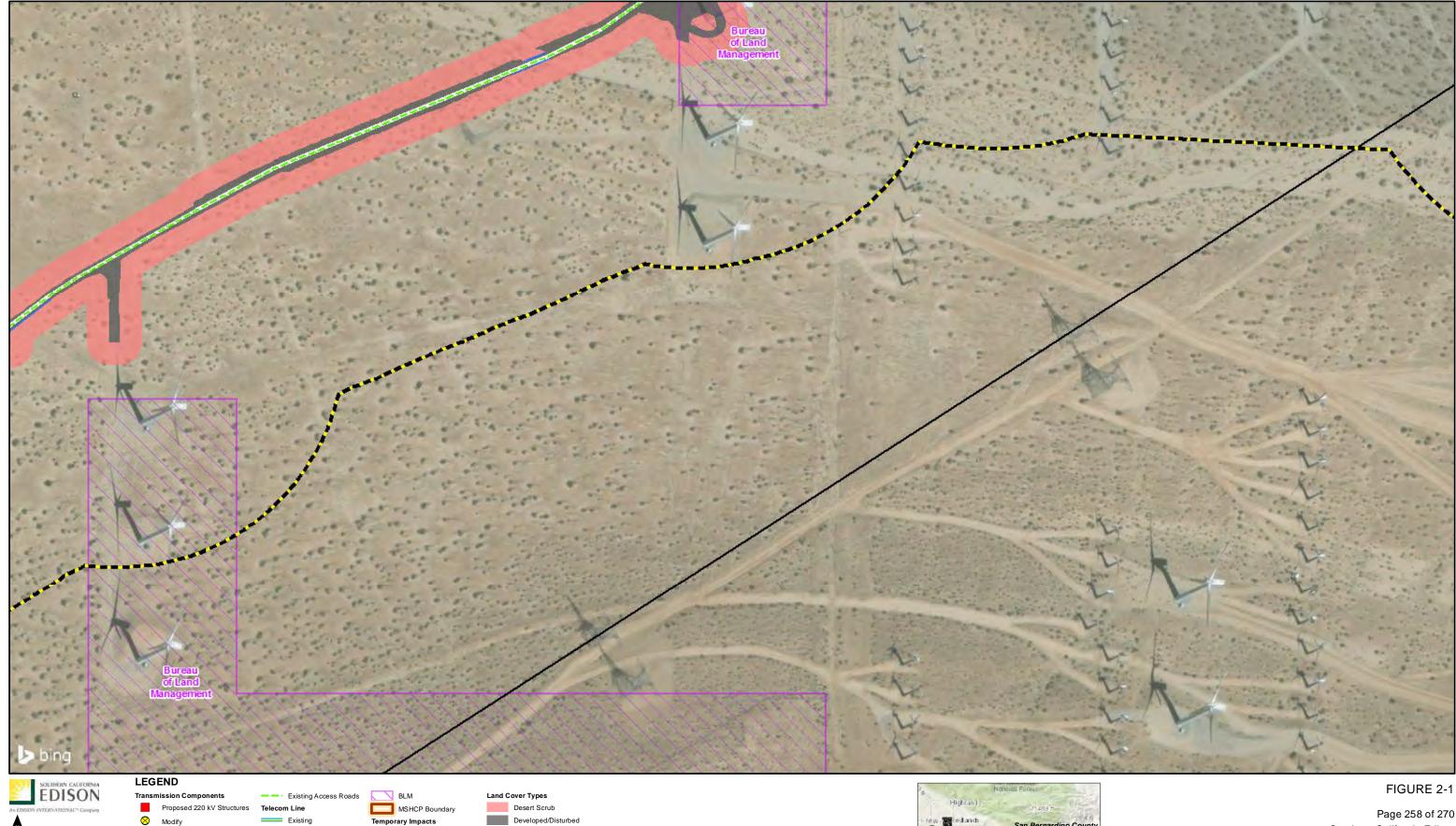
Sheet Index

Potential Road Widening Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid \\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Permanent Impact

ch2m:

Habitat Restoration and Revegetation Plan



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

Highland

San Bernardino County

Riverside

Core of the county

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Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
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Existing ROW

Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

Highland

San Bernardino County

Riverside

County

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Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Existing ROW

