

Biological Technical Report for the Torrey Pines Golf Course Storm Drain Repair Project

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A handwritten signature in black ink, appearing to read 'Greg Mason', is enclosed in a thin black rectangular border.

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1.0 INTRODUCTION

This report describes existing biological conditions in the Torrey Pines Golf Course Storm Drain Repair (project) study area and provides the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (Corps), California Department of Fish and Wildlife (CDFW), and City of San Diego (City) with information necessary to assess impacts to biological resources under the California Environmental Quality Act (CEQA) and City, State of California (State), and federal regulations.

1.1 PROJECT LOCATION

The study area for the project is located at the Torrey Pines Golf Course, 11480 North Torrey Pines Road, in the City west of the northbound Interstates 5 and 805 merge (Figures 1 and 2). The study area includes the project impact footprint where it occurs on undeveloped land and a portion of where the footprint occurs on developed golf course (the remainder of the project impact footprint is entirely on developed golf course so it is not addressed herein). The study area also includes a mapped buffer in order to address potential indirect effects to sensitive biological resources adjacent to the project. The study area is not within or adjacent to the City's preserve, the Multi-habitat Planning Area (MHPA). The study area is located in unsectioned land in Township 15S, Range 4W on the U.S Geological Survey (USGS) Del Mar quadrangle.

1.2 PROJECT DESCRIPTION

The project involves the repair of a storm drain outfall on the edge of the golf course, along a coastal canyon. The outfall is approximately 400 feet northwest of the Clubhouse. The outfall conveys runoff from an existing 18" reinforced concrete pipe (RCP) storm drain. It is not known when the original 18" RCP storm drain was constructed, but based on available record drawings, the outfall consisting of a straight concrete headwall was added to the pipe in 1960. This headwall was installed along the face of the coastal canyon, but has since fallen off, thus requiring repair.

The City completed an alternatives analysis report for the project. The selected design alternative would remove the existing cleanout east of the outfall. A new A-5 cleanout would be constructed in its place to accommodate a proposed 42" RCP storm drain. From this location, the 42" RCP would be directed to the northwest along the perimeter of the canyon. Approximately 300 feet from the connection location, a second A-5 cleanout will be installed. At this location, the 42" RCP would be directed to the southwest to a new outfall location. The new portion of pipe extending from the second cleanout would be directed towards the canyon base at a location suitable to install an energy dissipater. The pipe would discharge to the energy dissipater through a proposed headwall. The entire 42" RCP would be buried in the ground. A portion of the existing golf cart path would need to be removed and reconstructed. In addition, portions of the golf course and existing slope would be disturbed and restored. The design alternative would avoid work within the steep canyon slopes. Work will be limited to areas where slope gradients are less than 50 percent. Based on the velocity of runoff exiting the pipe, a City standard energy dissipater would be sufficient.

The existing depression at the base of the canyon would not be graded. Runoff would no longer be discharged through the outfall at this location, and further erosion in the canyon base would be avoided. The portion of 18" RCP which is not removed to construct the A-5 cleanout would be abandoned in place. The project includes remedial grading along the top of the coastal canyon in the vicinity of the existing outfall. By diverting runoff away from the coastal canyon, minimal runoff is anticipated to be collected within the existing depression. The grading along the top of slope is recommended to limit erosion along the coastal canyon in the immediate area. Additional field topography will be required to ensure a proper design. It is anticipated that area drains may be required to collect runoff that is diverted towards the golf course. The number and location of drains will be determined during final design. These drains can be connected to cleanouts located on the golf course.

Construction would be phased, and the impacts would be temporary except for where the new energy dissipater, outfall, and A-5 cleanouts would be installed. Temporary excavation grading along the path of the proposed storm drain will be performed. The temporary excavation grading would allow room to construct the proposed storm drain improvements. Upon completion of the storm drain improvements, the temporary excavation footprint would be filled with contours restored to their existing condition and the land revegetated per San Diego Municipal Code Landscape Standards. Construction is anticipated to begin March 9, 2020 and end on July 24, 2020.

2.0 METHODS AND SURVEY LIMITATIONS

2.1 LITERATURE REVIEW

Prior to visiting the study area, available maps, air photos, and existing conditions material for the study area were reviewed. Searches of CDFW's California Natural Diversity Database (CNDDDB) and the USFWS database were also queried for information regarding sensitive species known to occur in the study area or within its vicinity (a one-mile radius).

2.2 BIOLOGICAL SURVEYS

Alden Environmental, Inc. conducted a site visit on August 22, 2018 to identify and map existing biological resources in the study area. A sensitive plant survey was conducted on April 11, 2019.

2.2.1 Vegetation Mapping

The entire study area was walked and/or viewed with binoculars; vegetation was mapped in Google Earth; observed or detected plant and animal species were recorded in field notes; and representative study area photographs were taken. Vegetation communities were mapped according to Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) as updated (Oberbauer 2008).

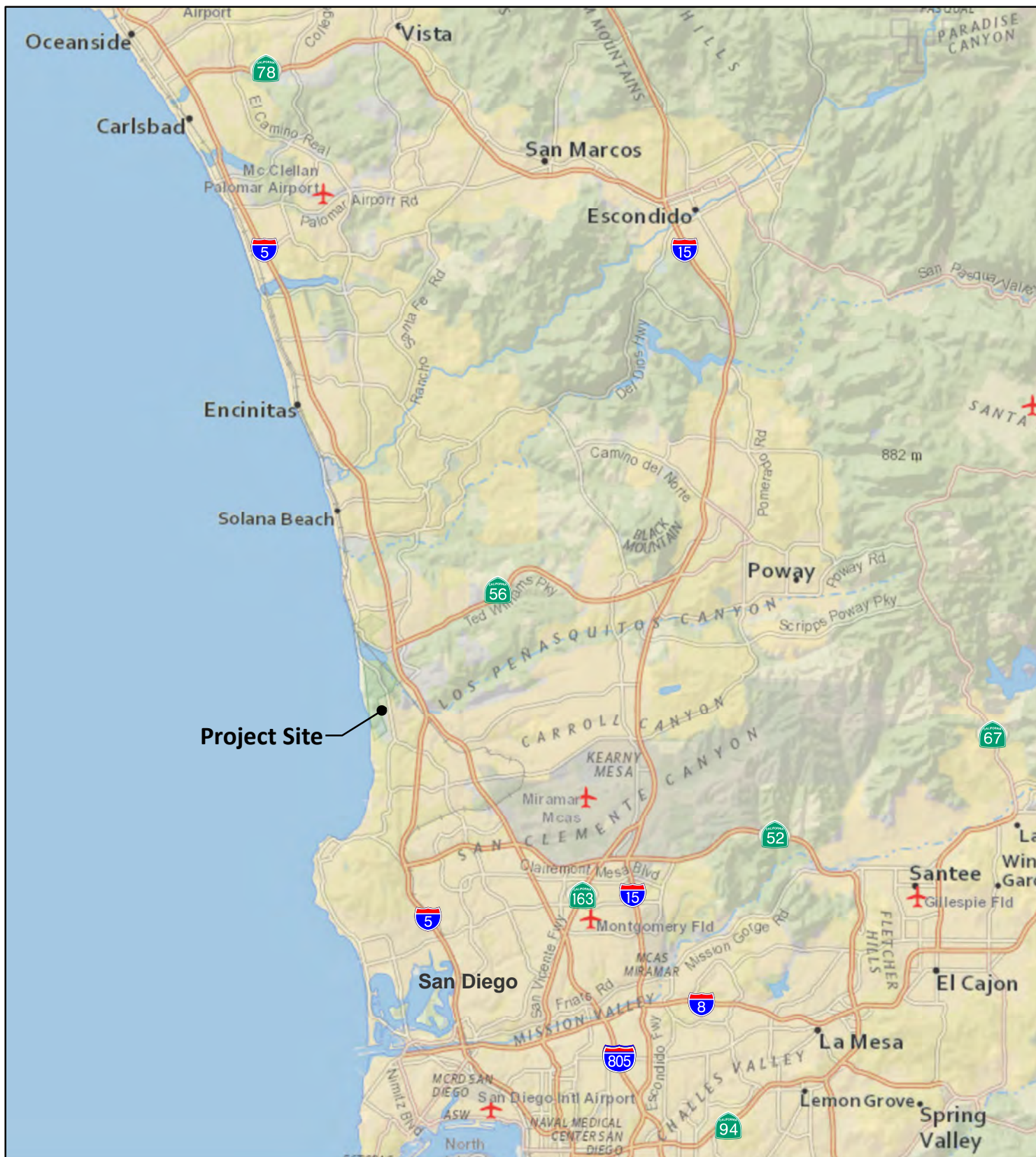
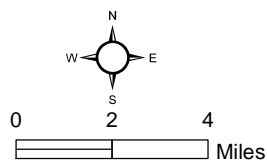


