State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

NOTICE OF AVAILABILITY AND INTENT TO ADOPT AN INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR THE PROPOSED UTILITY MODERNIZATION PROJECT, TORREY PINES STATE NATURAL RESERVE

Date: July 16, 2019

The California Department of Parks and Recreation (CDPR) has prepared and intends to adopt a Mitigated Negative Declaration for the Torrey Pines Utility Modernization project in compliance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines. CDPR is the lead agency for the proposed project under CEQA.

PROJECT LOCATION: Torrey Pines State Natural Reserve, San Diego, CA

DESCRIPTION OF THE PROPOSED PROJECT: This Project proposes to upgrade the aging utilities infrastructure at Torrey Pines State Natural Reserve by installing replacement underground electric, sewer, domestic water, fire, and telephone utilities to serve this heavily-used 1,300-acre park unit. The 5,726-foot (approximately 1.1 mile) alignment traverses both California Department of Parks and Recreation and City of San Diego property (via encroachment permit). Other project elements include the installation of approximately seven fire hydrants; two master lift stations; three below-ground lift stations; and three water fill stations.

PUBLIC REVIEW PERIOD: The Initial Study/Mitigated Negative Declaration is being made available for public review and comment for a period of 30 days, **beginning Friday July 19, 2019 and closing on Sunday August 18, 2019**. Questions and/or comments regarding the project should be directed to:

SSC Environmental Coordinator
2797 Truxtun Road, Barracks 26
San Diego, CA 92106
or by email at: environmental.review@parks.ca.gov

The Initial Study/Mitigated Negative Declaration may be reviewed at the following locations during normal business hours or downloaded from the CDPR CEQA Notices website at the following URL:

https://www.parks.ca.gov/?page_id=983

San Diego Coast District
California Department of Parks & Recreation
4477 Pacific Coast Hwy.
San Diego, CA 92110

Southern Service Center
California Department of Parks and Recreation
2797 Truxtun Rd, Barracks 26
San Diego, CA 92106

DRAFT
INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

TORREY PINES STATE NATURAL RESERVE
UTILITY MODERNIZATION PROJECT

July 2019
SCH #

State of California
DEPARTMENT OF PARKS AND RECREATION

MITIGATED NEGATIVE DECLARATION

PROJECT: **TORREY PINES STATE NATURAL RESERVE – UTILITY MODERNIZATION PROJECT**

LEAD AGENCY: California Department of Parks and Recreation

AVAILABILITY OF DOCUMENTS: The Initial Study for this Mitigated Negative Declaration is available for public review during regular business hours at:

- San Diego Coast District Headquarters
  California Department of Parks & Recreation
  4477 Pacific Coast Highway
  San Diego, CA 92110

- Southern Service Center
  California Department of Parks and Recreation
  2797 Truxtun Road, Barracks 26
  San Diego, CA 92106

It may also be downloaded from the CDPR CEQA Notices website at the following URL:

https://www.parks.ca.gov/?page_id=983

PROJECT DESCRIPTION:

This Project proposes to upgrade the aging utilities infrastructure at Torrey Pines State Natural Reserve by installing replacement underground electric, sewer, domestic water, fire, and telephone utilities to serve this heavily-used 1,300-acre park unit. The 5,726-foot (approximately 1.1 mile) alignment traverses both California Department of Parks and Recreation and City of San Diego property (via encroachment permit). Other project elements include the installation of approximately seven fire hydrants; two master lift stations; three below-ground lift stations; and three water fill stations.

A copy of the Initial Study is attached. Questions or comments regarding this Initial Study/Mitigated Negative Declaration may be addressed to:

Mike Yengling, Environmental Coordinator
Southern Service Center
California Department of Parks & Recreation
2797 Truxtun Road, Barracks 26
San Diego, CA 92106
Environmental.Review@parks.circagov

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (DPR) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of DPR. DPR, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.

Kimberly Weinstein
Acting District Superintendent, San Diego Coast District

7-15-19
Date

Mike Yengling
Environmental Coordinator, Southern Service Center

7/16/19
Date

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CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

The Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Utility Modernization Project at Torrey Pines State Natural Reserve, San Diego County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq*., and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq*.

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, a Mitigated Negative Declaration may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is DPR. The contact person for the lead agency is:

John Justice, Project Manager
Southern Service Center
California Department of Parks & Recreation
2797 Truxtun Road, Barracks 26
San Diego, CA 92106
(619) 221-4368

All inquiries regarding environmental compliance for this project, including comments on this environmental document should be addressed to:

Mike Yengling, Environmental Coordinator
Southern Service Center
California Department of Parks & Recreation
2797 Truxtun Road, Barracks 26
San Diego, CA 92106
Environmental.Review@parks.circagov

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Utility Modernization Project at Torrey Pines State Natural Reserve. Mitigation measures have also been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

- Chapter 1 - Introduction.
  This chapter provides an introduction to the project and describes the purpose and organization of this document.

- Chapter 2 - Project Description.
  This chapter describes the reasons for the project, scope of the project, and project objectives.

- Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures.
  This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental (Initial Study) Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less-than-significant level.

- Chapter 4 - Mandatory Findings of Significance
  This chapter identifies and summarizes the overall significance of any potential impacts to natural and cultural resources, cumulative impacts, and impact to humans, as identified in the Initial Study.

- Chapter 5 - Summary of Mitigation Measures.
  This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study.

- Chapter 6 - References.
  This chapter identifies the references and sources used in the preparation of this IS/MND. It also provides a list of those involved in the preparation of this document.

- Chapter 7 - Report Preparation

This chapter provides a list of those involved in the preparation of this document.

- Chapter 8 – Public and Agency Comment (* Final document only)
  Summary of the public review process for the IS/MND and comments received.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the Environmental (Initial Study) Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed project. Based on the IS and supporting environmental analysis provided in this document, the proposed Utility Modernization Project would result in less-than-significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, utilities and service systems, and tribal cultural resources.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

CHAPTER 2
PROJECT DESCRIPTION

2.1 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Utility Modernization Project at Torrey Pines State Natural Reserve (the Reserve), located between the community of La Jolla and the incorporated City of Del Mar, San Diego County, California (Figure 1). The site is located near the far northwest corner of the City of San Diego, within the city limits. The existing utilities infrastructure at the Reserve date as far back as circa 1920 (such as the water line for the Lodge) and are approaching the end of their functional life cycle, with ongoing intermittent repairs - especially to water lines - necessitating road closures and limiting park access. The proposed project will address these deficiencies by installing new underground sewer, domestic water, fire, and telephone utilities on both CDPR and City of San Diego property (via encroachment permit) to serve the heavily-used 1,300-acre Reserve.

2.2 BACKGROUND AND NEED FOR THE PROJECT

The existing utilities were installed between 1920 and 1960 and are in need of upgrading to meet the current needs of the Reserve. Utilities presently at the Reserve consist of San Diego Gas & Electric (SDG&E)'s circa 1960 main electrical distribution trunk line and metered laterals as well as a gas line; AT&T's circa 1960 telephone line (in a joint trench with SDG&E); and the circa 1950 water line. Sewer consists of on-site treatment at present. The main electrical distribution line alternates in its alignment between the coastal and inland side of the Torrey Pines Park Road (the Park Road) shoulder. The water line similarly alternates between the coastal and inland side of the Park Road shoulder, but on the opposite side. The SDG&E gas line stays on the coastal side of the Park Road until just south of the South Fork trailhead, where it crosses the Park Road and joins with North Torrey Pines Road.

After exploring a variety of alternatives including a combination of trenching outside the roadway and directional drilling (to avoid known locations of sensitive natural or cultural resources), as well as alternative routes to the north or utilizing the North Torrey Pines Road corridor, the preferred alternative of utilizing the existing roadway was selected. The majority of the work will take place within the existing alignment of the Park Road, an approximately two-mile long, two-lane road extending from the base of Torrey Pines Grade beyond the South Beach parking lot entrance station to a point at the southern boundary of the Reserve. Trenching beneath the existing road would allow the necessary separation of utilities while minimizing impacts to existing or potential cultural and natural resources on either side of the road.

2.3 PROJECT DESCRIPTION

Utility installation will use a combination of trenching (80% of total length) and directional drilling (20% of total length) along the 5,726-foot (approximately 1.1 mile) alignment (Figure 2). Width and depth will vary based on utility type, and whether sharing of trenches between utilities is possible. In general, trenches will be from 18 inches to 30 inches wide, with depths ranging from 4 feet to 6 feet for water and sewer (assuming 3 feet of cover between pipe and paving subgrade) and 2 feet to 4 feet for electrical and telecommunications, except where ground conditions or crossing utilities dictate otherwise. Depth will vary along the profile depending on ground slope, desired cover, and any obstacles to be avoided. Horizontal drilling will be facilitated by 6 foot by 10 foot access pits at termination points. Depth of bore will be up to 48 inches, and bores will be primarily for lateral connection of utilities to existing buildings. New connections to the existing water main and sewer lateral will be made on City of San Diego property.

Total approximate trenched lengths are as follows:

- Water: 5,620 feet
- Sewer force main: 5,100 feet
- Telecom: 3,925 feet
- Electrical: 470 feet
- Gravity sanitary sewer: 85 feet

Total approximate drilled lengths are as follows:

- Sewer force main: 2,100 feet
- Water: 930 feet
- Telecom: 540 feet
- Electrical: 150 feet
- Gravity sanitary sewer: 75 feet

Width and depth will vary based on utility type, and whether sharing of trenches between utilities is possible. A required 10-foot horizontal separation between sewer and water lines will be provided, and between sewer and other utilities as possible. There will also be a minimum one-foot vertical separation for utilities, with water located above sewer. In general, trenches will be from 18 inches to 30 inches wide, with depths ranging from 4 feet to 6 feet for water and sewer (assuming 3 feet of cover between pipe and paving subgrade) and 2 feet to 4 feet for electrical and telecommunications, except where ground conditions or crossing utilities dictate otherwise. Depth will vary along the profile depending on ground slope, desired cover, and any obstacles to be avoided. Horizontal drilling will be facilitated by 6 foot by 10 foot access pits at termination points. Depth of bore will be up to 48 inches, and bores will be primarily for lateral connection of utilities to existing buildings. New connections to the existing water main and sewer lateral will be made on City property.

Electrical/Gas

No new trunk lines are proposed. However, new metered electrical service laterals (includes meter pedestal and new transformer) are required for two new sewer lift stations. One of the two meters will jointly serve the ADA upgrade (A separate project) restroom in the West Lot. Additionally, a new service lateral (existing meter pedestal and transformer to remain) will serve the Fleming House (Figure 3).

Telephone/Communication

New trunk communication conduit will be placed within the Park Road. New branch laterals will be installed to serve the Maintenance Yard, Torrey Pines Lodge (Visitor Center), and the Fleming House (Figures 4-5; see Figure 3).

Sewer

New private and public sewer is proposed. A private trunk force main will be installed from the West Lot and extend within City right-of-way to the Torrey Pines Municipal Golf Course (TPMGC) maintenance yard. The force main will then transition to gravity sewer and will cross North Torrey Pines Road to connect to an existing City manhole located within a City easement near the National University administration building (Figure 6). The line will be installed within an existing gravity sewer line via a “pipe burst” trenchless process and two existing City manholes will be replaced in kind to accommodate the new larger gravity pipe.

Lateral force mains will serve the Maintenance Yard, Visitor’s Center and the Fleming House. The laterals will be installed within existing roads by trenching and outside of roads via trenchless methods (see Figures 3 through 5). Lateral alignments of the force main where connecting to new lift stations will be installed by trenchless methods near the West Lot and by trenching in a designated disturbed area within State right-of-way just east of the TPMGC (Figures 7-8).

Water

A new combined fire service/domestic water line and a separate parallel water line connecting to an irrigation meter will be installed within City right-of-way and within the Park Road. Lateral branches for fire hydrants and domestic building connections for the Maintenance Yard, Visitor Center and the Fleming House will be installed either by trenchless methods outside of roads or via trenching within roads (see Figures 3 through 5). Laterals serving water fill stations will be installed within designated disturbed areas adjacent to road shoulders or parking areas.

Other project elements include:

- Installation of approximately seven fire hydrants (possibly with bollard protection), to be located 6 feet to 10 feet from road edges.

- Installation of two master lift stations with a wet well diameter of 5 feet and a depth of up to 10 feet. One will be packaged in a fiberglass housing approximately 6 feet by 8 feet by 5 feet high and includes connection to an existing below-ground overflow containment vessel. The other will be below ground with a small control panel located above ground and will connect to a new below-ground 5-foot diameter and 8-foot deep overflow containment vessel (see Figures 7-8).
- Installation of three below-ground lift stations with wet well depths of up to 4 feet and diameters of 3 feet (see Figures 3 through 5).
- Installation of three water fill stations (see *Water*, above).

Proposed Phasing

Road surface removal for trenching will be executed as follows:

1. Remove 10 feet of the 20-foot wide road, keeping half the road width open for staff and public pedestrian use (bicycles to be detoured to North Torrey Pines Road). Install underground utilities.
2. Over excavate the road section and place engineered base. Open one lane.
3. Repeat process for opposing lane.
4. Concrete pour closed lane. Open to pedestrian traffic.
5. Close remaining lane and concrete pour.
6. Open full facility to public.

Construction zones will be coned and flagmen stationed. Where trenching occurs in areas not already covered with asphalt the road will be restored with concrete, which is the historic surface material. Any appurtenant structures such as curbing, culverts, etc. that date to the historic period shall be protected in place.

Removed concrete will be hauled to the Miramar recycling facility. It has not been determined how much will be stockpiled on site before haul and depends on whether demo will be limited to after hours and material stockpiled at south lot with haul occurring during daylight hours. This scenario is preferred so as not to mix haul trucks with pedestrians during open hours.

Staging Areas

Staging areas have not been determined, but possible locations include the following:

- Trailheads/turnouts
- Parking near Visitor Center
- Maintenance Yard
- Torrey Pines Road

Equipment

Equipment required to complete the project will include, at minimum; excavators, loaders, forklifts, boom trucks, directional drill rig and support vehicles, dump trucks, pickup trucks, and intermittent concrete trucks. Some work may include the need for concrete pumping, via a truck-towed line pump or a standalone boom pump rig.

2.4 PROJECT IMPLEMENTATION

Construction work is projected to start in September 2020, or soon thereafter, and continue for approximately 9 months. Work would occur only during daylight hours and not during weekends or on State Holidays in order to avoid unnecessary impact to visitors; however, weekend or holiday work could be implemented to address emergencies or unforeseen circumstances impacting construction.

Heavy equipment, such as a loader, compressor, and concrete pump will be used during construction. All equipment would be transported to the site and be parked within designated construction staging areas, with potential locations including the following: trailheads/turnouts; parking near the visitor center; maintenance yard; Torrey Pines Road. Transport vehicles for material, equipment delivery trucks, and crew vehicles would also be present intermittently at the site.

Best Management Practices (BMPs) will be incorporated into this project design to ensure that the natural and cultural resources in and around the project area are adequately protected during and after construction. The BMPs discussed in this document and used in the implementation of this project were obtained from the *California Stormwater Quality Association (CSQA), Stormwater Best Management Practices Construction Handbook.* Temporary BMPs will be used to keep sediment on-site throughout the duration of the project; during construction, BMPs will be checked weekly, maintained, and modified as needed. Some BMPs will be left in place after construction if needed to stabilize the site and minimize erosion.

The Department of Parks and Recreation has consistently referenced CSQA BMPs and has identified them as an acceptable standard for use in all State Parks.

2.5 VISITATION TO TORREY PINES STATE NATURAL RESERVE

Torrey Pines State Natural Reserve offers a unique piece of undeveloped California coastline amidst the densely-populated urban and suburban areas of surrounding San Diego County. Home to one of the world's rarest pine trees (its namesake *Pinus torreyana*), the Reserve contains high, broken cliffs and deep ravines overlooking the sea. Torrey Pines State Beach, adjacent to the Reserve, extends 4.5 miles north from Torrey Pines Mesa, past Los Peñasquitos Marsh Natural Preserve to Del Mar. The sandy State Beach is popular for swimming, surfing, and fishing. Popular trails in the Reserve include the Guy Fleming, Parry Grove, Razor Point, High Point, Broken Hill, and Beach trails.

Entrance to the Reserve is generally through the South Beach day use area parking lot, which contains restrooms and a picnic area. Torrey Pines State Beach is serviced for dispatch through the lifeguard headquarters at San Elijo State Beach. For the past three years (2016-2018), visitation to the Reserve has averaged 1,092,223 annually, peaking in July and August.

2.6 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The 1984 San Diego Coastal State Park System General Plan, Volume 8 –Torrey Pines State Beach and State Reserve describes the types of land use, activities, goals and guidelines that are appropriate for the site. It was approved by the State Park and Recreation Commission. The Declaration of Purpose for the park is:

The purpose of Torrey Pines State Reserve is to protect and perpetuate the area's prime resource values for the enlightenment, inspiration, and enjoyment of present and future generations. Prime resource values in the reserve in descending order of significance are: 1) the Torrey pine and its native plant community, 2) Los Penasquitos wetlands, 3) state and federally listed rare, endangered, and threatened plants and animals, 4) evidence of Native American and possibly Early Man occupation, 5) plants and animals designated by the department as species of special interest, and 6) exposed geologic sequences. Secondary values include recreational opportunities which directly relate to, and do not detract from, the primary resource values.

The project has been designed to be consistent with the General Plan's goals of protecting the prime natural resource values for which the Reserve was established. Avoidance and minimization measures have been incorporated wherever feasible; any necessary mitigation will ensure that impacts are reduced to a less-than-significant level.

The project area is zoned "Open Space - Parks" by the City of San Diego. The stated purpose of Open Space Zones is "to protect lands for outdoor recreation, education, and scenic and visual enjoyment; to control urban form and design; and to facilitate the preservation of environmentally sensitive lands. It is intended that these zones be applied to lands where the primary uses are parks or open space…" (City of San Diego 2018: 131.0201). The project is consistent with the property's designated use and will provide the public with improved facilities, including public safety (e.g. fire protection).

2.7 DISCRETIONARY APPROVALS

The following permits and/or consultation are anticipated for this project:

Coastal Development Permit
U.S. Fish and Wildlife Service consultation
California Department of Fish and Wildlife consultation
City of San Diego water and sewer construction permits
Fire Marshall Permit

As the project site covers more than one acre in total, a Stormwater Pollution Prevention Plan (SWPPP) will be provided under the Construction General Permit (Linear Underground Projects category). The project will be registered in the RWQCB SMARTS database.

2.8 RELATED PROJECTS

Three other projects are either planned or underway for this park unit: the Torrey Pines Lodge Drainage Improvement project, the Visitor Center Accessibility Improvements project, and the Restroom Replacement project. Approval and implementation of the utilities upgrades is not contingent on any of these projects.

CHAPTER 3
ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1.	Project Title:	Torrey Pines State Natural Reserve Utility Modernization Project
2.	Lead Agency Name & Address:	California Department of Parks and Recreation
3.	Contact Person & Phone Number:	Mike Yengling, (619) 221-7081
4.	Project Location:	Torrey Pines State Natural Reserve, San Diego County
5.	Project Sponsor Name & Address:	California Department of Parks and Recreation Southern Service Center 2797 Truxtun Road, Barracks 26 San Diego, CA 92106
6.	General Plan Designation:	State Natural Reserve
7.	Zoning:	Open Space - Parks
8.	Description of Project:	Installation of new underground sewer, domestic water, fire, and telephone utilities
9.	Surrounding Land Uses & Setting:	Refer to Chapter 3 of this document (Section IX, Land Use Planning)
10.	Approval Required from Other Public Agencies	Refer to Chapter 2, Section 2.6

1. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact", as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☒ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Tribal Cultural Resources	☐ Mandatory Findings of Significance

☐ None

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that, although the original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

I find that the proposed project **MAY** have a significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that, although the proposed project could have had a significant effect on the environment, because all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐

Michael C. Yengling — July 16, 2019

Mike Yengling — Date
Environmental Coordinator

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.

4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:

   a) Identify the earlier analysis and state where it is available for review.

   b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.

   c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.

6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.

7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.

8. Explanation(s) of each issue should identify:
   a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
   b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

ENVIRONMENTAL ISSUES

I. AESTHETICS.

ENVIRONMENTAL SETTING

Torrey Pines State Natural Reserve is a highly scenic area noted for its coastal bluffs, uniquely eroded canyons, and sweeping vistas overlooking the Pacific Ocean. With 4.5 miles of ocean frontage and a diversity of habitats including conifer woodland, chaparral, sage scrub, coastal strand, salt marsh, and both fresh and salt water, the Reserve contains numerous rare and endangered plant species including the iconic *Pinus torreyana* trees. Existing development within the Reserve includes the Torrey Pines Lodge and Visitor Center; the Guy Fleming House (serving as staff housing); two asphalt parking lots (one south of the Visitor Center and one on the opposite – i.e. west – side of Torrey Pines Park Road); restrooms (currently slated for replacement); a maintenance yard; numerous trails; and utilities infrastructure.

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

DISCUSSION

a) Access to scenic vistas shall be maintained to the greatest extent possible during construction, with the project phased for minimal disruption to visitor traffic. See Section XIV, Recreation, below for further information.

b-c) By placing new utilities underground beneath the existing road, the project aims to avoid aesthetic effects including effects to vegetation. Unavoidable impacts to trees or other vegetation to facilitate equipment access, staging locations, or installation of lateral lines not beneath the roadway shall be minimized to the greatest extent feasible. See Section IV, Biological Resources, below for further information.

d) The project will create no new sources of substantial light or glare.

II. AGRICULTURAL RESOURCES.

ENVIRONMENTAL SETTING

There is no agriculture within this State Natural Reserve. According to the California Department of Conservation's online California Important Farmland Finder* tool (2016), the nearest identified "Farmland of Local Importance" is located approximately 4 miles to the northeast in the Deer Canyon area on both sides of the Ted Williams Freeway (SR 56) in the vicinity of its intersection with Carmel Valley Road.

* https://maps.conservation.circagov/DLRP/CIFF/

WOULD THE PROJECT*:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

* In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

DISCUSSION

a-c) No effect on agricultural resources, as no farmlands exist within or adjacent to the Reserve.

III. AIR QUALITY.

ENVIRONMENTAL SETTING

The site is located in the San Diego Air Basin. This basin is a non-attainment area for the state and federal 8 hours standards for Ozone and an expected non-attainment area for Particulate Matter (PM) 2.5. The one hour federal standard for ozone has rarely been exceeded in the last few years. In general, trends have reduced the levels for several known pollutants but are increasing for PM 2.5 and PM 10. Air quality along the coast generally tends to be good due to onshore winds but can be poor during Santa Ana conditions if there is wildfire present in the inland mountains.

The most recent San Diego air quality plans are the Cailifornia Air Resources Board (CARB)'s 2017 State Implementation Plan (SIP) for San Diego County, updated in 2018, and the San Diego County Air Pollution Control District (APCD)'s 2008 Eight-Hour Ozone Attainment Plan, updated in 2016. These plans provide detailed measurements of major criterion pollutants. Actions associated with the project would not affect the implementation of the either the SIP or the Ozone Attainment Plan.

The construction portion of the project involving heavy equipment will be temporary and does not involve any long-term emissions; impacts to air quality are therefore considered to be less than significant and in compliance with SIP and the Ozone Attainment Plan. Because the air quality plans are based on growth projections reflected in local general plans, only new or amended general plans, or projects that exceed the level of development contemplated in the general plan have the potential to conflict with the air quality plans. The proposed project would have no effect on growth or development, therefore no conflict with the air quality plans would occur.

Standard project requirements/BMPs for air quality during construction shall be incorporated and followed.

WOULD THE PROJECT*:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant	☐	☐	☒	☐

	concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?			
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

* Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these determinations.

DISCUSSION

a) The proposed project will not obstruct implementation of the applicable San Diego County air quality plans, nor will it violate any air quality standards maintained by the San Diego County Air Pollution Control District.

b) The project will result in short-term emissions from equipment used during during construction. No change in long-term emissions levels is expected.

c) There shall be no cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is in non-attainment.

d) The project will not expose visitors to substantial pollutant concentrations.

e) The project will not create objectionable odors affecting a substantial number of people.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES - AIR QUALITY (AQ)
AQ 1: Standard construction protocols for dust control during construction shall be implemented. These protocols shall be included within the Storm Water Plan. The State's Representative and/or State Natural Resources Specialist will periodically inspect the work area to ensure that construction-related activities do not generate excessive amounts of dust or cause other related air quality disturbances.
AQ 2: Idling of vehicles shall be minimized to the maximum extent practicable.

IV. BIOLOGICAL RESOURCES.

ENVIRONMENTAL SETTING

Torrey Pines State Natural Reserve (Reserve) is situated along the coast, and immediately south of Del Mar, in the northern portion of the City of San Diego (City). Acquired in 1952, the Reserve consists of roughly 1,460 acres, contains two Natural Preserves (i.e., Los Peñasquitos and Ellen Browning Scripps), and supports the nation's rarest pine tree (*i.e.*, Torrey pine [*Pinus torreyana* ssp*. torreyana*]) (CDPR 1984). Torrey Pines Park Road (Park Road) is the primary travel way through the unit, and the location along which the utility improvements will be implemented. As proposed, the Project will extend from approximately 1,000 feet south of the Reserve's southern entrance, continue up coast along the Park Road, and end at the Fleming House (*i.e.*, roughly 750 feet northwest of the Lodge/Visitor Center). The utility alignment falls within the boundaries of the City's Multiple Species Conservation Program (MSCP), which was developed in 1998 to "preserve a network of habitat and open space" and protect biodiversity. The MSCP covers 85 species and outlines core biological resource areas (within the Multi-Habitat Planning Areas [MHPAs]) that are critical to long-term conservation (City of San Diego 1998). The Reserve lies within the MSCP's Core Biological Resource Area 14: Los Peñasquitos Lagoon/Del Mar Mesa/Peñasquitos Canyon, which is included in the Northern Area of the City's MSCP Subarea Plan. As described in the Subarea Plan, the Reserve is part of a Core Biological Resource Area that possesses high to moderate habitat value (City of San Diego 1997).

The information outlined below was derived from the Torrey Pines State Natural Reserve Utility Modernization Project, Biological Technical Report (ECORP and Blackhawk 2019), and can be referenced for further/additional details on the resources found within the Project area.

VEGETATION COMMUNITIES/OTHER LAND COVER TYPES

Database records (CNDDB 2019) indicated that one occurrence of Southern Riparian Forest existed to the east of North Torrey Pines Road (NTPR), approximately 0.25 miles beyond the proposed alignment. During field reviews, 13 vegetation communities/land use cover types were identified, mapped, and verified within the survey area; none of which were wetland and/or riparian-associated habitat types. Of this total, 12 communities could be classified into a tier of sensitivity "based on rarity and ecological importance", under the City's MSCP/MHPA (City of San Diego 2012). The tiers, which range from I to IV (i.e., from most to least sensitive) provide a guideline for assessing the level of biological impacts from proposed development. The vegetation communities/land use cover types within the survey area (*i.e.*, a 500-foot buffer beyond the construction footprint) are depicted in Figures 9 and 10, as well as outlined in Table IV-1 below.

Table IV-1. Vegetation Communities Documented within the Survey Area for the Proposed Torrey Pines Utility Modernization Project, Torrey Pines State Natural Reserve.

Vegetation Community/ Other Land Cover Types (Manual of California Vegetation)	MSCP Habitat Type (Holland)[1]	Tier Level[2]	Acreage
Opuntia littoralis Shrubland Alliance	Maritime Succulent Scrub	Tier I	0.246 acres
Adenostoma fasciculatum Shrubland Alliance	Southern Maritime Chaparral	Tier I	13.450 acres
Adenostoma fasciculatum - Xylococcus bicolor Shrubland Alliance	Southern Maritime Chaparral	Tier I	37.492 acres
Ceanothus verrucosus Shrubland Alliance	Southern Maritime Chaparral	Tier I	0.303 acres
Deinandra fasciculata Herbaceous Alliance	Southern Maritime Chaparral	Tier I	5.895 acres
Quercus dumosa Shrubland Alliance	Scrub Oak Chaparral	Tier I	23.117 acres
Pinus torreyana Woodland Special Stands	Torrey Pine Forest	Tier I	31.040 acres
Artemisia californica - Eriogonum fasciculatum Shrubland Alliance	Coastal Sage Scrub	Tier II	2.179 acres
Malosma laurina Shrubland Alliance	Coastal Sage Scrub	Tier II	1.248 acres
Rhus integrifolia Shrubland Alliance	Coastal Sage Scrub	Tier II	2.903 acres
Salvia mellifera Shrubland Alliance	Coastal Sage Scrub	Tier II	2.070 acres
Eucalyptus (*globulus, camaldulensis*) Semi-Natural Woodland Stands	Eucalyptus Woodland	Tier IV	0.626 acres
Developed	Developed	N/A	49.886 acres
		Total	**170.455 acres**

[1]Habitat types, as outlined in Holland's Preliminary Description of the Terrestrial Natural Communities of California (1986).
[2]Tier levels, as defined in the City of San Diego Municipal Code, Land Development Code (LDC), Biology Guidelines (Amended April 23, 2012).

Opuntia littoralis Shrubland Alliance (Maritime Succulent Scrub – Tier I)

This vegetation community, dominated by coast prickly pear (*Opuntia littoralis*), crosswalks to maritime succulent scrub (Holland 1986), a MSCP Tier I habitat type. During the field reviews, approximately 0.2 acres of potentially landscaped vegetation was documented on an east-

facing slope near the Visitor Center. The *Opuntia littoralis* Shrubland Alliance was characterized by a dominance of coast prickly pear with sub-dominant coastal sage scrub-associated species, including California buckwheat (*Eriogonum fasciculatum*), lemonade berry (*Rhus integrifolia*), California sagebrush (*Artemisia californica*), and chamise (*Adenostoma fasciculatum*).

Adenostoma fasciculatum Shrubland Alliance (Southern Maritime Chaparral – Tier I)
The fourth-most dominant habitat recorded on-site was the *Adenostoma fasciculatum* Shrubland Alliance, with 13.5 acres of overall coverage. This community occurred on sandstone soils in the coastal fog belt and supported the presence of mission manzanita (*Xylococcus bicolor*), chaparral yucca (*Hesperoyucca whipplei*), bushrue (*Cneoridium dumosum*), black sage (*Salvia mellifera*), and wart-stemmed ceanothus (*Ceanothus verrucosus*, a CRPR 2B.2 species). Such areas also contained rare plants in the gaps and understory including the Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*, a CRPR 1B.1 species) and long-spined spineflower (*Chorizanthe polygonoides* var. *longispina,* a CRPR 1B.2 species). Based on the City's LDC *Biology Guidelines* (City of San Diego 2012), this vegetation would be considered or qualify as southern maritime chaparral, a MSCP Tier I habitat type. Pockets of this community were scattered throughout the survey area and coverage was generally evenly distributed on the landscape, with some open canopies. Minor anthropogenic disturbances, such as dirt roads and trails, were documented in a few locations.

Adenostoma fasciculatum - Xylococcus bicolor Shrubland Alliance (Southern Maritime Chaparral – Tier I)
The dominant vegetation community within the survey area was determined to be the *Adenostoma fasciculatum-Xylococcus bicolor* Shrubland Alliance. This alliance, comprising over 37.5 acres, most closely correlates with southern maritime chaparral (Holland 1986), a MSCP Tier I habitat type. Within this community, several chaparral-associated small to large-sized shrub species were observed, but the co-dominants were chamise and mission manzanita. Sub-dominant species included scrub oak (*Quercus berberidifolia*), Nuttall's scrub oak (*Quercus dumosa*, a CRPR 1B.1 species), wart-stemmed ceanothus, lemonade berry, bush monkeyflower (*Mimulus aurantiacus*), California buckwheat, black sage, bushrue, and deerweed (*Acmispon glaber*). This habitat type was widespread on the landscape, with the majority occurring between the Visitor Center and Torrey Pines Municipal Golf Course (TPMGC). In general, coverage was dense with thick chaparral (roughly 5-7 feet in height) and some openings, with only minor anthropogenic disturbances, such as dirt roads and trails.

Ceanothus verrucosus Shrubland Alliance (Southern Maritime Chaparral – Tier I)
This rare chaparral alliance, totaling 0.3 acres, was mapped in the northwest portion of the site, near Parry Grove Trail. Per Sproul et al. (2011), the *Ceanothus verrucosus* Shrubland Alliance most directly crosswalks to southern maritime chaparral (Holland 1986), a MSCP Tier I habitat type. In the field, this community was found to be characterized by a dominance of wart-stemmed ceanothus, although other species were also recorded, including chamise, scrub oak, and Nuttall's scrub oak.