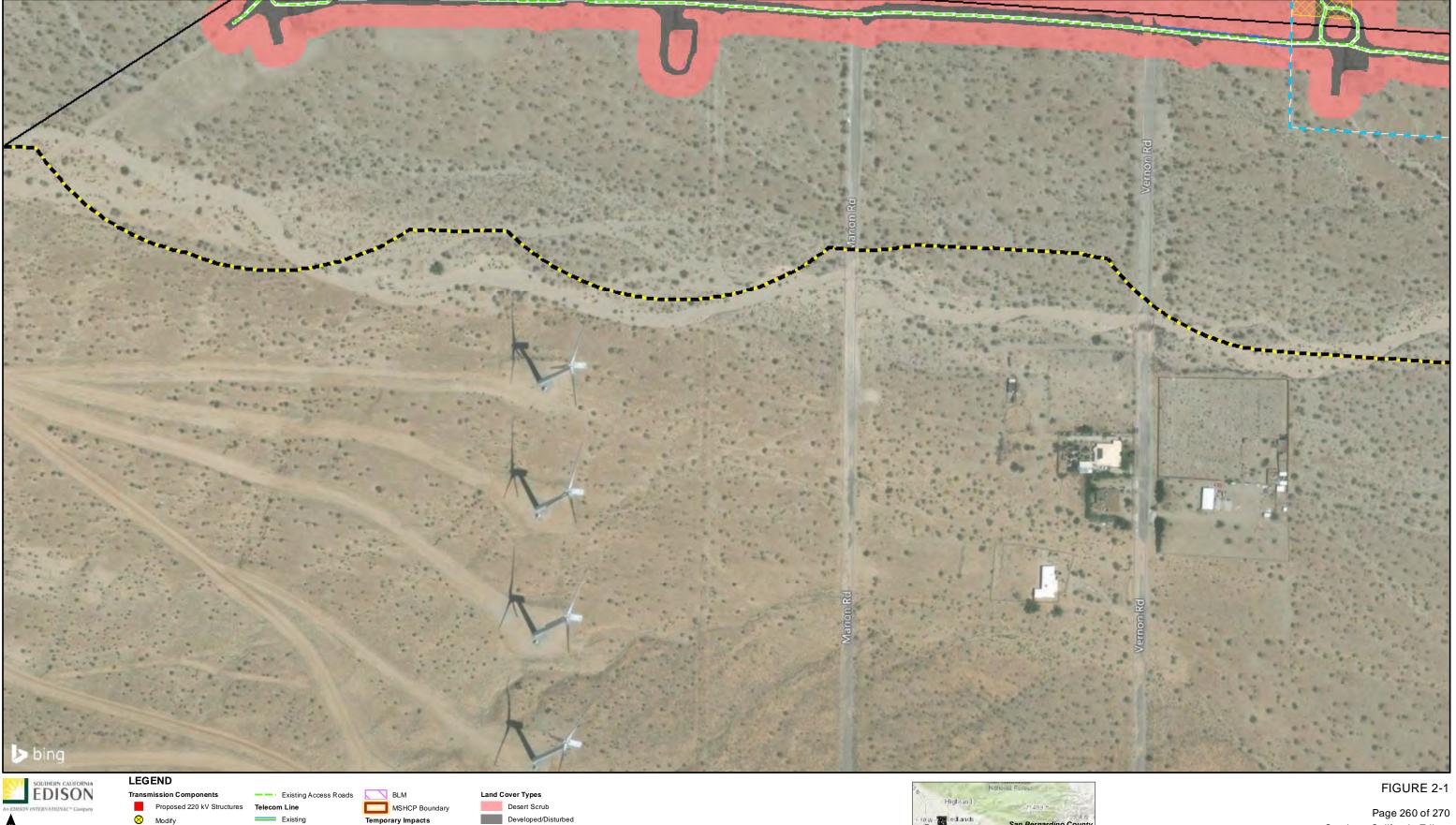
Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