Figure 1

Regional Location

TORREY PINES GOLF COURSE
STORM DRAIN REPAIR PROJECT



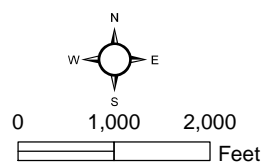
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Figure 2

Project Location

**TORREY PINES GOLF COURSE
STORM DRAIN REPAIR PROJECT**



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2.2.2 Mapping of Potential Jurisdictional Areas

The study area was assessed for features that could be considered jurisdictional Waters of the U.S., Waters of the State, and/or City Wetlands by the Corps, CDFW, Regional Water Quality Control Board (RWQCB), and/or the City, respectively.

Waters of the U.S. and Waters of the State encompass wetlands but also may include ephemeral and intermittent streams that may or may not be vegetated. Generally, Corps and CDFW wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities present.

Waters of the U.S. include wetlands and non-wetlands (streams) under the jurisdiction of the Corps. Waters of the State include wetland habitats and streambeds under the jurisdiction of the CDFW.

City Wetlands are defined by the City Municipal Code (Chapter 11, Article 3, Division 1) as areas that are characterized by any of the following summarized conditions.

1. All areas persistently or periodically containing naturally occurring wetland vegetation communities;
2. Areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities; and/or
3. Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands.

The definition of City Wetlands, however, is intended to differentiate uplands (terrestrial areas) from wetlands and, furthermore, to differentiate naturally occurring wetland areas from those created by human activities. Except for areas created for the purposes of wetland habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, it is not the intent of the City to regulate artificially created wetlands in historically non-wetland areas unless they have been delineated as wetlands by the Corps and/or CDFW. Therefore, artificially created wetland features that are not Corps and CDFW wetlands are also not considered City Wetlands.

2.2.3 Sensitive Species

Sensitive species are those that are considered federal, State, or California Native Plant Society (CNPS) rare, threatened, or endangered; Multiple Species Conservation Program (MSCP) Narrow Endemics; or MSCP Covered Species. For simplicity, “sensitive” may be used throughout this document to refer to any of these categories.

Sensitive Plant Species

A survey for sensitive plant species was conducted on April 11, 2019, and sensitive plant species that were observed were mapped. Sensitive species not observed but that may have potential to occur in the study area based on the study area's soils, vegetation, elevation, climate, documented sightings within one mile, etc. are addressed in Section 5.5.2, *Sensitive Plant Species*, of this report.

Sensitive Animal Species

Surveys for sensitive animal species were not conducted; however, sensitive animal species that were observed/detected were mapped. Sensitive species that may have potential to occur in the study area based on the study area's habitats, documented sightings within one mile, etc. are addressed in Section 5.5.3, *Sensitive Animal Species*, of this report.

2.2.4 Survey Limitations

Animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs; however, nocturnal animals, secretive animals, those that may only be detected during migration, or those that require trapping for identification would not have been observed. Therefore, the lists of species identified in Appendices A and B are not a comprehensive account of all species that utilize the study area. The species that are sensitive and have potential to occur in the study area, however, are still addressed in this report in Section 5.5.2, *Sensitive Plant Species*, Section 5.5.3, *Sensitive Animal Species*, and Section 6.1.4, *Direct Impacts to Sensitive Plant and Animal Species with Potential to Occur*.

2.2.5 Nomenclature

Nomenclature used in this report is from the following sources: City Biology Guidelines (City 2012) and the City's MSCP Subarea Plan (City 1997a); Holland (1986); Oberbauer et al. (2008); Hickman, ed. (1993); California Native Plant Society (CNPS; 2019); Crother (2008); American Ornithological Society (2018); Jones, et al. (1992); and CDFW (2018).

3.0 REGULATORY CONTEXT

3.1 REGULATORY ISSUES

The project would be subject to all City biological regulations, as outlined herein, as well as relevant state and federal regulations. A full description of state and federal regulations is included as Appendix C to this report. Note however, that compliance with the City's MSCP plan and implementing regulations (e.g., Biology Guidelines, MSCP Subarea Plan, etc.), would result in conformance with the state and federal endangered species acts for species deemed 'covered' under those plans. If any uncovered species occurred on site, consultation and permitting through state and federal agencies would still be required. Conformance with all other regulations, such as jurisdictional non-wetland waters regulations, would be required and is separate from the City's permitting process. Conformance with all regulations, State, local and federal, is the responsibility of the project applicant.

3.1.1 City of San Diego

Environmentally Sensitive Lands Regulations

Mitigation requirements for sensitive biological resources follow the requirements of the City's Biology Guidelines (2012) as outlined in the City's Municipal Code Environmentally Sensitive Lands (ESL) Regulations (Chapter 14, Article 3, Division 1). Impacts to biological resources within the City's preserve, the MHPA, must comply with the ESL Regulations, which also serve as standards for the determination of biological impacts and mitigation under CEQA in the City. ESL include sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal canyons and 100-year floodplains (San Diego Municipal Code [SDMC] 143.0110). If ESL resources are present then the project will require a Site Development Permit. ESL resources (sensitive biological resources and steep hillsides) are present in the study area. The project will comply with City ESL regulations.

City Biology Guidelines

The City's Biology Guidelines (2012) have been formulated by the Development Services Department to aid in the implementation and interpretation of the ESL Regulations; San Diego Land Development Code, Chapter 14, Division 1, Section 143.0101 et seq; and the Open Space Residential (OR-1-2) Zone, Chapter 13, Division 2, Section 131.0201 et seq. Section III of the Biology Guidelines (Biological Impact Analysis and Mitigation Procedures) also serves as standards for the determination of impact and mitigation under CEQA. The Biology Guidelines are the baseline biological standards for processing permits issued pursuant to ESL Regulations.

City of San Diego MHPA

The MHPA, the City's Preserve, was developed by the City in cooperation with the USFWS, CDFW, property owners, developers, and environmental groups using the Preserve Design Criteria contained in the MSCP Plan, and the City Council-adopted criteria for the creation of the MHPA. Development adjacent to the MHPA must ensure that indirect impacts to the MHPA are minimized. Section 1.4.3 of the City's Subarea Plan outlines the requirements to address indirect effects related to drainage and toxics, lighting, noise, public access, invasive plant species, brush management, and grading/land development. The MHPA does not occur within or adjacent to the study area; therefore, the MHPA Land Use Adjacency Guidelines do not apply to the project.

4.0 REGIONAL CONTEXT

4.1 MULTIPLE SPECIES CONSERVATION PROGRAM SUBAREA PLAN

The City, USFWS, CDFW, and other local jurisdictions joined together in the late 1990s to develop the MSCP, a comprehensive program to preserve a network of habitat and open space in the region and ensure the viability of (generally) upland habitat and species, while still permitting some level of continued development. The City's MSCP Subarea Plan (1997a) was prepared pursuant to the outline developed by USFWS and CDFW to meet the requirements of the State Natural Communities Conservation Planning (NCCP) Act of 1992. Adopted by the City in March 1997, the City's Subarea Plan forms the basis for the MSCP Implementing Agreement,

which is the contract between the City, USFWS, and CDFW (City 1997b). The Implementing Agreement ensures implementation of the City's Subarea Plan and thereby allows the City to issue "take" permits under the FESA and CESA to address impacts at the local level. Under the FESA, an Incidental Take Permit is required when non-Federal activities would result in "take" of a threatened or endangered species. A Habitat Conservation Plan, such as the City's MSCP Subarea Plan, must accompany an application for a Federal Incidental Take Permit. In July 1997, the USFWS, CDFW, and City entered into the 50-year MSCP Implementing Agreement, wherein the City received its FESA Section 10(a) Incidental Take Permit (City 1997b).