Deinandra fasciculata Herbaceous Alliance (Southern Maritime Chaparral – Tier I)
This habitat type was characterized by the open soils of the Lindavista formation, where the

existing hardpan impedes the growth of large productive vegetation. Shrub cover was typically low and very sparse, with succulents, forbs, and grasses established in the open grounds. Associated herbaceous vegetation included clustered tarweed (*Deinandra fasciculata),* short-leaved dudleya (*Dudleya brevifolia*, a State-endangered and CRPR 1B.1 species), long-spined spineflower, soap plant (*Chlorogalum* sp.), ashy spike-moss (*Selaginella cinerascens*, a CRPR 4.1 species), lance-leave dudleya (*Dudleya lanceolata*), fingertips (*D. edulis*), rat-tail fescue (*Festuca myuros*), foothill needlegrass (*Stipa lepida*), and Del Mar Mesa sand aster. As mentioned, vegetation mapped as *Deinandra fasciculata* Herbaceous Alliance maintained minimal shrub cover due in part to the hardpan soils, but also likely as a result of some historical disturbance. This community supports the same rare understory species as that found in southern maritime chaparral (City of San Diego 2012) and for purposes of evaluation, will be considered a MSCP Tier I habitat type. A total of 5.9 acres was mapped west of the Park Road between the West Lot and TPMGC.

Quercus dumosa Shrubland Alliance (Scrub Oak Chaparral – Tier I)

The third-most dominant vegetation community was the *Quercus dumosa* Shrubland Alliance, which accounted for over 23.1 acres of habitat. This mature chaparral community consisted of Nuttall's scrub oak intermixed with California buckwheat, chamise, lemonade berry, coyote brush (*Baccharis pilularis*), and California encelia (*Encelia californica*). Additionally, non-native Hottentot fig (*Carpobrotus edulis*) was found in some areas containing this vegetation type. The *Quercus dumosa* Shrubland Alliance, which correlates with scrub oak chaparral (Holland 1986), a MSCP Tier I habitat type, was documented throughout the survey area, with patches in the vicinity of the Fleming House and Visitor Center, as well as east of NTPR. Minor anthropogenic disturbances, such as roads and trails, were documented in a few locations.

Pinus torreyana Woodland Special Stands (Torrey Pine Forest – Tier I)

The second-most dominant community within the survey area was classified as *Pinus torreyana* Woodland Special Stands, with 31.0 acres of overall coverage. This species gives the Reserve its namesake and typifies the local region. The Torrey pine is notable due to having the smallest distribution of any pine species in the United States, occurring as a narrow endemic in coastal sage and coastal sage/chaparral habitats, along the southern California coast and some offshore California islands. Torrey pines formed the dominant species in the tree canopy with intermixed chamise, lemonade berry, bush monkeyflower, California buckwheat, coast prickly pear, chaparral yucca, and bushrue in the underlying shrub canopy. The *Pinus torreyana* Woodland Special Stands align with Torrey pine forest (Holland 1986), a MSCP Tier I habitat type. This community was found throughout the survey area, with patches occurring in the vicinity of the Fleming House and the Visitor Center, as well as a large patch opposite the TPMGC. Minor anthropogenic disturbances, such as roads and trails, were present in some areas.

Artemisia californica - Eriogonum fasciculatum Shrubland Alliance (Coastal Sage Scrub – Tier II)

Approximately 2.2 acres of the *Artemisia californica - Eriogonum fasciculatum* Shrubland Alliance or coastal sage scrub (Holland 1986) was mapped within the survey area. This MSCP Tier II habitat type supported several small to medium-sized sage scrub-associated species, with the co-dominants being California sagebrush and California buckwheat. Due to

its small extent, the community was not common and only occurred in the northwest portion of the survey area, west of the Fleming House.

Malosma laurina Shrubland Alliance (Coastal Sage Scrub – Tier II)
Laurel sumac (*Malosma laurina*) represented the dominant large shrub within the *Malosma laurina* Shrubland Alliance, although other chaparral or coastal sage scrub shrubs were also present. Within the survey area, one polygon, totaling 1.2 acres, was mapped in the northwest section of the site, directly adjacent to the Parry Grove Trail. This *Malosma laurina* Shrubland Alliance most closely aligns with coastal sage scrub (Holland 1986), a MSCP Tier II habitat type.

Rhus integrifolia Shrubland Alliance (Coastal Sage Scrub – Tier II)
Similar to laurel sumac, lemonade berry occurs in both chaparral and coastal sage scrub communities. This species was dominant in the *Rhus integrifolia* Shrubland Alliance, in association with other shrubs, such as California encelia, California sagebrush, and chamise. Collectively, 2.9 acres were mapped largely in the areas near the Maintenance Yard and Visitor Center. The *Rhus integrifolia* Shrubland Alliance most closely aligns with coastal sage scrub (Holland 1986), a MSCP Tier II habitat type.

Salvia mellifera Shrubland Alliance (Coastal Sage Scrub – Tier II)
The *Salvia mellifera* Shrubland Alliance is a coastal sage scrub vegetation community dominated by black sage. Generally, the species was found with other shrubs including chamise, California sagebrush, California buckwheat, coyote brush, laurel sumac, and lemonade berry. An estimated 2.1 acres were mapped in just one location directly north of the TPMGC. The *Salvia mellifera* Shrubland Alliance directly crosswalks to coastal sage scrub (Holland 1986), a MSCP Tier II habitat type. Minor anthropogenic disturbances, such as roads and trails, were present in some areas.

Eucalyptus (globulus, camaldulensis) Semi-Natural Woodland Stands (Eucalyptus Woodland – Tier IV)
Eucalyptus Semi-Natural Woodland Stands may be composed of one to several eucalyptus species that result from intentional planting of the non-native trees or via recruitment. A total of 0.6 acres of this vegetation community was mapped along a strip of landscaped vegetation between the golf course and Park Road. The woodland was composed of eucalyptus (*Eucalyptus* spp.), with an understory that included lemonade berry and ice plant (*Carpobrotus* sp.). *Eucalyptus* Semi-Natural Woodland Stands correlate directly with Eucalyptus Woodland (Holland 1986), a MSCP Tier IV habitat type.

Developed
The majority of the survey area can best be classified as developed, with 49.9 acres of overall coverage. Developed areas are nearly or entirely devoid of native vegetation and display significant evidence of intentional, human-caused conversion of previously existing natural habitats to buildings, roads, or other structures. Development within the survey area included the Park Road and road shoulders, existing parking lots, NTPR and its shoulders, TPMGC, and National University and associated landscaping.

SENSITIVE SPECIES

A search of the California Natural Diversity Database (CNDDB 2019) found 27 special-status plants and 15 special-status wildlife species occurring within 0.5 miles of the Project site. These results were used during surveys to determine the presence/absence and Potential for Occurrence (PFOs) of each sensitive species. Following field work in 2018, another four plants and four wildlife species were added to the inventory and included in the impact assessment for the proposed improvements. The information outlined in Appendix B describes the listing status, habitat requirements, and PFO for each special-status species reviewed for the Project.

SPECIAL-STATUS PLANT SPECIES

Of the 31 special-status plants that were evaluated, 16 had confirmed presence within the survey area. Due to a lack of suitable habitat and/or observations, the remaining 15 plants were not anticipated to exist in or near the Project footprint and, therefore, are not expected to be effected by construction. These species included: aphanisma (*Aphanisma blitoides*), coastal dunes milkvetch (*Astragalus tener* var. *titi*), beach goldenaster (*Heterotheca sessiflora* ssp. *sessiflora*), Brand's phacelia (*Phacelia stellaris*), cliff spurge (*Euphorbia misera*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), decumbent goldenbush (*Isocoma menziesii* var. *decumbens*), Lakeside ceanothus (*Ceanothus cyaneus*), Nuttall's acmispon (*Acmispon prostratus*), Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*), Orcutt's spineflower (*Chorizanthe orcuttiana*), San Diego marsh-elder (*Iva hayesiana*), sand-loving wallflower (*Erysimum ammophilum*), short-lobed broomrape (*Orobanche parishii* ssp. *brachyloba*), and sticky dudleya (*Dudleya viscida*). The following descriptions provide a summary of the relative abundance and general locations of those plants documented or likely to be present within the survey area.

Ashy Spike-Moss

Ashy spike-moss (*Selaginella cinerascens*), is a CRPR 4.1 species that prefers sunny openings on clay soils and forms a network of fine, prostrate runners on the soil surface. During the dry season, the plant is dormant and appears grayish green. Following rains, it responds with vegetative growth of fine green leaves. During field efforts, this species was found in several areas beyond the Project alignment in sunny openings mostly in chaparral communities.

Del Mar Manzanita

Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), a federally endangered, CRPR 1B.1, and MSCP-covered species, is an attractive, medium-to large-sized perennial shrub with smooth, dark red bark and tough, gray-green foliage. This plant was documented in several locations away from the Project alignment in chaparral and Torrey pine communities. At least 45 individuals were recorded within the survey area, both singly and in small to medium-sized patches.

Del Mar Mesa Sand Aster

Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*), a CRPR 1B.1 and MSCP-

covered species, is a perennial subshrub/shrub with linear, grayish green foliage and puberulent stems that grow upright from the base of the plant. Floristically, the species is characterized by light pink ray flowers and yellow disk flowers. Del Mar Mesa sand aster was encountered throughout the survey area and also found within dirt margins of the Park Road, including in the construction footprint of the proposed Project. Over 1,000 individuals were recorded within the survey area and, as estimated, up to 100 individuals have the potential to be affected by work-related activities.

Golden-Spined Cereus

Golden-spined cereus (*Bergerocactus emoryi*), a CRPR 2B.2, is a perennial stem succulent that typically grows in sandy substrate in coastal sage scrub and chaparral communities. This species can develop into dense thickets with ascending to sprawling cylindric stems. Spines are needle-like and tend to be yellow to dark yellow in color. Flowers are typically yellow with reddish margins and green midveins. Fruits are spheric, fleshy, and densely spiny. Golden-spined cereus was encountered near the Visitor Center (one individual) and may have been planted around 1923 by Guy Fleming. Additionally, a species' record exists in the area immediately north of the Fleming House, which is also presumed to have been planted. Although these individuals lie in proximity to the Project alignment, no impacts to the golden-spined cereus are expected.

Long-Spined Spineflower

Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), a CRPR 1B.2 species, is a diminutive, low-growing annual herb that prefers sandy or sandy clay soils in a variety of habitat types, usually occurring in full sun. The plant is typically distinguished by stiff, reddish branchlets, a mat-like growth form, and spiny-tipped flowers. Thousands of individuals were observed in several locations occurring singly or in patches scattered within chaparral and sage scrub associations in the central portion of the survey area, but outside the proposed Project footprint.

Nevin's Barberry

Nevin's barberry (*Berberis nevinii*), a federally/State-endangered, CRPR 1B.1, and MSCP-covered species, is a large perennial shrub with evergreen, grayish green, and holly-shaped foliage, which produces attractive yellow flowers and round, orange fruits. Field efforts found five individuals in close proximity to the Visitor Center, immediately adjacent to proposed work areas. The shrub, however, is not naturally-occurring at the Reserve. Individuals documented in the survey area were planted around 1923 by Guy Fleming or naturalized from the intentional planting event.

Nuttall's Scrub Oak

Nuttall's scrub oak (*Quercus dumosa*), a CRPR 1B.1 species, is a large, sprawling, evergreen shrub that typically grows wider than taller and features a network of angled branches and branchlets. This species was encountered throughout the survey area, with over several hundred individuals observed. Many were documented immediately adjacent to, but not within, the proposed work areas. One individual has the potential to be affected by Project activities due to branches that extend into the construction limits.

San Diego Barrel Cactus

San Diego barrel cactus (*Ferocactus viridescens*), a CRPR 2B.1 and MSCP-covered species, is a small to medium-sized barrel-shaped cactus with stiff spines that features a brilliant yellow, short-lived flower. Several dozen individuals were observed in sage scrub, chaparral, and Torrey pine associations, with many barrel cactuses found in locations scattered in the northern and central portions of the survey area, outside the proposed Project footprint.

Sea Dahlia

Sea dahlia (*Leptosyne maritima*), a CRPR 2B.2 species, is a perennial, yellow-flowering herb found along the coastal strand on sea bluffs and in coastal sage scrub habitats. Several of the plants were recorded in two locations of chaparral associations in the northern portion of the survey area, but beyond the proposed Project footprint.

Shaw's Agave

Shaw's agave (*Agave shawii* var. *shawii*), a CRPR 2B.1 and MSCP-covered succulent species, has a striking appearance with thick, toothed leaves arranged in a large basal rosette and a tall inflorescence featuring clustered yellow flowers. During field efforts, three individuals were found in chaparral and sage scrub associations in the far northern portion of the survey area, but none within the proposed Project footprint.

Short-Leaved Dudleya

Short-leaved dudleya (*Dudleya brevifolia*), a State-endangered, CRPR 1B.1, and MSCP-covered species, is a diminutive, fleshy-leaved perennial herb found in very limited distribution of coastal San Diego County, on open sandstone terraces in chaparral and coastal sage scrub habitats. Over 15,000 individuals were documented in a number of medium to large sized patches on compacted open soils (terrace escarpments) during focused rare plant surveys, including adjacent to proposed work areas. Several plants were also recorded that were not necessarily associated with patches. All locations were concentrated south and west of the proposed Project alignment in the central portion of the survey area, in coastal sage scrub and chaparral associations.

South Coast Saltscale

South Coast saltscale (*Atriplex pacifica*), a CRPR 1B.2 species, is a diminutive annual herb with a prostrate, mat-forming structure that typically occurs on coastal bluff scrub and dunes. Seven individuals were reported during the 2016 rare plant work in the central portion of the survey area and well-removed from any proposed construction areas.

Summer Holly

Summer holly (*Comarostaphylis diversifolia ssp. diversifolia*), a CRPR 1B.2 species, is a medium-to large-sized perennial shrub associated with chaparral habitats, often near the coast. Superficially, the species is similar to mission manzanita, possessing bright red fruits, grayish twigs, and shredding bark. Field efforts documented two individuals within chaparral associations in the vicinity of the Maintenance Yard (i.e., north-central portion of the survey area) and outside the Project footprint.

Torrey Pine

Torrey pine (*Pinus torreyana*), a CRPR 1B.2 and MSCP-covered species, is a large perennial, evergreen pine tree with open, indistinct branching found in chaparral and pine forests near the coast. The tree's needles are among the longest of the world's pine species, evolved to collect moisture from coastal fog. As a narrow endemic species, limited to coastal San Diego County and some offshore islands, the Torrey pine is considered among the rarest pines in the world. Several hundred individuals were documented, with the majority occurring throughout the northern half of the survey area, as well as, east of the Park Road and within the southern half of the survey boundaries. Three individuals have the potential to be affected by Project activities due to branches that extend into the construction limits.

Wart-Stemmed Ceanothus

Wart-stemmed ceanothus (*Ceanothus verrucosus*), a CRPR 2B.2 and MSCP-covered species, is a perennial, medium-to large-sized evergreen shrub occurring in chaparral habitats, often near the coast, and occasionally on rocky slopes. When in bloom, the species displays an abundance of small white flowers that cover entire hillsides during late winter where the shrubs are dominant. Within the survey area, the species was commonly to abundantly found in and near all native habitat associations, with over 200 individuals observed. Many wart-stemmed ceanothus were documented immediately adjacent to the proposed work areas and three individuals have the potential to be impacted by work-related activities due to branches overhanging the Project footprint.

Western Dichondra

Western dichondra (*Dichondra occidentalis*), a CRPR 4.2 species, is a perennial, mat-forming herb likely to be intermixed among rocks and shrubs in a variety of chaparral, woodland, grassland, and sage scrub associations. In the field, the species was commonly to abundantly recorded in and near all native habitat associations, and typically observed growing beneath larger shrubs, including within and immediately adjacent to the proposed work areas.

SPECIAL-STATUS WILDLIFE SPECIES

Of the 19 special-status wildlife potentially occurring near the Project site, a total of six were subsequently found either within or adjacent to the survey area. However, based on the absence of suitable habitat and/or lack of confirmed sightings, 13 wildlife species were not expected in the Project vicinity and, as such, not likely to be affected by the utility upgrades. These species included: the California mellitid bee (*Melitta californica*), globose dune beetle (*Coelus globosus*), mimic tryonia (=California brackishwater snail) (*Tryonia imitator*), monarch butterfly (*Danaus plexippus*), coast horned lizard (*Phrynosoma blainvillii*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), Coronado skink (*Plestiodon skiltonianus interparietalis*), southern California legless lizard (*Anniella stebbinsi*), Belding's savannah sparrow (*Passerculus sandwichensis beldingii*), California least tern (*Sternula antillarum browni*), light-footed Ridgway's rail (*Rallus longirostris levipes*), western snowy plover (*Charadrius alexandrines nivosus*) (nesting), and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*). For those species recorded on-site, information on their relative abundance, habitat associations, observation notes, and general locations, are described below.

Orange-Throated Whiptail

The orange-throated whiptail (*Aspidoscelis hyperythra*), a MSCP-covered species, occurs widely in sage scrub, woodlands, grasslands, and chaparral communities in microhabitats of loose granitic soils, with open areas for sunning and foraging. Individuals typically have a black or brown dorsal side, with five or six light colored stripes, and a noticeable orange throat. Juvenile lizards can be distinguished by a blue tail and legs that eventually fade as the individual ages. In the survey area, the species was commonly found within native habitat or sometimes at the interface between existing habitat and disturbed/developed areas, including in and adjacent to proposed work sites. Collectively, several hundred observations of the orange-throated whiptail were documented during the field work; however, not all observations were recorded.

American Peregrine Falcon

The American peregrine falcon (*Falco peregrinus anatum*), is currently a State Fully-Protected Species and MSCP-covered raptor, that was once listed as endangered by both the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS), but delisted due to a recovery in status. Known to use many habitat types, the species can be found nearly anywhere in the coastal ranges of California, but mostly along mountain ranges, river valleys, coastlines, and in cities. The peregrine falcon is a bird of prey that feeds almost exclusively on species such as pigeons, doves, waterfowl, songbirds, and wading birds. Nesting in scrapes on the edge of cliffs, the female typically lays one to five eggs in February or March, which are incubated for 29 to 33 days. On May 25, 2018, the species was documented engaging in courtship behavior near the survey area; with two fledglings also observed in a pine tree on the same day. A peregrine falcon was again sighted on June 29, 2017 and May 29, 2018. It is clear that the species nests in the region, but due to an absence of suitable substrates, the peregrine falcon is not expected to nest in the survey area. The avian prey base within/near the Project footprint, though, renders the site suitable for species' foraging.

Coastal California Gnatcatcher

The coastal California gnatcatcher, a federally threatened and MSCP-covered species, and State Species of Special Concern, is strongly associated with coastal sage scrub communities, but also known to occupy other habitats supporting sage scrub components. In terms of habitat structure, this small songbird prefers a gap rate of about 25 percent between mature shrubs from three to five feet tall. During the breeding season, males of the species develop a noticeable black cap, while females retain an overall grayish/brownish plumage year-round.

In previous surveys conducted at the Reserve, the species was commonly found in coastal sage scrub and adjacent chaparral vegetation communities, and presumed to nest within the survey area based on observations of reproductive pairs and fledglings. However, nests were not detected during field efforts completed in 2015, 2016, 2017, and 2018, or during the first four surveys of 2019 (total of six to be completed). Within the survey area, habitat that would most likely be used for nesting (i.e., larger patches of secluded coastal sage scrub) is located some distance from the proposed Project footprint. In general, coastal sage scrub was mapped approximately 325 feet northeast (downslope) of the Fleming House (northernmost extent of survey area), approximately 200 feet southwest (downslope) of the Fleming House,

and approximately 400 feet east (downslope) of the existing Maintenance Yard near the center of the Project alignment.

Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*), a MSCP-covered species, is a well-distributed raptor that occurs in varied habitats including deciduous, mixed, and evergreen forests, and riparian woodlands. Overall, the species is tolerant of human disturbance and habitat fragmentation and has been found to increasingly breed in suburban and urban areas. Cooper's hawks tend to nest in extensive forests, moderately sized woodlots, and occasionally in isolated trees in more open areas. Nest sites are typically built in mature trees with relatively more canopy cover than that which is locally available. On May 29, 2018, an individual was observed carrying prey just outside the survey area. Additionally, another hawk was documented on June 29, 2017, carrying prey over the golf course and on June 30, 2017, carrying prey over a parking lot. Although all observations were recorded outside the survey area, suitable nest sites exist in the form of Torrey pines and large, exotic trees within the eucalyptus stands or at the TPMGC. Accordingly, due to the presence of numerous trees, an ample avian prey base, and its resident status, this species has a moderate to high potential to nest in the survey area.

Southern California Rufous-Crowned Sparrow

The southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), a MSCP-covered songbird, is known to prefer coastal lowlands and foothills in sage scrub, open or burned chaparral, and grasslands with scattered shrubs. Typical habitat consists of fairly steep south-facing slopes with about 50% cover of low shrubs. Sage scrub on gentle rolling hillsides is even more favorable, but now greatly reduced and fragmented throughout the range of the species. The rufous-crowned sparrow was documented approximately 800 feet west-northwest of the survey area on May 29, 2018, in the vicinity of the trail leading to the beach. Due to the species' presence in suitable, connected habitat and the bird's resident status, the rufous-crowned sparrow has a high potential to nest in the survey area.

Western Bluebird

The western bluebird (*Sialia mexicana*), a MSCP-covered species, is a songbird found in areas of scattered trees, open conifer forests, and farmlands. The bluebird breeds in semi-open areas including pine woods, oak woodlands, streamside groves, ranch country, and occasionally in pinyon-juniper woods, but avoids hot dry regions. The species also winters in many types of open or semi-open habitats, including pinyon-juniper, desert, farmland, and others. During wildlife surveys conducted in the latter half of the 2017 breeding season (June 29), a pair of western bluebirds with fledglings was documented in the survey area on the developed grounds of the golf course. On May 22, 2018, a pair was detected in the same location, along with individual western bluebirds that were observed or detected during subsequent surveys on May 25 and 29, 2018. This species has a high potential to nest in suitable cavities in trees that are located in and adjacent to the golf course. However, bluebirds would generally not be expected to occur in chaparral or sage scrub associations.

Other Special-Status Wildlife Species Observed or Detected

Surveys documented several special-status avian species that were recorded as flyovers along the coastline, but assumed absent from terrestrial habitat of the survey area including, California brown pelican (*Pelecanus occidentalis*; State-Fully Protected Species), osprey (*Pandion haliaetus*; State Watchlist Species), and California gull (*Larus delwarensis*; State Watchlist Species). As no suitable habitat exists in or near the Project site to support these species, no additional discussion or evaluation of these birds will be needed/completed.

The Project-related field work also documented the presence of woodrat (*Neotoma* sp.) middens in the survey area. However, no formal trapping was conducted and no confirmed visual detections were made to positively identify the species. Even though no occurrences of woodrats were found during the literature review, the potential exists that some of the middens may be of the San Diego desert woodrat (*Neotoma lepida intermedia*), a State Species of Special Concern.

HYDROLOGIC FEATURES

No drainage features or water bodies, including vernal pools, were observed in or near the Project alignment (i.e., within 50 feet). Hydrologic input into the area appears to consist of low to moderate velocity surface water runoff occurring primarily as sheet flow from the surrounding hills and paved surfaces. Runoff within the survey boundaries appears to occur entirely within upland habitats, dissipating into sheet flow within the Project footprint, with no direct connectivity to any potentially jurisdictional drainage features or water bodies.

Vernal pool vegetation or other wetland indicator species were also not observed in concentrations to support, and do not occur within soil series typical of, vernal pool formation. As such, there are no drainage features or water bodies (seasonal or permanent) within the temporary or permanent impact areas of the Project alignment that would be considered to be jurisdictional waters of the U.S., Army Corps of Engineers, Regional Water Quality Control Board, or CDFW.

The National Wetlands Inventory (USFWS 2019) has documented some intermittent/ephemeral drainage features (i.e., Riverine and Forested/Shrub Riparian) near the Park Road that have hydrologic connectivity to the Pacific Ocean. These areas are located over 300 feet from the Project alignment, but within the larger survey boundaries. A Freshwater Forested/Shrub Wetland was also previously recorded approximately 250 feet from the West Lot in the northwest portion of the site, while two Freshwater Ponds (within TPMGC) exist roughly 300 feet from the Project footprint at the southwest end of the alignment. These features; however, do not lie within or immediately adjacent to any areas that would be temporarily or permanently impacted by the Project.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a)Have a substantial adverse effect, either directly or	☐	☒	☐	☐

through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

DISCUSSION

a) Due to proximity to the Project footprint, four plant species (identified as special status under local/regional plans or designated per authority of the CDFW/USFW) have the potential to be directly impacted by the proposed upgrades. As estimated, up to 100 individuals of the Del Mar Mesa sand aster could be permanently removed through placement of ancillary features and/or utility trenching. Temporary disturbance to wart-stemmed ceanothus (three individuals), Torrey pine (three individuals), and Nuttall's scrub oak (one individual) could also result from minor pruning/trimming or excavation within the canopy/dripline. No direct removal; however, of these three species is planned or anticipated. With regard to special-status wildlife, six species were documented within or near the survey area *(i.e.*, American peregrine falcon, coastal California gnatcatcher, Cooper's hawk, orange-throated whiptail, southern California rufous-crowned sparrow, and western bluebird). Project activities, though, would primarily occur in existing developed areas; thereby, minimizing the extent and potential loss of nesting, foraging, and dispersal habitat. Additionally, with implementation of appropriate measures (e.g., seasonal restrictions, fencing) impacts to special status wildlife and plants would be further reduced. As a result, no substantial adverse effect to any species identified as a sensitive, candidate, or special status species would result from construction.

b) The closest occurrence of riparian habitat to the Project site has been documented roughly

300 feet to the southwest of the existing roadway/alignment. Given the distance to this resource, and the type of work proposed, impacts to the sensitive habitat would not be expected. In contrast, vegetation communities located within the footprint, and classified as Tier I or II under the City's MSCP/MHPA, would be subject to some level of Project-related disturbance. As anticipated, approximately 0.017 acres and 0.11 acres of permanent and temporary impacts, respectively, would result from the utility upgrades. The vegetation communities that would be affected, include southern maritime chaparral, Torrey pine forest, and coastal sage scrub. However, any habitat disturbed as a result of construction, would be offset through native restoration/revegetation, as outlined in the City's LDC Biology Guidelines (City of San Diego 2012). Additionally, with incorporation of Project-specific avoidance and minimization measures, impacts to sensitive natural communities should be reduced to a less than significant level.

c) Two unnamed drainages, identified as supporting Riverine habitat (USFWS 2019), exist within or near the 500-foot survey area, but outside the boundaries of the Project. These features, which originate on the mesa, flow in a southwesterly direction to eventually discharge into the Pacific Ocean. Two Freshwater Ponds, located within the Torrey Pines Golf Course, also lie inside the survey limits, but beyond any construction impacts. Additionally, a Freshwater Forested/Shrub Wetland, previously recorded in the northwest portion of the study area, is situated some distance (~250 feet) from the proposed alignment and unlikely to be affected by the proposed work. Evidence of this particular wetland, though, could not be reconfirmed/verified during vegetation mapping in 2018. Based on these conditions, no impacts to features that could potentially qualify as wetlands under the Clean Water Act are expected to occur. Construction-related activities would be restricted to areas that do not support jurisdictional waters, and Best Management Practices, along with design elements, would serve to avoid any accidental removal, fill, or hydrologic interruption of these resources.

d) The Project is located in the Northern Area of the City's MHPA, which has designated the Los Peñasquitos Lagoon/Del Mar Mesa/Peñasquitos Canyon, as a Core Biological Resource Area (CBRA) (No. 14). Within this region, the Del Mar Mesa – Black Mountain and Los Peñasquitos Creek west of Poway function as the primary wildlife corridors to adjoining CBRAs. These linkages are situated over 5 miles to the east of the Reserve and the proposed Project. As such, no activities associated with the utility improvements should obstruct or interfere with the movement of native resident or migratory wildlife species through these corridors. Additionally, since the majority of construction would be occurring incrementally along or near the Park Road, minimal disruption of wildlife movement through the Reserve would be anticipated. The Project alignment is also not known to overlap with any habitat supporting nursery sites; therefore, no disturbance to such areas would be expected.

e) The utility improvements would not conflict with any known local ordinances or Department of Parks and Recreation policies regarding the protection of biological resources, such as the Department Operation Manual (DOM) and/or the San Diego Coastal State Park System General Plan, which addresses management of the Reserve. The upgrades shall also be

largely confined to developed and disturbed areas to assist in preventing impacts to existing habitat and associated plants/wildlife.

f) The Reserve falls within the boundaries of the City's MSCP (City of San Diego 1998) and the Northern Area of the City's MSCP Subarea Plan (Core Biological Resource Area 14: Los Peñasquitos Lagoon/Del Mar Mesa/Peñasquitos Canyon) (City of San Diego 1997). Accordingly, the Project would adhere to the guidelines/procedures of these planning efforts, including natural resource protection and compensatory measures. Thus, no conflicts with the City's MSCP/MHPA should exist and no outstanding issues with any other approved local, region, or state habitat conservation plan are known.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES - BIOLOGICAL RESOURCES (BIO)
BIO 1: Coastal California Gnatcatcher - All Project-related work lying within the boundaries of the MHPA, will be completed between August 16 and February 28 to prevent potential impacts to breeding or nesting coastal California gnatcatchers. Any utility improvements conducted outside the MHPA and during the gnatcatcher breeding season will be preceded by a preconstruction survey, as outlined in BIO-2 and BIO-3 below.
BIO 2: Other Nesting Birds - Since the site supports the resident and federally listed coastal California gnatcatcher, no activities will be conducted within the MHPA between March 1 and August 15. However, as the Reserve also supports nesting migratory birds and raptors, the potential exists for other avian species to be harmed/harassed during the months of January, February, and September. Given such conditions, should work need to occur during these three months, then a nesting bird survey shall be performed by the Project biologist/qualified biologist approximately one (1) week before the onset of activities. Should the Project biologist/avian biologist discover any nesting birds in or near the construction footprint, then appropriate measures, as determined by the Project biologist, will be implemented to minimize impacts. These measures may include but are not limited to: (1) Redirecting work to other locations within the Project area, (2) staking/flagging near the nest site, (3) establishing a minimum "no work" buffer, and/or (4) installing temporary fencing. No work (*e.g.*, involving disturbance to structures, the ground or vegetation, and/or generating noise levels greater than ambient) will start or resume in the area of concern until receipt of written approval from State Parks.
BIO 3: Prior to any ground disturbance, the Project biologist/qualified biologist shall conduct a pre-construction survey for sensitive biological resources within and near the Project area that will consist of: 1. A survey for special-status plants to assess the presence of the short-leaved dudleya and other species of concern. Should any special-status plants be found (either individuals or populations), then measures shall be incorporated into operations to prevent/reduce disturbance. At a minimum, temporary fencing or flagging will be placed around/near the plant(s) to provide a conspicuous, visual barrier. Any other measures deemed necessary by the Project biologist shall also be employed to avoid disturbance to the species, 2. A survey for sensitive wildlife will be performed no more than one (1) week in advance of any work. Should sensitive wildlife be found, then measures recommended by the Project biologist/qualified biologist shall be implemented to reduce the likelihood of

species impacts. Should work be suspended or delayed for a period of greater than seven (7) days, then the Project biologist/qualified biologist, at their discretion, will complete an additional survey to ensure that no other resources of concern exist in or adjacent to the proposed Project footprint.

Regular updates will be provided during construction meetings or the environmental awareness training to inform staff of areas supporting special-status plants/wildlife and measures needed to avoid/minimize potential impacts.

BIO 4: During vegetation clearing, trimming or removal, and/or ground disturbing work, the qualified biologist shall be on-site to monitor for the presence of special-status species. If any wildlife of concern is unearthed during these activities, the qualified biologist will coordinate with the Project biologist regarding appropriate measures to safeguard the health/life of the individual(s) (*e.g.*, flushing, safely relocating away from the site).

BIO 5: A qualified biologist will present an education program on the coastal California gnatcatcher and other listed/sensitive species to all Project employees prior to the start of construction and before new employees begin work on-site. Materials discussed in the program will include, at a minimum, the following topics: (1) species description, general behavior, and ecology, (2) distribution and occurrence near the Project site, (3) species' sensitivity to human activities, (4) legal protection, (5) penalties for violation of State and Federal laws, (6) reporting requirements, and (7) Project conservation measures. The biological monitor will document the names, dates, and affiliation of those persons who attend the training.

BIO 6: Before the start of construction, specialized temporary fencing will be installed adjacent/near the existing short-leaved dudleya population to prevent unintended impacts to the species. The barrier should be erected alongside any portion of the population that exists within roughly 10 feet of the construction corridor. This barrier should be solid in structure, with no openings and incorporate reinforcements/measures to ensure it does not topple onto the short-leaved dudleya population. The Project biologist, in coordination with a qualified botanist, will identify and flag the start and end of the temporary, solid barrier fencing. Installation will be conducted in a manner that minimizes excavation/digging and vegetation removal. Following construction, all fencing materials (e.g., mesh, stakes, and sand bags) shall be collected and transported off-site.

BIO 7: A certified arborist will be available to oversee and direct any work involving the pruning/removal of trees, the cutting of roots two (2) inches in diameter or greater, or any accidental tree damage that may occur during the project. Tree pruning procedures will comply with the American National Standards Institute (ANSI) A300, "Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices".

BIO 8: Any trenching/digging conducted off the road and within the drip line of a tree (*e.g.*, Torrey pine) will be hand cleared and excavated to minimize damage to the tree's root system. No roots two (2) inches in diameter or larger will be cut, except for those which may obstruct placement of project features. These activities will be supervised/directed by the certified arborist, in coordination with the Project biologist/qualified biologist to ensure that large, excised roots are cleanly cut and excavations are properly performed.