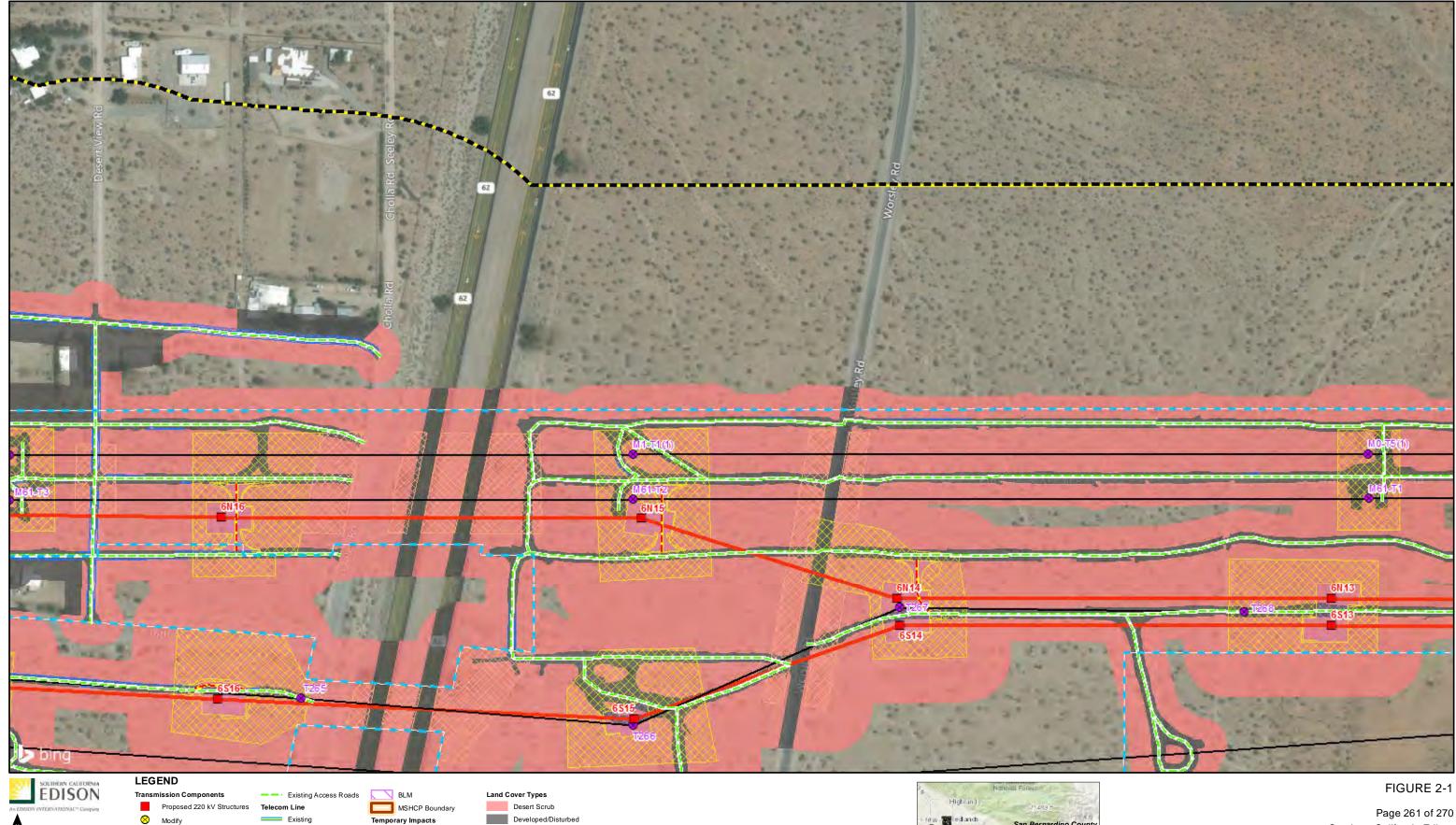
Permanent Impacts

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Maximum Potential Impacts

Habitat Restoration and Revegetation Plan





Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\\Proj\\SoCalEDISON\\493461\\MapFiles\\Plans\\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Existing ROW

Study Area

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Permanent Impact

Potential Road Widening

Permanent Impacts

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Project Detail and Estimated
Maximum Potential Impacts
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Revegetation Plan



Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

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Existing ROW

Study Area

Guard Pole

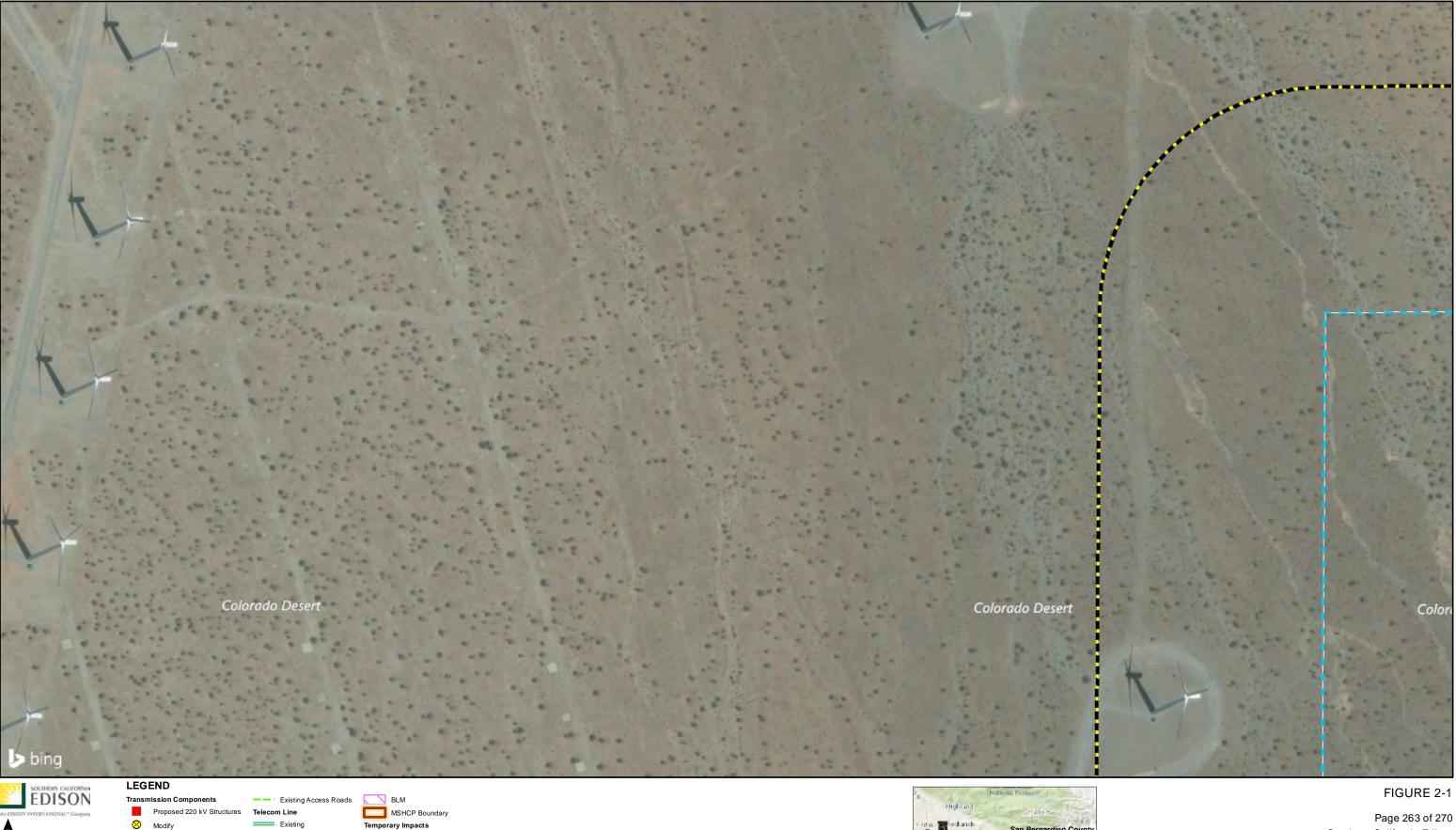
Permanent Impacts

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Southern California Edison West of Devers Upgrade Project Project Detail and Estimated **Maximum Potential Impacts** Habitat Restoration and Revegetation Plan