Pursuant to its MSCP permit issued under Section 10(a), the City has incidental "take" authority over 85 rare, threatened, and endangered species including regionally sensitive species that it aims to conserve (i.e., "MSCP Covered Species"). "MSCP Covered" refers to species that are covered by the City's Federal Incidental Take Permit and considered to be adequately protected within the MHPA. Special conditions apply to Covered Species that would be potentially impacted including, for example, designing a project to avoid impacts to Covered Species in the MHPA where feasible. Outside the MHPA, projects must incorporate measures (i.e., Area Specific Management Directives; ASMDs) for the protection of Covered Species as identified in Appendix A of the City's Subarea Plan. Two Covered Species were observed or detected in the study area (see Table 4).

In addition to identifying preserve areas within the City (and guiding implementation of the MSCP within its corporate boundaries), the City's Subarea Plan also regulates effects on natural communities throughout the City.

4.1.1 Multi-habitat Planning Area

The MHPA was developed by the City in cooperation with the USFWS, CDFW, property owners, developers, and environmental groups using the Preserve Design Criteria contained in the MSCP Plan, and the City Council-adopted criteria for the creation of the MHPA.

MHPA lands are large blocks of native habitat that have the ability to support a diversity of plant and animal life and, therefore, have been included within the City's Subarea Plan for conservation. The MHPA also delineates core biological resource areas and corridors targeted for conservation as these lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. The study area does not occur within or adjacent to the MHPA.

4.1.2 Land Use Adjacency Guidelines

Development adjacent to the MHPA must ensure that indirect impacts to the MHPA are minimized per Section 1.4.3 of the City's Subarea Plan. The Land Use Adjacency Guidelines do not apply to the project because the project study area is not within or adjacent to the MHPA.

5.0 SURVEY RESULTS

5.1 PHYSICAL CHARACTERISTICS

The study area contains level golf course; unvegetated, steep cliff face; vegetated steep canyon sides, and a riparian canyon bottom.

Elevations in the study area range between approximately 300 and 355 feet above mean sea level. Soils are mapped primarily as Terrace Escarpments with a lesser area Carlsbad gravelly loamy sand (five to nine percent slopes).

5.2 VEGETATION COMMUNITIES

Three vegetation communities and three land cover types were mapped in the study area: southern willow scrub, scrub oak chaparral, southern maritime chaparral, cliff face, disturbed land, and developed (golf course; Table 1; Figure 3).

Table 1 EXISTING VEGETATION COMMUNITIES AND LAND COVER TYPES IN THE STUDY AREA	
Vegetation Communities	Acres
Southern willow scrub (No Tier)	0.24
Scrub oak chaparral (Tier I)	0.49
Southern maritime chaparral (Tier I)	0.69
Disturbed land (Tier IV)	0.22
Cliff face (No Tier)	0.04
Developed (No Tier)	3.59
TOTAL	5.28

Southern Willow Scrub

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) often in association with mule fat (*Baccharis salicifolia*). This community occurs on loose, sandy, or fine gravely alluvium deposited near stream channels during flood flows (i.e., it is a “riparian” community that occurs in association with streams and rivers). Southern willow scrub in the study area is dominated by arroyo willow (*Salix lasiolepis*).

Scrub Oak Chaparral

Scrub oak chaparral is a dense, evergreen chaparral up to 20 feet tall, dominated by scrub oak (*Quercus* spp.) often with mountain mahogany (*Cercocarpus betuloides*). Scrub oak chaparral occurs in somewhat more mesic areas than many other chaparrals, such as north facing slopes, and recovers more rapidly from fires than other chaparrals due to its resprouting capabilities (Holland 1986; Keeley and Keeley 1988). Scrub oak chaparral in the study area is comprised of species such as Nuttall's scrub oak (*Quercus dumosa*), mission manzanita (*Xylococcus bicolor*), and lemonadeberry (*Rhus integrifolia*).

Southern Maritime Chaparral

Southern maritime chaparral is restricted to the weathered sands within the coastal fog belt in San Diego County from La Jolla to Carlsbad with some scattered patches to the south at Point Loma, Spooner's Mesa, and Penasquitos Canyon. This low, fairly open, chaparral is often dominated by wart-stemmed ceanothus (*Ceanothus verrucosus*). Additional species may include mission manzanita, chamise (*Adenostoma fasciculatum*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), Nuttall's scrub oak (*Quercus dumosa*), and summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*). Similar to other chaparral communities, fire is necessary for the reproduction of many of the constituent species which generally re-sprout from underground root crowns (Conrad 1987). The distribution of this community coincides with some of the most developed areas in San Diego County. Some characteristic species in this community in the study area include chamise, coast spice bush (*Cneoridium dumosum*), and San Diego barrel cactus (*Ferocactus viridescens*).

Disturbed Land

Disturbed land occurs along the upper edges of the canyon where it meets the developed golf course. It appears to be kept mostly cleared of vegetation, although some non-native species are present such as fennel (*Foeniculum vulgare*).

Cliff Face

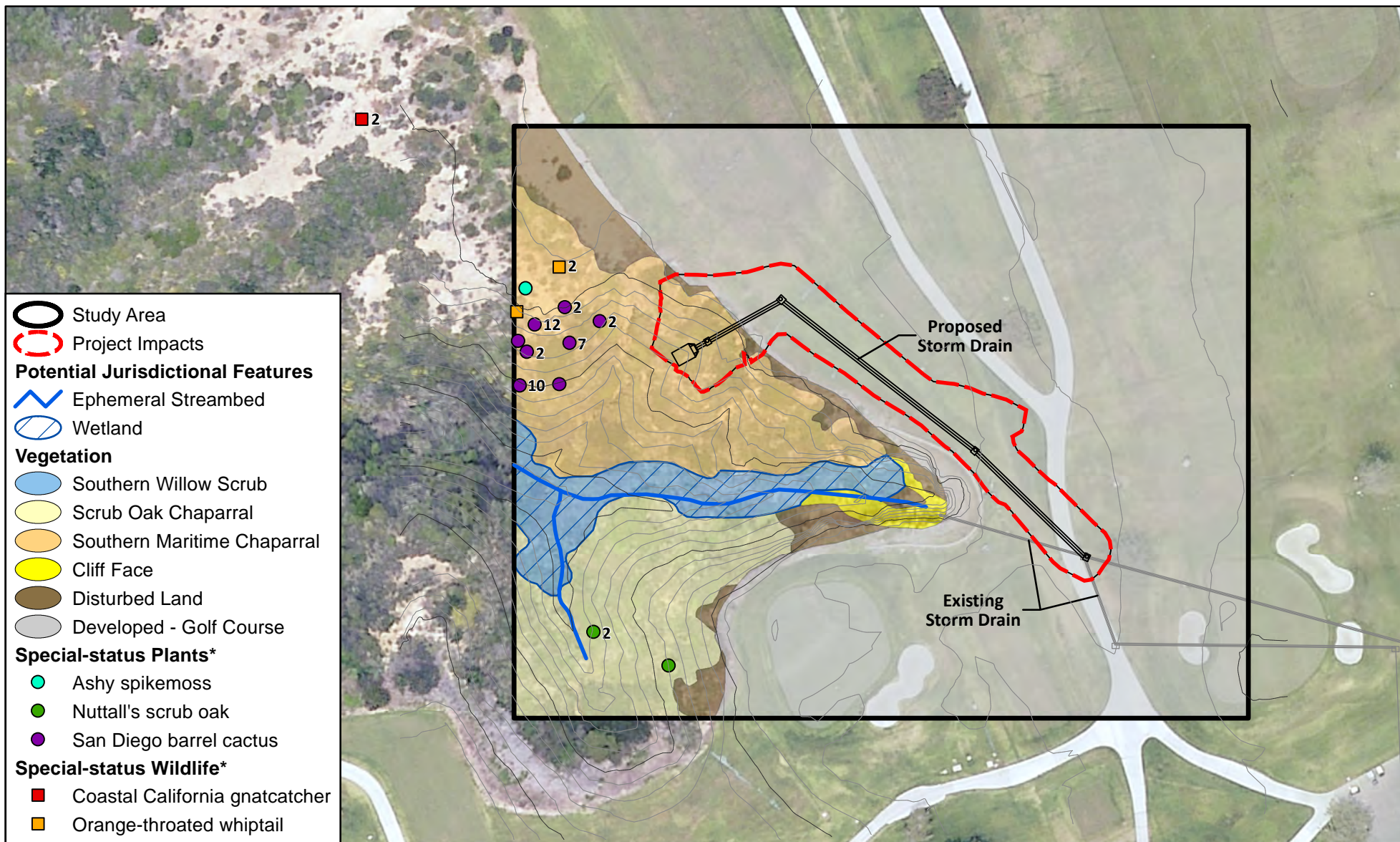
Cliff face in the study area is an area of essentially vertical, unvegetated, eroded land where the existing storm drain outlets into the canyon.