BIO 9: A biological monitor will be present on-site during all clearing, grubbing, and grading activities to monitor work and ensure conservation measures are appropriately implemented. Such activities will include, the installation/removal of construction boundary materials, vegetation trimming, vegetation removal, trench excavation/back-fill, and any ground

disturbance associated with entry/exit of directional drilling equipment. In addition, the biological monitor shall, at his/her discretion, continue to survey activities throughout construction to ensure that impacts to natural resources are avoided/minimized.
BIO 10: Sensitive habitat (*e.g.*, maritime chaparral, and other Tier I and Tier II habitats) near the Project boundaries will be designated Environmentally Sensitive Areas (ESAs) and strictly avoided. No encroachment (*i.e.*, workers, equipment, materials) will be allowed in these locations at any time. Sensitive vegetation or resources will be marked and protected by temporary fencing (*e.g.*, orange plastic fencing, silt fencing) or other acceptable method. Work limits will be clearly marked in the field and confirmed by the Project biologist/biological monitor prior to the start of operations. All staked/fenced boundaries will be maintained in good repair throughout construction.
BIO 11: Work shall be limited to the construction footprint, as outlined in the Project plans and directed by State Parks. Access routes, staging areas, and the total footprint of disturbance shall be the minimum number/size necessary to complete the Project, and will be selected/placed to avoid impacts to sensitive habitat/resources.
BIO 12: BMPs to address erosion and excess sedimentation shall be incorporated into the Project plans. Materials that could be used during construction include burlap fiber rolls, organic erosion control blankets, sand bags, silt fencing, filter fabric, and any other items deemed appropriate by State Parks. Where applicable, weed-free products shall be used to minimize the spread of exotics. At all times, sufficient amounts of erosion control materials will be available on-site to respond to potential emergencies and any rains forecasted within 24 hours.
BIO 13: Debris or runoff generated as a result of Project activities shall be minimized, whenever possible. If capture is not possible, then it will be directed away from any drainages and/or culverts to prevent deposition into waterways. The disposal of materials must be performed in a manner that will minimize effects to the environment.
BIO 14: All contractor equipment and vehicles shall be inspected for leaks immediately prior to the start of construction, and regularly thereafter until the equipment and/or vehicles are removed from Reserve premises. Any leaks shall be properly contained or the equipment/vehicle(s) repaired, and if failing repair, removed off-site.
BIO 15: All construction equipment used for the Project will be clean and free of soil and plant material before arrival on-site and before leaving the park to prevent the spread of invasive plants. Biological monitors shall periodically inspect vehicles, equipment, and boots to ensure that no invasive species (mainly *Ehrharta longiflora* and *Oncoisiphon piluliferum*) leave the site or are introduced into the Reserve.
BIO 16: All storage and staging areas shall only be allowed on existing developed or disturbed locations (*e.g.,* paved surfaces) that have been reviewed and approved by State Parks, in coordination with the Project biologist and Project archaeologist. All areas used for stockpiling will be kept free from trash and other waste. No Project-related items will be stored outside approved staging areas at any time.
BIO 17: Any areas of excavation (*e.g.,* pits, trenches, drilling holes) shall be covered overnight or during periods of inactivity. Routes of escape from excavated pits and trenches will also be installed for wildlife that could potentially become entrapped (e.g., wood planks, sticks, or equivalent with dimensions of roughly 2-inch-thick by 6-inch-wide, and earthen ramps/slopes). These locations will be regularly inspected over the course of the Project and immediately prior to filling. Should any entrapped wildlife be discovered, then work will be

suspended at the excavation site until the animal can be safely relocated by the biological monitor or Project biologist.
BIO 18: All equipment will be cleaned, fueled, and repaired (other than emergency repairs) outside Reserve boundaries, whenever possible. Contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside the Reserve, at a lawfully authorized destination.
BIO 19: Dust impacts shall be minimized by implementing appropriate measures that will reduce/control emissions generated by the Project. Water will be applied (e.g., using a water truck) at sufficient quantities to prevent airborne dust from leaving the Project area. Increased watering frequency will be required whenever dry, dusty conditions exist on-site. Watering shall be conducted in a manner that prevents any runoff into adjacent habitat or ESAs. Best Management Practices to address erosion and excess sedimentation will also be incorporated into Project operations. Weed-free products shall be used to minimize the spread of exotics. During construction, the biological monitor/Project biologist will periodically inspect the work area to ensure that activities do not generate excessive amounts of dust or cause other disturbances.
BIO 20: Consumption of food shall not be allowed within the Reserve or along the construction alignment. Any meals or food consumption shall be restricted to areas that have been identified/designated as acceptable by State Parks. Food-related items shall never be left within the construction corridor or in the Reserve. The Project area shall also be kept clear of work-related trash. All garbage shall be placed in sealed containers and regularly removed from the site. Following construction, any trash, debris, or rubbish remaining within the work limits shall be collected and hauled off to an appropriate facility.
BIO 21: Pets belonging to Project personnel shall not be permitted within the construction boundaries at any time.

V. CULTURAL RESOURCES.

ENVIRONMENTAL SETTING

Native American Era

According to the indigenous people of the San Diego region, they are descendants of the first people, and have lived in their ancestral lands since the time of creation (Cline 1979:103; Gifford and Block 1990:102-112). Scientific studies have found evidence of people in the San Diego region over 9,000 years ago. The oldest undisputed radiocarbon dates in San Diego County are from several sites: CA-SDI-39, CA-SDI-149, CA-SDI-210, CA-SDI-4669, CA-SDI-10965, and CA-SDI-11079 (Breschini et al. 1996; Erlandson et al. 2007; Gallegos 2017; Hector 2007). Site CA-SDI-39 (La Jolla Spindrift) produced a radiocarbon date of 8,940 ± 100 radiocarbon years before present (RCYBP) [Gallegos 2017], CA-SDI-149 (the Harris Site) produced a radiocarbon date of 9,030 ± 350 radiocarbon years before present (RCYBP), site CA-SDI-210 (at Agua Hedionda Lagoon) was dated to 9,020 ± 500 RCYBP (Breschini et al. 1996), site CA-SDI-4669 in La Jolla was dated to 9,590-9,920 years before present (Hector 2007), CA-SDI-10965 (Windsong Shores) produced a radiocarbon date of 8890 ±40 RCYBP (Gallegos 2017), and CA-SDI-11079 was dated to 9,340-9,460 RYBA (Erlandson et al. 2007). Another site (CA-SDI-10940) located near TPSNR is known as the Del Mar Man site and has a date of 9,070 ± 100 RCYBP associated with it, but this, and other dates from the site are considered unreliable (Breschini et al. 1996).

Malcolm Rogers, a researcher with the San Diego Museum of Man was one of the first in the region to record archaeological sites and try to put together a chronology based on artifact types found at those sites. He named the earliest cultural complex of southern California sites: the San Dieguito Complex or Tradition (Rogers 1966). The San Dieguito culture dates to the early Holocene, and although the San Dieguito people were previously thought to have been almost exclusively 'big game hunters' (Pourade 1966), more recent evidence suggests that they were also gatherers and, along the coast, exploiters of marine resources (Gallegos 1992). Rogers (1966) divided the San Dieguito Complex into four "aspects" (major zones of concentration): the Western, Central, Southwestern, and Southeastern Aspects. The Western Aspect covers the San Diego coastal region.

In San Diego County there are competing interpretations of the culture periods, with most of the disagreement connected to the differences between the San Dieguito and the La Jolla Traditions, and the transition from San Dieguito to La Jolla. Some argued that a clear distinction is not evident and that variations simply represent different regional or seasonal adaptations of a single culture (Gallegos 1992; Gallegos and Kyle 1988; Kyle et al. 1990; and others), while others have claimed that this distinction exists and can be identified in the archaeological record (Warren et al. 1993). Grinding implements (manos and metates) increase in numbers during the La Jolla period suggesting an increased reliance on milling of vegetal materials. Rogers used this change as a distinction to separate the La Jolla Tradition from the San Dieguito, calling the La Jollans "seed grinders and seafood gatherers more than hunters" (Pourade 1966:8). However, as mentioned above, there is mounting evidence that the San Dieguito were not only relying on hunting, but on gathering and grinding as parts of

their subsistence strategy (Gallegos 1992). Numerous sites from this time period are coastal sites (Christenson 1992:220), and around 6,000 years before present (BP) the lagoons of northern San Diego County supported large populations (Gallegos and Kyle 1988; Pigniolo et al. 1993). There appears to be a decline in the numbers of sites in northern San Diego County from around 3,000 to 1,500 years BP. This paucity of sites has been attributed to the siltation of the lagoons and the depletion of lagoon resources including shellfish (Gallegos 1992:206, 213; Gallegos and Kyle 1988). The end of the Early Period in present-day San Diego County has been estimated to be around 1,300 years BP (Gallegos 1992:212-213).

Late Period

The Late Period (also known as the Yuman Period) lasted from circa 1,300 years BP to European contact. This period has been distinguished from earlier periods by the appearance of small projectile points and ceramics in the archaeological record, and the practice of cremating the dead (Christenson 1992:217; Gallegos and Kyle 1988). Some researchers believe that the drying up of the large inland lakes (Lake Cahuilla and others) instigated or contributed to the migration of peoples from the eastern deserts to the western portion of San Diego County (e.g., Pourade 1966:8). Recent archaeological studies in the Colorado Desert indicate population growth and “concomitant adjustments in settlement and subsistence” occurred there after A.D. 1600, although the role of the final recession of Lake Cahuilla (if any) remains unclear (Schaefer 1994:72-73). Populations in the Colorado Desert apparently adjusted well after the recession (Schaefer 1994:72-74). Yuman Period sites have been found mainly in the inland portion of the county, with only two percent being located within the coastal strip (Christenson 1992:220). These results may be in part skewed due to the loss of site data because of coastal development prior to the instigation of standard site recording practices (Christenson 1992:220-221). Although Christenson (1992:221, 225-226) concludes that Late Prehistoric people of present-day western San Diego County used a wide variety of environmental settings for settlement and subsistence, maritime resources never became an emphasis, as reported for other groups living along coastal areas of California.

Ethnography

Torrey Pines State Natural Reserve is within the ethnographic territory of the Kumeyaay (who are also called the Diegueño Band of Mission Indians, and divided into the Ipai, Tipai, and Kamia). Kumeyaay territory included a vastly varied terrain, ranging from coastal beaches and lagoons, across the mountains, and down into the arid desert. The Kumeyaay were expert hunters and gatherers, making seasonal rounds to take advantage of various resources. They also developed horticultural/agricultural techniques including burning, seed broadcasting, transplanting, and planting (Bean and Lawton 1973; Gee 1972; Luomala 1978; Shipek 1982). Kumeyaay women used pottery bowls, pots, and jars; baskets; net bags; digging and gathering sticks; manos and metates; mortars and pestles; and various wood, fiber, stone, shell, and bone utensils for collecting and processing vegetal foods and materials (Kroeber 1976:722-723; Luomala 1978). Terrestrial hunting was typically done with bow and arrow, throwing stick, or net. Brush burning to scare up and drive game was also employed (Bean and Lawton 1973; Gee 1972; Gifford 1931:26; Luomala 1978:601). Bows were made of mesquite, screwbean, or willow with a sinew string and arrows were made of arrowweed

and/or cane with a wooden or stone point that was attached by sinew (Gifford 1931:28).

The Kumeyaay were organized into autonomous bands with a hereditary (patrilineal) clan chief as well as at least one assistant chief (Luomala 1978:597). Each band had a central primary village and a number of outlier homesteads located at small water sources, springs, or at the mouths of secondary creeks (Shipek 1982). Campsites were selected for accessibility to water, drainage, availability of boulder outcrops or other natural protection from weather and ambush, and the abundance of flora and fauna (Luomala 1978:597). Kumeyaay structures varied by region and use. The more permanent dwellings were domed or gabled, with a slightly sunken floor, and were constructed of a tied-pole framework overlain with brush thatch and sometimes a mud and grass covering (Kroeber 1976:721; Luomala 1978:597).

Clothing was minimal; children and men went naked and women wore one- or two-piece bark or braided fiber aprons (Luomala 1978:599). In the winter, robes of rabbitskins, willowbark, or buckskin were used (Gifford 1931:32-33; Luomala 1978:599). Although the Kumeyaay usually went barefoot, agave-fiber sandals were used for traveling over rough or thorny terrain (Kroeber 1976:721). Women wore twined or coiled basketry caps and the men wore coiled caps (Kroeber 1976:721; Luomala 1978:599). Other adornments included bone, shell, or stick ornaments for nose or ear piercings, shell bead necklaces, and shell pendants (Gifford 1931:37-38; Luomala 1978:599). Hair was worn long with bangs for both men and women, except when it was cut short for mourning (Gifford 1931:36-37; Kroeber 1976:721; Luomala 1978:559, 603). Tattooing was practiced by both sexes, but may have been more prevalent among women due to its place as part of the adolescence ceremony for girls (Gifford 1931:35-36; Kroeber 1976:721). Piercing (ears and nasal septum) was also practiced and face painting was used as another method of personal adornment (Gifford 1931:34-35; Luomala 1978:599; Shipek 1970:40).

The Ipai and Tipai groups practiced shamanism, utilizing the toloache (Datura) initiation customs that had been learned from the Luiseños and Gabrielinos to the north; while the Kamia practiced the system of song-myth cycles that came from the Colorado River region (Kroeber 1971). Items such as stone, cane, or ceramic pipes; pottery, tortoise shell, gourd, and deer-hoof rattles; and crescentic stones were used in ceremonial rituals (Gifford 1931; Kroeber 1976; Luomala 1978).

The Kumeyaay cremated their dead. The body and its possessions were burned on a pyre over a pit (Luomala 1978:603). After the cremation of the body, the ash, bones, and unburned fragments of possessions were gathered up and placed in a pottery jar that was then capped and buried or hidden among remote rocks (Kroeber 1976:716; Luomala 1978:603).

Previous Archaeological Work

Due to the amount of work that has been conducted within TPSNR, this section focuses only on those studies in and around the project area and in the Main Reserve – excluding work that was solely within the Extension Area or State Beach lands.

In the 1920s and 1930s, M. J. Rogers recorded at least ten sites within the lands that would

become TPSNR and TPSB (Rogers 1929). Rogers also tested at least two of these sites (CA-SDI-9588 and CA-SDI-9598). During the 1940s, A. E. Treganza recorded four sites within TPSNR and in 1978 Westec recorded three sites along the park road. In 1982 State Parks Archaeologist E. Breck Parkman led a team of archaeologists on a survey of the Reserve. They documented 29 archaeological sites, 11 of which were newly identified during their work (Nesbitt 1983). Also in 1982, State Parks Archaeologist Jim Woodward conducted a resources inventory survey along Torrey Pines State Beach and recorded two previously undocumented sites (Woodward and Stammerjohan 1985). State Parks staff revisited some of the sites within TPSNR in 1986 to check site conditions and update site forms (Barter 1986). As a result of the 1986 survey, two new sites were recorded (CA-SDI-10636 and CA-SDI-10637) and testing was carried out on two FAR features at CA-SDI-10636 (Barter 1987). Radiocarbon dates obtained from these features came back as 90 ± 60 years BP and "statistically indistinguishable from the modern standard" (Barter 1987:15).

No substantial surveys were done at TPSNR between 1982 and 1996. Site excavation and testing projects were also few and far between. In 1982 researchers from the University of Calgary tested four sites (CA-SDI-9602, CA-SDI-9605, CA-SDI-10636 and CA-SDI-10637). These studies resulted in Radiocarbon dates between A.D. 600 and A.D. 800 (Reeves 1982).

In 1985 Linda Roth carried out site testing at CA-SDI-4625, including surface collection and test-pit excavation as part of a utility-trench monitoring project. The conclusion of the study was that CA-SDI-4625 had incurred substantial damage from the construction of the old Highway (between 1910 and 1915) and that very little of the deposit remained intact (Roth 1985). However, the maps for this report have vanished from the files (if they were ever present) and it is unclear precisely where within the site the testing occurred.

Also in 1985, B. Smith and J. Moriarty noted in their report on excavations at SDMM-W-20 (see "Work Outside the Reserve" below) that radiocarbon dates from CA-SDI-196, CA-SDI-9598, and CA-SDI-10637 ranged from 4,970 to 2,140 RCYBP (Smith and Moriarty 1985). In 1987 C. Gilbert and G. Reinoehl excavated three test units at CA-SDI-9588. Samples of shell from the units yielded three radiocarbon dates: 6,460 ± 100 years BP, 6,440 ± 110 years BP, and 3,030 ± 110 years BP (Gilbert and Reinoehl 1987).

State Parks staff Marla Mealey, Beth Castro, and Richelle Heimgaertner carried out testing and surface collections at CA-SDI-9605, CA-SDI-10636 and CA-SDI-10637 in 1995 as part of a Statewide Cultural Resources Management Program (SCRMP) project (Mealey et al. 1996). The calibrated radiocarbon dates from test units at CA-SDI-9605 were between 450 and 2,190 years BP. Flotation studies on soil samples gathered from a FAR feature at CA-SDI-9605 revealed a charred Salvia seed, charred dicot leaf fragments, and charcoal of the Asteraceae family (Scott Cummings et al. 1996). Two groundstone samples from site CA-SDI-10637 were sent to Paleo Research Laboratories in Colorado for phytolith and protein residue analyses. The results appear to indicate that both the mano and the metate fragment were used to process grass seeds, while the metate fragment also yielded a positive protein residue result for deer antiserum (Scott Cummings et al. 1996).

During the records and literature review for the 1995 fieldwork, discrepancies in site location,

site size, and site condition were noted (Mealey et al. 1996). To resolve these inconsistencies 27 site locations were field checked and rerecorded using GPS technology. During these field checks, an additional 15 sites were identified and recorded (Mealey et al. 1997).

Students from San Diego State University under the guidance of Dr. Lynn Gamble surveyed, recorded, and tested sites within the State Reserve as part of field class exercises (Gamble 2002).

In the autumn of 2002, State Parks staff completed SCRMP survey work on the northern portion of the Main Reserve (Mealey and Shabel 2002). Approximately 123 acres were surveyed during this project and 14 new sites and 9 new isolates were identified during the survey. Sixteen previously recorded sites were also examined and updated. This study also resulted in the completion of 33 Archaeological Site Condition Assessment Records (ASCARs).

Archaeological site assessment work in the spring of 2005 showed that heavy winter and spring rains and the increased erosion and runoff that they caused, resulted in damages to sites and features throughout TPSNR (Mealey and McFarland 2005). Site condition evaluations conducted during this project indicated that erosion and unauthorized foot-traffic are the major threats to sites in TPSNR. Damages to sites were found to be moderate to heavy throughout TPSNR. The most severe damages caused by the 2004/2005 rainfall were found along trails and on the edges of bluffs and banks where some slumping, rock fall, and edge erosion did occur.

In late 2005 archaeologists from Affinis were hired to conduct excavation work at two of the sites (CA-SDI-9588 and CA-SDI-14447) within the Main Reserve (Gross 2005). Two 1x1m units were excavated at each site and an additional 1x.5m unit was excavated at CA-SDI-14447.

In early 2006, funding became available to conduct data recovery on some of the features that were damaged by the heavy rains of 2004/2005. Thirteen features at five sites were excavated during this work (Mealey 2006). Most of the features were radiocarbon dated to the Late Period, although three features were dated to the Post-Contact period including one that was dated as essentially “modern”. However, it is known that the Kumeyaay Indians were going to the area of Torrey Pines to gather pine nuts and other resources well into the early 20th century. So it is possible that these features represent historic Kumeyaay use of the area.

Archaeological monitoring work was carried out from 2008 through 2011 as part of an overlooks construction and trail repair project (Lower and Brown 2016). This work resulted in the recordation of two newly identified archaeological sites and the expansion of one previously recorded site (CA-SDI-16407).

In 2010 archaeological investigations, including survey and testing, were carried out for an accessibility improvement project for several trails throughout the Main Reserve (Mealey & Ruston 2010). Forty-two shovel test pits (STPs) were excavated as part of the testing. Based on the results of the survey and testing, seven previously recorded sites (CA-SDI-4625,

CA-SDI-9602, CA-SDI-14455, CA-SDI-16410, CA-SDI-16412, CA-SDI-16414, and CA-SDI-16417) were expanded and updated and one newly identified isolated artifact (P-37-031479) was recorded. One 1x1m test unit was excavated at a newly identified FAR feature at CA-SDI-16417 in the Parry Grove Overlook area resulting in the recovery of several pieces of lithic debitage (n=17), a couple shell fragments, and 41 pieces of fire-affected rock. Monitoring for the trail accessibility improvement project was carried out between 2011 and 2015. During the monitoring work, additional artifacts were observed and recorded at several sites, and one new site and several new isolates were identified (Lower and Brown 2016).

In 2011, road repair work was undertaken along the historic highway/park road within TPSNR. The work was monitored by an archaeologist from CSP's SSC (McFarland 2011). No cultural materials were observed within the soils beneath the pavement in the three areas that were repaired.

In 2012 an archaeologist from CSP's SSC monitored auger testing beneath the historic highway/park road within TPSNR (Liwosz 2012). No cultural materials were observed.

Archaeological testing was conducted in 2012 at CA-SDI-9588B as part of a SCRMP project to install erosion control in order to protect the exposed and eroding shell midden located at this site (Shabel 2012). Sixteen shovel test pits were excavated in order to determine the extent and content of the site. Only 15 pieces of lithic debitage, along with 5,571 pieces of shellfish shell were recovered, although the bulk of both came from just three STPs. Dates from shellfish remains place the site between 4,240 and 5,820 years before present (with outliers at 7,230 +/- 40 BP and 2,150 +/- 30 BP).

Archaeological monitoring for a trail improvement project was undertaken in 2014 and resulted in the recordation of one newly recorded site (CA-SDI-21592) and an update to CA-SDI-16417 (Roland 2014).

Diseased and dying tree removal was undertaken by the district in 2014 and 2015. Archaeological monitoring was conducted by several archaeologists from the Southern Service Center (Meling 2015; Pawloski 2015; Vaughn 2014, 2015). As a result of the monitoring work, six isolates were recorded (P-37-034712 through P-37-034717).

Improvement work on several utility poles was also undertaken within the Reserve during 2014 and 2015 (Scharlotta 2014; Williams 2014, 2015). Archaeological survey and monitoring work, undertaken as part of these projects, resulted in the recordation of two new historic sites (CA-SDI-21221 and CA-SDI-21812) and one new isolated projectile point (P-37-033784).

Archaeological survey work was conducted in 2014 and 2015 by volunteers from the Society for California Archaeology and the San Diego County Archaeological Society as part of the Climate Change and California Archaeology project. This work is focusing on public lands within the coastal zone that are under threat of sea level rise and/or coastal erosion caused by higher sea levels. Overall, more than 40 acres were surveyed, 13 newly identified sites and 11 newly identified isolates were recorded, and 15 updates were completed during this work (Mealey 2014a, 2015). One site was found to contain cremains that were determined to be

Native American in origin.

Archaeological survey and testing was conducted in 2016 and 2017 for the Broken Hill Trail Improvements Project by the Southern Service Center (Rolland et al. 2018). As a result of the testing one isolate was observed during the survey and a single auger unit out of 46 that were excavated, was positive for cultural resources (within CA-SDI-4625). Five units were also excavated, one yielding a fire-affected rock feature (Feature P of CA-SDI-14447), while the other three were determined to contain jumbles of out-of-context fire-affected rock, possibly from erosion or trail repair work.

Archaeological Work

Archaeological survey work was undertaken as part of the current project in August and November 2016. Archaeologists from CSP's Southern Service Center (SSC) walked 10- to 15-meter transects along the park road from the golf course to the Fleming House. Three previously recorded sites were updated and nine newly recorded sites and isolates were identified. Site record updates were prepared for CA-SDI-4625, CA-SDI-9600, and the National Register of Historic Properties site Roosevelt Memorial Highway (park road).

CA-SDI-4625 is a shell midden site with fire-affected rock features and lithic artifacts. CA-SDI-9600 is a lithic scatter with fire-affected rock features, and Roosevelt Memorial Highway (P-37-036624) is the original paved coastal highway through this region. Additional artifacts and features for the three sites were observed and recorded during the survey work.

The five sites that were newly recorded during the survey consisted of a 1880s-1940s glass and ceramic scatter (CA-SDI-21993), a historic concrete boundary marker (CA-SDI-21995), an area of deflated fire-affected rock features (CA-SDI-22037), a 1940s-1950s trash scatter (CA-SDI-22038), and a 1960s-1970s trash scatter (CA-SDI-22483).

There were four isolated artifacts that were also recorded during the survey including a remnant concrete footing possibly related to WWII-era Camp Callan (P-37-036276),1963 bottle base (P-37-036280), a 1960s/70s interlocking seam, church key-opened can (P-37-036393), and wood post remnants from a railing along an old spur road that dates back to the 1920s (P-37-036395).

Archaeological monitoring of geotechnical testing was undertaken in January 2018. An archaeologist from CSP's SSC and a Native American monitor were present during the testing. Only one small fragment of shell was recovered during the testing from the area of archaeological site CA-SDI-4625. As with other work beneath the historic highway/park road, little to no evidence of cultural materials seems to indicate that substantial disturbance of the sites within the roadway has already occurred.

Archaeological testing for this project occurred in August and November 2018. Archaeologists from CSP's SSC and San Diego Coast District excavated ninety-four (94) auger test holes, four shovel test pits, and one 1x.5-meter unit along the project route. A Native American monitor was present during all archaeological excavations.

Of the 94 augers, 56 of these were excavated to at least 50cm below surface, with 12 of these going deeper, and the deepest going to 90cm. Thirty-eight of the auger tests were positive, although twenty of these were only “minimally positive” containing fewer than 3 pieces of shell per level or non-diagnostic potentially historic items (primarily glass). For the most part, the positive auger holes aligned with the known site boundaries.

The unit was excavated within the inland shoulder of the road (eastern side) in an area that had a few pieces of fire-affected rock on the surface. It was hoped that the fire-affected rock were evidence of a fire-affected rock feature, however, that did not prove to be the case. It was also hoped that the unit would show similar disturbance that Roth (1985) had observed (see above), but no such disturbance was noted during the excavation. The unit contained shell midden and lithic artifacts down to the sandstone bedrock.

Four 30x30cm shovel test pits (STPs) were excavated in the shoulder “berms” (three on the inland side and one on the ocean side) of the historic highway/park road. Few to moderate amounts of shell and a couple pieces of lithic debitage were recovered.

Details of the archaeological testing can be obtained from CSP SSC.

Historic Period

Torrey Pines State Natural Reserve can trace its origins to August 10, 1899 when, after a year of deliberation and lobbying by local and nationally-renowned environmentalists, the Common Council of the City of San Diego passed an ordinance setting aside 369 acres of city-owned land as a public natural preserve. The area was earlier part of the pueblo lands of San Diego. The land was recognized for its population of rare namesake *Pinus torreyana* trees, relics of the ice age and among the rarest pines in the world. Twisted and clinging to the sandstone cliffs in their native, wind-swept habitat, the pines are indigenous to only two small areas in California. One is on the twin headlands overlooking Los Peñasquitos Creek Marsh in Torrey Pines State Reserve and the Reserve’s Extension south of the City of Del Mar. The other is on the eastern shores of Santa Rosa Island, one of the Santa Barbara Channel Islands (Bevil 2010: 1).

In 1769, the Portolá-Serra Expedition passed through nearby Sorrento Valley on its way from San Diego to colonize Monterey and establish missions along the way. The trail they used is referred to as El Camino Real. Spanish exploring the California coast were the first ones to record the trees’ existence, with the forested headland, Punta de los Arboles (“Point of the Trees”), became a familiar navigation point for mariners sailing along the coast. They used this area both as a landmark and as a warning that they were too close to the shore in the fog. Native tribes had utilized the pine’s oily kernels as a food source since prehistoric times; however, these unique maritime trees were unprotected and largely scientifically ignored until the latter part of the 19th century. They were simply noted as *soledad* or "solitary" pines because they grew on the seaward slopes of both sides of the entrance to Soledad Valley. Nineteenth-century county histories also ignored the pines in their descriptions of San Diego's resources, and as late as 1889 the site of the present-day Reserve was still popularly

regarded simply as "Pine Hill" (CDPR 1984: 23). The official San Diego public land maps drawn in 1845, 1858, and 1870 did not denote or name these pines. Although Dr. Charles C. Parry, botanist with the Mexican Boundary Survey, recognized these trees as a new and rare species of pine in 1850, nearly 50 years would pass before this remarkable natural monument received municipal protection ((CDPR 1984: 23). Parry named the tree for his mentor, Dr. John Torrey, of New York. Torrey was one of the leading botanists of his time. He had co-authored *A Flora of North America*, and was the sole author of *A Flora of New York State*.

The greatest threat to the grove came during the 1890s. The City of San Diego had leased its sparsely populated northern limits for sheep and cattle-raising. Also, trees and woody shrubs of all kinds were being cut and hauled away for fuel. An added danger was wildfires that often swept over the area. Miss Belle Angier, a local assistant of Dr. Charles Sprague Sargent of the Arnold Arboretum, Harvard University, was concerned. She appealed to members of the San Diego Society of Natural History to petition the San Diego City Council to preserve the trees. Urged by George W. Marston, Daniel Cleveland, and other influential members of the Society, the Council passed Ordinance No. 648. The ordinance called for the creation of a public park to preserve the trees. On August 10, 1899, the Council set aside 369 acres of land in Pueblo Lots 1332, 1333, 1336, and 1337 as a public park.

In 1908, the City of San Diego hired John Nolen, Massachusetts landscape architect and consultant, to draw up a comprehensive plan for San Diego's improvement. Among Nolen's recommendations was "a great system of parks well connected by boulevards and parkways." Nolen included the fledgling Torrey Pines Park within his interconnecting park system. Unfortunately, his grand scheme was never enacted (CDPR 1984: 27).

Initiated by pioneer real estate developer Ed Fletcher in 1906, the the two-lane concrete Torrey Pines Park Road was co-funded by Edward W. and Ellen B. Scripps and completed in 1915. This historic “Gateway to San Diego” was closely tied to San Diego’s early highway, real estate, and park development and represents the highest form of contemporary American road building at the time. The use of poured Portland cement concrete in its construction represents the material’s growing popularity for use on America’s public roads during the early part of the 20th century. An integral part of the new coast highway between Los Angeles and San Diego, the road helped to reduce the driving distance between Los Angeles and San Diego, thereby increasing commercial and tourist traffic between the two cities. As a result, it was directly responsible for increasing residential and commercial development in a number of coastal San Diego County communities, particularly Del Mar, La Jolla and Pacific Beach. Passing through stands of rare Torrey Pine trees, the approximately two-mile section of the highway known as Torrey Pines Road was a major factor in the evolution of Torrey Pine Park into the Torrey Pine Preserve.

The road also played an important part in the location and building of the historic Torrey Pines Lodge and the nearby Guy L. and Margaret E. Fleming House. Built in 1923 and 1927, respectively, they continue to contribute to the area’s conservation and interpretation. Even after 1933, when a newer highway nearby diverted a major portion of the road’s traffic, Torrey Pines Park Road continued to serve as a diversionary scenic drive for the next 27 years.

Since its acquisition as part of the transference of Torrey Pines Preserve to the California Department of Parks and Recreation in 1959, the road is no longer used as a through road. However, it still plays an integral part in the interpretation and maintenance of Torrey Pines State Reserve as the Reserve's only public means of entry and exit (Bevil 2001).

It became known that the new Torrey Pines Park did not contain the best stands of Torrey Pines. These, set amid some of the more picturesque carved sandstone bluffs and gorges, lay north of the park in Pueblo Lots 1338 and 1339. The city had previously sold these lands to private interests around 1870. Word got out that the land was to be sold and subdivided for commercial purposes. Concerned, George Marston urged fellow businessman Edward W. Scripps to convince his half-sister, Miss Ellen B. Scripps, to acquire these lands. An ardent conservationist and philanthropist, Miss Scripps was keenly interested in preserving the trees and other plants north of the park. Between 1908 and 1912, she bought Pueblo Lots 1338 and portions of Pueblo Lot 1339. It was her wish that the land be held in trust for public education and recreation. It, along with the parkland to the south, would be used as an outdoor museum of native flora, fauna, and natural geology. With her purchase of the lots adjacent to the park, Ellen B. Scripps became the patroness of the movement to save the Torrey Pines (Bevil 2010: 2). By the time of her death in 1932, Miss Scripps had contributed significantly to the establishment of the Reserve. Ellen Browning Scripps Natural Preserve, the area around the Parry Grove and Guy Fleming Trails, has since been designated by the State Park and Recreation Commission as an outstanding area.

In June 1921, with City Park Commission concurrence, Scripps appointed Guy Fleming, a local horticulturist, as the custodian and naturalist for her pueblo lot purchases. About the same time, the Park Commission named Fleming caretaker of Torrey Pines Park. The entire area was designated a reservation and named Torrey Pines Reserve. The following year, Ellen Scripps financed the construction of Torrey Pines Lodge as a gift to the City of San Diego. Designed by the San Diego firm of Requa and Jackson, the lodge was a highly successful adaptation of southwestern United States pueblo dwellings (CDPR 1984: 27).