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Southern California Edison
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Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan

Existing ROW

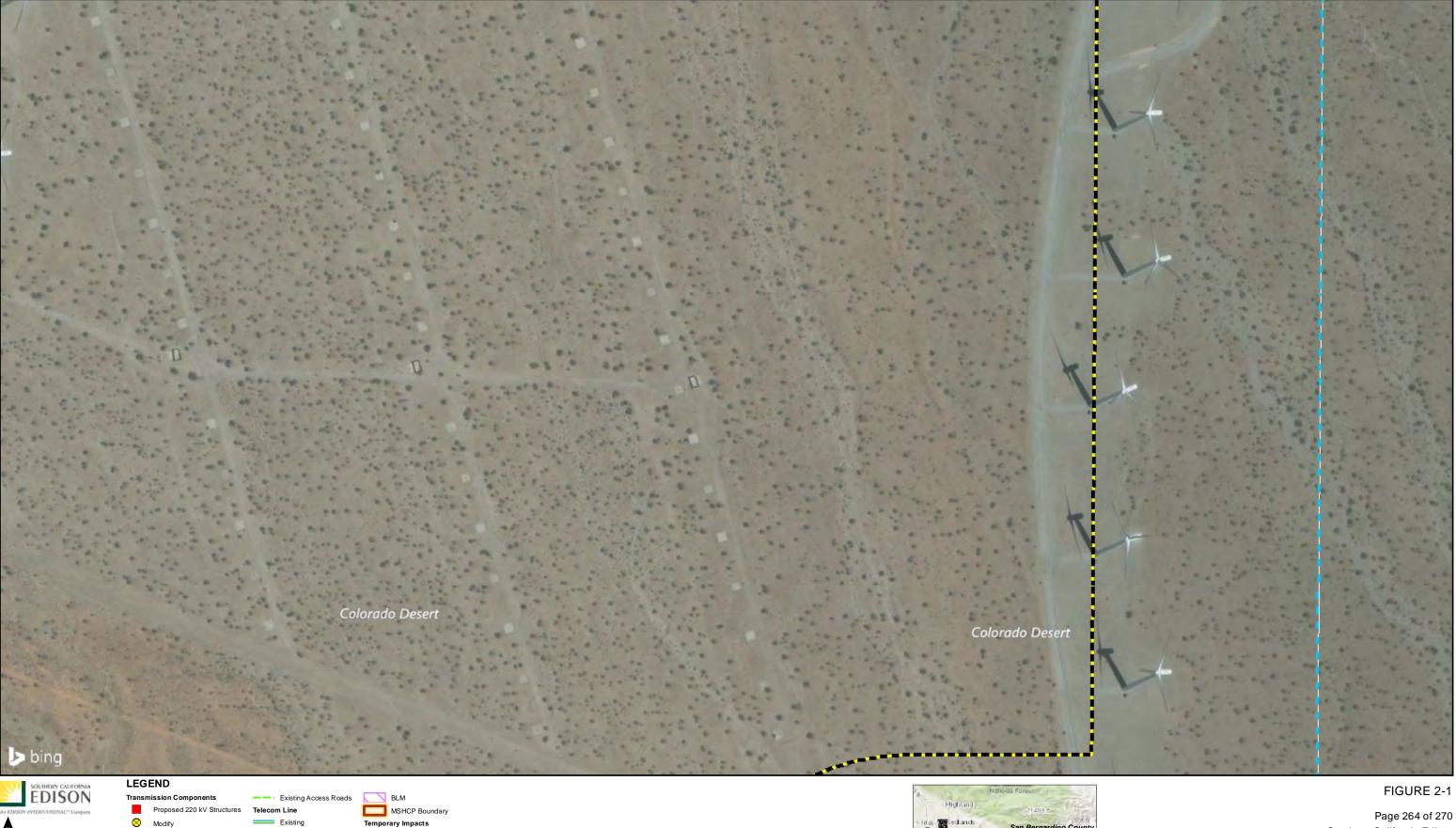
Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Existing ROW