Developed

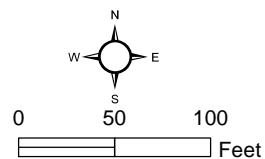
Developed land in the study area consists of the golf course.

5.3 PLANT SPECIES OBSERVED

Seventy-eight species of plants were observed in the study area. A list of these plant species is provided in Appendix A.



* Numbers next to plants and wildlife represent number of individuals observed.



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Figure 3

Biological Resources

TORREY PINES GOLF COURSE
STORM DRAIN REPAIR PROJECT

5.4 ANIMAL SPECIES OBSERVED OR DETECTED

Twenty-two species of animals were observed or detected in the study area. A list these animal species is provided in Appendix B.

5.5 SENSITIVE BIOLOGICAL RESOURCES

According to SDMC (Chapter 11, Article 3, Division 1) and the City's Biology Guidelines (City 2012), sensitive biological resources refers to upland and/or wetland areas that meet any one of the following criteria:

- (a) Lands that have been included in the City's MSCP Preserve (i.e., the MHPA);
- (b) Wetlands;
- (c) Lands outside the MHPA that contain Tier I, Tier II, Tier IIIA, or Tier IIIB habitats;
- (d) Lands supporting species or subspecies listed as rare, endangered, or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the FESA, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;
- (e) Lands containing habitats with MSCP Narrow Endemic species as listed in the Biology Guidelines (City 2012); or
- (f) Lands containing habitats of MSCP Covered Species as listed in the Biology Guidelines (City 2012).

5.5.1 Sensitive Vegetation Communities

Additionally, sensitive vegetation communities are those considered rare within the region or sensitive by CDFW (Holland 1986) and/or the City. These communities, in any form (e.g., including disturbed or burned), are considered sensitive because they have been historically depleted, are naturally uncommon, or support sensitive species. The study area supports three sensitive vegetation communities: southern willow scrub, scrub oak chaparral, and southern maritime chaparral (Table 1; Figure 3).

5.5.2 Sensitive Plant Species

Sensitive plant species are those that are considered federal, State, or CNPS rare, threatened, or endangered; MSCP Covered Species; or MSCP Narrow Endemic species. More specifically, if a species is designated with any of the following statuses (a-c below), it is considered sensitive per SDMC (Chapter 11, Article 3, Division 1):

- (a) A species or subspecies is listed as rare, endangered, or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the FESA, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;
- (b) A species is a Narrow Endemic as listed in the Biology Guidelines in the Land Development Manual (City 2012); and/or
- (c) A species is a Covered Species as listed in the Biology Guidelines in the Land Development Manual (City 2012).

A species may also be considered sensitive if it is included in the CNPS Inventory of Rare and Endangered Plants (CNPS 2017). California Rare Plant Rank 1 includes plants that are rare, threatened or endangered in California. California Rare Plant Rank 2 includes plants that are rare, threatened or endangered in California but more common elsewhere. California Rare Plant Rank 3 includes plants that are eligible for state listing as rare, threatened or endangered. California Rare Plant Rank 4 plants are locally significant but few, if any, are eligible for state listing.

Sensitive plant status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. A species that exhibits a small or restricted geographic range (such as those endemic to the region) is geographically rare. A species may be more or less abundant but occur only in very specific habitats. Lastly, a species may be widespread but exists naturally in small populations.

Four sensitive plant species were observed in the study area (Figure 3).

Ashy spike-moss (*Selaginella cinerascens*)

Status: CNPS Rare Plant Rank 4.1 (limited California distribution; seriously endangered in California)

Distribution: Orange and San Diego counties; northwestern Baja California, Mexico.

Habitat(s): This perennial, rhizomatous herb can be found on flat mesas in coastal sage scrub and chaparral.

Presence in the study area: One patch of ashy spike-moss was found in southern maritime chaparral in the northwestern portion of the study area (Figure 3).

Nuttall's scrub oak (*Quercus dumosa*)

Status: CNPS Rare Plant Rank 1B.1 (rare or endangered in California and elsewhere; seriously endangered in California)

Distribution: San Diego, Orange, and Santa Barbara counties; Baja California, Mexico.

Habitat(s): This perennial evergreen shrub can be found in chaparral with a relatively open canopy cover (also found in coastal scrub). On north-facing slopes, may grow in dense monotypic stands. Sandy or clay loam soils.

Presence in the study area: Three Nuttall's scrub oaks were found on the north-facing slope in scrub oak chaparral in the study area (Figure 3).

San Diego barrel cactus (*Ferocactus viridescens*)

Status: CNPS Rare Plant Rank 2B.1 (rare or endangered in California, common elsewhere; seriously endangered in California); MSCP Covered

Distribution: San Diego County; Baja California, Mexico.

Habitat(s): This perennial stem succulent's habitat includes chaparral, coastal scrub, valley and foothill grassland, and vernal pool areas.

Presence in the study area: Thirty-seven barrel cacti were found on the south-facing slope in southern maritime chaparral in the study area (Figure 3).

The CNDDDB and USFWS database searches identified 25 sensitive plant species in the study area or within one mile of it. Those species were considered for their potential to occur (Table 2). Table 2 lists sensitive plant species and their potential to occur that are not MSCP Narrow Endemic species; the Narrow Endemics are addressed separately in Table 3 (not all Narrow Endemic species were identified in the database searches). Narrow Endemic species are a subset of MSCP Covered Species (defined in Section 4.1, *Multiple Species Conservation Program Subarea Plan*). The City specifies additional conservation measures in its MSCP Subarea Plan to ensure impacts to Narrow Endemic plant species are avoided to the maximum extent practicable. No Narrow Endemic plant species were observed in the study area. All sensitive plant species that were not observed were determined to have low potential to occur or are not expected to occur as explained in Tables 2 and 3.