In 1926 Guy Fleming married Margaret Doubleday Eddy, and the couple occupied a tent house at Torrey Pines while Fleming and his father designed and built a residence located several hundred yards below Torrey Pines Lodge. Designed to complement the Pueblo-style lodge, the house was finished in March 1927. By the terms of Ellen Scripps' will, the Flemings were given life tenancy in the property.

Torrey Pines Reserve suffered several intrusions during the next 15 years. Between 1929 and 1930, controversy swirled around the city's proposal to construct an additional cliff road through Torrey Pines. Finally, in June 1930, a compromise was reached between the San Diego Park Commission and the Common Council, the commissioners agreeing to a road which would skirt the east side of Torrey Pines in lieu of the cliff route along the ocean. This hotly debated new route through the pines is present-day North Torrey Pines Road (Highway S21).

In 1950, Guy Fleming and 20 other prominent San Diego citizens organized and incorporated the Torrey Pines Association, an organization "dedicated to the perpetual preservation of the

mainland habitat of the rare Torrey Pines." Ellen Scripps, upon her death in 1932, had bequeathed her holdings to the City of San Diego "to be held in perpetuity as a public park," but no proVisions had been made for guarding and preserving these holdings. Through the efforts of the Torrey Pines Association, a special city election was held on June 5, 1956 "to convey portions of Torrey Pines Park, not to exceed 1,000 acres, to the State of California for park purposes." The proposition was passed by well over a two-thirds majority vote. On May 7, 1959, formal title was vested in the State of California.

As of 1964, the state reserve consisted of 877 acres and approximately 3,000 Torrey pine trees. Between 1964 and 1970, the Citizens Committee for Extension of Torrey Pines Reserve made a concerted effort to have additional property added to the reserve. Their efforts paid off in the summer of 1970 when the State Legislature confirmed the allocation of $900,000 in park bonds for the appropriation of the reserve extension and released the money for the purchase of the first parcel of land. With the incorporation of the Extension, located about one mile northeast of the main reserve across the estuary, the Reserve now encompasses 1,256 acres devoted to the preservation of the Torrey pine (CDPR 1984: 28-29).

Historic Resources in the Project Vicinity

The proposed project's area of potential effects (APE) runs alongside or under an approximately one-mile section of the Torrey Pines Park Road. The APE includes three resources listed in the National Register of Historic Places: the Torrey Pines Lodge (NR 98000699), Guy and Margaret Fleming House (NR 98000700), and Torrey Pines Park Road (NR 98001248). Of these three resources, only one (the Park Road) will be directly impacted by the project. In addition to the historic road sections, the APE includes a concrete retaining wall and rustic stone masonry stairway associated with the Lodge's landscape improvements. It also includes a graded sandstone conglomerate driveway leading to the Fleming House.

Torrey Pines Lodge (DPR Facility # 630-A-1-10-0-001)

Description:

Erected in 1923, the Torrey Pines Lodge currently houses the Torrey Pines State Natural Reserve's visitor center and ranger headquarters. An exemplary example of an early 1920s Pueblo Revival style adobe building, the low, horizontal single-story building is strategically located at the 320-foot-high crest of Torrey Pines Park Road (Figures 11-12). Access to the Lodge's south parking lot is by a short blacktop access lane that curves eastward off the adjacent Torrey Pines Grade Road. Built during the time of the Lodge's 1923 opening, the now asphalt-covered parking lot extends some 500 feet south of the Lodge. A long narrow landscaped island separates the parking lot from the roadway to the west. Among the Lodge's character-defining historic landscape features are the previously mentioned rustic stone and adobe block masonry stairway and massive concrete retaining wall along its western terraced garden area.

Historic Significance:

A noteworthy local example of the Pueblo Revival style of American architecture adapted to a

public building, the historic Torrey Pines Lodge represents the collaborative work of several master architects, and builders. Among these were noted San Diego architects Richard S. Requa and Herbert L. Jackson, and Santa Monica adobe expert, John Byers. Contributing to the lodge's harmonizing and blending with its natural surroundings were Los Angeles landscape architect Ralph D. Cornell, his partner native plant specialist Theodore Payne, and "the Father of the Torrey Pines State Reserve," Guy L. Fleming. The lodge is also associated with one of San Diego's most important and influential philanthropists, Miss Ellen B. Scripps. Through her agent James C. Harper, she donated funds for the lodge's construction. Her munificence represents her life-long commitment to philanthropy in San Diego. The lodge's construction coincides with the symbiotic relationship between early road development and tourism. Situated at the crest of Torrey Pines Grade Road, the "Gateway to San Diego," from 1923 to 1933 the lodge was a popular stopping place for tourists travelling between Los Angeles and San Diego. The lodge remained a popular destination even after most thru traffic was diverted along the wider and straighter North Torrey Pines Road in 1933. On June 18, 1998, the Secretary of the Interior listed the Torrey Pines Park Road on the National Register of Historic Places (Bevil 2017: 3).

Guy and Margaret Fleming House (DPR Facility # 630-A-3-05-3-001)

Description:

The two-story, wood-frame house is situated north of the 320-foot crest of Torrey Pines Park Road. Currently used as a parks staff residence, it is a rare example of a mid-1920's owner-built house reflecting vernacular Pueblo Revival style influences (Figures 13-14). Automobile access is by means of a gravel-covered graded sandstone service lane. Because the lane runs along a high ridge between Torrey Pines Park Road and the house, it is obscured from view along the main road. Approaching the house from the service road, the lane ends at the house's detached, two-car garage. Constructed in tandem with the main house in 1927, the single-story garage also reflects the main house's vernacular, hand-built Pueblo Revival imagery as the main house. East of the garage, a stone and tile stairway leads down to the main house. The latter is set in a graded defile that reportedly was excavated for grading material during the nearby Torrey Pine Grade Road's 1915 construction.

Historic Significance:

Besides being an excellent mid-1920s example of the Pueblo Revival vernacular style, the house played a critical role in the preservation, management, maintenance, and study of the surrounding natural reserve. From 1927 to 1932, it served as the reserve's Park Administration Office, and later as the first official headquarters building of the California State Park's Southern California District from 1933 to 1948. During these two periods, the house was associated with two local and state-significant historical personages: Guy L. Fleming and his wife, Margaret. Regarded as the "Father of Torrey Pines Reserve," naturalist Guy L. Fleming was the reserve's first custodian, and later the first director of California State Parks' Southern California District. An ardent supporter of San Diego and Southern California's natural and historical resources, Fleming utilized the house's upper floor to continue his stewardship of the Preserve and in his capacity as District Superintendent. A noted conservationist in her own right, his wife, Margaret E. Fleming, was a well-known landscape artist. Her watercolors and other artwork helped inform and inspire the public to preserve the Reserve's surrounding

beauty. The Secretary of the Interior also listed the Fleming House on the National Register of Historic Places on June 18, 1998 (Bevil 2017: 3-4).

Torrey Pines Park Road (DPR Facility # 630-C-5-02-1-001)

Description:

Torrey Pines Park Road is an approximately 2-mile long two-lane poured-in-place concrete, crushed rock and shell aggregate road that extends from a point where it connects to North Torrey Pines Road, and travels in a series of "S" curves up Torrey Pines Grade southward to the top of the headlands. It then continues past the historic Torrey Pines Lodge south through the reserve to the latter's southeastern boundary (Figure 15). The historic road's right-of-way is currently divided by use into two sections: a northern, asphaltic concrete-covered poured-in-place concrete pavement public access route; and a poured-in-place concrete-paved southern limited-access-use service road. Along the route, the road passes a wide dirt entry along its east shoulder that provides access to the Guy L. and Margaret E. Fleming House's driveway. Further on, its east shoulder is integrated with the base of a rustic stone and adobe block masonry stairway, massive concrete retaining wall, and concrete swale that separate the road bed from the Torrey Pines Lodge Visitor Center/Ranger Station's western terraced garden area.

Historic Significance:

The circa 1915 Torrey Pines Park Road was listed in the National Register of Historic Places in 1998 (NR 98001248) for its significance in San Diego's early highway, real estate, and park development, its association with pioneer real estate developer Ed Fletcher, and for its early use of Portland cement in the paving of a public road. An integral part of the new coast highway between Los Angeles and San Diego, the road helped to reduce the driving distance between Los Angeles and San Diego, thereby increasing commercial and tourist traffic between the two cities. As a result, it was directly responsible for increasing residential and commercial development in a number of coastal San Diego County communities, particularly Del Mar, La Jolla and Pacific Beach. Passing through stands of rare Torrey Pine trees, the approximately two-mile section of the highway known as Torrey Pines Road was a major factor in the evolution of Torrey Pine Park into the Torrey Pine Preserve.

Alterations:

From 1915 to around 1932 or 1933 the Park Road was part of a section of the original Coast Highway from Del Mar to La Jolla. After that time, the road's connection to the new Coast Highway along the Torrey Pines Grade was severed to accommodate the installation of the new, wider four-lane North Torrey Pines Road highway. Traces of the original Coast Highway's 1915-era concrete pavement can still be seen incorporated into the road south of the reserve entry sign. However, the next 1,000 feet of roadway south of the sign has been altered. Widened approximately 7 feet than the original 18-foot-wide concrete pavement, the approximately 4-inch-deep top asphaltic concrete pavement had reportedly been resurfaced periodically with asphalt during the 1970s to 1990s (Bevil 2013).

Even after 1933, when a newer highway nearby diverted a major portion of the road's traffic, Torrey Pines Park Road continued to serve as a diversionary scenic drive for the next 27 years. Since its acquisition as part of the transference of Torrey Pines Preserve to the California Department of Parks and Recreation in 1959, the road is no longer used as a through road. However, it still plays an integral part in the interpretation and maintenance of Torrey Pines State Reserve as the Reserve's only public means of entry and exit (Bevil 2017: 1-2). Although closed to public automobile traffic, the southern road section serves as a park service road, as well as a popular hiking and bicycling path of travel across the Reserve's southern section (Bevil et al. 2017)

A detailed evaluation of the road's physical integrity has been completed, revealing that over half of its total length has been widened and resurfaced with asphalt (beginning in circa 1991) (Figure 16). Of the remaining section in which historic concrete is visible, repairs to the road in circa 2001, 2012, and 2017 has resulted in a patchwork of surface materials including patched cracks, new concrete sections, and asphalt sections (Figures 17 through 19)

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic features?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

DISCUSSION

a) The proposed project will result in no significant adverse effects to any of the Reserve's National Register-listed historic properties. Although the Park Road will be repaved following the installation of new underground utilities, its return to a continuous concrete surface will actually restore the road closer to its original appearance, versus the heavily patched and fragmented surface conditions that exist currently. The size, location, and alignment of the road will all remain unchanged.

The project does not involve either the Torrey Pines Lodge or the Guy and Margaret Fleming House, with exception to new lateral lines that will tie in to existing connections (see Figures 3 and 5).

b) Based on current and past archaeological work history, the Proposed Project would not result in an adverse change to any archaeological resource due to the placement of subsurface work in previously disturbed context to avoid impacts to intact portions of known archaeological sites. Due to the presence and proximity of known archaeological sites, measures CR 1 and CR 2 shall be in place, including monitoring of ground disturbance, to ensure that any unforeseen significant resources can be protected in place and documented sufficiently. This would result in less than significant impact.

c) No unique paleontological resources or sites have been identified within the Proposed Project site, nor are there any unique geologic features present.

d) There are no known human remains within the Proposed Project area and none are expected. Mitigation measure CR 3 ensures that should any be discovered, that the discovery is handled appropriately in order to remain compliant with all applicable state and federal laws. This would result in no impact.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES - CULTURAL RESOURCES (CR)
CR 1: All ground-disturbing activities shall be monitored by a qualified archaeologist and a Native American monitor. Monitors shall observe all new earthwork and inspect back dirt piles for artifacts and/or other cultural constituents. Monitoring logs shall be completed for each day that monitoring is undertaken, including photographs of the Proposed Project area and records of construction activities. Any discoveries (including diagnostic isolates) shall be accurately plotted in order to document their distribution and create working field maps and final report-quality maps.
CR 2: If archaeological features, or potentially significant concentrations of artifacts or other cultural constituents are encountered during monitoring, all ground-disturbing activities will immediately be redirected away from the discovered resource to allow for its evaluation and appropriate treatment. This evaluation will be undertaken by the archaeological Principal Investigator at the Southern Service Center or their designee. The discovery site shall be flagged to protect it from further construction impacts. Once the feature or deposit has been exposed to the extent possible, CDPR archaeologists shall assess the eligibility of the feature or deposit and make a determination as to avoidance, protection, or implementation of mitigation measures such as data recovery.
CR 3: In the event of an accidental discovery or recognition of any human remains within the Proposed Project area the following steps shall be taken. There shall be no further excavation or disturbance of the location of the discovery or any nearby area reasonably suspected to overlie adjacent human remains until the Santa Diego County Medical Examiner or approved has been contacted to determine that no investigation of the cause of death is required. If the Medical Examiner determines the remains to be Native American, the Medical Examiner shall contact the Native American Heritage Commission within 24 hours.

The Native American Heritage Commission shall identify the person or persons it believes to be the Most Likely Descendent/s (MLD) of the deceased Native American. As provided in Public Resources Code Section 5097.98, the MLD may make recommendation for treatment or disposition with appropriate dignity, of the human remains and any associated grave goods. Alternatively, when the conditions listed below occur, an authorized representative of CDPR shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. The conditions are: (1) that the Native American Heritage Commission is unable to identify an MLD, or (2) the MLD fails to make a recommendation within 24 hours after being notified by the commission, or (3) CDPR rejects the recommendation of the MLD, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to CDPR. California Department of Parks and Recreation's policy regarding the treatment of human remains is consistent with these guidelines.
CR 4: Utilities necessary for the functioning of the Proposed Project shall be aligned to avoid impact to known archaeological sites and Traditional Cultural Resources.
CR 5: The size, location, and alignment of the historic Park Road will all remain unchanged. Although it will be repaved following the installation of new underground utilities, its return to a continuous concrete surface will restore the road closer to its original appearance, versus the heavily patched and fragmented surface conditions that exist currently.
CR 6: The historic Park Road's alignment shall be maintained in its current location/configuration.
CR 7: New concrete shall match the original roadway's matrix of Portland cement with an aggregate of rounded beach or river rock/pebbles. The Secretary of the Interior's Standards and Guidelines note that "Like the guidance for repair, the preferred option is always replacement of the entire feature in kind, that is, with the same material."

VI. GEOLOGY AND SOILS.

ENVIRONMENTAL SETTING

The project area is located on the coastal margin of the the Peninsular Ranges Geomorphic Province (Southern Coastline Geomorphic Sub-Province), which includes the southwestern corner of California and all of Baja California (Figure 20). The province is a northwest-trending granitic block sharply uplifted on the east and tilted to the west. The eastern boundary is the San Jacinto fault zone and the western limit is the edge of the continental shelf.

The coastal margin of the geomorphic province is made up of Late Cretaceous, Eocene, and Pleistocene-aged sedimentary rocks resting on a Mesozoic metamorphic and plutonic rock basement complex. The Eocene and Pleistocene strata were deposited unconformably on the Upper Cretaceous sediments in a northwest-trending basin called the San Diego embayment. Rocks of the San Diego embayment are generally gently folded and faulted Eocene marine, lagoonal, and nonmarine rocks deposited in a tectonically downwarped basin.

The geology of the Torrey Pines area is characterized by thick layers of marine, lagoonal, and nonmarine rocks which are well exposed in the steep cliffs along the beach and in the short canyons which cut through the Reserve. The oldest formation is the Delmar Formation which is exposed in the lower part of the seacliffs from the south beach parking lot southward to Flat Rock. This formation is notable for several resistant layers that are very rich in fossil oysters. Above the Delmar Formation is Torrey Sandstone – a clean, beach-type deposit with extensive cross-bedding, white to very light tan, with the distinctive weathering characteristic of forming caverns or round hollows in the cliff face. Torrey Sandstone is extensively exposed in the Extension and above the Delmar Formation southward to Flat Rock. The Lindavista and Bay Point Formations are relatively thin layers which overlie the much older Tertiary formations. The Linda Vista Formation is particularly striking, with bright red layers stained by iron oxide minerals (CDPR 1984: 11-12).

In general, the project alignment is underlain by surficial undocumented fill, in some areas, and Pleistocene-age Very Old Paralic Deposits, historically described as the Lindavista Formation, and Tertiary-age (Eocene) Torrey Sandstone (Zorne and Fernandez 2018: 3). The soil map for the project area, which consists largely of Carlsbad gravelly loamy sand (CbC), is included as Figure 21. Exploratory borings along the project alignment performed in January 2018 ranged in elevation from 312 to 411 above mean sea level (MSL). Groundwater or seepage was not found at a maximum boring depth of approximately 11 feet, and while groundwater elevations vary according to seasonal precipitation, construction excavations are generally are not expected to encounter groundwater (Zorne and Fernandez 2018: 2). The principal geologic concerns at Torrey Pines are cliff, canyon, and trail erosion, landslide potentials, and seismicity. The project alignment traverses two primary zones: 1) “level mesa area underlain by terrace deposits and bedrock”; and 2) “level or sloping terrain - unfavorable geologic structure” (City of San Diego 2008).

WOULD THE PROJECT:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems, where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☒	☐

DISCUSSION

a-d) The Alquist-Priolo Earthquake Fault Zoning Act (1972) and the Seismic Hazards Mapping Act (1990) directs the State Geologist to delineate regulatory “zones of required investigation” to assist cities, counties and state agencies (lead agencies) in fulfilling their responsibilities for protecting the public safety from the effects of earthquake-triggered ground failure. According to the California Department of Conservation’s California Earthquake Hazards Zone Application (“EQ Zapp”), the project area is located approximately 4.6 miles north of the northern end of the Mt. Soledad Fault, which runs southeast from La Jolla Shores to a point near the northeast corner of Mission Bay. This is part of the larger Newport-Inglewood-Rose Canyon Fault Zone. Additionally, the project area is traversed by three lesser “inactive, presumed inactive, or activity unknown

faults" (Zorne and Fernandez 2018: 5; City of San Diego 2008) (Figures 22-23). While there is the possibility for ground shaking as a result of earthquake activity, the proposed project would not increase the likelihood or the severity of such an event.

The project is not located on expansive soils or within an identified liquefaction zone. Based on the City of San Diego's *Seismic Safety Study, Geologic Hazards and Faults* (2008), the project alignment is poses "nominal" and "low to moderate" geologic hazards risk. Measures will need to be incorporated into the design to reduce the effects of erosion.

e) The project improvements will eliminate any future need for the existing abandoned leach field and four septic systems. The project does not involve waste disposal or waste water discharge.

f) No unique paleontological resources or sites have been identified within the proposed project area, nor are there any unique geologic features present.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES - GEOLOGY & SOILS (GEO)
GEO 1: Erosion Control A. Prior to the start of construction, Contractor will prepare a Storm Water Plan for CDPR approval that identifies the BMPs to be used in all construction areas to reduce or eliminate the discharge of soil, surface water runoff, and pollutants during all excavation, grading, or trenching. B. BMPs must be in place at all times including covering (tarping) any stockpiled materials or soils and by constructing silt fences, straw bale barriers, fiber rolls, or other structures around stockpiles and disturbed areas.
GEO 2: If groundwater accumulates in the excavation, it should be pumped out prior to the installation of buried infrastructure.

* See also Biological Resources measures 12 and 13 (BIO 12, BIO 13) regarding erosion, sedimentation, debris and runoff.

VII. HAZARDS AND HAZARDOUS MATERIALS.

ENVIRONMENTAL SETTING

The California Department of Environmental Protection (CALEPA) has the responsibility for compiling (pursuant to Government Code §65962.5) information on hazardous material sites in California that together comprise the "Cortese" list. A review of this list found the closest identified site to be the Kyocera America Inc. site (71002420) at 11620 Sorrento Valley Road, approximately 0.75 mile east-southeast of the southern terminus of the project alignment. The site was used for ceramic capacitor manufacturing by Emcon (formerly owned by ITW) from 1963 to 1980 and by KII from 1980 to 1986.

It is not anticipated that any hazardous materials will be encountered during project excavation and trenching. Based on exploratory boring samples, expected materials include asphalt concrete and Portland cement concrete ranging in depths from 4 to 7 inches, decomposed granite, undocumented fill, and paralic deposits (Zorne and Fernandez 2018: Appendix A).

Standard project requirements and BMPs will be followed to prevent accidental spills associated with construction equipment operation, maintenance, and repair.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	☐	☐	☐	☒
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located in the vicinity of a private airstrip? If so,	☐	☐	☐	☒

	would the project result in a safety hazard for people residing or working in the project area?				
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h)	Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

DISCUSSION

a-d) The proposed project is not anticipated to transport, use or dispose of any hazardous materials, accidentally release hazardous material, substance or waste, emit or handle hazardous waste within one-quarter mile of an existing or proposed school or be located on a site which is listed as a hazardous material site.

e-f) The project is not within two miles of a public airport, public use airport or private airstrip. The closest airports are Mirarmar Marine Corps Air Station, located approximately 7 miles to the southeast; Montgomery-Gibbs Executive Airport ("Montgomery Field"), 10 miles to the southeast; San Diego International Airport, 14 miles to the south; and McClellan-Palomar Airport (owned by the County of San Diego) in Carlsbad, 14 miles to the north. The Torrey Pines Gliderport, a premier destination for paragliding and hang gliding, is located approximately one mile south/downcoast from the southern end of the project area.

g) Neither emergency response plans nor emergency evaluation plans shall be impaired by implementation of the project.

h) The project shall not expose people or structures to a significant risk of loss, injury or death from wildland fires. Through the installation of a new combined fire service/domestic water line and new fire hydrants, the project will provide the public with improved fire protection infrastructure.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES - HAZARDS/HAZARDOUS MATERIALS (HAZ)

HAZ 1: Hazardous Material Spills

A. Prior to the start of construction, the contractor shall clean all equipment before entering the project site. Equipment shall be cleaned and repaired (other than emergency repairs) outside the project site boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds shall be contained and disposed of outside the boundaries of the site, at a lawfully permitted or authorized destination.

B. Prior to the start of construction, the contractor shall inspect all equipment for leaks and regularly inspect thereafter until equipment is removed from the project site.

C. Prior to the start of construction, CDPR's contractor shall prepare a Spill Prevention and Response Plan (SPRP) to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants. This plan shall include (but not be limited to):

1. A map with both primary and secondary containment areas with a listing of BMPs to be used to prevent the accidental release of fluid materials, including concrete.
2. A map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment will occur.
3. A list of items required in a spill kit on-site that will be maintained throughout the life of the project.

HAZ 2: Fire Safety

A. Prior to the start of construction, the Project Contractor shall develop a CDPR-approved Fire Safety Plan. The plan will include the emergency calling procedures for the Local Fire Department.

B. Spark arrestors or turbo chargers (which eliminate sparks in exhaust) and fire extinguishers will be required for all heavy equipment.

C. Cutting of vegetation within the staging area and the use a ground barrier covered with leveling fill will keep construction vehicles away from flammable material, such as dry grass or brush.

HAZ 3: Worker Safety

Require construction personal to have appropriate training in compliance with 29 CFR, §§1910, et seq. (Occupational Safety and Health Standards), 1926 et seq (Safety and Health Regulations for Construction) and 8 CCR § 5192 (Hazardous Waste Operations and Emergency Response) to protect workers.

VIII. HYDROLOGY AND WATER QUALITY.

ENVIRONMENTAL SETTING

The Reserve is located within the California Floristic Province, Southwestern Region, South Coast Subregion. The climate is considered Mediterranean and fluctuates with seasons of hot dry summers and mild wet winters. Elevations range from approximately 300 feet above MSL to approximately 400 feet above MSL (Zorne and Fernandez 2018: Appendix A). Most of the rainfall occurs from November through March, caused by Pacific storm systems. Intense storms, occasionally of hurricane force, infrequently strike the San Diego area, causing floods. Average seasonal rainfall on the coast is 10 inches, increasing to 16 inches in the upper Los Penasquitos watershed.

Torrey Pines State Natural Reserve lies within the Los Penasquitos watershed, which encompasses a drainage area of about 100 square miles. The three major drainages in the watershed - Carmel Valley, Los Penasquitos Canyon, and Carroll Canyon, from north to south - empty into Soledad Valley, a broad lowland floodplain, and eventually into Los Penasquitos Lagoon in the Reserve. The drainages have their sources in the mountains to the east. Streamflow in the three major tributaries is absent during the summer months and ephemeral at other times. During fall, winter, and spring, streamflow occurs after storms for days, weeks, or months, depending on rainfall intensity and frequency (CDPR 1984: 9).

The hardpan of the Linda Vista Formation (see Section VI, Geology and Soils, above) supports the rare plant *Dudleya* brevifolia (short-leaved dudleya) that is dependent on direct precipitation or sheet flows in small localized mini-watersheds.

General Drainage Characteristics

The topography along the project corridor generally slopes from southeast to northwest. Storm water sheet flows in this direction, draining the ridgeline. While some storm runoff from the area may make its way into Los Penasquitos Lagoon, the majority of the surrounding coastal terrace drains directly into the sea. The road cut that parallels the east side of the Park Road for much of its length encourages most runoff to flow either down the road or to the west, in the direction of a number of steep ravines that drain towards the ocean below. All onsite storm water runoff flows offsite without any treatment.

The area receives runoff from adjacent developed areas, including Torrey Pines Park Road and two visitor parking lots, with hydrology primarily limited to on-site surface drainage. The project will result in no net increase in impervious surfaces over the existing conditions.

Water Quality Regulation

The Reserve is within the jurisdiction of the San Diego Regional Water Quality Control Board (SDRWQCB) Region 9, which includes most of San Diego County along with portions of southern Orange County and southwest Riverside County. Within this region, the project area falls within the 94 square-mile Los Peñasquitos Watershed Management Area (WMA), the second smallest WMA in San Diego County (Figure 24).

The SDRWQCB “Basin Plan”, last updated in 2016, characterizes watersheds within the region, identifies beneficial uses that exist or have the potential to exist in each water body, establishes water quality objectives for each water body to protect beneficial uses or allow their restoration and provides an implementation program that achieves water quality objectives. Per the requirements of the Federal Clean Water Act (CWA) Section 303(c), Water Quality Control Plans are reviewed every three years and revised as necessary to address problems with the plan, and meet new legislative requirements. In 1985, the California Coastal Conservancy developed an Enhancement Plan to deal with the degradation of the Los Penasquitos Lagoon. The Los Penasquitos Lagoon Foundation was established to oversee this plan (updated in 2016) and to monitor water quality.

As the project site covers more than one acre in total, a Stormwater Pollution Prevention Plan (SWPPP) will be provided under the Construction General Permit.

Sea Level Rise

Mean sea level rise (MSLR) and extreme event impacts are expected to dramatically increase into the foreseeable future. Although impacts will vary locally, research has projected that sea levels along the California coast will increase by as much as 56-66 inches over the next 100 years (CDPR 2015: 4). MSLR and associated increases in extreme event impacts are anticipated to permanently inundate large amounts of coastal land and subject current upland areas to increased flooding. As the caretaker of more than 300 miles of the California coastline, California State Parks is uniquely suited to play a leading role in coastal protection by proactively evaluating and attempting to minimize the effects of MSLR.

MSLR, combined with an increase in extreme events, is expected to result in significant impacts to state parks located along coastal, bay, and Delta shorelines. These may include:

- Loss of significant cultural and natural resources;
- Loss of beach area and width;
- Damage to park facilities and infrastructure owned by CDPR and others;
- Decreased public access;
- Altered recreational opportunities; and
- Change in revenue generation opportunities

Although the project area is located within the jurisdictional Coastal Zone, due to its elevation of greater than 300 feet above mean sea level (MSL) it is not anticipated that the associated improvements will be directly impacted by increased MSLR or events involving storm surge or wave runup.

WOULD THE PROJECT:

a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	☐	☐	☒	☐
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Substantially degrade water quality?	☐	☐	☒	☐
g)	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	☐	☐	☐	☒
j)	Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

DISCUSSION

a) Project construction will comply with the NPDES General Permit for Storm Water Discharges Associated with Construction Activities (Order No 2009-0009-DWQ). The Clean Water Act prohibits the discharging of pollutants through a point source into a water of the United States without a National Pollutant Discharge Elimination System (NPDES) permit. The permit contains limits on what can be discharged, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health.

b) This project is not anticipated to substantially deplete groundwater supplies or interfere

substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. There are no active or inactive wells located on the site. Project water will be supplied by a metered City hydrant.

c) The project site topography generally slopes from southeast to northwest. The project is located on the coastal terrace of the Los Penasquitos watershed, and drains largely into the Pacific Ocean. As the site does not contain naturally occurring drainage features such as a stream or river, construction activities would not alter the course of said features. Off the road, the surrounding area provides large areas of pervious surfaces that provide infiltration of storm water during rain events.

Project implementation is anticipated to result in no substantial modifications to the site topography and drainage; subsequent storm water discharges should largely mimic the current condition. The site will be largely stabilized and will not result in substantial erosion or siltation offsite. Therefore, impacts will be less than significant.

d) See (c), above.

e) See (c), above.

f) See (a), above.

g) The project does not propose any new residential uses.

h) No portion of the project is located within a (100-year) flood hazard area as defined by FEMA.

i) The project site is not located near, or adjacent to, a drainage feature (such as a river) that is retained with a levee, or with a reservoir that is retained by a dam. As mentioned in (g), above, the project site is not located within a 100-year flood hazard area. Therefore the site would not be subject to flooding, and consequently, would not expose people or structures to significant risks from flooding. The potential for a levee or dam failure does not exist.

j) According to the County of San Diego's Tsunami Inundation Map (Del Mar quadrangle, 2009), the entire project area falls outside of the identified tsunami inundation area.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES - HYDROLOGY/WATER QUALITY (WQ)
WQ 1: The repaved road shall be designed to preserve flows similar to what is present.
WQ 2: Best Management Practices (BMPs) including the use of sandbags, silt fencing, filter fabric, sand traps, oil or biofilters, low-flow systems, limited temporary irrigation, and other accepted methods for reducing erosion and improving water quality shall be implemented during project construction.

* See also Biological Resources measures 12 and 13 (BIO 12, BIO 13) regarding erosion, sedimentation, debris and runoff.

IX. LAND USE AND PLANNING.

ENVIRONMENTAL SETTING

The project site is located between the Pacific Ocean and North Torrey Pines Road (S21) within the City of San Diego and subject to the San Diego Local Coastal Plan. It is located entirely within Torrey Pines State Natural Reserve and subject to the 1984 San Diego Coastal State Park System General Plan, Volume 8 - Torrey Pines State Beach and State Reserve. Nearby land uses include the Torrey Pines Golf Course, an internationally known 36-hole municipal public golf facility owned by the City of San Diego, to the south. To the southeast, on the east side of North Torrey Pines Road, are a number of corporate, technical, and educational facilities including pharmaceutical laboratories. Torrey Pines State Beach and the Los Peñasquitos Marsh Natural Preserve and Lagoon are located to the north.

The City of San Diego's University Area Community Plan encompasses an area of approximately 8,500 acres. The area is bounded by Los Peñasquitos Lagoon and the toe of the east-facing slopes of Sorrento Valley on the north; the railroad track, the Marine Corps Air Station Miramar and Interstate 805 on the east; state Route 52 on the south; and Interstate 5, Gilman Drive, North Torrey Pines Road, La Jolla Farms and the Pacific Ocean on the west.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

DISCUSSION

a-c) The project does not introduce a substantial new use or change the existing land use. It is consistent with the park unit General Plan and subject to the City of San Diego Local Coastal Plan. The proposed replacement utilities will be located almost entirely beneath the existing Park Road, a previously-disturbed alignment surfaced with both concrete and asphalt. The proposed project will be compatible with the surrounding land use and provide upgrades to essential public facilities for park visitors.

X. MINERAL RESOURCES.

ENVIRONMENTAL SETTING

There is no mineral resource extraction associated with this project. Moreover, it is a land use that is not compatible with the mission of CDPR.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION

a-b) No mineral sources of value locally, to the region or to residents of the state are known to exist within the Reserve.

XI. NOISE.

ENVIRONMENTAL SETTING

The Reserve is largely a quiet destination for passive recreational activity, being bordered by the ocean, beach and bluffs on the west and a four lane road (North Torrey Pines Road) with no adjacent development on the east. The City of San Diego's Torrey Pines Golf Course lies to the south. The primary noises occurring in the vicinity of the project area include vehicular traffic, air traffic (generally jets and helicopters from MCAS Miramar, located approximately 10 miles southeast), and sounds associated with park operations and day use activities. The human activity levels will generally be higher during the peak months and middle of the day. Traffic noise would be higher during peak traffic hours and the summer season.