Study Area

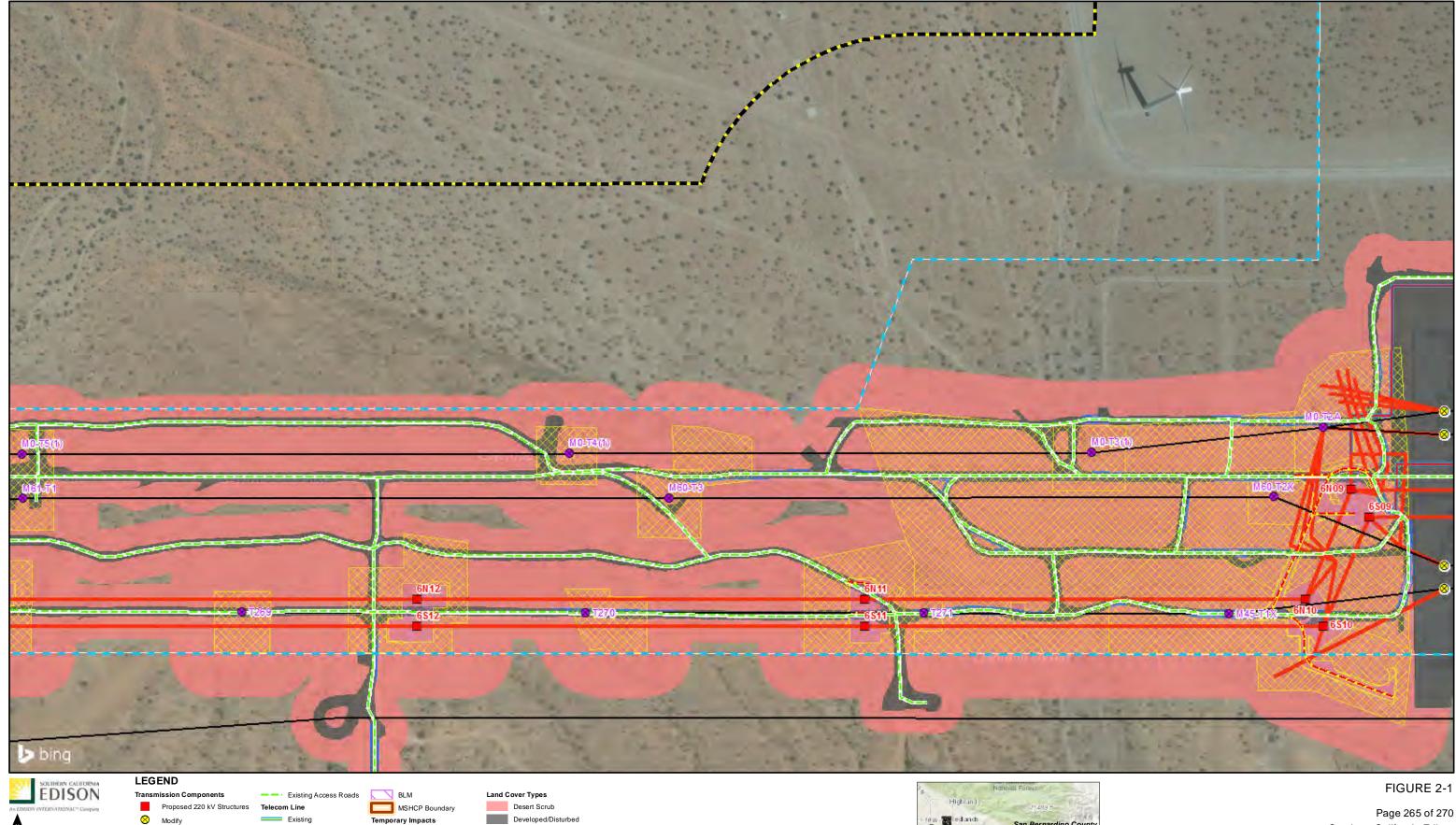
Temporary Impact

Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Guard Pole



Note: Project features shown are based on November 11, 2017 engineering design. The

design is subject to refinements prior to the start of construction.