Table 2
SENSITIVE PLANT SPECIES
AND THEIR POTENTIAL TO OCCUR

SPECIES	SENSITIVITY¹	POTENTIAL TO OCCUR
California adolphia (<i>Adolphia californica</i>)	CNPS RPR 2B.1	Not expected. A perennial shrub that would have been observed, if present, during the April 2019 sensitive plant survey conducted during the species' bloom period (December to May). It was reported to the CNDDDB within one mile of the study area in Soledad Valley, three miles from coast in 1936.
South coast saltscale (<i>Atriplex pacifica</i>)	CNPS RPR 1B.2	Not expected. Occurs in coastal scrub, coastal dune, and playa habitats not present in the study area. It was not noted during the August 2018 site visit nor found during the April 2019 sensitive plant survey, both which occurred during its bloom period (March to October). It was reported to the CNDDDB within one mile of the study area in 2010 at Torrey Pines State Park, approximately 0.4 mile southeast of the Visitor's Center.
Ashy spike-moss (<i>Selaginella cinerascens</i>)	CNPS RPR 4.1	Observed.
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>)	Federal endangered CNPS RPR 1B.1 MSCP Covered	Not expected. An evergreen perennial shrub that would have been observed, if present, during the April 2019 sensitive plant survey, which occurred during its bloom period (December to June). It was reported to the CNDDDB within one mile of the study area in 2010 along both sides of Torrey Pines Park Road and in 1980 near Torrey Pines State Reserve, east of North Torrey Pines Road, and west of Flintkote Avenue.
Lakeside ceanothus (<i>Ceanothus cyaneus</i>)	CNPS RPR 1B.2 MSCP Covered	Not expected. An evergreen perennial shrub that would have been observed, if present, during the April 2019 sensitive plant survey, which occurred during its bloom period (April to June). It was reported to the CNDDDB in 1938 at Torrey Pines.
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	CNPS RPR 2B.2 MSCP Covered	Not expected. An evergreen perennial shrub that would have been observed, if present, during the April 2019 sensitive plant survey, which occurred during its bloom period (December to May). It was reported to the CNDDDB in 2013 in the Vicinity of Torrey Pines State Reserve.

**Table 2 (cont.)
SENSITIVE PLANT SPECIES
AND THEIR POTENTIAL TO OCCUR**

SPECIES	SENSITIVITY¹	POTENTIAL TO OCCUR
Orcutt's pincushion (<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>)	CNPS RPR 1B.1	Not expected. Occurs in coastal scrub and coastal dunes not present in the study area. It was not noted during the August 2018 site visit nor found during the April 2019 sensitive plant survey, both which occurred during its bloom period (January to August). It was reported to the CNDDDB within one mile of the study area in 2011 in Torrey Pines State Park; along Guy Fleming Trail, Razor Point Trail, Beach Trail, & Broken Hill Trail, Soledad Valley.
Orcutt's spineflower (<i>Chorizanthe orcuttiana</i>)	CNPS RPR 1B.1	Low. May be found in sandy openings in maritime chaparral but was not observed during the April 2019 sensitive plant survey, which was conducted during the species' bloom period (Mar to May). It was reported to the CNDDDB within one mile of the study area in 2017 at Torrey Pine State Reserve near the parking area.
Long-spined spineflower (<i>Chorizanthe polygonoides</i> var. <i>longispina</i>)	CNPS RPR 1B.2	Low. While it can be found in chaparral habitats, it is often on clay soil, which is not present in the study area. The species was not observed during the April 2019 sensitive plant survey, which was conducted during the species' bloom period (April to July). It was reported to the CNDDDB in 2010 within one mile of the study area in Torrey Pines State Reserve.
San Diego sand aster (<i>Corethrogyne filaginifolia</i> var. <i>incana</i>)	CNPS RPR 1B.1	Low. May be found in chaparral habitats, but it was not noted during the site visit in August 2018 during its bloom period (June to September). It was reported to the CNDDDB within one mile of the study area in 1992 at the intersection of North Torrey Pines Road and Genessee Avenue.
Del Mar sand aster (<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>)	CNPS RPR 1B.1 MSCP Covered	Low. May be found in chaparral habitats, but it was not noted during the site visit in August 2018 during its bloom period (May, July, August, September). It was reported to the CNDDDB in three locations within one mile of the study area: Torrey Pines State Reserve (2010), two miles north of the Genessee Avenue/North Torrey Pines Road intersection (1992), and along Johns Hopkins Drive at its junction with Tower Road (2001).

**Table 2 (cont.)
SENSITIVE PLANT SPECIES
AND THEIR POTENTIAL TO OCCUR**

SPECIES	SENSITIVITY¹	POTENTIAL TO OCCUR
Sticky dudleya (<i>Dudleya viscida</i>)	CNPS RPR 1B.2 MSCP Covered	Not expected. May be found in chaparral habitats but in rocky areas not present in the study area. It was reported to the CNDDDB within one mile of the study area in 1987 at Torrey Pines State Park.
Sand-loving wallflower (<i>Erysimum ammophilum</i>)	CNPS RPR 1B.2 MSCP Covered	Low. May be found in chaparral habitats, but it was not found during the April 2019 sensitive plant survey during its bloom period (February to June). It was reported to the CNDDDB within one mile of the study area along a marsh trail east of the road at the southern boundary of Peñasquitos Marsh (no date provided).
Cliff spurge (<i>Euphorbia misera</i>)	CNPS RPR 2B.2	Not expected. Found in rocky habitats (coastal bluff scrub, coastal scrub, and Mojavean desert scrub) not present in the study area. A perennial shrub that would have been observed, if present. Not noted during the August 2018 site visit nor during the April 2019 sensitive plant survey, which both occurred during the species' bloom period (December to August [October]). It was reported to the CNDDDB within one mile of the study area in two locations in Torrey Pines State Reserve in 2015 and 1982.
San Diego barrel cactus (<i>Ferocactus viridescens</i>)	CNPS RPR 2B.1 MSCP Covered	Observed.
Beach goldenaster (<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>)	CNPS RPR 1B.1	Low. May be found in coastal chaparral, but it was not noted during the August 2018 site visit nor found during the April 2019 sensitive plant survey, both which occurred during its bloom period (March to December). It was reported to the CNDDDB within one mile of the study area in 2007 at Torrey Pines Beach.
Decumbent goldenbush (<i>Isocoma menziesii</i> var. <i>decumbens</i>)	CNPS RPR 1B.2	Low. May be found in chaparral, but it was not noted during the August 2018 site visit nor found during the April 2019 sensitive plant survey, both which occurred during its bloom period (April to November). It was reported to the CNDDDB within one mile of the study area in 1975 at the Callan Cliffs north of La Jolla.

**Table 2 (cont.)
SENSITIVE PLANT SPECIES
AND THEIR POTENTIAL TO OCCUR**

SPECIES	SENSITIVITY¹	POTENTIAL TO OCCUR
San Diego marsh-elder (<i>Iva hayesiana</i>)	CNPS RPR 2B.2	Not expected. Occurs in marsh, swamp, and playa habitats not present in the study area. It was not noted during the August 2018 site visit nor found during the April 2019 sensitive plant survey, both which occurred during its bloom period (April to October). It was reported to the CNDDDB within one mile of the study area in 2015 at the south end of Torrey Pines State Reserve.
Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	CNPS RPR 1B.1	Not expected. Occurs in coastal salt marshes and swamps, playas, and vernal pools not present in the study area. It was not found during the April 2019 sensitive plant survey during its bloom period (February to June). It was reported to the CNDDDB within one mile of the study area in 1969 at Peñasquitos Lagoon.
Sea dahlia (<i>Leptosyne maritima</i>)	CNPS RPR 2B.2	Not expected. Occurs in coastal bluff scrub and coastal scrub habitats not present in the study area. It was not found during the April 2019 sensitive plant survey during its bloom period (March to May). It was reported to the CNDDDB within one mile of the study area in three locations in 2015—two in Torrey Pine State Reserve and one south of the Reserve.
Brand's star phacelia (<i>Phacelia stellaris</i>)	CNPS RPR 1B.1	Not expected. Occurs in coastal dunes and coastal scrub habitats not present in the study area. It was not found during the April 2019 sensitive plant survey during its bloom period (March to June). It was reported to the CNDDDB within one mile of the study at Torrey Pines State Reserve (no date provided).
Torrey pine (<i>Pinus torreyana</i> ssp. <i>torreyana</i>)	CNPS RPR 1B.2 MSCP Covered	Not expected. May occur in chaparral on sandstone substrates, but this species is a perennial evergreen tree that would have been observed, if present, in the study area. It was reported to the CNDDDB within one mile of the study at Torrey Pines State Reserve in 2014.