Anticipated equipment needed to complete the project will include at a minimum: excavators, loaders, forklifts, boom trucks, directional drill rig and support vehicles, and pickup trucks. In addition to these there will be intermittent concrete trucks, and end dumps throughout the construction phase. Some work may include the need for concrete pumping, via a truck towed line pump or a standalone boom pump rig. Typical construction noise levels associated with the above-listed equipment is as follows (City of San Diego 2007: 3.10-7)

Table XI-1. Typical Construction Phase Noise Levels at 50 Feet

Equipment Item	Range of Noise Level at 50 Feet dB(A)	Nominal Noise Level, Leq, at 50 Feet dB(A)
Earthmoving Backhoes, 200 HP	71 to 93	85
Dozers	72 to 96	86
Front Loaders, 300 HP	71 to 96	82
Graders	73 to 95	85
Paver	80 to 92	89
Roller, 180 HP	78 to 84	79
Scrapers	73 to 95	88
Trencher, 80 HP	76 to 86	82
Truck/Trailer, 200 HP	70 to 92	82
Truck: 125 HP, 150 HP	76 to 85	80, 82
Materials Handling Concrete Mixer	70 to 90	85
Concrete Pump	74 to 84	82
Side Boom, 200 HP	80 to 90	85
Water Truck, 500 HP	79 to 88	84
Compressors: 100, 200 HP	68 to 87	78, 81
Generators: 20, 400, 1300 HP	69 to 81	74, 81, 84
Pumps: 25, 200, 350 HP	60 to 80	73, 76, 80

The primary noises occurring in the vicinity of the project area include vehicular traffic and sounds associated with park operations (e.g. trash collection) and day use activities. The nearest public facilities to the project site are the UC San Diego North Campus and stadium complex, approximately 4 miles to the south at the intersection of N. Torrey Pines Rd. and

Genesee Ave.; and the San Diego Police Department (Northern Division) and San Diego Fire & Rescue Department Station 35, approximately 5.5 miles to the southeast at 4275-4285 Eastgate Mall in La Jolla.

With regards to construction-related noise, the City of San Diego's noise control ordinance states: "It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator." The proposed project shall adhere to this ordinance. The County of San Diego's Noise Ordinance (Section 36.409) states: "Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 dB(A) L eq for an eight-hour period, between 7:00 AM and 7:00 PM, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received." The proposed project shall adhere to both of these ordinances.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☐	☒	☐
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	☐	☐	☒	☐
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	☐	☐	☐	☒
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	☐	☐	☒	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

DISCUSSION

a) The project will not expose people or generate noise levels in excess of any state or federal standards. The project will also adhere to the applicable noise regulations for construction activities established by the City of San Diego. Residential noise standards will be incorporated into the project specifications and include starting work after 7 AM and completing work by 7 PM, Monday through Friday. Weekend or holiday work could be implemented to address emergencies or unforeseen circumstances impacting construction.

b) The project will not expose people to excessive groundborne vibration or noise levels. Though some vibration may occur within small, localized areas while construction activities are taking place, the vibration will be temporary and should not significantly intrude on visitors elsewhere within the Reserve. There may be periods during which visitors may only access the Reserve from one direction (e.g. north or south), depending on where construction work is occurring at that time.

c) Because the project is of limited duration, it will not create a substantial permanent increase in ambient noise levels in the vicinity of the project.

d) The project may, at times, create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels without the project. The noise of construction equipment and tools shall, however, be limited to localized areas where construction is taking place and within the limits of established noise control regulations.

e) The Reserve is not located within two miles of a public or public use airport. The Torrey Pines Gliderport, a premier destination for paragliding and hang gliding, is located approximately one mile south/downcoast from the southern end of the project area.

f) The Reserve is not in the vicinity of a private airstrip.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES - NOISE (NO)
NO 1: Noise generated from demolition or construction activities shall be limited to avoid periods when sensitive wildlife species may be significantly impacted, and day use visitors will be redirected away from the construction zone.
NO 2: Construction activities shall be limited to daylight hours, Monday through Friday between 7:00 AM and 7:00 PM. Weekend or holiday work could be implemented to address emergencies or unforeseen circumstances impacting construction.
NO 3: Internal combustion engines used for any purpose at the job site shall be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction shall utilize noise control techniques (e.g., engine enclosures, acoustically attenuating shields, or shrouds, intake silencers, ducts, etc.).

XII. POPULATION AND HOUSING

ENVIRONMENTAL SETTING

The city of Del Mar to the north has a population of 4,363, while the City of San Diego, including La Jolla to the south, has 1.42 million. Surrounding San Diego County has a population of more than 3.3 million. Apart from the Reserve, adjacent State Beach and Peñasquitos Canyon to the east, the surrounding area is generally urbanized.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION

a-c) The project will replace utilities infrastructure in an existing State Park unit and not affect either population or housing, as no new infrastructure will be constructed for such uses.

XIII. PUBLIC SERVICES.

ENVIRONMENTAL SETTING

Public services at the Reserve are primarily provided by the California Department of Parks and Recreation (DPR). DPR rangers and lifeguards promote public safety and law enforcement at adjacent Torrey Pines State Beach and within the Reserve. DPR maintenance staff services the Park infrastructure and cleans the restrooms and campground area. City services, such as fire protection, are available nearby.

The closest fire stations to the project site are San Diego Fire & Rescue Department Station 24, approximately 4.7 miles to the northeast at 13077 Hartfield Ave; and San Diego Fire & Rescue Department Station 35, approximately 5.5 miles to the southeast at 4275-4285 Eastgate Mall in La Jolla.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	☐	☐	☒	☐
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒

DISCUSSION

a) Installation of the upgraded utilities would result in a less than significant impact to fire protection, police protection, schools, parks, or other public facilities and services, and will ultimately benefit the users of the Reserve through an updated and more reliable infrastructure system.

XIV. RECREATION.

ENVIRONMENTAL SETTING

One of the most important missions of CDPR is to provide recreational resources to the people of the State of California and elsewhere. The setting is within a Reserve that is very popular for day use activities. For the past three years (2016-2018), visitation has averaged 1,092,223 annually, peaking in July and August. Popular trails, from north to south, include the Guy Fleming Trail; Parry Grove Trail; Razor Point Trail; Beach Trail (potential work in 2019-2020 could cause closures); Broken Hill Trail and North Fork Trails (both currently closed; scheduled to reopen September 2019); and South Fork Trail (located near the tee for hole 7 on the Torrey Pines Golf Course's North Course) (Figure 25).

The proposed project will be phased to preserve, as the construction schedule permits, public access to the Reserve with as little interruption as reasonably possible. One approach to the construction phasing would be to work from one end towards the middle, then proceeding from the opposite end, which would allow park users access to trails in the interior of the Reserve from one direction while work is occurring. Once completed, the project will preserve and enhance existing recreational opportunities at the Reserve by providing up-to-date and reliable water, sewer, electrical, and other utilities.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

DISCUSSION

a-b) Once built, the project will provide improved services to the public. All adverse recreational impacts would occur during construction. Visitors will be directed away from the construction zone and the site will be secured at the close of the working day and on weekends. Additionally, construction noise could adversely affect the visitor experience for those recreating in the vicinity.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES – RECREATION (REC)
REC 1: To the extent possible, construction phasing will be developed to keep visitors away from the construction zone while maintaining public access to the Reserve from at least one direction.
REC 2: The construction zone will be secured at the close of the working day and on weekends.
REC 3: Construction activities shall be limited to daylight hours, Monday through Friday between 7:00 AM and 7:00 PM. See Avoidance, Minimization, Mitigation Measures - Noise (NO), above.

XV. TRANSPORTATION/TRAFFIC.

ENVIRONMENTAL SETTING

The site is within a State Natural Reserve that is located in a coastal setting, bordered by the ocean on one side and the four-lane North Torrey Pines Road, a heavily traveled local corridor, on the other. The main park entrance is located at the South Beach parking lot (shared with Torrey Pines State Beach), which is north of the project area. North Torrey Pines Road is heavily traveled during the summer season and by commuters during the peak hours. It also serves as an alternate transportation corridor for Interstate 5, which is located approximately one mile to the east on the other side of the Los Penasquitos Lagoon and Sorrento Valley.

Vehicular access to the Reserve is via the Park Road, which leads southeast from the South Beach parking lot mentioned above. Public bus stops are located on North Torrey Pines Road at the north end of the South Beach lot and opposite the National University – La Jolla campus, south of the South Fork Trailhead. Visitor parking (including ADA accessible spaces) is located in the South Beach lot as well as at the two smaller parking lots on either side of the Park Road near the Lodge/Visitor Center.

	LESS THAN POTENTIALLY SIGNIFICANT IMPACT	SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

DISCUSSION

a) There is no increase in capacity; therefore the proposed project is not expected to result in any substantial increase in traffic to the Reserve.

b) The Level of Service standards will not change based on the proposed project.

c) There will be no changes to air traffic patterns as a result of the project.

d) There will be no design features or incompatible uses that would increase hazards.

e) Emergency access will remain sufficient.

f) The proposed utilities upgrades are not expected to substantially increase visitation, therefore current parking capacity will not be directly impacted by this project in excess of current demands.

g) No policies, plans or programs supporting alternative transportation will be affected by the project.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES – TRANSPORTATION/TRAFFIC (TR)
TR 1: Construction equipment and employee parking shall be confined to specific construction staging areas so as not to impact limited visitor parking off of the Park Road.

XVI. UTILITIES AND SERVICE SYSTEMS.

ENVIRONMENTAL SETTING

Because it is a high public use area, the project site is served by all major utilities including water, sewer and electricity.

Public services in the vicinity of the project area include trash receptacles that are serviced daily, and a bank of chemical toilets at the West Lot/Beach Trail parking (these are expected to be replaced by a planned new restroom building, which is a separate project) on the west side of the Park Road. Restrooms in the form of a standard comfort station can be found at the South Beach Parking Lot, near the reserve entrance kiosk beyond the north end of the project area.

The contractor's water source will most likely be a metered connection to City water. Restroom facilities for construction workers will consist of a portable chemical toilet and shall be locked after hours. Construction waste from the project is estimated to include approximately 2,000 cubic yards (3,250 tons) of soil; 1,300 cubic yards (1,950 tons) of concrete; and 370 cubic yards (555 tons) of asphalt. Concrete and asphalt will likely be disposed of in an offsite landfill or recycled (typically for road base) at a construction debris recycling center.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	☐	☐	☐	☒
Would the construction of these facilities cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	☐	☐	☒	☐
Would the construction of these facilities cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's	☐	☐	☐	☒

existing commitments?

f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g)	Comply with federal, state, and local statutes and regulations as they relate to solid waste?	☐	☐	☐	☒

DISCUSSION

a) The project will not exceed wastewater treatment restrictions or standards of the SDRWQCB.

b) The project does not involve the construction of new water or wastewater treatment facilities or expansion of existing facilities.

c) The project does not involve the construction of new storm water drainage facilities or expansion of existing facilities.

d) Existing water resources will suffice to meet the water demands of the project. The contractor's water source will most likely be a metered connection to City water.

e) There are no wastewater facilities within The Reserve. A portable chemical toilet is to be provided for project construction staff.

f) The project will be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

g) The project shall comply with federal, state, and local statutes and regulations as they relate to solid waste.

XVII. TRIBAL CULTURAL RESOURCES.

ENVIRONMENTAL SETTING

Tribal Consultation including a search of the Native American Heritage Commission's (NAHC's) Sacred Lands files was initiated in June of 2016. The NAHC responded that the search of the Sacred Lands file was negative for Tribal Cultural Resources and provided a list of fifteen Diegueño/Kumeyaay representatives.

Letters were sent to all representatives on the NAHC list. Two responses were received. They both requested Native American monitoring for any ground disturbing work, including archaeological testing.

WOULD THE PROJECT
cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe)	☐	☐	☒	☐

DISCUSSION

a) There are no known Tribal Cultural Resources listed on or determined eligible for listing on the California or other register within the project area.

b) There are archaeological sites that are potentially significant pursuant to the National Register of Historic Places Criteria listed in subdivision (c) of Public Resources Code 5024.1, and as such may be significant to Native American groups. However it appears that the project work will be completely within previously disturbed sections with little to no integrity. As such, the potential for impact is considered to be less than significant.

AVOIDANCE, MINIMIZATION, MITIGATION MEASURES – TRIBAL CULTURAL RESOURCES (TCR)
TCR 1: All ground-disturbing activities shall be monitored by a qualified archaeologist and a Native American monitor to ensure avoidance of significant impacts to Tribal Cultural Resources. Monitoring logs shall be completed for each day that monitoring is undertaken, including photographs of the Proposed Project area and records of construction activities. Any discoveries shall be accurately plotted in order to document their distribution and create working field maps and final report-quality maps.
TCR 2: If potentially significant Tribal Cultural Resources are encountered during monitoring, all ground-disturbing activities will immediately be redirected away from the discovered resource to allow for its evaluation and appropriate treatment. This evaluation will be undertaken by the archaeological Principal Investigator at the Southern Service Center or their designee in consultation with the Kumeyaay. The discovery site shall be flagged to protect it from further construction impacts. Once the feature or deposit has been exposed to the extent possible, CDPR archaeologists shall assess the eligibility of the feature or deposit and make a determination as to avoidance, protection, or implementation of mitigation measures such as data recovery.
TCR 3: In the event of an accidental discovery or recognition of any human remains within the Proposed Project area the following steps shall be taken. There shall be no further excavation or disturbance of the location of the discovery or any nearby area reasonably suspected to overlie adjacent human remains until the San Diego County Medical Examiner or approved has been contacted to determine that no investigation of the cause of death is required. If the Medical Examiner determines the remains to be Native American, the Medical Examiner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the Most Likely Descendent/s (MLD) of the deceased Native American. As provided in Public Resources Code Section 5097.98, the MLD may make recommendation for treatment or disposition with appropriate dignity, of the human remains and any associated grave goods. Alternatively, where the conditions listed below occur, an authorized representative of CDPR shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. The conditions are: (1) that the Native American Heritage Commission is unable to identify an MLD, or (2) the MLD fails to make a recommendation within 24 hours after being notified by the commission, or (3) CDPR rejects the recommendation of the MLD, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to CDPR. California Department of Parks and Recreation's policy regarding the treatment of human remains is consistent with these guidelines.
TCR 4: Utilities necessary for the functioning of the Proposed Project shall be aligned to avoid impact to known Traditional Cultural Resources.

Also see Cultural Resources (Section 5), above.

CHAPTER 4
MANDATORY FINDINGS OF SIGNIFICANCE

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
WOULD THE PROJECT:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	☐	☒	☐	☐
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	☐	☐	☒	☐
d) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	☐	☐	☒	☐

DISCUSSION

a) No adverse effects to habitat quality, reductions in fish, wildlife, or plant populations, or significant impacts to rare/endangered plants or animals are anticipated with implementation of the project. Impacts to biological resources will be minimized, as the majority of work will be confined to the existing roadway. Additionally, incorporation of avoidance and minimization measures will further reduce the potential of disturbance to resources of concern.

b) No important examples of California history or prehistory will be eliminated as a result of the project.

c) No anticipated cumulative impacts are associated with the project. Overall, the project will result in a net benefit to the Reserve by improving public services for visitors.

d) No substantial adverse effects to humans, direct or indirect, are anticipated. The proposed project will provide necessary upgrades to the Reserve's utilities that will improve public services. It will potentially result in temporary recreational impacts owing to the popularity of the Reserve for day use activities. Project phasing will reduce these effects below a significant threshold level.

CHAPTER 5
SUMMARY OF MITIGATION MEASURES

The following mitigation measures would be implemented by CDPR as part of the Torrey Pines Utility Modernization Project:

AIR QUALITY (AQ)

AQ 1: Standard construction protocols for dust control during construction shall be implemented. These protocols shall be included within the Storm Water Plan. The State's Representative and/or State Natural Resources Specialist will periodically inspect the work area to ensure that construction-related activities do not generate excessive amounts of dust or cause other related air quality disturbances.
AQ 2: Idling of vehicles shall be minimized to the maximum extent practicable.

BIOLOGICAL RESOURCES (BIO)

BIO 1: Coastal California Gnatcatcher - All Project-related work lying within the boundaries of the MHPA, will be completed between August 16 and February 28 to prevent potential impacts to breeding or nesting coastal California gnatcatchers. Any utility improvements conducted outside the MHPA and during the gnatcatcher breeding season will be preceded by a preconstruction survey, as outlined in BIO-2 and BIO-3 below.
BIO 2: Other Nesting Birds - Since the site supports the resident and federally listed coastal California gnatcatcher, no activities will be conducted within the MHPA between March 1 and August 15. However, as the Reserve also supports nesting migratory birds and raptors, the potential exists for other avian species to be harmed/harassed during the months of January, February, and September. Given such conditions, should work need to occur during these three months, then a nesting bird survey shall be performed by the Project biologist/qualified biologist approximately one (1) week before the onset of activities. Should the Project biologist/avian biologist discover any nesting birds in or near the construction footprint, then appropriate measures, as determined by the Project biologist, will be implemented to minimize impacts. These measures may include but are not limited to: (1) Redirecting work to other locations within the Project area, (2) staking/flagging near the nest site, (3) establishing a minimum "no work" buffer, and/or (4) installing temporary fencing. No work (e.g., involving disturbance to structures, the ground or vegetation, and/or generating noise levels greater than ambient) will start or resume in the area of concern until receipt of written approval from State Parks.
BIO 3: Prior to any ground disturbance, the Project biologist/qualified biologist shall conduct a pre-construction survey for sensitive biological resources within and near the Project area that will consist of:

1. A survey for special-status plants to assess the presence of the short-leaved dudleya and other species of concern. Should any special-status plants be found (either individuals or populations), then measures shall be incorporated into operations to prevent/reduce disturbance. At a minimum, temporary fencing or flagging will be placed around/near the plant(s) to provide a conspicuous, visual barrier. Any other measures deemed necessary by the Project biologist shall also be employed to prevent disturbance to the species,

2. A survey for sensitive wildlife will be performed no more than one (1) week in advance of any work. Should sensitive wildlife be found, then measures recommended by the Project biologist/qualified biologist shall be implemented to reduce the likelihood of species impacts. Should work be suspended or delayed for a period of greater than seven (7) days, then the Project biologist/qualified biologist, at their discretion, will complete an additional survey to ensure that no other resources of concern exist in or adjacent to the proposed Project footprint.

Regular updates will be provided during construction meetings or the environmental awareness training to inform staff of areas supporting special-status plants/wildlife and measures needed to avoid/minimize potential impacts.

BIO 4: During vegetation clearing, trimming or removal, and/or ground disturbing work, the qualified biologist shall be on-site to monitor for the presence of special-status species. If any wildlife of concern is unearthed during these activities, the qualified biologist will coordinate with the Project biologist regarding appropriate measures to safeguard the health/life of the individual(s) (e.g., flushing, safely relocating away from the site).

BIO 5: A qualified biologist will present an education program on the coastal California gnatcatcher and other listed/sensitive species to all Project employees prior to the start of construction and before new employees begin work on-site. Materials discussed in the program will include, at a minimum, the following topics: (1) species description, general behavior, and ecology, (2) distribution and occurrence near the Project site, (3) species' sensitivity to human activities, (4) legal protection, (5) penalties for violation of State and Federal laws, (6) reporting requirements, and (7) Project conservation measures. The biological monitor will document the names, dates, and affiliation of those persons who attend the training.

BIO 6: Before the start of construction, specialized temporary fencing will be installed adjacent/near the existing short-leaved dudleya population to prevent unintended impacts to the species. The barrier should be erected alongside any portion of the population that exists within roughly 10 feet of the construction corridor. This barrier should be solid in structure, with no openings and incorporate reinforcements/measures to ensure it does not topple onto the short-leaved dudleya population. The Project biologist, in coordination with a qualified botanist, will identify and flag the start and end of the temporary, solid barrier fencing. Installation will be conducted in a manner that minimizes excavation/digging and vegetation removal. Following construction, all fencing materials (e.g., mesh, stakes, and sand bags) shall be collected and transported off-site.

BIO 7: A certified arborist will be available to oversee and direct any work involving the pruning/removal of trees, the cutting of roots two (2) inches in diameter or greater, or any accidental tree damage that may occur during the project. Tree pruning procedures will comply with the American National Standards Institute (ANSI) A300, "Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices".

BIO 8: Any trenching/digging conducted off the road and within the drip line of a tree (*e.g.*, Torrey pine) will be hand cleared and excavated to minimize damage to the tree's root system. No roots two (2) inches in diameter or larger will be cut, except for those which may obstruct placement of project features. These activities will be supervised/directed by the certified arborist, in coordination with the Project biologist/qualified biologist to ensure that large, excised roots are cleanly cut and excavations are properly performed.

BIO 9: A biological monitor will be present on-site during all clearing, grubbing, and grading activities to monitor work and ensure conservation measures are appropriately implemented. Such activities will include, the installation/removal of construction boundary materials, vegetation trimming, vegetation removal, trench excavation/back-fill, and any ground disturbance associated with entry/exit of directional drilling equipment. In addition, the biological monitor shall, at his/her discretion, continue to survey activities throughout construction to ensure that impacts to natural resources are avoided/minimized.
BIO 10: Sensitive habitat (*e.g*., maritime chaparral, and other Tier I and Tier II habitats) near the Project boundaries will be designated Environmentally Sensitive Areas (ESAs) and strictly avoided. No encroachment (*i.e*., workers, equipment, materials) will be allowed in these locations at any time. Sensitive vegetation or resources will be marked and protected by temporary fencing (*e.g.*, orange plastic fencing, silt fencing) or other acceptable method. Work limits will be clearly marked in the field and confirmed by the Project biologist/biological monitor prior to the start of operations. All staked/fenced boundaries will be maintained in good repair throughout construction.
BIO 11: Work shall be limited to the construction footprint, as outlined in the Project plans and directed by State Parks. Access routes, staging areas, and the total footprint of disturbance shall be the minimum number/size necessary to complete the Project, and will be selected/placed to avoid impacts to sensitive habitat/resources.
BIO 12: BMPs to address erosion and excess sedimentation shall be incorporated into the Project plans. Materials that could be used during construction include burlap fiber rolls, organic erosion control blankets, sand bags, silt fencing, filter fabric, and any other items deemed appropriate by State Parks. Where applicable, weed-free products shall be used to minimize the spread of exotics. At all times, sufficient amounts of erosion control materials will be available on-site to respond to potential emergencies and any rains forecasted within 24 hours.
BIO 13: Debris or runoff generated as a result of Project activities shall be minimized, whenever possible. If capture is not possible, then it will be directed away from any drainages and/or culverts to prevent deposition into waterways. The disposal of materials must be performed in a manner that will minimize effects to the environment.
BIO 14: All contractor equipment and vehicles shall be inspected for leaks immediately prior to the start of construction, and regularly thereafter until the equipment and/or vehicles are removed from Reserve premises. Any leaks shall be properly contained or the equipment/vehicle(s) repaired, and if failing repair, removed off-site.
BIO 15: All construction equipment used for the Project will be clean and free of soil and plant material before arrival on-site and before leaving the park to prevent the spread of invasive plants. Biological monitors shall periodically inspect vehicles, equipment, and boots to ensure that no invasive species (mainly *Ehrharta longiflora* and *Oncoisiphon piluliferum*) leave the site or are introduced into the Reserve.
BIO 16: All storage and staging areas shall only be allowed on existing developed or disturbed locations (*e.g.,* paved surfaces) that have been reviewed and approved by State Parks, in coordination with the Project biologist and Project archaeologist. All areas used for stockpiling will be kept free from trash and other waste. No Project-related items will be stored outside approved staging areas at any time.
BIO 17: Any areas of excavation (*e.g.,* pits, trenches, drilling holes) shall be covered overnight or during periods of inactivity. Routes of escape from excavated pits and trenches will also be

installed for wildlife that could potentially become entrapped (e.g., wood planks, sticks, or equivalent with dimensions of roughly 2-inch-thick by 6-inch-wide, and earthen ramps/slopes). These locations will be regularly inspected over the course of the Project and immediately prior to filling. Should any entrapped wildlife be discovered, then work will be suspended at the excavation site until the animal can be safely relocated by the biological monitor or Project biologist.

BIO 18: All equipment will be cleaned, fueled, and repaired (other than emergency repairs) outside Reserve boundaries, whenever possible. Contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside the Reserve, at a lawfully authorized destination.

BIO 19: Dust impacts shall be minimized by implementing appropriate measures that will reduce/control emissions generated by the Project. Water will be applied (e.g., using a water truck) at sufficient quantities to prevent airborne dust from leaving the Project area. Increased watering frequency will be required whenever dry, dusty conditions exist on-site. Watering shall be conducted in a manner that prevents any runoff into adjacent habitat or ESAs. Best Management Practices to address erosion and excess sedimentation will also be incorporated into Project operations. Weed-free products shall be used to minimize the spread of exotics. During construction, the biological monitor/Project biologist will periodically inspect the work area to ensure that activities do not generate excessive amounts of dust or cause other disturbances.

BIO 20: Consumption of food shall not be allowed within the Reserve or along the construction alignment. Any meals or food consumption shall be restricted to areas that have been identified/designated as acceptable by State Parks. Food-related items shall never be left within the construction corridor or in the Reserve. The Project area shall also be kept clear of work-related trash. All garbage shall be placed in sealed containers and regularly removed from the site. Following construction, any trash, debris, or rubbish remaining within the work limits shall be collected and hauled off to an appropriate facility.

BIO 21: Pets belonging to Project personnel shall not be permitted within the construction boundaries at any time.

CULTURAL RESOURCES (CR)

CR 1: All ground-disturbing activities shall be monitored by a qualified archaeologist and a Native American monitor. Monitors shall observe all new earthwork and inspect back dirt piles for artifacts and/or other cultural constituents. Monitoring logs shall be completed for each day that monitoring is undertaken, including photographs of the Proposed Project area and records of construction activities. Any discoveries (including diagnostic isolates) shall be accurately plotted in order to document their distribution and create working field maps and final report-quality maps.

CR 2: If archaeological features, or potentially significant concentrations of artifacts or other cultural constituents are encountered during monitoring, all ground-disturbing activities will immediately be redirected away from the discovered resource to allow for its evaluation and appropriate treatment. This evaluation will be undertaken by the archaeological Principal Investigator at the Southern Service Center or their designee. The discovery site shall be flagged to protect it from further construction impacts. Once the feature or deposit has been exposed to the extent possible, CDPR archaeologists shall assess the eligibility of the feature or deposit and make a determination as to

avoidance, protection, or implementation of mitigation measures such as data recovery.
CR 3: In the event of an accidental discovery or recognition of any human remains within the Proposed Project area the following steps shall be taken. There shall be no further excavation or disturbance of the location of the discovery or any nearby area reasonably suspected to overlie adjacent human remains until the Santa Diego County Medical Examiner or approved has been contacted to determine that no investigation of the cause of death is required. If the Medical Examiner determines the remains to be Native American, the Medical Examiner shall contact the Native American Heritage Commission within 24 hours.
The Native American Heritage Commission shall identify the person or persons it believes to be the Most Likely Descendent/s (MLD) of the deceased Native American. As provided in Public Resources Code Section 5097.98, the MLD may make recommendation for treatment or disposition with appropriate dignity, of the human remains and any associated grave goods. Alternatively, when the conditions listed below occur, an authorized representative of CDPR shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. The conditions are: (1) that the Native American Heritage Commission is unable to identify an MLD, or (2) the MLD fails to make a recommendation within 24 hours after being notified by the commission, or (3) CDPR rejects the recommendation of the MLD, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to CDPR. California Department of Parks and Recreation's policy regarding the treatment of human remains is consistent with these guidelines.
CR 4: Utilities necessary for the functioning of the Proposed Project shall be aligned to avoid impact to known archaeological sites and Traditional Cultural Resources.
CR 5: The size, location, and alignment of the historic Park Road will all remain unchanged. Although it will be repaved following the installation of new underground utilities, its return to a continuous concrete surface will restore the road closer to its original appearance, versus the heavily patched and fragmented surface conditions that exist currently.

CR 6: The historic Park Road's alignment shall be maintained in its current location/configuration.
CR 7: New concrete shall match the original roadway's matrix of Portland cement with an aggregate of rounded beach or river rock/pebbles. The Secretary of the Interior's Standards and Guidelines note that "Like the guidance for repair, the preferred option is always replacement of the entire feature in kind, that is, with the same material."

GEOLOGY AND SOILS (GEO)

GEO 1: Erosion Control

A. Prior to the start of construction, Contractor will prepare a Storm Water Plan for CDPR approval that identifies the BMPs to be used in all construction areas to reduce or eliminate the discharge of soil, surface water runoff, and pollutants during all excavation, grading, or trenching.
B. BMPs must be in place at all times including covering (tarping) any stockpiled materials or soils and by constructing silt fences, straw bale barriers, fiber rolls, or other structures around stockpiles and disturbed areas.

GEO 2: If groundwater accumulates in the excavation, it should be pumped out prior to the installation of buried infrastructure.

HAZARDS AND HAZARDOUS MATERIALS (HAZ)

HAZ 1: Hazardous Material Spills

A. Prior to the start of construction, the contractor shall clean all equipment before entering the project site. Equipment shall be cleaned and repaired (other than emergency repairs) outside the project site boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds shall be contained and disposed of outside the boundaries of the site, at a lawfully permitted or authorized destination.

B. Prior to the start of construction, the contractor shall inspect all equipment for leaks and regularly inspect thereafter until equipment is removed from the project site.

C. Prior to the start of construction, CDPR's contractor shall prepare a Spill Prevention and Response Plan (SPRP) to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants. This plan shall include (but not be limited to):

1. A map with both primary and secondary containment areas with a listing of BMPs to be used to prevent the accidental release of fluid materials, including concrete.
2. A map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment will occur.
3. A list of items required in a spill kit on-site that will be maintained throughout the life of the project.

HAZ 2: Fire Safety

A. Prior to the start of construction, the Project Contractor shall develop a CDPR-approved Fire Safety Plan. The plan will include the emergency calling procedures for the Local Fire Department.

B. Spark arrestors or turbo chargers (which eliminate sparks in exhaust) and fire extinguishers will be required for all heavy equipment.

C. Cutting of vegetation within the staging area and the use a ground barrier covered with leveling fill will keep construction vehicles away from flammable material, such as dry grass or brush.

HAZ 3: Worker Safety

Require construction personal to have appropriate training in compliance with 29 CFR, §§1910, et seq. (Occupational Safety and Health Standards), 1926 et seq (Safety and Health Regulations for Construction) and 8 CCR § 5192 (Hazardous Waste Operations and Emergency Response) to protect workers.

HYDROLOGY AND WATER QUALITY (WQ)

WQ 1: The repaved road shall be designed to preserve flows similar to what is present.

WQ 2: Best Management Practices (BMPs) including the use of sandbags, silt fencing, filter fabric, sand traps, oil or biofilters, low-flow systems, limited temporary irrigation, and other accepted methods for reducing erosion and improving water quality shall be implemented during project construction.

* See also Biological Resources measures 12 and 13 (BIO 12, BIO 13) regarding erosion, sedimentation, debris and runoff.

NOISE (NO)

NO 1: Noise generated from demolition or construction activities shall be limited to avoid periods when sensitive wildlife species may be significantly impacted, and day use visitors will be redirected away from the construction zone.
NO 2: Construction activities shall be limited to daylight hours, Monday through Friday between 7:00 AM and 7:00 PM. Weekend or holiday work could be implemented to address emergencies or unforeseen circumstances impacting construction.
NO 3: Internal combustion engines used for any purpose at the job site shall be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction shall utilize noise control techniques (e.g., engine enclosures, acoustically attenuating shields, or shrouds, intake silencers, ducts, etc.).

RECREATION (REC)

REC 1: To the extent possible, construction phasing will be developed to keep visitors away from the construction zone while maintaining public access to the Reserve from at least one direction.
REC 2: The construction zone will be secured at the close of the working day and on weekends.
REC 3: Construction activities shall be limited to daylight hours, Monday through Friday between 7:00 AM and 7:00 PM. See Avoidance, Minimization, Mitigation Measures - Noise (NO), above.

TRANSPORTATION/TRAFFIC (TR)

TR 1: Construction equipment and employee parking shall be confined to specific construction staging areas so as not to impact limited visitor parking off of the Park Road.

TRIBAL CULTURAL RESOURCES (TCR)

TCR 1: All ground-disturbing activities shall be monitored by a qualified archaeologist and a Native American monitor to ensure avoidance of significant impacts to Tribal Cultural Resources. Monitoring logs shall be completed for each day that monitoring is undertaken, including photographs of the Proposed Project area and records of construction activities. Any discoveries shall be accurately plotted in order to document their distribution and create working field maps and final report-quality maps.

TCR 2: If potentially significant Tribal Cultural Resources are encountered during monitoring, all ground-disturbing activities will immediately be redirected away from the discovered resource to allow for its evaluation and appropriate treatment. This evaluation will be undertaken by the archaeological Principal Investigator at the Southern Service Center or their designee in consultation with the Kumeyaay. The discovery site shall be flagged to protect it from further construction impacts. Once the feature or deposit has been exposed to the extent possible, CDPR archaeologists shall assess the eligibility of the feature or deposit and make a determination as to avoidance, protection, or implementation of mitigation measures such as data recovery.
TCR 3: In the event of an accidental discovery or recognition of any human remains within the Proposed Project area the following steps shall be taken. There shall be no further excavation or disturbance of the location of the discovery or any nearby area reasonably suspected to

overlie adjacent human remains until the San Diego County Medical Examiner or approved has been contacted to determine that no investigation of the cause of death is required. If the Medical Examiner determines the remains to be Native American, the Medical Examiner shall contact the Native American Heritage Commission within 24 hours.