Sheet Index

Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Existing ROW

Study Area

Temporary Impact Guard Pole

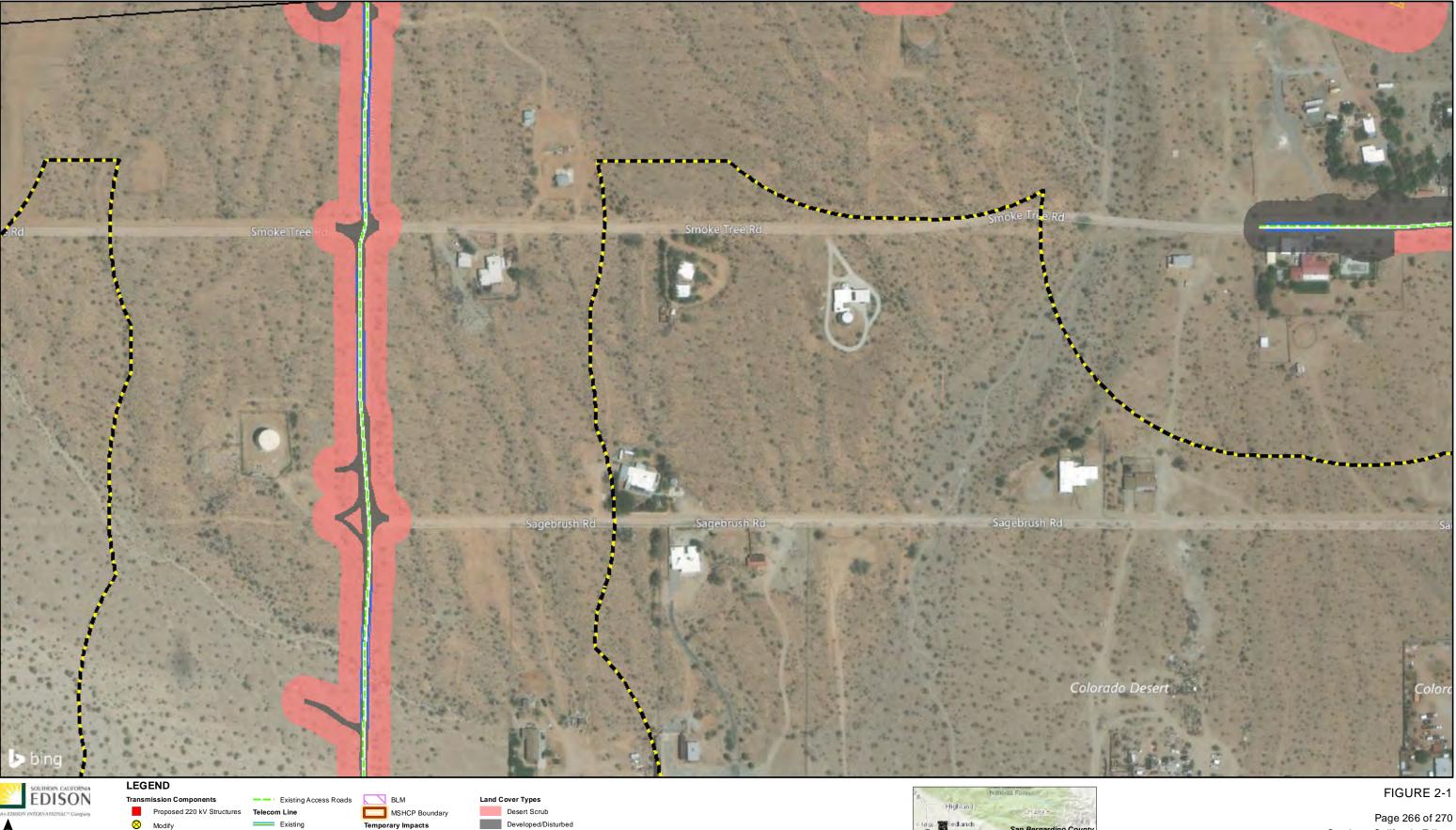
Shoo-fly Work Area

Permanent Impact

Potential Road Widening

Permanent Impacts

Southern California Edison
West of Devers Upgrade Project
Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

San Bernardino County
Riverside County

Riverside County

Southern California Edison
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Maximum Potential Impacts
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Revegetation Plan

Existing ROW

Study Area

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Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Note: Project features shown are based on November 11, 2017 engineering design. The

design is subject to refinements prior to the start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\\Proj\\SoCalEDISON\\493461\\MapFiles\\Plans\\HRRP_HCP_2016-08-10\\Fig2-1_WOD_\Project_DETAILS_2018-02-14.mxd (2/14/2018)