Table 2 (cont.) SENSITIVE PLANT SPECIES AND THEIR POTENTIAL TO OCCUR		
SPECIES	SENSITIVITY¹	POTENTIAL TO OCCUR
Nuttall's scrub oak (<i>Quercus dumosa</i>)	CNPS RPR 1B.1	Observed.

¹CNPS RPR = California Native Plant Society Rare Plant Rank

1B.1 = Rare, threatened, or endangered in California and elsewhere. Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

1B.2 = Rare, threatened, or endangered in California and elsewhere. Moderately endangered in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat).

2B.1 = Rare, threatened, or endangered in California, but more common elsewhere. Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

2B.2 = Rare, threatened, or endangered in California, but more common elsewhere. Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat).

4.1 = A watch list for species of limited distribution. Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

MSCP Covered = Species for which the City has take authorization from the USFWS and CDFW within the City's subarea.

Table 3 MSCP NARROW ENDEMIC PLANT SPECIES¹ AND THEIR POTENTIAL TO OCCUR		
SPECIES	SENSITIVITY²	POTENTIAL TO OCCUR
San Diego thorn-mint (<i>Acanthomintha ilicifolia</i>)	Federal threatened State endangered CNPS RPR 1B.1	Not expected. Clay soils and habitat (vernal pools) not present in the study area. Not found during the April 2019 sensitive plant survey conducted during the species' bloom period (April to June). No CNDDDB or USFWS records within one mile of the study area.
Shaw's agave (<i>Agave shawii</i>)	CNPS RPR 2B.1	Not expected. A perennial, leaf succulent that would have been observed, if present. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (September to May). No CNDDDB records within one mile of the study area.
San Diego ambrosia (<i>Ambrosia pumila</i>)	Federal endangered CNPS RPR 1B.1	Low. May occur in chaparral habitats with sandy loam or clay soils. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (April to October). There are no CNDDDB records within one mile of the study area.
Aphanisma (<i>Aphanisma blitoides</i>)	CNPS RPR 1B.2	Not expected. Occurs in coastal bluff scrub, coastal dune, and coastal scrub habitats not present in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (February to June). Reported to CNDDDB in Torrey Pines State Park in 1973 and in a small canyon north of the Torrey Pines Glider Port in 2010.
Coastal dunes milk vetch (<i>Astragalus tener</i> var. <i>titi</i>)	Federal endangered State endangered CNPS RPR 1B.1	Not expected. Occurs in sandy places along the coast such as coastal dunes, which are not present in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (March to May). The only record of this species within one mile of the study area is at "Soledad" from 1882.
Encinitas baccharis (<i>Baccharis vanessae</i>)	Federal threatened State endangered CNPS RPR 1B.1	Low. May occur on sandstone in maritime chaparral. Not observed during the August 2018 site visit during the species' bloom period (August, October, November). The only Baccharis species found in the study area was positively identified as <i>Baccharis pilularis</i> subsp. <i>consanguinea</i> (coyote brush). There are no CNDDDB or USFWS records of this species within one mile of the study area.

Table 3 (cont.) MSCP NARROW ENDEMIC PLANT SPECIES¹ AND THEIR POTENTIAL TO OCCUR		
SPECIES	SENSITIVITY²	POTENTIAL TO OCCUR
Otay tarplant (<i>Deinandra conjugens</i>)	Federal threatened State endangered CNPS RPR 1B.1	Not expected. Not known from near the project vicinity. Found on clay soil in coastal scrub and grassland habitats not present in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period ([April] May to June). There are no CNDDDB or USFWS records within one mile of the study area.
Short-leaved dudleya (<i>Dudleya brevifolia</i>)	State endangered CNPS RPR 1B.1	Low. May occur on dry, sandstone in maritime chaparral openings. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (April to May). There is one CNDDDB record of the species within one mile of the study area, and it is from 2017 at Torrey Pines State Reserve north of the golf course.
Variegated dudleya (<i>Dudleya variegata</i>)	CNPS RPR 1B.2	Not expected. May occur in chaparral habitats but on clay soils not present in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (April to June). No CNDDDB records within one mile of the study area.
San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>)	Federal endangered State endangered CNPS RPR 1B.1	Not expected. Suitable habitat (vernal pools) does not occur in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (April to June). No CNDDDB or USFWS records within one mile of the study area.
Spreading navarretia (<i>Navarretia fossalis</i>)	Federal threatened CNPS RPR 1B.1	Not expected. Suitable habitat (vernal pools, swamps) does not occur in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (April to June). No CNDDDB or USFWS records within one mile of the study area.

Table 3 (cont.) MSCP NARROW ENDEMIC PLANT SPECIES AND THEIR POTENTIAL TO OCCUR		
SPECIES	SENSITIVITY²	POTENTIAL TO OCCUR
Snake cholla (<i>Cylindropuntia californica</i> var. <i>californica</i>)	CNPS RPR 1B.1	Not expected. May occur in chaparral but is a perennial, stem succulent that would have been observed, if present, during the August 2018 site visit and April 2019 sensitive plant survey (the latter of which was conducted during the species' bloom period [April to May]). There are no CNDDDB records within one mile of the study area.
California Orcutt grass (<i>Orcuttia californica</i>)	Federal endangered State endangered CNPS RPR 1B.1	Not expected. Suitable habitat (vernal pools) does not occur in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (April to August). There are no CNDDDB or USFWS records within one mile of the study area.
San Diego mesa mint (<i>Pogogyne abramsii</i>)	Federal endangered State endangered CNPS RPR 1B.1	Not expected. Suitable habitat (vernal pools) does not occur in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (March to July). There are no CNDDDB or USFWS records within one mile of the study area.
Otay Mesa mint (<i>Pogogyne nudiuscula</i>)	Federal endangered State endangered CNPS RPR 1B.1	Not expected. Suitable habitat (vernal pools) does not occur in the study area. Not observed during the April 2019 sensitive plant survey conducted during the species' bloom period (May to July). There are no CNDDDB or USFWS records within one mile of the study area.

¹ Narrow Endemic species are a subset of MSCP Covered Species.

² CNPS RPR = California Native Plant Society Rare Plant Rank

1B.1 = Rare, threatened, or endangered in California and elsewhere. Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

1B.2 = Rare, threatened, or endangered in California and elsewhere. Moderately endangered in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat).

2B.1 = Rare, threatened, or endangered in California but more common elsewhere. Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).

5.5.3 Sensitive Animal Species

Sensitive animal species are those that are considered federal or state threatened or endangered; MSCP Covered Species; or MSCP Narrow Endemic species. More specifically, if a species is designated with any of the following statuses (a-c below), it is considered sensitive per SDMC (Chapter 11, Article 3, Division 1):

- (a) A species or subspecies is listed as endangered or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the FESA, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;
- (b) A species is a Narrow Endemic as listed in the Biology Guidelines in the Land Development Manual (City 2012); and/or
- (c) A species is a Covered Species as listed in the Biology Guidelines in the Land Development Manual (City 2012).

A species may also be considered sensitive if it is included on the CDFW Special Animals List (CDFW 2018) as a State Species of Special Concern, State Watch List species, State Fully Protected species, or Federal Bird of Conservation Concern.

Generally, the principal reason an individual taxon (species or subspecies) is considered sensitive is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss.

One sensitive animal species, orange-throated whiptail (*Aspidoscelis hyperythra*), was observed in the study area (Figure 3).

Orange-throated whiptail (*Aspidoscelis hyperythra*)

Status: State Watch List; MSCP Covered

Distribution: Southern Orange County and southern San Bernardino County, south through Baja California

Habitat(s): Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.).

Presence in the study area: Three orange-throated whiptails were observed in southern maritime chaparral in the study area (Figure 3).

The CNDDDB and USFWS database searches identified 12 sensitive species in the study area or within one mile of it. Those species were considered for their potential to occur (Table 4). One species, coastal California gnatcatcher (*Poliophtila californica californica*), has high potential to occur since it was observed just outside the study area (Figure 3), and three reptile species have moderate potential to occur. The remaining species have low potential to occur or are not expected due to the absence of habitat.