The Native American Heritage Commission shall identify the person or persons it believes to be the Most Likely Descendent/s (MLD) of the deceased Native American. As provided in Public Resources Code Section 5097.98, the MLD may make recommendation for treatment or disposition with appropriate dignity, of the human remains and any associated grave goods. Alternatively, where the conditions listed below occur, an authorized representative of CDPR shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. The conditions are: (1) that the Native American Heritage Commission is unable to identify an MLD, or (2) the MLD fails to make a recommendation within 24 hours after being notified by the commission, or (3) CDPR rejects the recommendation of the MLD, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to CDPR. California Department of Parks and Recreation's policy regarding the treatment of human remains is consistent with these guidelines.

TCR 4: Utilities necessary for the functioning of the Proposed Project shall be aligned to avoid impact to known Traditional Cultural Resources.

CHAPTER 6
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CHAPTER 7
REPORT PREPARATION

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

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SAN DIEGO COAST DISTRICT

CHAPTER 8
PUBLIC AND AGENCY COMMENT

This draft IS/MND will be circulated for a 30-day public review period, beginning on July 19, 2019 and closing on August 18, 2019. Notices were mailed to property owners within 500 feet the project area as well as known agencies and organizations that may have interest in the project. Copies of the document were sent to the State Clearinghouse as required under CEQA §15073. Copies of the Draft IS/MND were made available at the Torrey Pines Visitor Center as well as at CDPR's Southern Service Center and San Diego Coast District office.

Tribal Consultation for the project was undertaken in July 2016 by contacting the Native American Heritage Commission (NAHC) and requesting a search of the sacred lands files and a list of concerned Tribal Representatives. The search of the sacred lands files was negative. Fifteen tribal contacts on the list provided by the NAHC were contacted by letter on 7/20/2016. Two responses were received (Iipay Nation of Santa Ysabel and the Kwaaymii Laguna Band of Mission Indians). Through consultation with the Iipay Nation of Santa Ysabel and the Kwaaymii Laguna Band of Mission Indians it was determined that there was a potential for tribal cultural resources to be present within the project area, and Native American monitoring was requested.

APPENDIX A

PROJECT GRAPHICS

FIGURE 1. PROJECT LOCATION

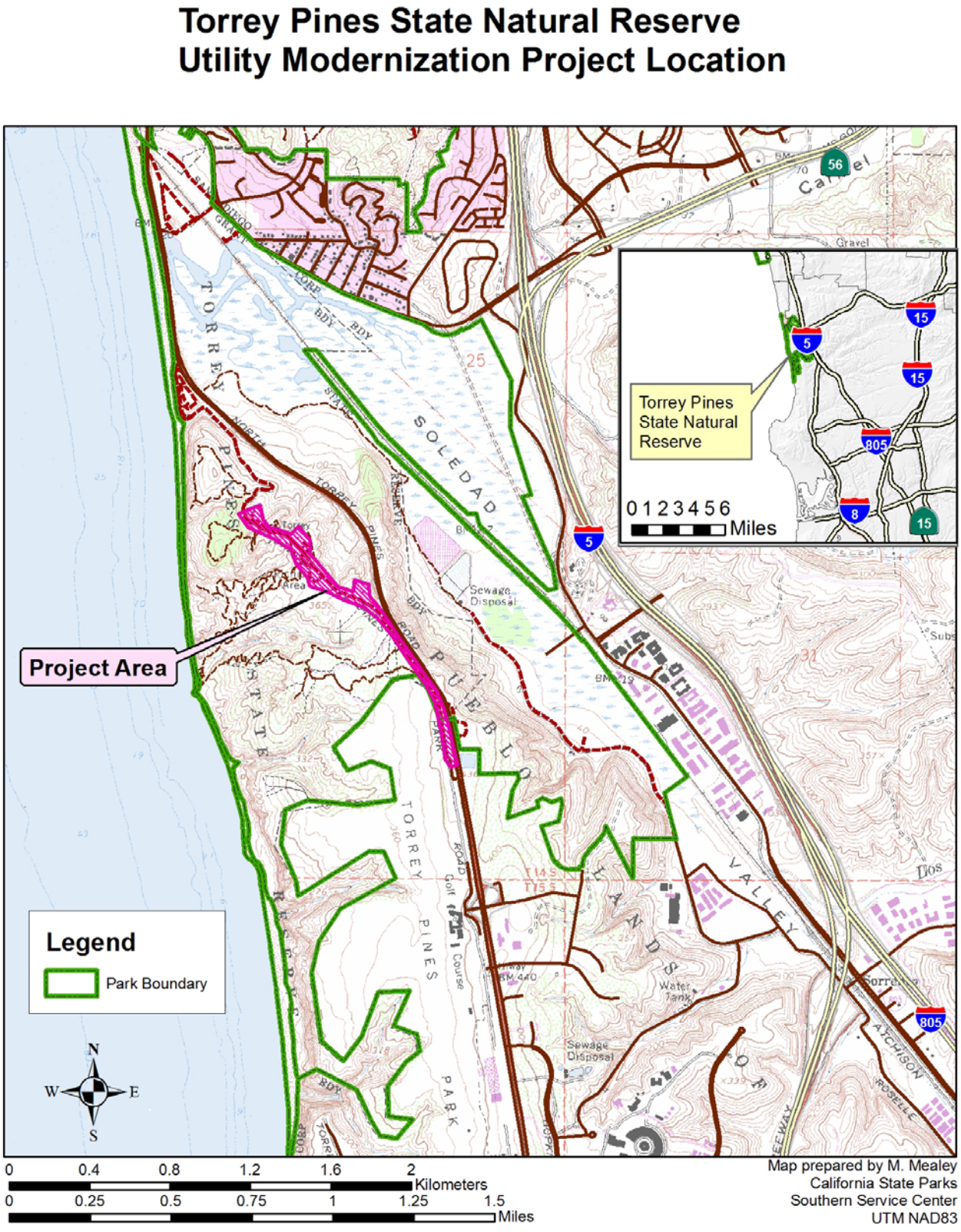


FIGURE 2. UTILITIES ALIGNMENT – OVERVIEW AND DRAWING SHEET KEY

FIGURE 3. FLEMING HOUSE LATERAL LINES

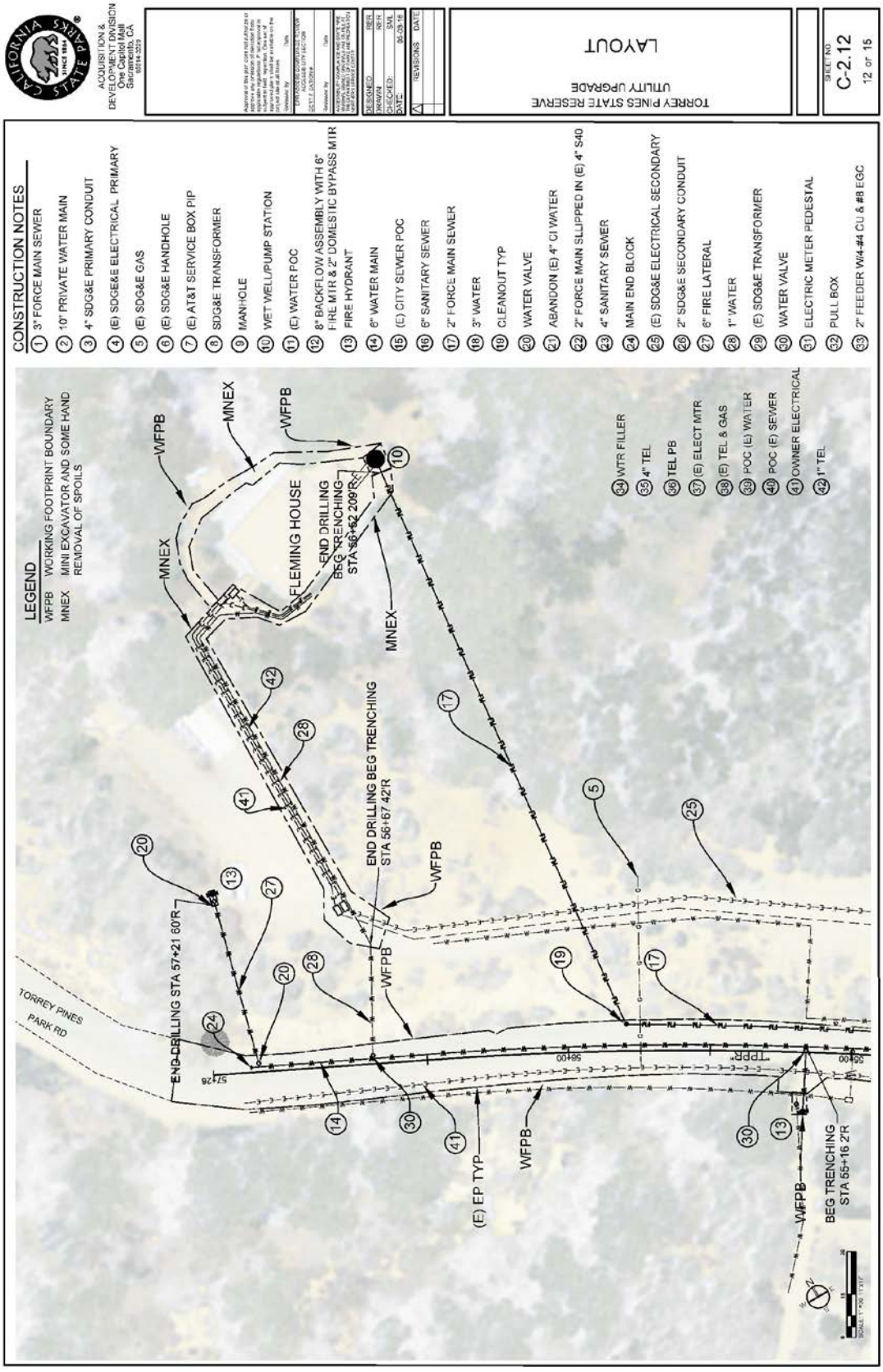


FIGURE 4. MAINTENANCE YARD LATERAL LINES

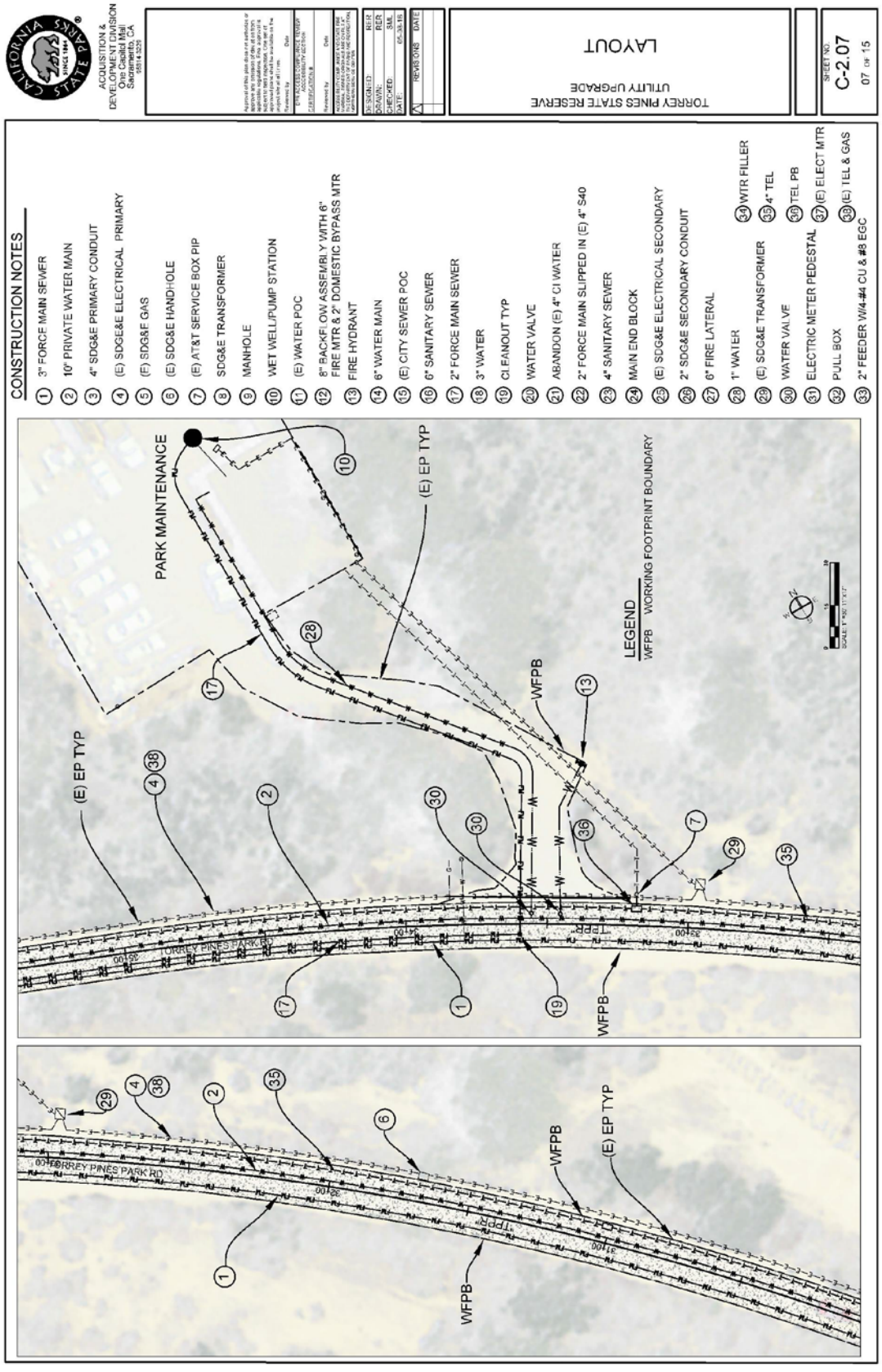


FIGURE 5. TORREY PINES LODGE (VISITOR CENTER) LATERAL LINES

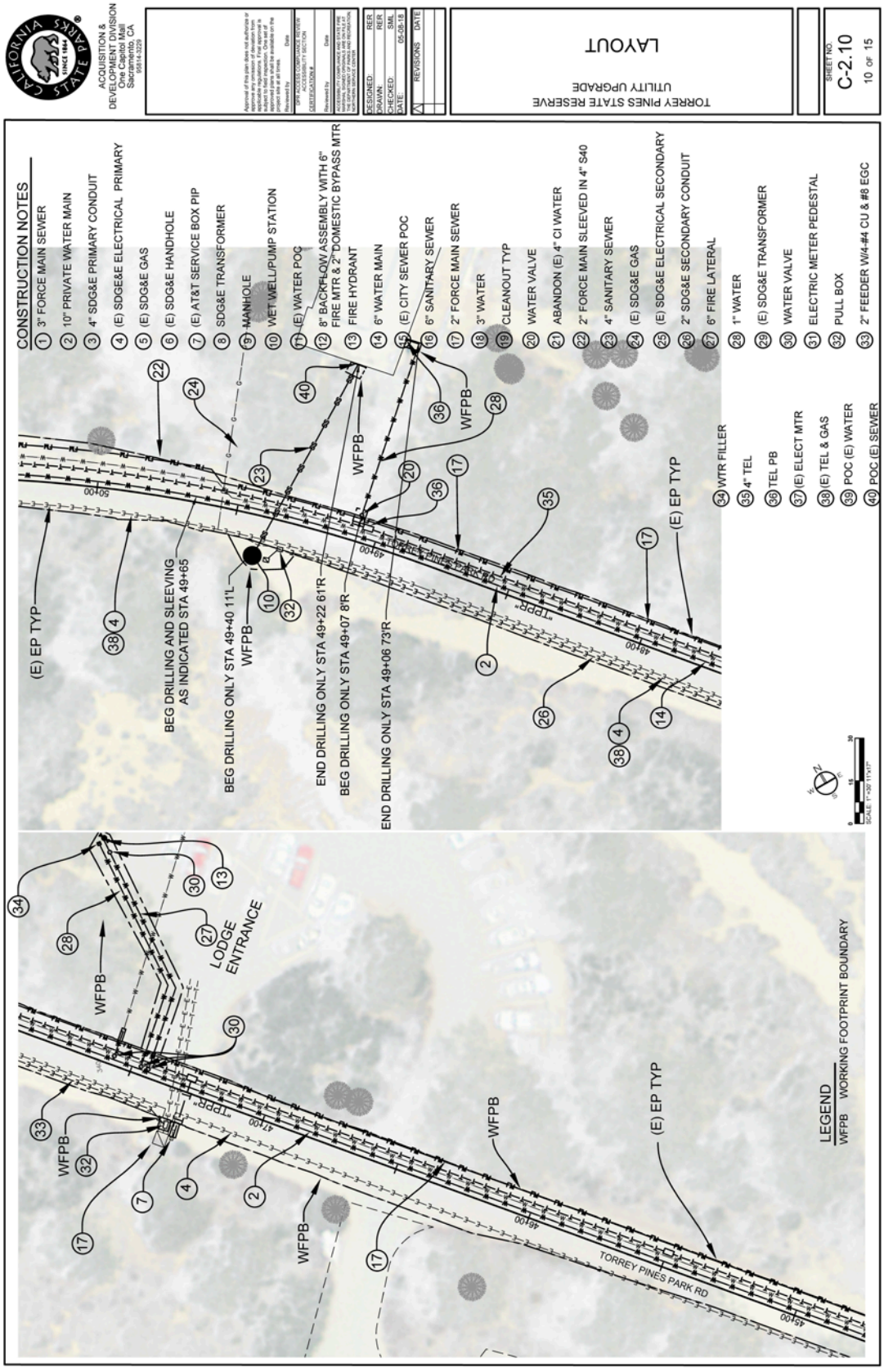


FIGURE 6. SEWER TRUNK FORCE MAIN,
TORREY PINES MUNICIPAL GOLF COURSE MAINTENANCE YARD

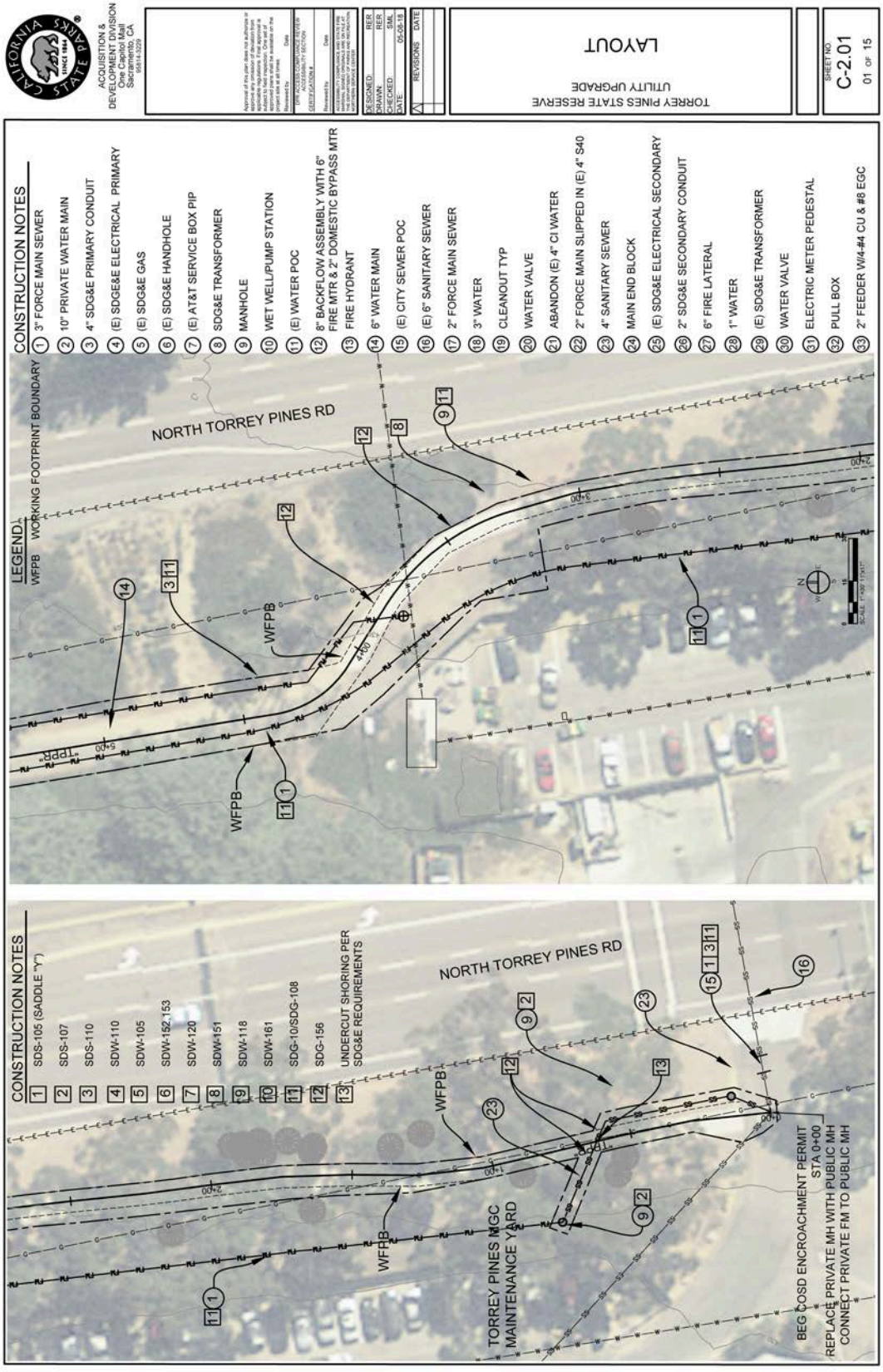


FIGURE 7. PRIMARY LIFT STATION (SOUTH FORK TRAILHEAD LOCATION)

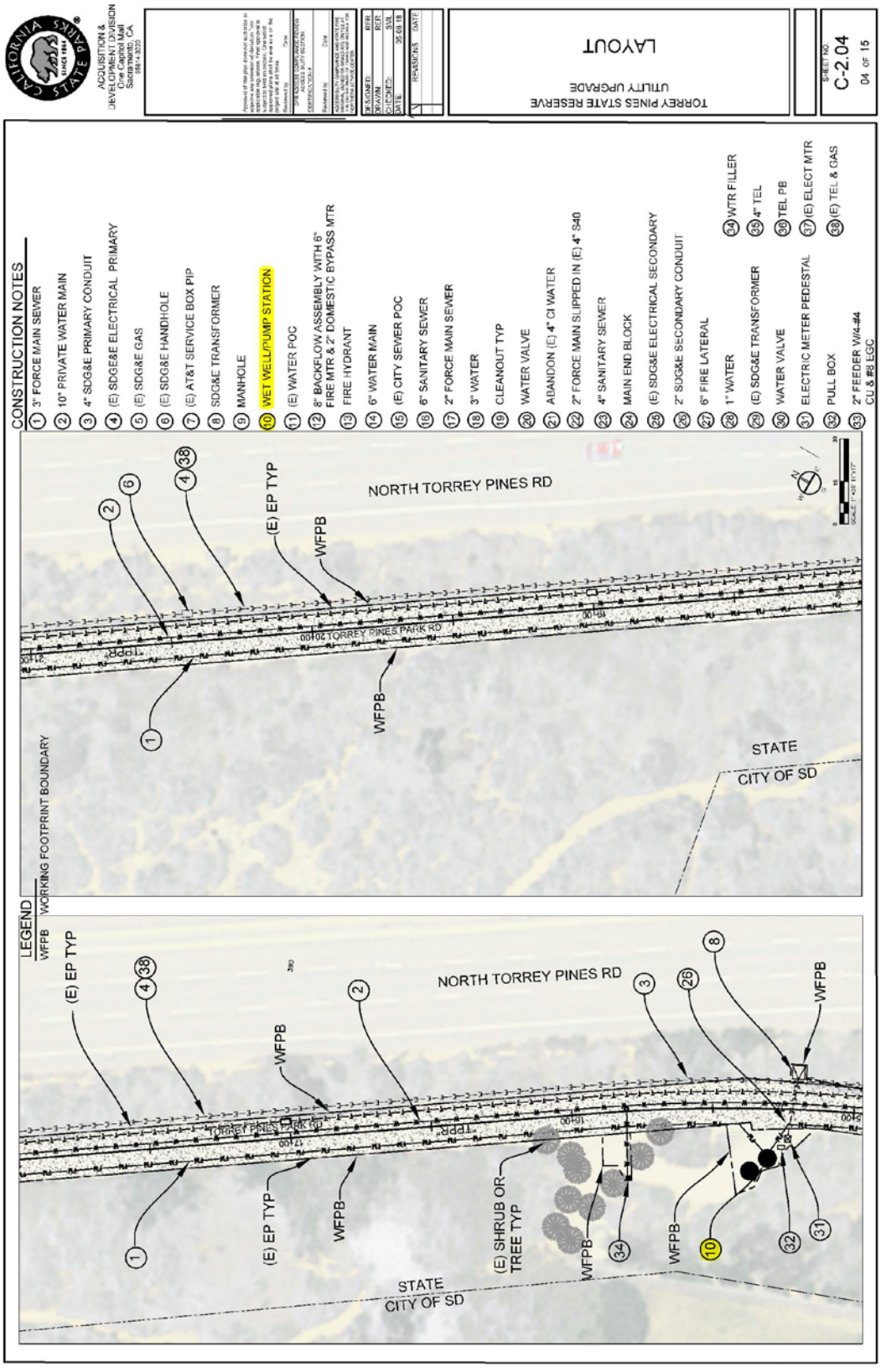


FIGURE 8. PRIMARY LIFT STATION (WEST LOT RESTROOM LOCATION)

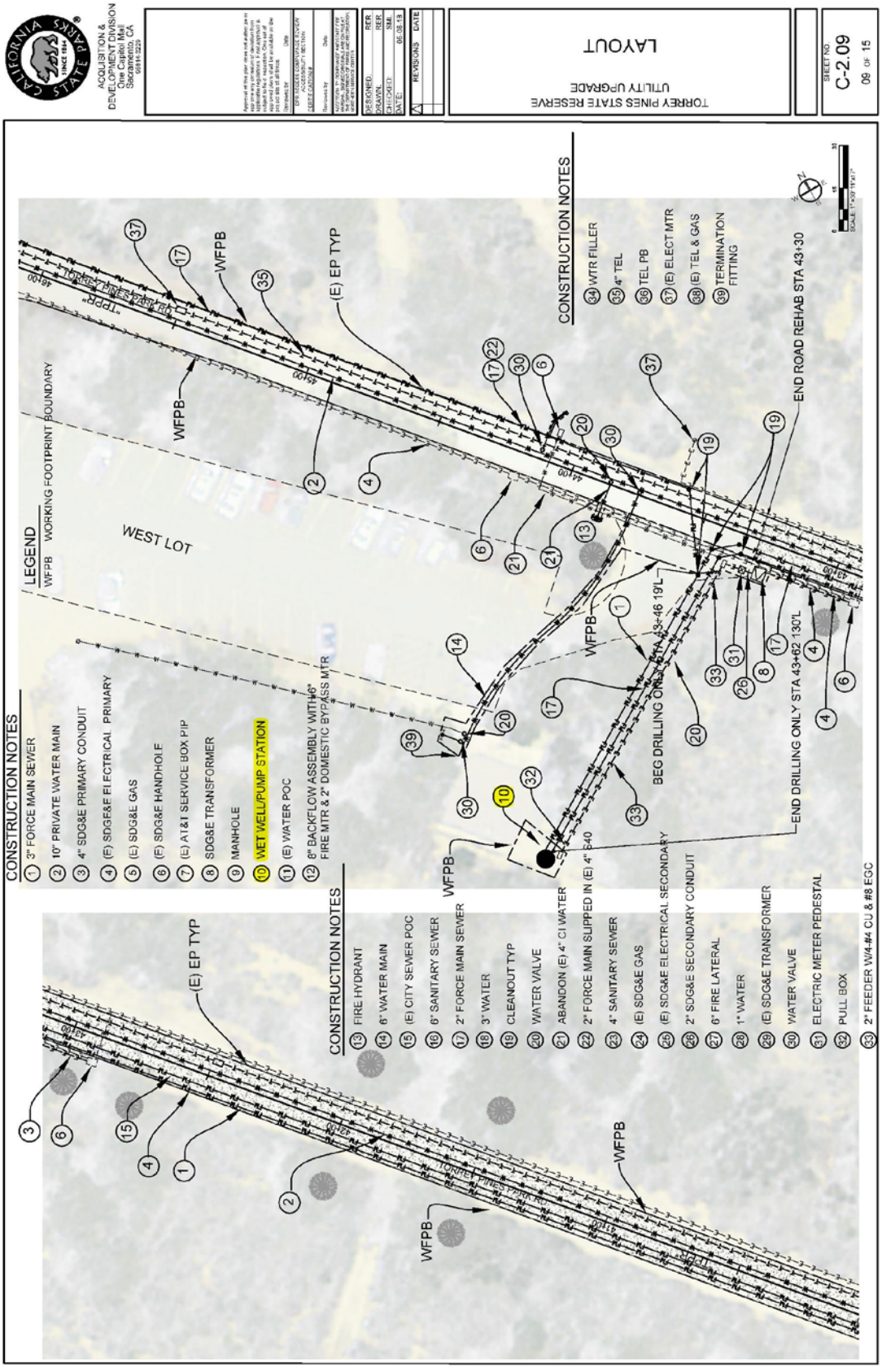
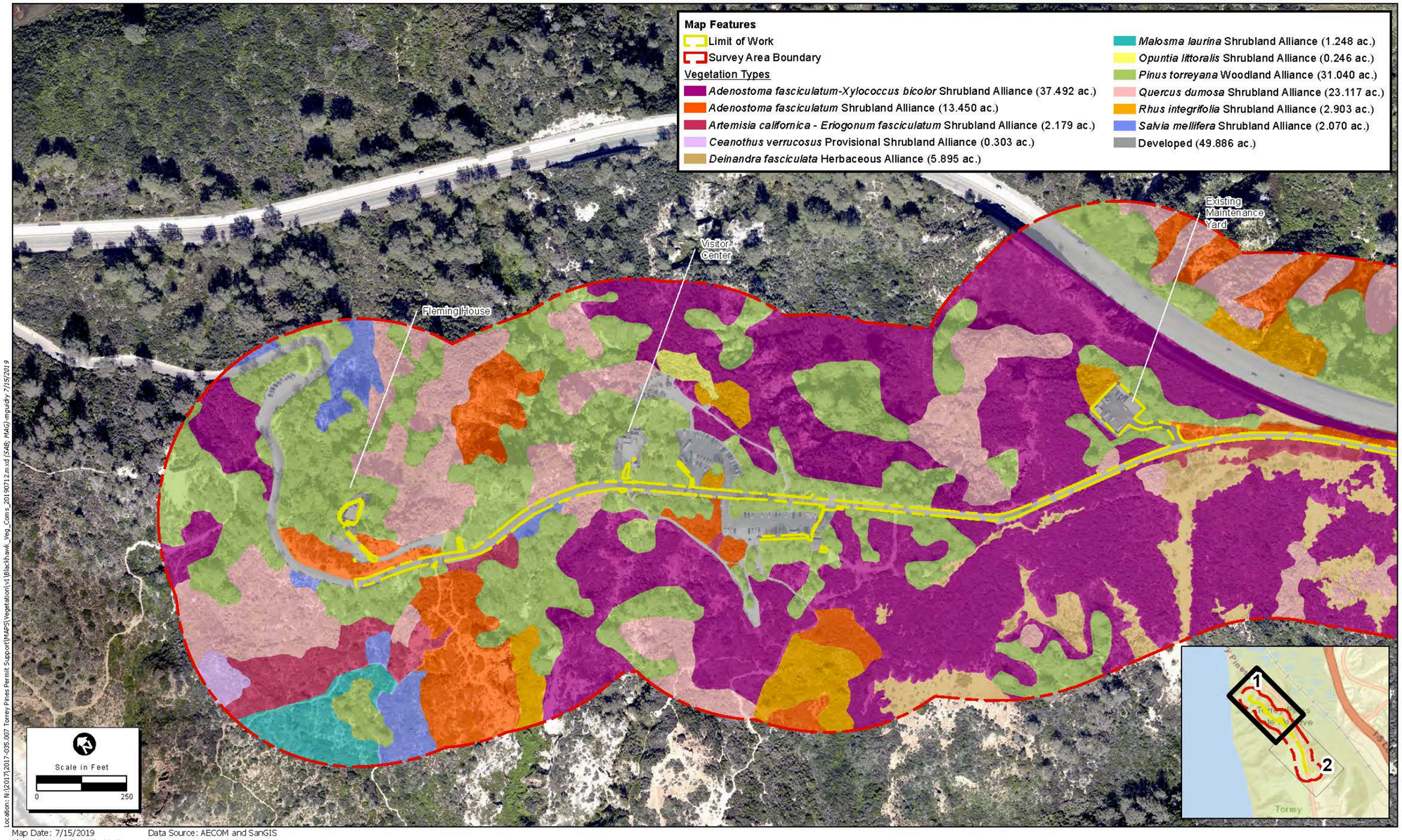


FIGURE 9. VEGETATION COMMUNITIES - NORTHERN HALF OF PROJECT AREA



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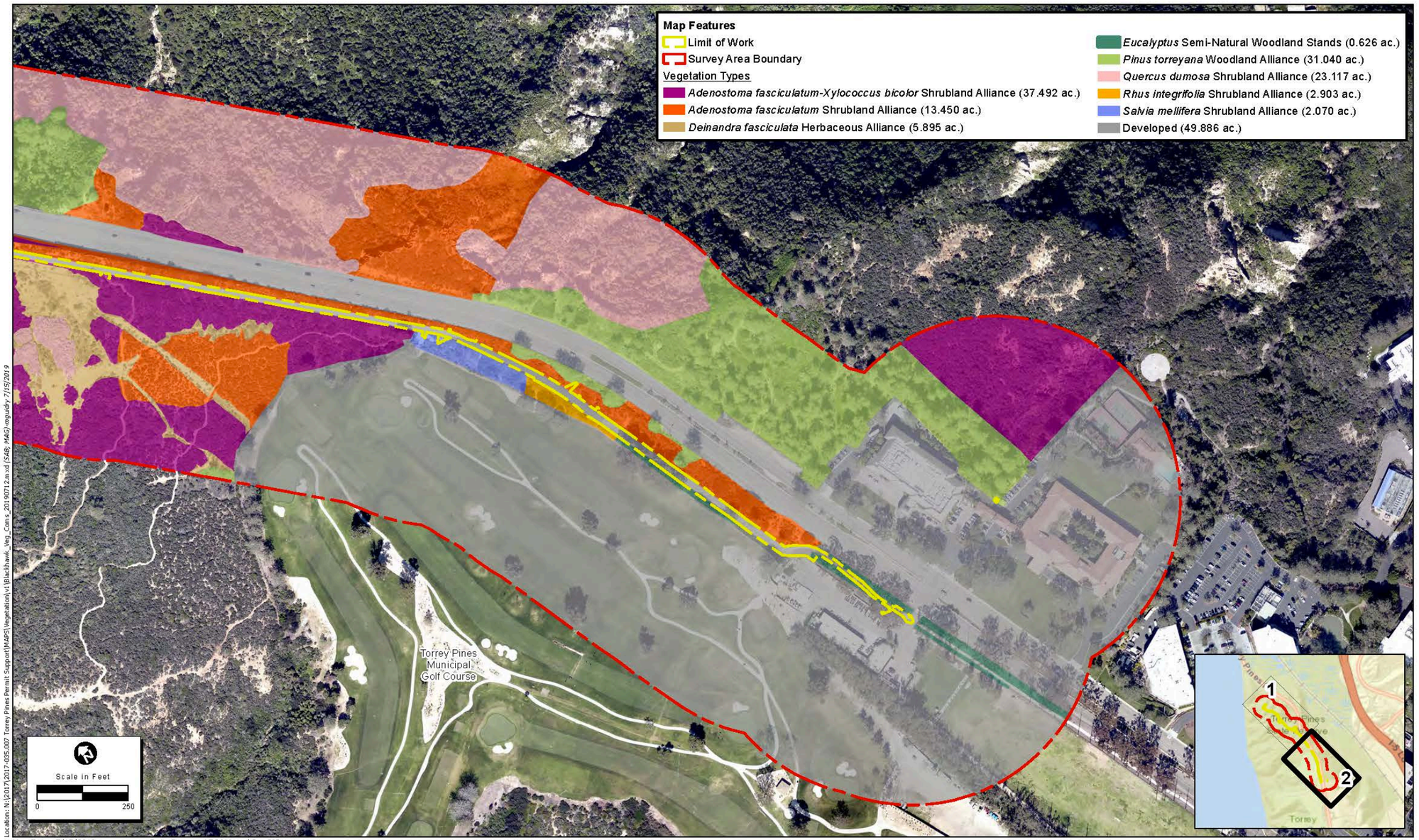
ENVIRONMENTAL CONSULTANTS

Figure 9. Vegetation Communities

2017-035.007 TPSNR Utility Modernization Project - Biological Technical Report

FIGURE 10. VEGETATION COMMUNITIES - SOUTHERN HALF OF PROJECT AREA



Map Date: 7/15/2019
Photo Source: SanGIS, 2017

Data Source: AECOM and SanGIS

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 10. Vegetation Communities

2017-035.007 TPSNR Utility Modernization Project - Biological Technical Report

FIGURE 11. HISTORIC POSTCARD, TORREY PINES LODGE AND THE PARK ROAD, CIRCA 1930 VIEW LOOKING SOUTH.