Existing ROW

Study Area

Temporary Impact Guard Pole

Shoo-fly Work Area

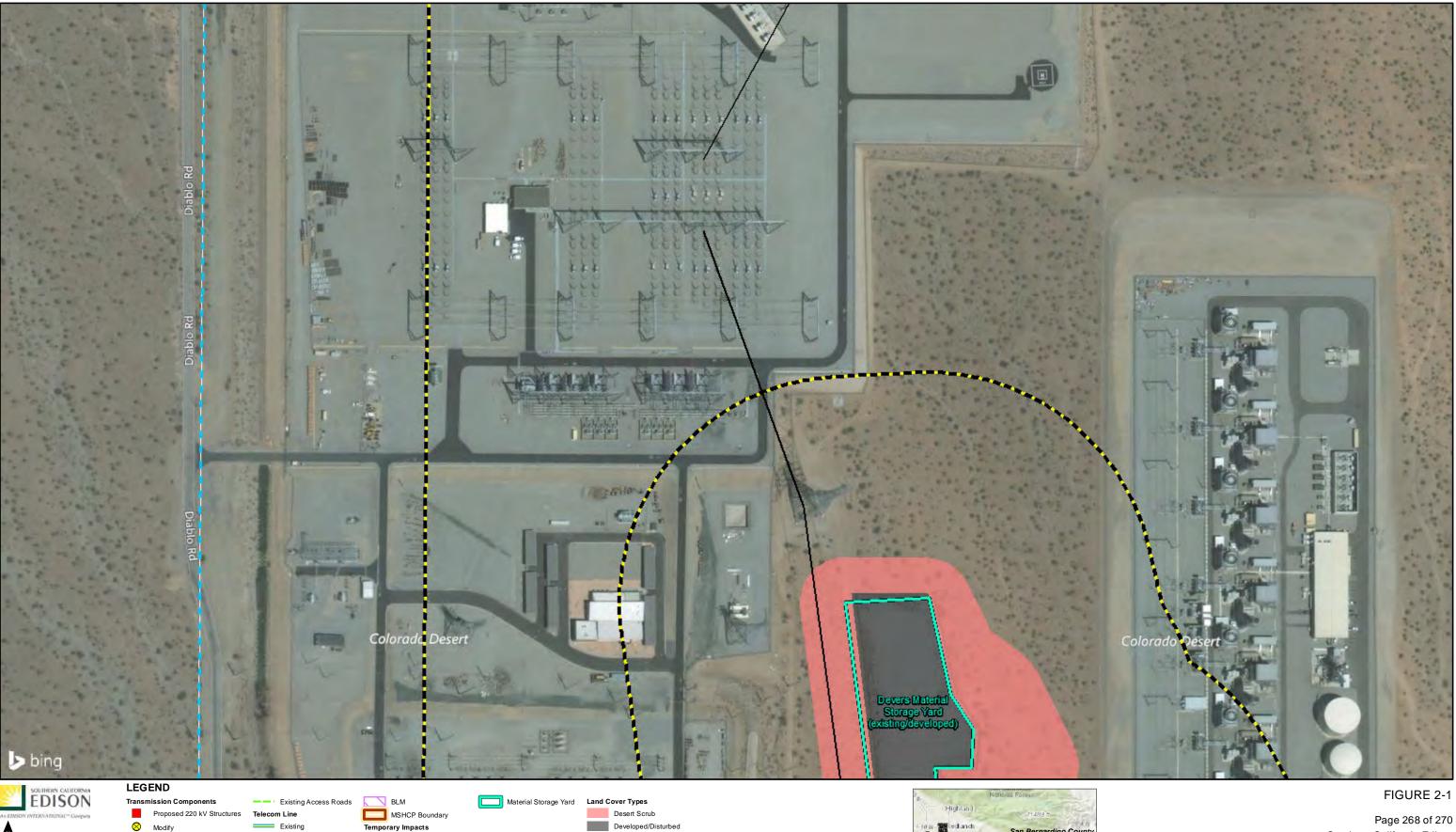
Permanent Impact

Potential Road Widening

Permanent Impacts

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Ch2m:



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Southern California Edison
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Project Detail and Estimated
Maximum Potential Impacts
Habitat Restoration and
Revegetation Plan



Proposed 220kV

Proposed

Study Area

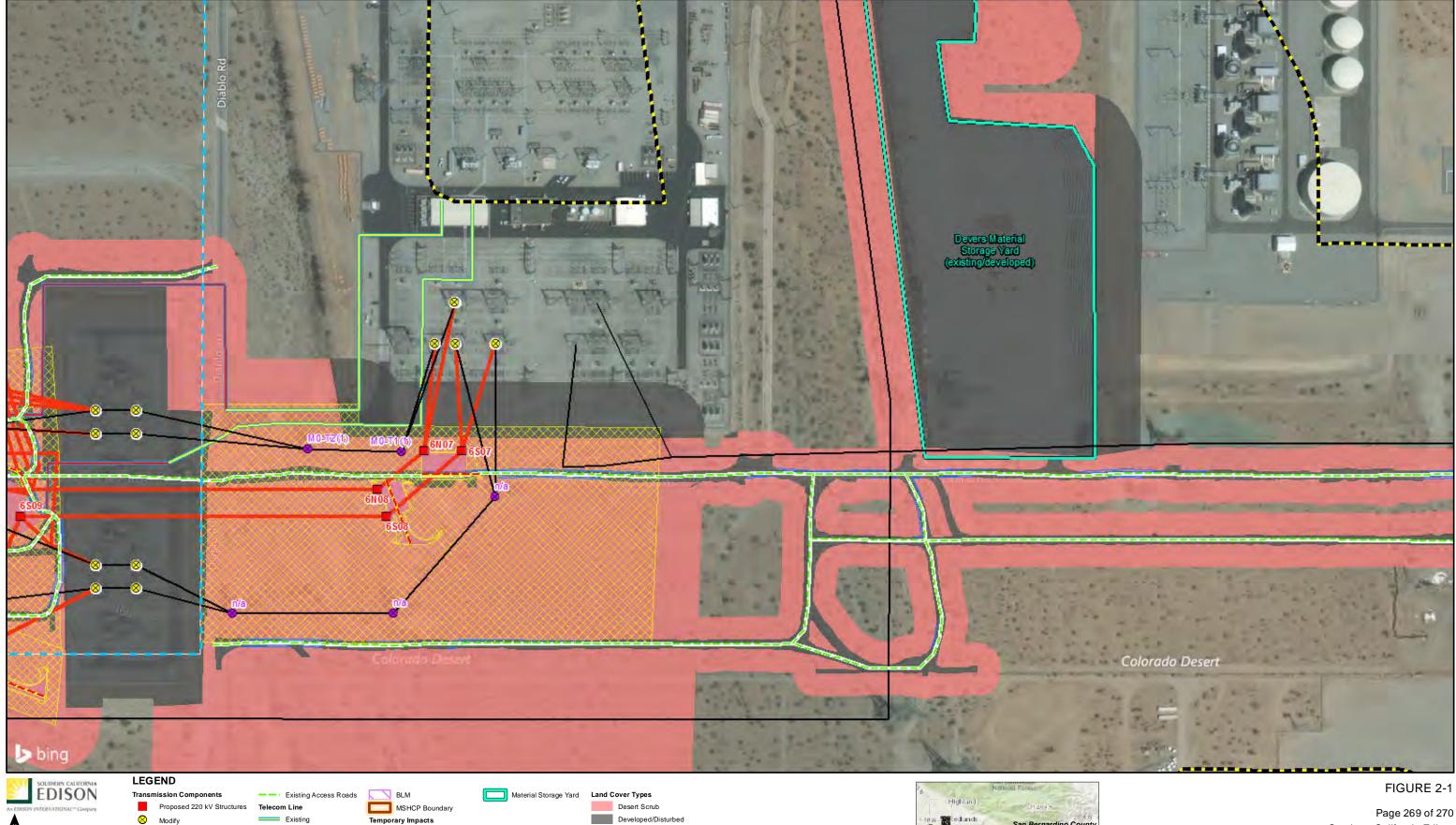
Existing ROW

Temporary Impact Guard Pole

Shoo-fly Work Area

Permanent Impact

Potential Road Widening



Note: Project features shown are based on November 11, 2017 engineering design. The

design is subject to refinements prior to the

start of construction.