Table 4
SENSITIVE ANIMAL SPECIES
AND THEIR POTENTIAL TO OCCUR

SPECIES	SENSITIVITY ¹	POTENTIAL TO OCCUR
Reptiles		
Southern California legless lizard (<i>Anniella stebbinsi</i>)	SSC	Moderate. May occur in sandy riparian areas or sparsely vegetated chaparral with moist, loose, warm soil. Suitable habitat may be present in the study area. Reported to the CNDDDB within one mile of the study area in 1953 at Peñasquitos Lagoon in Torrey Pines State Reserve.
Orange-throated whiptail (<i>Aspidoscelis hyperythra</i>)	WL MSCP Covered	Observed.
Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	SSC	Moderate. May occur in hot and dry, open areas with sparse foliage including woodland and riparian areas that may be suitable in the study area. Reported to the CNDDDB within one mile of the study area in Torrey Pines State Reserve just west of Torrey Pines Road and just north of the golf course.
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	MSCP Covered	Moderate. May occur in open areas with sandy soil and low vegetation—often along dirt roads.
Coronado skink (<i>Plestiodon skiltonianus interparietalis</i>)	WL	Low. May occur in chaparral, especially in open sunny areas and the edges of creeks and rivers, but prefers rocky areas near streams with a lot of vegetation.
Birds		
Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	WL MSCP Covered	Low. May be found breeding in chaparral habitats but prefers coastal sage scrub. Suitable chaparral habitat may develop following a fire. Reported to the CNDDDB within one mile of the study area in 1992 east of Interstate 5 between Peñasquitos Creek and Carmel Valley.
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	Federal threatened, BCC SSC MSCP Covered	Not expected. Habitat includes beaches, dunes, and salt flats not present in the study area. Reported to the CNDDDB within one mile of the study area in 1978 in Los Peñasquitos Lagoon.

**Table 4 (cont.)
SENSITIVE ANIMAL SPECIES
AND THEIR POTENTIAL TO OCCUR**

SPECIES	SENSITIVITY¹	POTENTIAL TO OCCUR
Birds		
Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	Federal threatened SSC MSCP Covered	High. Two gnatcatchers were observed foraging together in August 2018 outside the study area to the north in southern maritime chaparral like that which is present in the study area.
California black rail (<i>Laterallus jamaicensis coturniculus</i>)	BCC State threatened, FP	Not expected. Habitat includes marshes and wet meadows that are not present in the study area. Reported to the CNDDB within one mile of the study area in 1954 in the vicinity of Sorrento, within Soledad Valley, one mile north of Interstate 5 and Genessee Avenue intersection, northeast of La Jolla.
Belding's savannah sparrow (<i>Passerculus sandwichensis beldingi</i>)	State endangered MSCP Covered	Not expected. Habitat includes coastal marshes dominated by pickleweed (<i>Salicornia</i> spp.) that are not present in the study area. Reported to the CNDDB within one mile of the study area in 2001 in Los Peñasquitos Lagoon.
Light-footed Ridgway's rail (<i>Rallus obsoletus levipes</i>)	Federal endangered State endangered, FP MSCP Covered	Not expected. Habitat includes coastal salt marshes and brackish and freshwater sites that are not present in the study area. Reported to the CNDDB within one mile of the study area in 2007 in Los Peñasquitos Lagoon. Reported to the USFWS within one mile of the study area in 2014 in Sorrento Valley.

Table 4 (cont.) SENSITIVE ANIMAL SPECIES AND THEIR POTENTIAL TO OCCUR		
SPECIES	SENSITIVITY¹	POTENTIAL TO OCCUR
Birds		
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Federal endangered State endangered MSCP Covered	Low. Habitat includes riparian woodland, riparian forest, mule fat scrub, and southern willow scrub. Potential habitat in the study area consists of a 0.24-acre patch of southern willow scrub-disturbed that is potentially too small to support least Bell's vireo breeding (the species requires a minimum of 0.50 acre; Kus 2002). Reported to the CNDDDB within one mile of the study area in 2006 in Soledad Valley at the mouth of Los Peñasquitos Creek. Reported to the USFWS (10 records) within one mile of the study area during the period 2000 through 2016 in Soledad Valley, Sorrento Valley, and Los Peñasquitos areas.

¹BCC = Bird of Conservation Concern—Non-listed subspecies or populations of federal threatened or endangered species.

SSC = State Species of Special Concern: Declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

FP = Fully Protected refers to all vertebrate and invertebrate taxa of concern to the California Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.

WL = State Watch List: Species that are/were: a) not on the current list of species of special concern but were on previous lists and have not been state listed under the California Endangered Species Act; b) previously state or federally listed and now are on neither list; or c) on the list of "Fully Protected" species.

MSCP Covered = Species for which the City has take authorization from the USFWS and CDFW within the City's subarea.

5.5.4 Waters of the U.S., Waters of the State, and City Wetlands

There is one drainage in the central portion of the study area that may be considered jurisdictional by Corps, CDFW, and California RWQCB (Figure 3). The drainage is ephemeral; may, in part, support hydric soils; and a portion of it supports City wetland (i.e., southern willow scrub; Figure 3).

5.5.5 Wildlife Corridors

Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Wildlife corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species presence. Local corridors provide access to resources such as food, water, and shelter. Animals use these corridors, which are often hillsides or tributary drainages, to move between different habitats areas. Regional corridors provide these functions and link two or more large habitat areas. Regional corridors provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

While Torrey Pines State Reserve occurs north and west of the golf course and allows for movement in a generally north-south direction, the Reserve canyons that trend inland and eastward, including the canyon in the study area, are bordered by the wide open, developed golf course that would not attract wildlife movement. The canyon in the study area, therefore, likely provides for local movement just within the canyon itself and the Reserve to the west, and the project is an underground storm drain that would not be an impediment to wildlife use.

6.0 PROJECT IMPACT ANALYSIS

The City's CEQA Significance Determination Thresholds (City 2016) are used to establish whether a proposed project may result in a 'significant effect.' A "significant effect" is defined as a "substantial or potentially substantial adverse change in the environment." Impacts to biological resources are evaluated by City staff through the CEQA review process, the ESL Regulations, and the City Biology Guidelines (City 2012), as well as through the review of a project's consistency with the City's MSCP Subarea Plan. For projects within the City or carried out by the City that may affect sensitive biological resources, potential impacts to such sensitive biological resources must be evaluated using the eight significance criteria outlined in the City's CEQA Significance Determination Thresholds (City 2016). Each of these criteria is addressed in this section.

6.1 CRITERION 1

Would the project result in substantial adverse impacts, either directly or through habitat modifications, to any species identified as a candidate, sensitive or special status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFW or USFWS?

6.1.1 Criterion 1 Impact Analysis

Direct Impacts

No sensitive plant or animal species were observed or detected in the project impact footprint (Figure 3).

Indirect Impacts

Indirect impacts consist of secondary effects of a project that can occur during construction or from a project once built and affect sensitive plant and animal species and their habitats. Less-than-significant impacts would occur to these resources from potential indirect effects for the reasons listed below.

During construction, all potential drainage and toxics impacts would be addressed through the required use of the City's Construction Site Best Management Practices (San Diego Municipal Code [SDMC] §43.0301).

Project construction will occur during daylight hours; no night lighting will be used.

The project will involve returning the temporarily impacted area to its existing condition and revegetating it per San Diego Municipal Code Landscape Standards, which prohibits the use of invasive plants.

Project conditions, which includes the clear delineation of the impact footprint, will avoid the potential impact of construction activity outside the impact footprint.

Construction of the project would include the use of dust control measures required in SDMC Section 142.0101 et seq.

6.2 CRITERION 2

Would the project result in a substantial adverse impacts on any Tier I, Tier II, Tier IIIA or Tier IIIB habitats as identified in the Biology Guidelines or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?