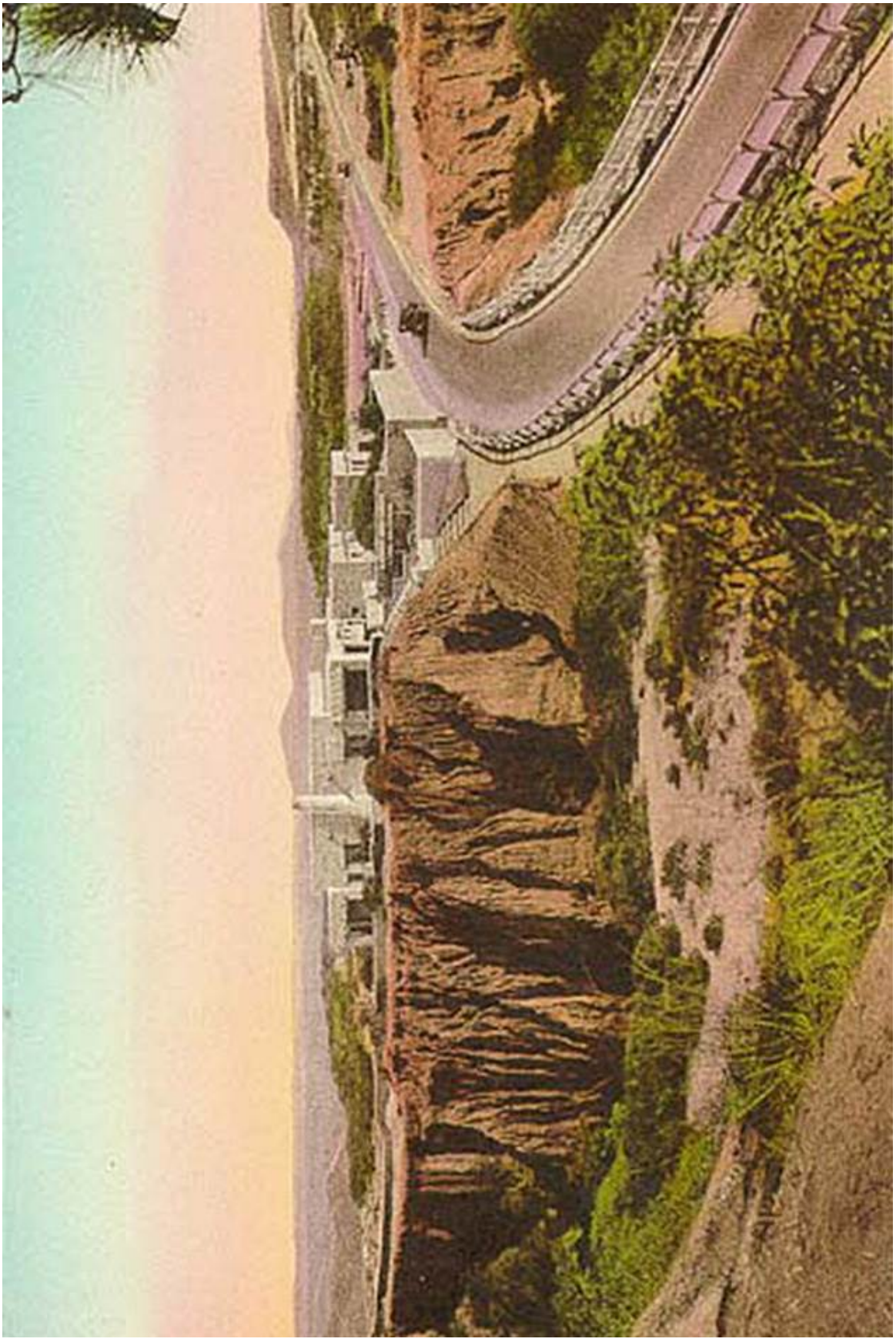
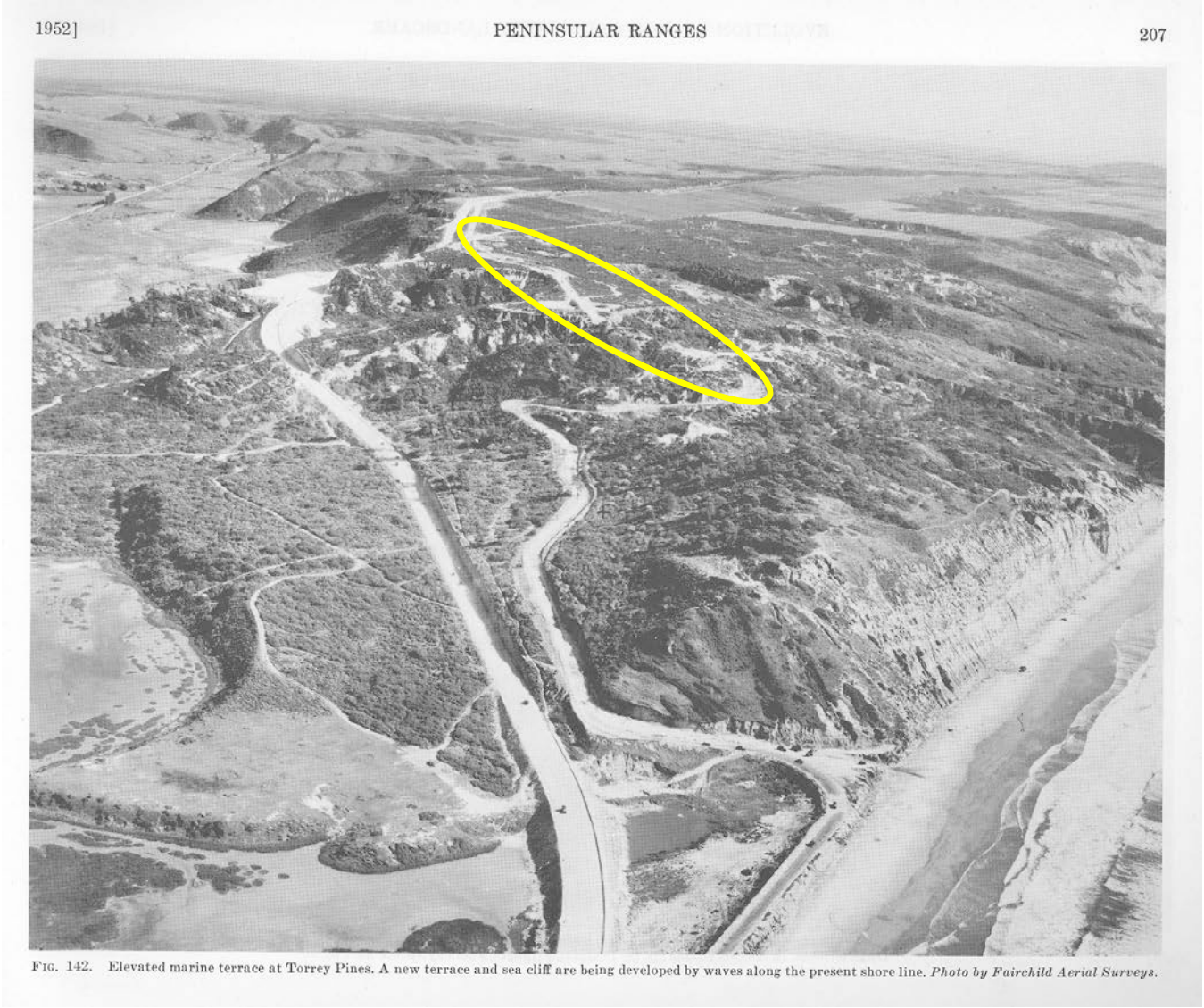


FIGURE 12. TORREY PINES LODGE (VISITOR CENTER), VIEW NORTH TOWARDS FRONT ENTRY
IS ARCHITECTURE, OCTOBER 2011

FIGURE 13. FLEMING HOUSE WITH GUY FLEMING, 1956. VIEW LOOKING EAST. CALIFORNIA STATE PARKS, #090-S14443

FIGURE 14. GUY AND MARGARET FLEMING HOUSE, VIEW LOOKING EAST.
IS ARCHITECTURE, DECEMBER 2006

FIGURE 15. AERIAL VIEW OF THE PARK ROAD (AT RIGHT), 1952. PROJECT AREA IN YELLOW. FAIRCHILD AERIAL SURVEYS



1952] PENINSULAR RANGES 207

FIG. 142. Elevated marine terrace at Torrey Pines. A new terrace and sea cliff are being developed by waves along the present shore line. *Photo by Fairchild Aerial Surveys.*

FIGURE 16. SURVEY MAP SHOWING INTACT SECTIONS OF HISTORIC ROAD SURFACE (OVERVIEW)

State of California - The Resources Agency **Primary #:**
DEPARTMENT OF PARKS AND RECREATION **HRI#**
SKETCH MAP **Trinomial:**
Page 21 **of** 30 ***Resource Name or Number (Assigned by recorder):** Torrey Pines Park Road
***Map Name:** Torrey Pines Park Road Sketch Map ***Scale:** see scale bar below ***Date of Map:** Aerial=6/3/2014, data=1/27/2017

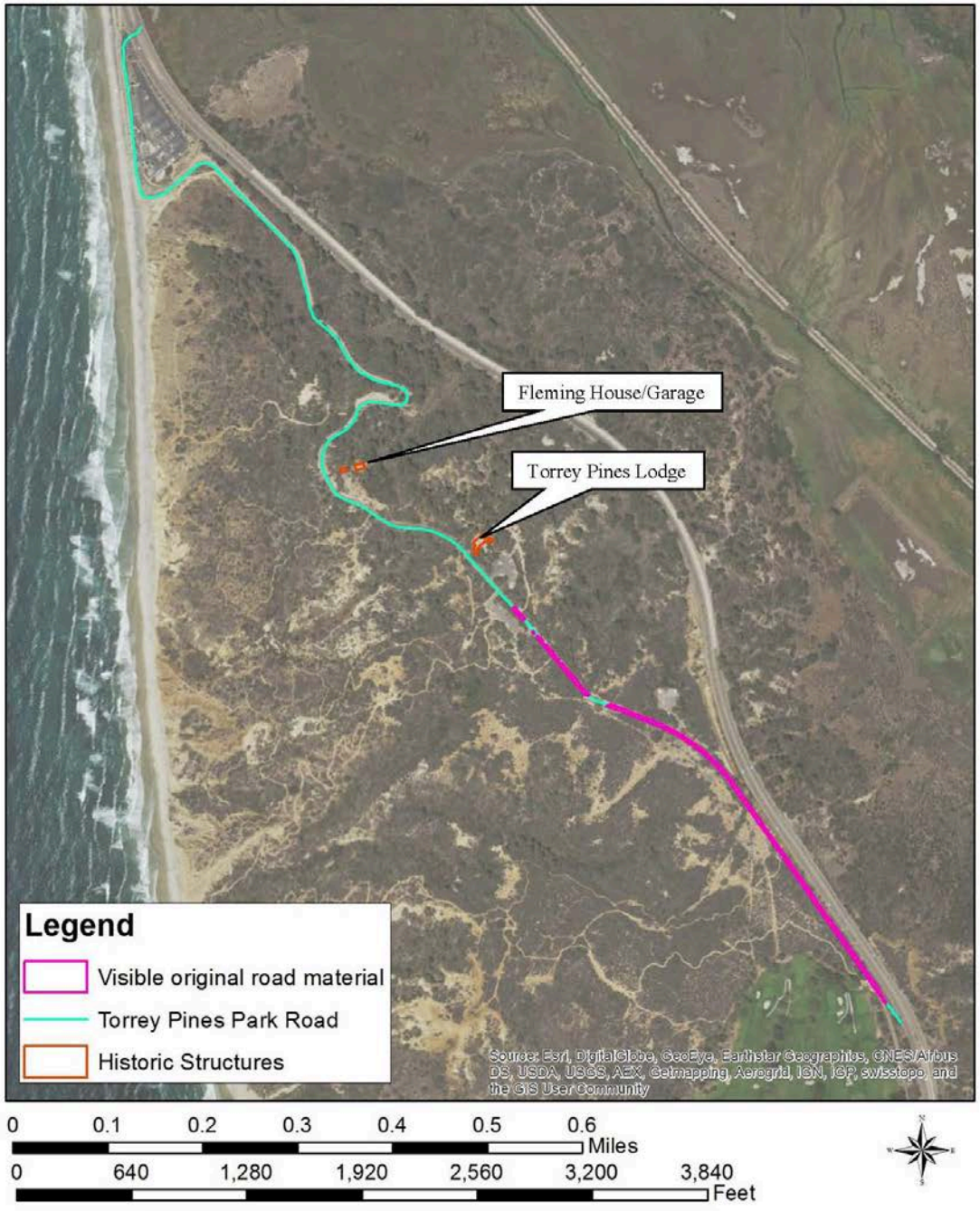


FIGURE 17. TORREY PINES PARK ROAD UNDER REPAIR, NOVEMBER 2011.

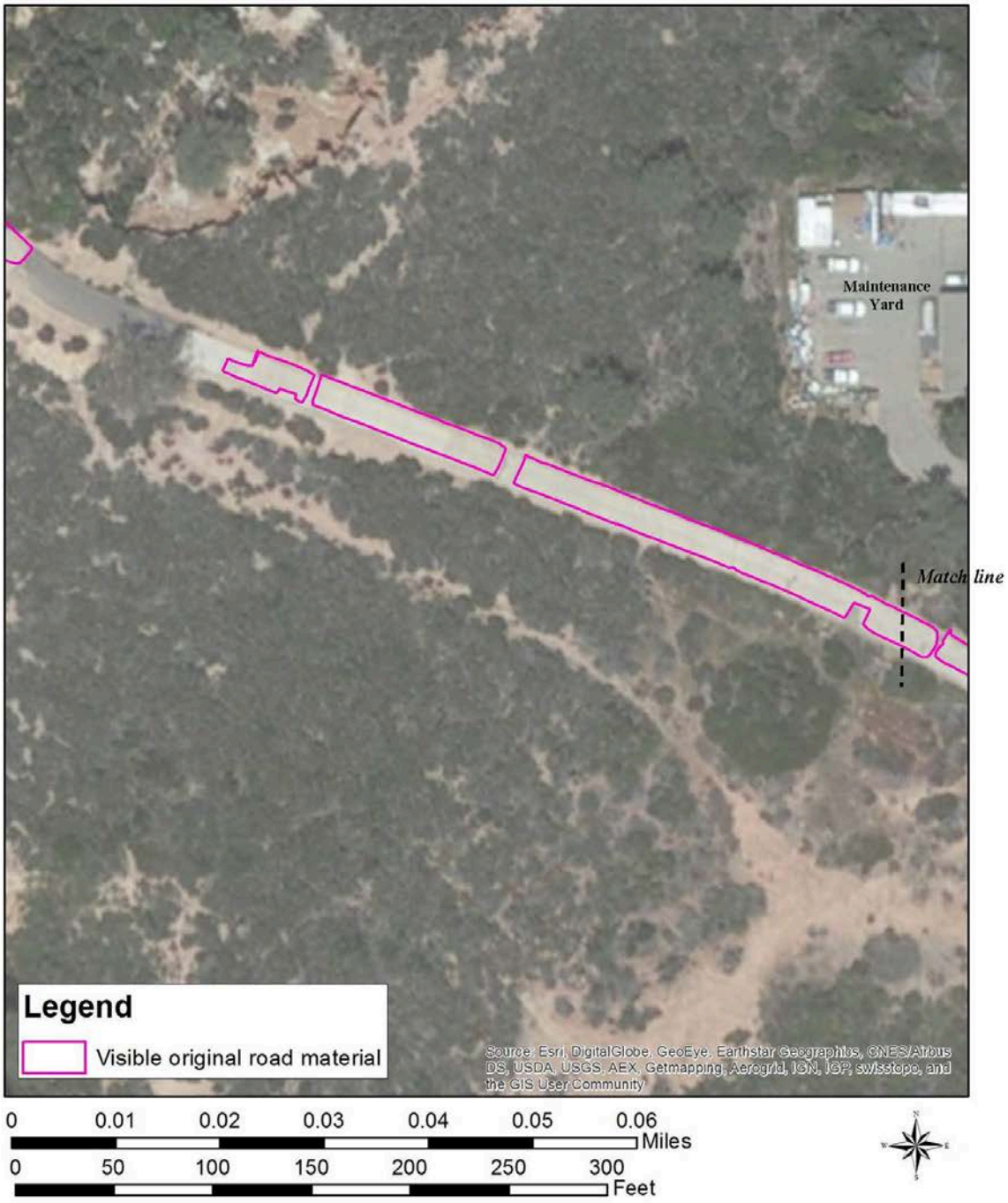
FIGURE 18. SURVEY MAP SHOWING FRAGMENTED SECTIONS OF HISTORIC ROAD SURFACE (WEST LOT AREA)

State of California - The Resources Agency **Primary #:**
DEPARTMENT OF PARKS AND RECREATION **HRI#**
SKETCH MAP **Trinomial:**
Page 23 **of** 30 ***Resource Name or Number (Assigned by recorder):** Torrey Pines Park Road
***Map Name:** Torrey Pines Park Road Sketch Map – visible original road surface – close up (northern extent – near West Parking lot)
***Scale:** see scale bar below ***Date of Map:** Aerial=6/3/2014, data=1/27/2017

DPR 523 *Required Information

FIGURE 19. SURVEY MAP SHOWING FRAGMENTED SECTIONS OF HISTORIC ROAD SURFACE (MAINTENANCE YARD AREA)

State of California - The Resources Agency **Primary #:**
DEPARTMENT OF PARKS AND RECREATION **HRI#**
SKETCH MAP **Trinomial:**
Page 24 **of** 30 ***Resource Name or Number (Assigned by recorder):** Torrey Pines Park Road
***Map Name:** Torrey Pines Park Road Sketch Map – visible original road surface – close up (near Maintenance yard)
***Scale:** see scale bar below ***Date of Map:** Aerial=6/3/2014, data=1/27/2017



DPR 523 *Required Information

FIGURE 20. GEOLOGIC MAP - SOUTHERN COASTLINE SUB-PROVINCE

Simplified Geologic Map | Southern Coastline Sub-Province

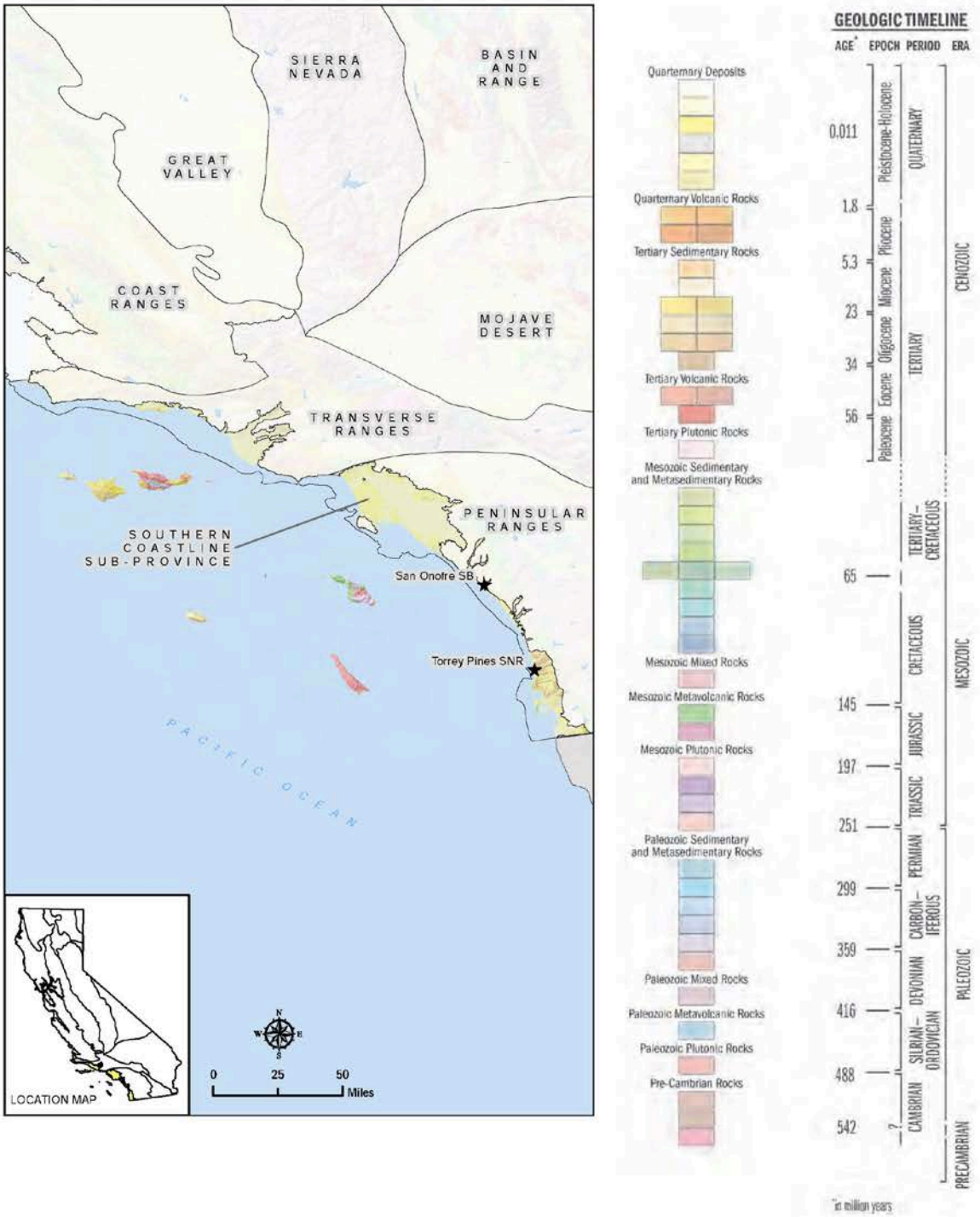


FIGURE 21. SOIL MAP OF THE PROJECT AREA

FIGURE 22. GEOLOGIC HAZARD MAP OF THE PROJECT AREA

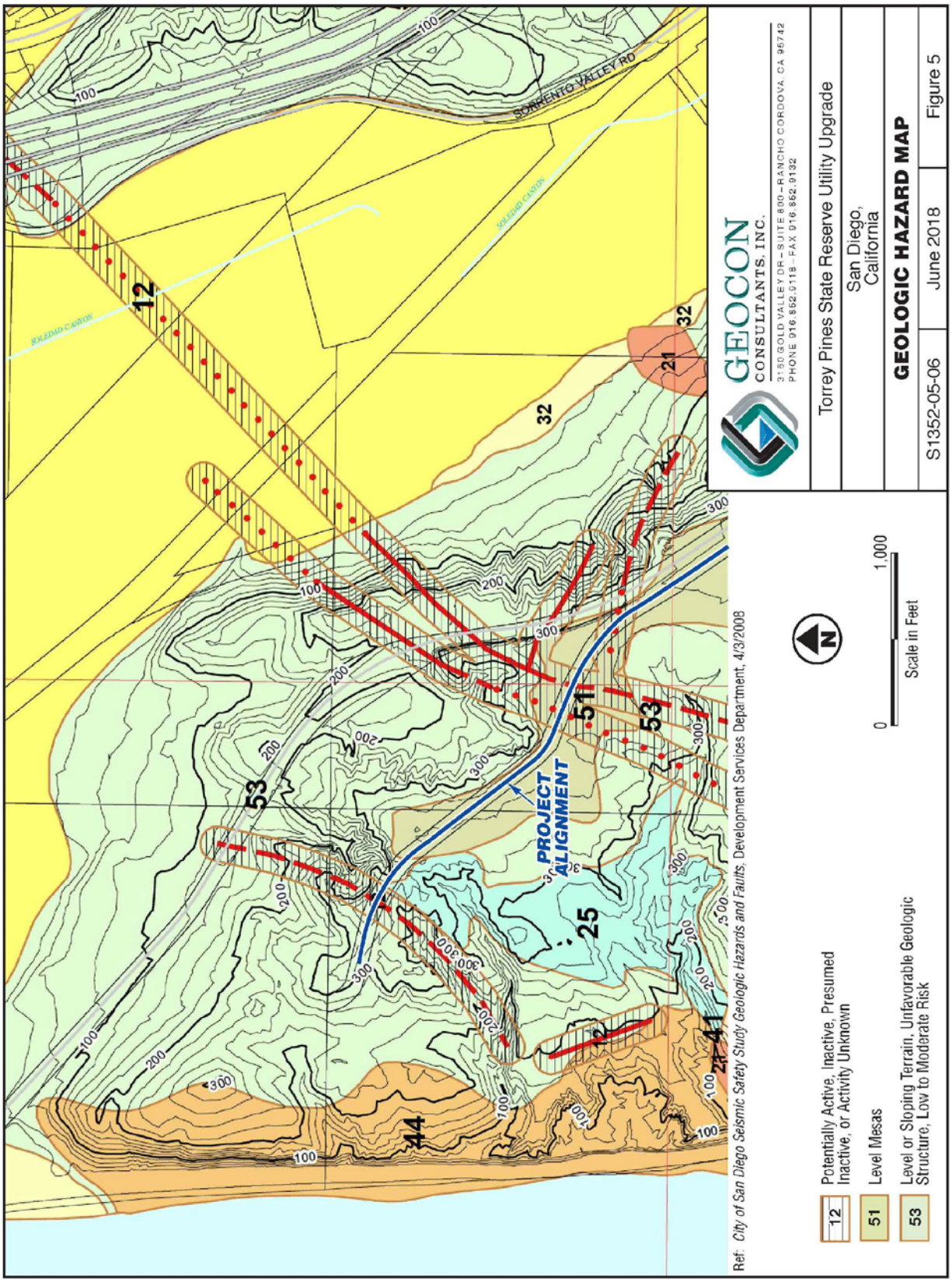


FIGURE 23. CITY OF SAN DIEGO SEISMIC HAZARD MAP, TILE 38 (PROJECT AREA AT LOWER LEFT)