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Source: SCE, County of Riverside, AMEC, Bing Maps Hybrid

\\galt\Proj\SoCalEDISON\493461\MapFiles\Plans\HRRP_HCP_2016-08-10\\Fig2-1_WOD_Project_DETAILS_2018-02-14.mxd (2/14/2018)

Temporary Impact Guard Pole

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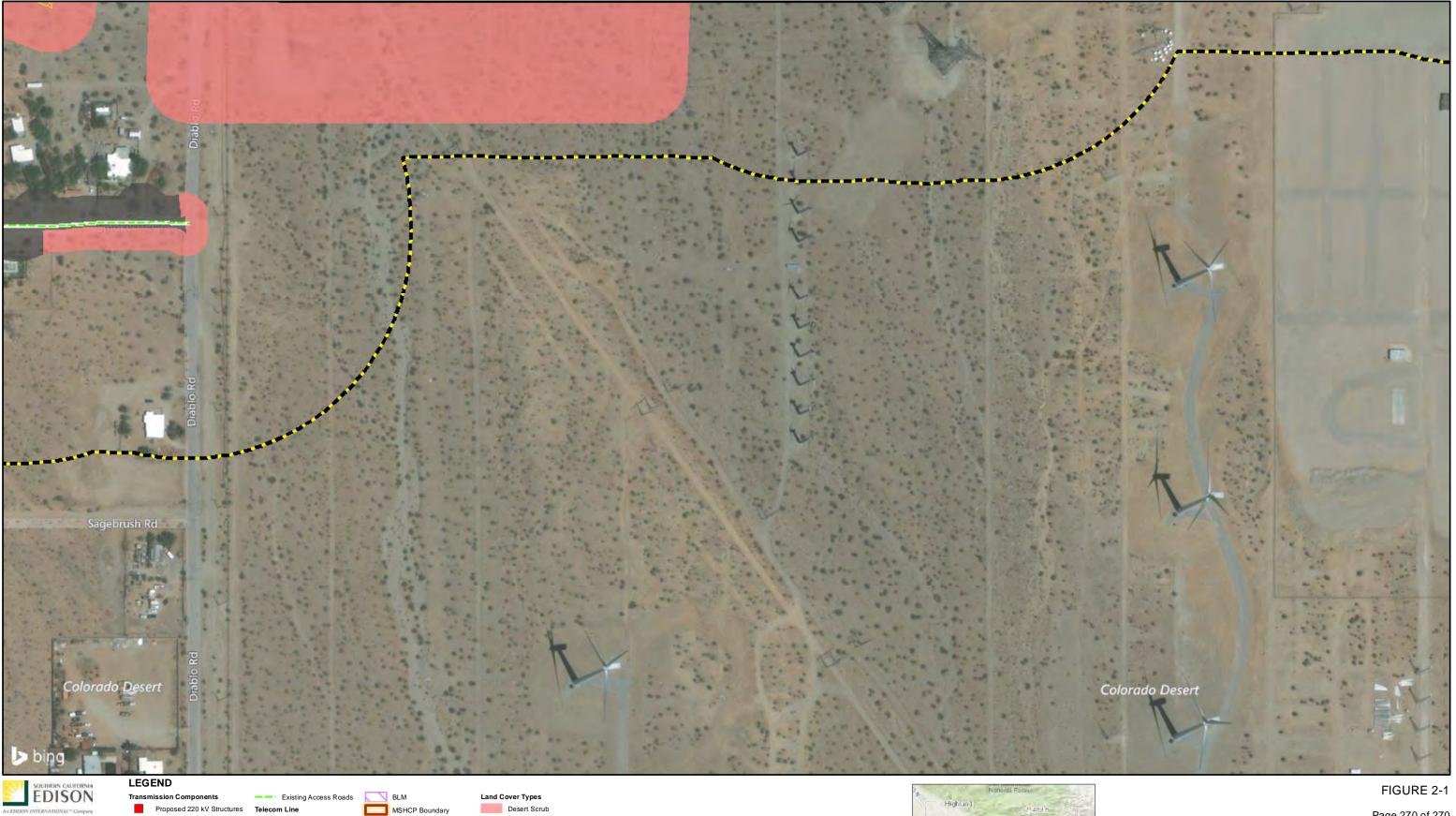
Permanent Impacts

Proposed

Study Area

Existing ROW

Southern California Edison West of Devers Upgrade Project Project Detail and Estimated **Maximum Potential Impacts** Habitat Restoration and Revegetation Plan



Note: Project features shown are based on November 11, 2017 engineering design. The design is subject to refinements prior to the start of construction.

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Developed/Disturbed