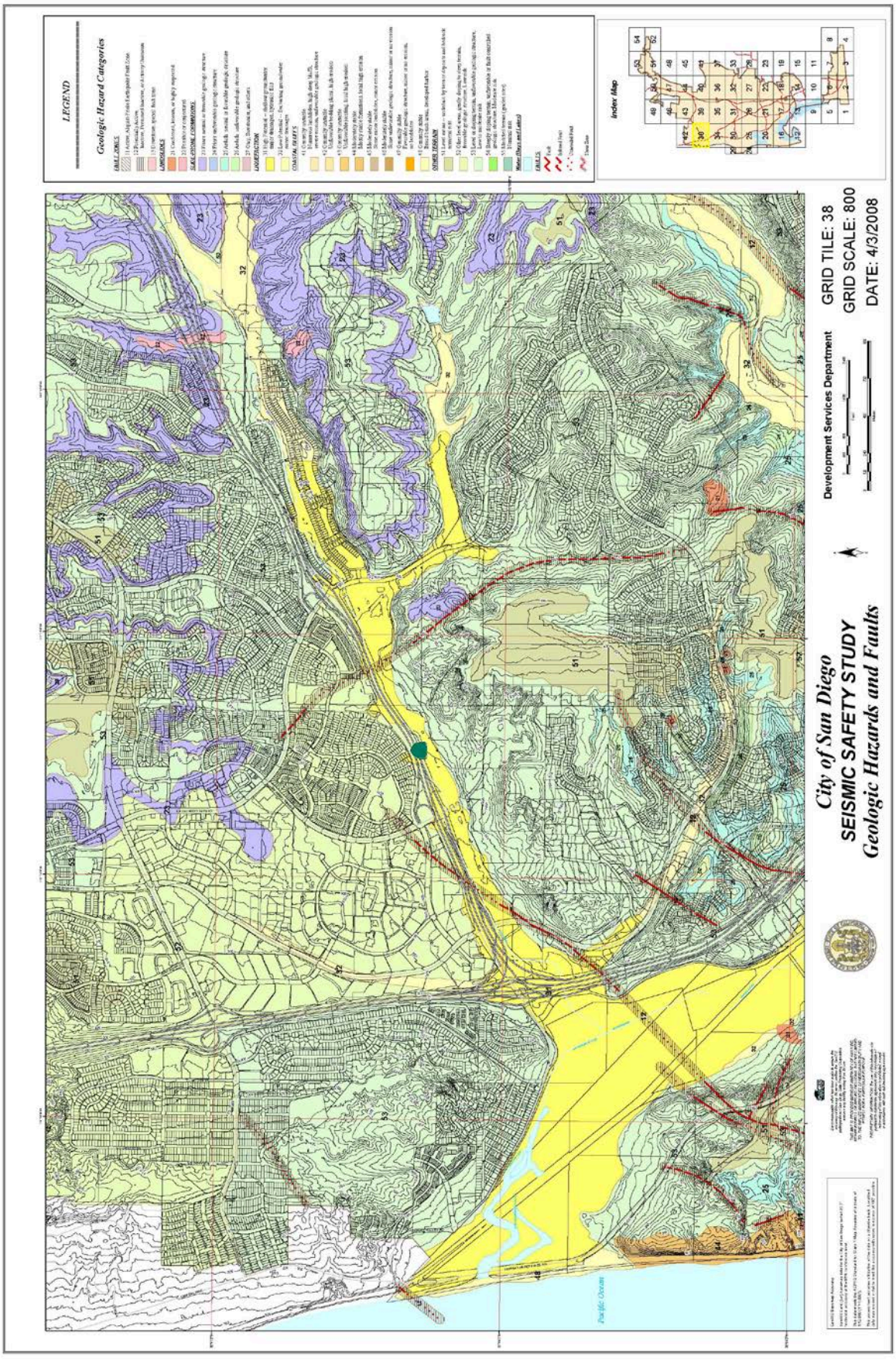


FIGURE 24. SAN DIEGO COUNTY WATERSHED MANAGEMENT AREAS

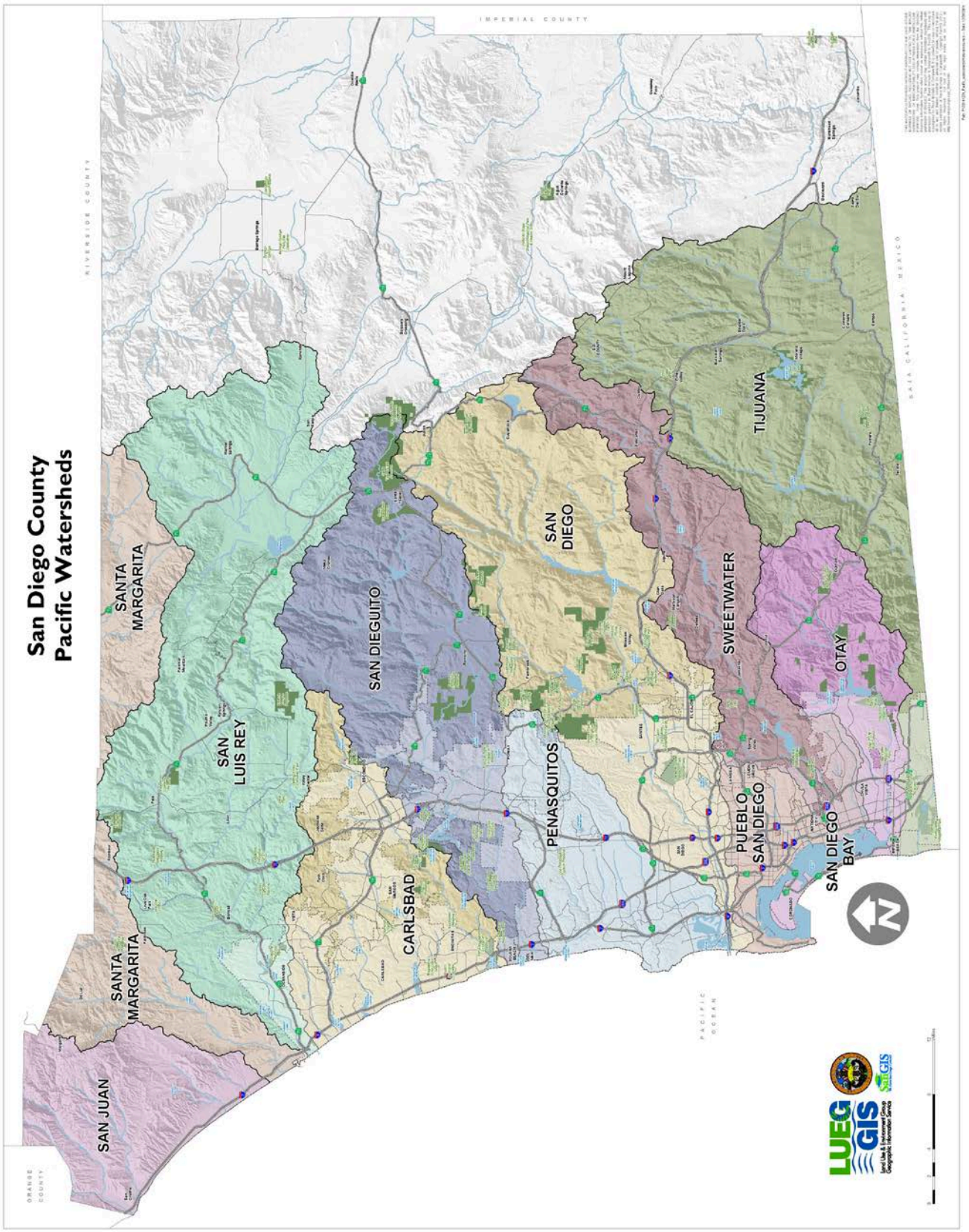
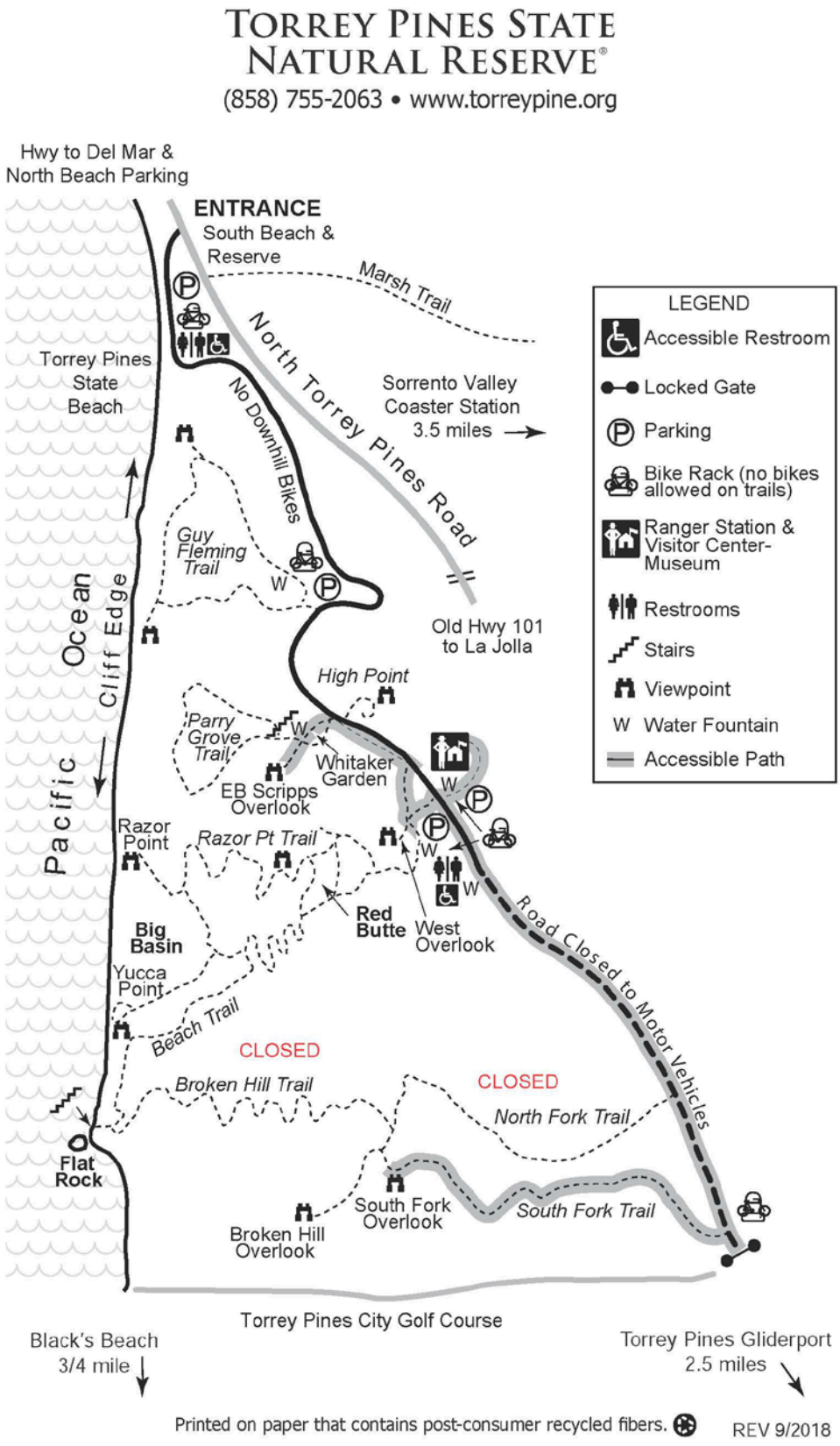


FIGURE 25. TORREY PINES STATE NATURAL RESERVE TRAIL MAP



APPENDIX **B**

Special-Status Species Potentially Occurring within the Survey Area for the Proposed Torrey Pines Utility Modernization Project, Torrey Pines State Natural Reserve

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Aphanisma *Aphanisma blitoides*	Federal: None State: None CRPR: 1B.2 MSCP: Covered	Annual, fleshy-leaved herb found in coastal bluff scrub, coastal dunes, coastal dune scrub and saline sand. Plants often exhibit significant amounts of red coloration. Blooms: Jun-Sep Elevation: 0-656 feet	**Presumed Absent.** This species was not found during focused rare plant surveys and there are no historical records from within the survey area. The species, though, was previously recorded in the vicinity of the "beach trail" in 1973. Suitable habitat was not observed within the survey boundaries.
Ashy spike-moss *Selaginella cinerascens*	Federal: None State: None CRPR: 4.1 MSCP: None	Pale green to tan-colored moss typically found in sunny openings or under shrubs in chaparral and coastal sage scrub. Forms a network of fine, prostrate runners on the soil surface. Prefers clay soils. Blooms: N/A Elevation: 0-1804 feet	**Present.** Found in several locations in the central portion of the survey area within sunny openings. However, all occurrences were recorded outside the proposed Project footprint.
Beach goldenaster *Heterotheca sessiflora* ssp. *sessiflora*	Federal: None State: None CRPR: 1B.1 MSCP: None	Perennial, yellow-flowering herb found on beaches, dunes, and mud flats along the southern California coast line. Blooms: Jun-Sep Elevation: 0-197 feet	**Presumed Absent.** This species was not found during focused rare plant surveys and there are no historical records from within the survey area. Also, suitable habitat was not observed within the survey boundaries.
Brand's phacelia *Phacelia stellaris*	Federal: None State: None CRPR: 1B.1 MSCP: None	Diminutive annual herb occurs in sandy washes and benches in alluvial flood plains. This species is generally dependent on periodic flooding and sediment transport. Population size may vary from year to year depending upon rainfall. Blooms: Mar-Jun Elevation: 3-1312 feet	**Presumed Absent.** This species was not found during focused rare plant surveys, although one historical occurrence did overlap the survey area. Suitable habitat was not observed within the survey boundaries.

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Cliff spurge *Euphorbia misera*	Federal: None State: None CRPR: 2B.2 MSCP: None	Perennial shrub typically found along the coast in coastal bluff scrub and coastal sage scrub habitat. Blooms: Dec-Aug (Oct) Elevation: 33-1650 feet	**Presumed Absent.** This species was not found during focused rare plant surveys. Although suitable habitat exists within the survey area it is not expected to occur near or adjacent to the proposed Project footprint.
Coastal dunes milkvetch *Astragalus tener* var. *titi*	Federal: **FE** State: **SE** CRPR: 1B.1 MSCP: Covered	Low-growing annual herb with lavender flowers that is typically known in sandy areas along the coast (dunes, bluffs, prairies). Blooms: Mar-May Elevation: 0-164 feet	**Presumed Absent.** This species was not found during focused rare plant surveys and only one historical occurrence (c. 1880) was recorded 0.5 miles east of the survey area. Suitable habitat was not observed within the survey boundaries.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Federal: None State: None CRPR: 1B.1 MSCP: None	Small, annual yellow-flowering herb typically occurring on moist or wet soils, including saline soils, in vernal pools, playas, alkali sinks, and salt marshes. Blooms: Apr-May Elevation: 0-3281 feet	**Presumed Absent.** This species was not found during focused rare plant surveys and there are no historical records from within the survey area. Also, suitable habitat was not observed within the survey boundaries.
Decumbent goldenbush *Isocoma menziesii* var. *decumbens*	Federal: None State: None CRPR: 1B.2 MSCP: None	Perennial shrub typically found in chaparral and coastal scrub habitat. Blooms: Apr-Nov Elevation: 33-445 feet	**Presumed Absent.** This species was not found during focused rare plant surveys. Although suitable habitat exists within the survey area it is not expected to occur near or adjacent to the proposed Project footprint.
Del Mar manzanita *Arctostaphylos glandulosa* ssp. *crassifolia*	Federal: **FE** State: None CRPR: 1B.1 MSCP: Covered	Perennial shrub of limited distribution found in coastal chaparral of San Diego County. Foliage features distinctive gray-green, leathery leaves. Blooms: Dec-Feb (June) Elevation: 0-328 feet	**Present.** Suitable habitat exists within the survey area. Isolated individuals or small patches were found in several locations in the northern and central portions of the survey area, but outside the Project footprint.

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Del Mar Mesa sand aster *Corethrogyne filaginifolia* var. *linifolia*	Federal: None State: None CRPR: 1B.1 MSCP: Covered	Endemic perennial herb found in coastal sage scrub and chaparral of San Diego County. Foliage and stems are typically gray-green and puberulent to hairy. Blooms: Mar-Aug Elevation: 0-328 feet	**Present.** Suitable habitat exists and populations were commonly found throughout the survey area, including within and immediately adjacent to the proposed work areas.
Golden-spined cereus *Bergerocactus emoryi*	Federal: None State: None CRPR: 2B.2 MSCP: None	Perennial stem succulent typically growing in sandy substrates in coastal sage scrub and chaparral, as well as closed-cone coniferous forest. Mostly limited to southwestern San Diego County and nearby islands to the west. Blooms: May-Jun Elevation: 10-1,300 feet	**Present.** Suitable habitat exists; however, one individual documented in the survey area near the Visitor Center was likely planted around 1923 by Guy Fleming or naturalized from an intentional planting event. A species' record exists immediately north of the Fleming House, which is also presumed to have been planted.
Lakeside ceanothus *Ceanothus cyaneus*	Federal: None State: None CRPR: 1B.2 MSCP: Covered	Perennial, large, tree-like shrub found in chaparral and pine forest habitats on slopes and ridge lines. Features brilliant purple flowers and glossy green leaves. Primarily limited to San Diego County. Blooms: Apr-Jun (Jul) Elevation: 148-3445 feet	**Presumed Absent.** Suitable habitat exists within the survey area; however, this species was not found during focused rare plant surveys and the only historical record within the vicinity of the Reserve (1938) could possibly be a planted specimen.
Long-spined spineflower *Chorizanthe polygonoides* var. *longispina*	Federal: None State: None CRPR: 1B.2 MSCP: None	Annual, low-growing, stiff-branched herb typically found in sandy or sandy clay soils of chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pool habitats. Blooms: Apr-Jun Elevation: 98-4921feet	**Present.** Suitable habitat exists within the survey area and individuals were found in several locations or patches scattered in the central portion of the survey boundaries, but outside the Project footprint.

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Nevin's barberry *Berberis nevinii*	Federal: **FE** State: **SE** CRPR: 1B.1 MSCP: Covered	Perennial, evergreen, holly-leafed, multi-trunked shrub found in chaparral, foothill woodland, washes, and coastal sage scrub habitats. Prefers sandy to gravelly soils. Blooms: Apr-May Elevation: <2133 feet	**Present.** Suitable habitat exists and five individuals were found in a few locations in the northern portion of the survey area, including immediately adjacent to proposed work areas.
Nuttall's acmispon *Acmispon prostratus*	Federal: None State: None CRPR: 1B.1 MSCP: Covered	Annual low-growing herb typically found in coastal dunes and sandy coastal scrub habitat. Blooms: Mar-Jun(Jul) Elevation: 0-33 feet	**Presumed Absent.** This species was not found during focused rare plant surveys. Although suitable habitat exists within the survey area it is not expected to occur near or adjacent to the proposed Project footprint.
Nuttall's scrub oak *Quercus dumosa*	Federal: None State: None CRPR: 1B.1 MSCP: None	Perennial, evergreen, large shrub found in chaparral, coastal sage scrub, and sandstone habitats. Prefers sandy soils. Characteristically grows wider than taller with numerous angled branches and branchlets. Blooms: (Feb) Mar-May Elevation: 0-656 feet	**Present.** Suitable habitat exists and individuals were commonly found throughout the survey area, including immediately adjacent to proposed work areas.
Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana*	Federal: None State: None CRPR: 1B.1 MSCP: None	Small, annual yellow-flowering herb found on coastal dunes and bluffs. Blooms: (Jan) May-Jun (Aug) Elevation: 0-328 feet	**Presumed Absent.** This species was not found during focused rare plant surveys; however one historical occurrence was recorded in the northern portion of the survey area near the Guy Fleming Trail. Marginally suitable habitat was observed within the survey boundaries.

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Orcutt's spineflower *Chorizanthe orcuttiana*	Federal: **FE** State: **SE** CRPR: 1B.1 MSCP: None	Inconspicuous, low-growing annual herb that is typically known in sandy openings of chaparral and coastal scrub. Blooms: Mar-May Elevation: 9-410 feet	**Presumed Absent.** This species was not found during focused rare plant surveys. Although suitable habitat exists within the survey area, it is not expected to occur near or adjacent to the proposed Project footprint.
San Diego barrel cactus *Ferocactus viridescens*	Federal: None State: None CRPR: 2B.1 MSCP: Covered	Found in sandy to rocky areas of coastal sage scrub, grassland, open chaparral, and occasionally wetlands in coastal San Diego County and Baja California. Blooms: May-Jun Elevation: 0-886 feet	**Present.** Found in several locations scattered within the northern and central portions of the survey area, outside the Project footprint.
San Diego marsh-elder *Iva hayesiana*	Federal: None State: None CRPR: 2B.2 MSCP: None	Perennial herb typically found in wet areas such as marshes and playas. Blooms: May-Jun Elevation: 0-886 feet	**Presumed Absent.** This species was not found during focused rare plant surveys, there are no historical records (points) from within the survey area, and no suitable habitat exists within the survey boundaries.
Sand-loving wallflower *Erysimum ammophilum*	Federal: None State: None CRPR: 1B.2 MSCP: Covered	Perennial, yellow-flowering herb found along the coastal strand on sandy soils of coastal dunes. Blooms: (Feb) Mar-Apr (Jun) Elevation: <164 feet	**Presumed Absent.** This species was not found during focused rare plant surveys, no historical records exist from within the survey area, and no suitable habitat exists within the survey boundaries.
Sea dahlia *Leptosyne maritima*	Federal: None State: None CRPR: 2B.2 MSCP: None	Perennial, yellow-flowering herb found along the coastal strand on sea bluffs and in coastal sage scrub habitats. Blooms: (Feb) Mar-May (Jun) Elevation: <164 feet	**Present.** Several individuals were found in two locations in the northern portion of the survey area, outside the Project footprint.

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Shaw's agave *Agave shawii* var. *shawii*	Federal: None State: None CRPR: 2B.1 MSCP: Covered	Perennial, succulent shrub found along the coastal strand in coastal sage scrub habitats on bluffs, hillsides, and mesas. Features a strikingly inflorescence on a tall stalk that grows from thick, toothy leaves arranged in attractive rosettes. Blooms: Sep-Mar (May) Elevation: <164 feet	**Present.** Several individuals were found in the far northern portion of the survey area, outside the Project footprint.
Short-leaved dudleya *Dudleya brevifolia*	Federal: None State: **SE** CRPR: 1B**.**1 MSCP: Covered	Diminutive, fleshy-leaved perennial herb found in very limited distribution of coastal San Diego County on barren sandstone terraces in chaparral and coastal sage scrub habitats. Blooms: Apr-May (Jun) Elevation: <820 feet	**Present.** This species was found in a number of medium to large patches on open soils during the focused rare plant surveys, including adjacent to proposed work areas.
Short-lobed broomrape *Orobanche parishii* ssp. *brachyloba*	Federal: None State: None CRPR: 4.2 MSCP: None	Low-growing perennial herb found on sandy soil near the ocean, generally parasitic on coast goldenbush. Blooms: May-Aug Elevation: 0-984 feet	**Presumed Absent.** This species was not found during focused rare plant surveys and there are no historical records from within the survey area. The species; however, has been previously collected within the Reserve along the Guy Fleming Trail and some suitable habitat exists within the survey boundaries.
South Coast saltscale *Atriplex pacifica*	Federal: None State: None CRPR: 1B.2 MSCP: None	Low-growing annual herb found on coastal bluff scrub, dunes, alkali sinks, and wetland/riparian habitats. Blooms: Mar-Oct Elevation: <984 feet	**Present.** Seven individuals were reported during the 2016 rare plant survey in the central portion of the survey area, well removed from proposed work areas.

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Sticky dudleya *Dudleya viscida*	Federal: None State: None CRPR: 1B.2 MSCP: Covered	Perennial, low-growing succulent found in chaparral and coastal sage scrub habitats, often associated with bluffs and rocky cliffs. Blooms: May-Jun Elevation: <1476 feet	**Presumed Absent.** Suitable habitat for this species exists within the survey area; however, this species was not found during focused rare plant surveys and there are no historical records from within the survey boundaries.
Summer holly *Comarostaphylis diversifolia* ssp. *diversifolia*	Federal: None State: None CRPR: 1B.2 MSCP: None	Perennial, medium-to large-sized shrub found in chaparral habitats, often near the coast. Features bright red fruits and grayish twigs with bark that shreds. Blooms: (Apr) May-Jun (Jul) Elevation: 328-1805 feet	**Present.** Two individuals were found in separate locations in the north-central portion of the survey area, outside the Project footprint.
Torrey pine *Pinus torreyana*	Federal: None State: None CRPR: 1B.2 MSCP: Covered	Perennial, large, evergreen pine tree with open, indistinct branching found in chaparral and pine forests near the coast. The tree's needles are among the longest of the world's pine species. Narrow endemic species limited to coastal San Diego County and some offshore islands. Blooms: N/A Elevation: <656 feet	**Present.** This species was commonly found throughout the natural habitats of the survey area, particularly the Torrey pine forest association. Several hundred individual trees were mapped, including several adjacent to proposed work areas.
Wart-stemmed ceanothus *Ceanothus verrucosus*	Federal: None State: None CRPR: 2B.2 MSCP: Covered	Perennial, medium-to large-sized evergreen shrub found in chaparral habitats, often near the coast, occasionally on rocky slopes. When in bloom, the species displays an abundance of small white flowers. Blooms: Jan-Apr Elevation: 328-1804 feet	**Present.** Commonly found throughout the survey area, including immediately adjacent to proposed work areas.

PLANTS			
Species Name	**Listing Status**	**Habitat Requirements[1, 2]**	**Potential for Occurrence**
Western dichondra *Dichondra occidentalis*	Federal: None State: None CRPR: 4.2 MSCP: None	Perennial, mat-forming herb found among rocks and shrubs in a variety of chaparral, woodland, grassland, and sage scrub associations. Blooms: Mar-Jun (Jul) Elevation: <1706 feet	**Present.** Commonly found below larger shrubs within the survey area.
WILDLIFE			
INVERTEBRATES			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
California mellitid bee *Melitta californica*	Federal: None State: None MSCP: None	Ground-nesting solitary species with a phenology from the end of February to mid-April. Found in California, Arizona, and northwestern Mexico. Host plants include California encelia, mallows (*Sphaeralcea* spp.), and Parish's desert thorn, among others.	**Presumed Absent.** The CNDDB lists the historic location as possibly extirpated.
Globose dune beetle *Coelus globosus*	Federal: None State: None MSCP: None	Typically inhabits coastal dunes, including foredunes and sand hummocks.	**Presumed Absent.** No suitable habitat exists for this species in the survey area.
Mimic tryonia (=California brackishwater snail) *Tryonia imitator*	Federal: None State: None MSCP: None	Occurs in shallow brackish water channels.	**Presumed Absent.** No suitable habitat exists for this species in the survey area.

WILDLIFE			
INVERTEBRATES			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
Monarch butterfly *Danaus plexippus* (Pop. 1 California overwintering population)	Federal: None State: None MSCP: None	At overwintering sites, monarchs require high humidity, fresh water, and an absence of freezing temperatures or high winds. The species is found on sites with roost trees, in which monarchs cluster, surrounded by a larger grove or windrow of trees. Trees most commonly used for roosting include Monterey pine, Monterey cypress, blue gum eucalyptus, red gum eucalyptus, western sycamore, and coast live oak. Monarchs are still observed passing through many habitat types of the region, including both urban and natural lands on the coastal strand.	**Presumed Absent for overwintering**. Although suitable overwintering trees (eucalyptus woodlands) are located in the survey area and historical records indicate that monarchs previously occupied Torrey pines near the southern boundary of the park, the overwintering population was lost in the 1980's due to removal of roost trees at TPMGC. **High (migration, nectaring, resting, flyover).** This species likely occurs within the Project area migrating, flying over, nectaring, and/or resting on vegetation. However, an absence of milkweed (*Ascleipias* spp.) from the survey area precludes its presence for egg-laying and larval development purposes.
VERTEBRATES			
Reptiles			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
Coast horned lizard *Phrynosoma blainvillii*	Federal: None State: SSC MSCP: Covered	Prefers grassland, broken chaparral, coastal sage scrub, open coniferous forest, and broadleaf woodland and requires open areas for basking, vegetation that provides cover, and soil or sand for burrowing. Must have an abundance of ants available as food source.	**Low.** Suitable habitat is found in undeveloped areas within the survey area, and this species is known to occur in the Project vicinity; however, the potential for this species to use developed areas where the proposed Project is planned is unlikely.
Coastal whiptail *Aspidoscelis tigris stejnegeri*	Federal: None State: SSC MSCP: None	Prefers open scrub, chaparral and woodland habitats, with open areas for basking and native ants as a prey base.	**Low.** Suitable habitat is found in many undeveloped areas within the survey area, and this species is known to occur in the Project vicinity; however, the potential for this species to use developed areas where the proposed Project is planned is unlikely.

VERTEBRATES			
Reptiles			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
Coronado skink *Plestiodon skiltonianus interparietalis*	Federal: None State: None MSCP: None	Found in grasslands, woodlands, pine forests, and chaparral with open areas for sunning; often in rocky areas near creeks and rivers that have abundant vegetation. Also found in areas away from water, though often associated with moist areas.	**Low.** Suitable habitat is found in many undeveloped areas within the survey area, and this species is known to occur in the Project vicinity; however, the potential for this species to use developed areas where the proposed Project is planned is unlikely.
Orange-throated whiptail *Aspidoscelis hyperythra*	Federal: None State: SSC MSCP: Covered	Occurs widely in sage scrub, woodlands, grasslands, and chaparral communities within microhabitats of loose granitic soils and open areas for sunning and foraging.	**Present.** This species was commonly found along the undeveloped portions of the survey area, including adjacent to proposed work areas.
Southern California legless lizard *Anniella stebbinsi*	Federal: None State: SSC MSCP: None	Occurs in chaparral, oak woodland, riparian woodland, oak-pine forests, and desert scrub. Prefers habitat with friable soils and various forms of cover (e.g., rocks, woody material, and shrubs).	**Low.** Suitable habitat is found in select undeveloped areas within the survey area, and this species is known to occur in the Project vicinity, however, the potential for this species to use developed areas where the proposed Project is planned is unlikely.
Birds			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
American peregrine falcon *Falco peregrinus anatum*	Federal: BCC State: **FP** MSCP: Covered	Nest sites include cliff faces, or series of cliffs, generally 200 to 300 feet in height that typically dominate the surrounding landscape. Mountain valleys and river gorges with precipitous cliffs also are preferred nest sites. Foraging sites include wetlands, riparian corridors, agricultural lands, and other large open areas.	**Present.** This species was documented on May 25, 2018, engaging in courtship behavior near the survey area. In addition, two fledglings were observed in a pine tree. This species was again observed on June 29, 2017 and May 29, 2018. **Presumed Absent for nesting.** Due to an absence of suitable nesting substrates in the survey area, this species is considered absent for nesting purposes.

Birds			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
Belding's savannah sparrow *Passerculus sandwichensis beldingii*	Federal: None State: **SE** MSCP: Covered	This non-migratory subspecies is narrowly restricted to coastal marshes dominated by pickleweed.	**Presumed Absent.** No suitable habitat exists for this species in the survey area.
California least tern *Sternula antillarum browni*	Federal: **FE** State: **SE, FP** MSCP: Covered	Nests on exposed sandy or gravelly beaches and tidal flats around bays of the Pacific Ocean, usually among sparse vegetation. May also nest on man-made substrates, such as airport islands that mimic natural qualities. Forages near shore in the ocean, as well as bays and estuary mouths.	**Presumed Absent.** No suitable habitat exists for this species in the survey area.
Coastal California gnatcatcher *Polioptila californica californica*	Federal: **FT** State: SSC MSCP: Covered	This resident southern California species is strongly associated with coastal sage scrub communities, but will also use other habitats where coastal sage scrub species form some component of the vegetation. Individuals prefer a gap rate of about 25% between mature shrubs from three to five feet tall.	**Present.** This species was commonly found in the undeveloped portions of the survey area, particularly those with coastal sage scrub characteristics, where it prefers to nest. Several sightings were noted adjacent to proposed work areas.
Cooper's hawk *Accipiter cooperii* (nesting)	Federal: None State: None MSCP: Covered	Tends to occur in mature forest, open woodlands, wood edges, and river groves. Nests in coniferous, deciduous, and mixed woods, typically those with tall trees and openings or edge habitat nearby. Also found in trees along rivers through open country, and increasingly in suburbs and cities where some tall trees exist for nest sites.	**High.** This species was observed carrying prey on May 29, 2018, outside the survey area. Due to the presence of numerous suitable nesting trees and an ample avian prey base, this species has a moderate to **high potential to nest** in the survey area. Also observed on June 29, 2017, carrying prey over the golf course and on June 30, 2017, carrying prey over a parking lot.

Birds			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
Light-footed Ridgway's rail *Rallus longirostris levipes*	Federal: **FE** State: **SE, FP** MSCP: Covered	Occurs in emergent wetlands and brackish wetland areas often dominated by cattails, bulrush and/or cordgrass.	**Presumed Absent.** No suitable habitat exists for this species in the survey area.
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	Federal: None State: None MSCP: Covered	Found in coastal lowlands and foothills in sage scrub, open or burned chaparral, and grassland with scattered shrubs. Typical habitat is fairly steep south-facing slopes with about 50% cover of low shrubs. Sage scrub on gentle rolling hillsides is even more favorable, but now greatly reduced and fragmented.	**High.** This species was documented just outside the survey area on May 29, 2018. Due to documented presence in suitable, connected habitats, it has a **high potential to nest** in the survey area.
Western bluebird *Sialia mexicana*	Federal: None State: None MSCP: Covered	Found in areas of scattered trees, open conifer forests, and farms. Breeds in semi-open areas including pine woods, oak woodlands, streamside groves, ranch country, occasionally in pinyon-juniper woods, but avoids hot dry regions. Winters in many kinds of open or semi-open habitats, especially in pinyon-juniper, also in desert, farmland, and others.	**High.** Several detections occurred outside the survey area. A pair was documented during the general peak of the nesting season on the golf course on May 22, 2018, indicating that individuals were likely breeding nearby. Also observed on June 29, 2017 and May 25 and 29, 2018.
Western snowy plover *Charadrius alexandrines nivosus* (nesting)	Federal: **FT**, BCC State: SSC MSCP: Covered	Breeds above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries.	**Presumed Absent.** No suitable habitat exists for this species in the survey area.

Mammals			
Species Name	**Listing Status**	**Habitat Requirements[2]**	**Potential for Occurrence**
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	Federal: None State: SSC MSCP: None	Nocturnal small mammal that breeds typically from March through May. Preferred habitat includes rocky, gravelly, or sandy substrate in arid coastal or desert border areas. Found in coastal scrub, mixed chaparral, sagebrush, annual grassland, and desert communities.	**Low.** Suitable habitat is found in select undeveloped areas within the survey area and this species is known to occur in the Project vicinity; however, the potential for this species to use developed areas where the proposed Project is planned is unlikely.

Federal Designations
FE: Listed under the Federal Endangered Species Act as Endangered.
FT: Listed under the Federal Endangered Species Act as Threatened.
BCC: U.S. Fish and Wildlife Service - Birds of Conservation Concern.

State Designations
SE: Listed under the California Endangered Species Act as Endangered.
FP: California Department of Fish and Wildlife – Fully Protected Species.
SSC: California Department of Fish and Wildlife – Species of Special Concern.

Other Designations
MSCP (Multiple Species Conservation Plan)
Covered: Covered species

California Native Plant Society Rare Plant Ranks (CRPR):
1B: Plants rare, threatened, or endangered in California and elsewhere.
2B: Plants rare, threatened, or endangered in California but more common elsewhere.
4: Watch List: Plants of limited distribution.
CNPS Threat Ranks:
0.1 Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).
0.2 Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat).
0.3 Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Sources:
Calflora. 2019. Information on California plants for education, research and conservation. [web application]. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/. (Accessed: 15 January 2019).
California Department of Fish and Wildlife. 2019. California Natural Diversity Database (CNDDB) – Government version dated June 1, 2018. Retrieved June 14, 2019 from https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.
California Native Plant Society. 2019. CNPS Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). Available: http://www.rareplants.cnps.org. (Accessed: 15 January 2019).
Notes:
1. Plant blooming months in parentheses are extreme beginnings/endings known to occur on occasion,

usually in very wet or dry years. Months not in parentheses are the typical bloom period.
2. Only habitat requirements for the species range in California are listed.