6.2.1 Criterion 2 Impact Analysis

Direct Impacts

Direct impacts from the project would be temporary (except for where the new energy dissipater, outfall, and A-5 cleanouts would be installed), limited to a total of approximately 0.42 acre (Figure 3), and would affect three vegetation communities/land cover types as shown in Table 5.

The temporary impacts would occur from pipeline excavation grading, which includes removal of a portion of the existing golf cart path that would later be reconstructed. Upon completion of the storm drain improvements, the excavation footprint would be filled with contours restored to their existing condition, and the land would be revegetated per San Diego Municipal Code Landscape Standards.

The permanent impacts of the project would be where southern maritime chaparral is replaced with the energy dissipater and outfall and where A-5 cleanouts would be installed along the pipe in developed land.

Table 5 IMPACTS TO VEGETATION COMMUNITIES AND LAND COVER TYPES IN THE STUDY AREA			
Vegetation Community/ Land Cover Type	Acre Impacted	Mitigation Ratio	Mitigation Required (Acre)
Southern maritime chaparral (Tier I)	0.08 ¹	0:1	0.00
Disturbed land (Tier IV)	0.01 ²	0:1	0.00
Developed (No Tier)	0.33 ¹	0:1	0.00
TOTAL	0.42¹	NA	0.00

¹Includes both temporary and permanent impacts; Permanent impacts total 190 square feet which is negligible in the above totals

²Temporary impacts

According to the City's Biology Guidelines (City 2012), total impacts to 0.1 acre or more of Tiers I through III habitats are significant and require mitigation. Therefore, project impacts to 0.08 acre of Tier I southern maritime chaparral would not be considered significant, and mitigation would not be required.

Impacts to Tier IV disturbed land, as well as developed also would be less than significant because these communities/land cover types do not have significant habitat value, so mitigation would not be required.

Indirect Impacts

Indirect impacts to Tier I southern maritime chaparral would be less than significant for the reasons listed under Criterion 1.

6.3 CRITERION 3

Would the project result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pools, riparian areas, etc.) through direct removal, filling, hydrological interruption, or other means?

6.3.1 Criterion 3 Impact Analysis

Direct Impacts

The project would not impact any area that would be considered jurisdictional by the Corps, CDFW, California RWQCB, or as City wetland (southern willow scrub) because none is present within the project impact footprint. Therefore, no permits or City wetland deviation findings are required.

Indirect Impacts

Indirect impacts to areas considered jurisdictional by the Corps, CDFW, California RWQCB, or as City wetland would be less than significant for the reasons listed under Criterion 1.

6.4 CRITERION 4

Would the project substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites?

6.4.1 Criterion 4 Impact Analysis

Direct Impacts

The project would not interfere substantially with the movement of wildlife in the study area canyon because it is an underground storm drain. Wildlife nursery sites are specific sites for reproduction and include, for example, bat nursery colonies, which were not observed/detected in the study area.

6.5 CRITERION 5

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, NCCP, or other approved local, regional or state habitat conservation plan, either within the MSCP plan area or in the surrounding region?

6.5.1 Criterion 5 Impact Analysis

The project would not conflict with the requirements of any local, regional, or state conservation plans. The project involves repair of a storm drain outfall on the edge of the golf course, along a coastal canyon and is consistent with the City's MSCP Subarea Plan (See Criterion 6 Impact Analysis).

6.6 CRITERION 6

Would the project introduce a land use within an area adjacent to the MHPA that would result in adverse edge effects?

6.6.1 Criterion 6 Impact Analysis

The project study area is not within or adjacent to the MHPA and, therefore, impacts resulting from project activities would not result in adverse edge effects.

6.7 CRITERION 7

Would the project conflict with any local policies or ordinances protecting biological resources?

6.7.1 Criterion 7 Impact Analysis

The natural areas within the project study area have potential to support nests for common avian species. Protection of avian species is required under the Migratory Bird Treaty Act and/or the California Fish and Game Code (§3503) under which it is unlawful to “take, possess, or needlessly destroy” avian nests or eggs (see Appendix C). Any vegetation removal or trimming that occurs during the nesting season (January 15 to September 15) would require standard avian protection measures, as outlined in Section 7.0 of this report. The nesting season timeframe includes nesting for raptor species which starts on January 15.

6.8 CRITERION 8

Would the project result in an introduction of invasive species of plants into a natural open space area?

6.8.1 Criterion 8 Impact Analysis

The project will involve returning the temporarily impacted area to its existing condition and revegetating it per San Diego Municipal Code Landscape Standards, which prohibits the use of invasive plants.

6.9 CUMULATIVE IMPACTS

Cumulative impacts include both the potential regional (long-term, additive) effects of a project and the ways a project, in combination with other projects and conditions in a region, may affect an ecosystem or one of its components beyond the project limits and on a regional scale. Because the project would be consistent with the MSCP, a regional conservation plan, there would be no cumulatively significant biological impacts.

7.0 AVOIDANCE AND MINIMIZATION MEASURES

The project would have a direct, less than significant impact (less than 0.1 acre) on Tier I southern maritime chaparral and, therefore, mitigation is not required. To ensure that project construction stays within the approved limits, the following Project conditions for **Biological Resource Protection During Construction** shall be implemented, as applicable.

I. Prior to Construction

- A. **Biologist Verification** -The owner/permittee shall provide a letter to the City’s Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego’s Biological Guidelines (2012), has been retained to implement the project’s biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.

- B. **Preconstruction Meeting** - The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up monitoring measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.
- C. **Biological Documents** - The Qualified Biologist shall submit all required documentation to MMC verifying that any special reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.
- D. **BCME** -The Qualified Biologist shall present a Biological Construction Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.
- E. **Resource Delineation** - Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.
- F. **Education** -Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

- A. **Monitoring-** All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on “Exhibit A” and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSV). The CSV shall be e-mailed to MMC on the 1st day of monitoring, the 1st week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.
- B. **Subsequent Resource Identification** - The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna onsite (e.g., flag plant specimens for avoidance during access, etc). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. Post Construction Measures

- A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, state CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

8.0 REFERENCES

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9.0 PREPARER'S QUALIFICATIONS/CERTIFICATIONS

Greg Mason, Principal/Senior Biologist, Alden Environmental, Inc.

Summary of Qualifications

Mr. Mason is the Principal and Senior Biologist at Alden Environmental, Inc. He has over 20 years' experience working in the environmental field and has participated in hundreds of projects in San Diego County. His experience includes oversight of large- and small-scale mitigation compliance programs, including habitat restoration, sensitive species surveys, vegetation mapping, wetland delineations, construction monitoring, impact analysis, report preparation, project permitting, and project management. He has worked extensively with both public and private clients, in coordination with federal, state and local regulatory staff, in the implementation of mitigation and monitoring programs in the field. He assists clients in obtaining aquatic resources permits including U.S. Army Corps Section 404 Permits, RWQCB Section 401 Certifications, and CDFW 1600 Streambed Alteration Agreements. Through his permitting work, Mr. Mason also facilitates the Section 7 consultation process with the USFWS and negotiates conservation measures. Mr. Mason is permitted by the USFWS to conduct presence/absence surveys for Quino checkerspot butterfly; San Diego, Riverside, vernal pool, Conservancy, and longhorn fairy shrimps; and vernal pool tadpole shrimp throughout the range of each species, and is also authorized to conduct dry season fairy shrimp analysis, identification, and culturing.

Education

Bachelor of Science, Natural Resources Planning & Interpretation, Humboldt State University, 1992

Registrations/Certifications/Licenses

- USFWS Threatened/ Endangered Wildlife Species Permit (quino checkerspot butterfly; San Diego, Riverside, vernal pool, Conservancy, and longhorn fairy shrimps; and vernal pool tadpole shrimp)
- USFWS authorized for dry season fairy shrimp analysis, identification, and culturing
- CDFW Scientific Collecting Permit SC-007619
- County of San Diego, Approved Biological Consultant and Approved Revegetation Planner

Professional Affiliations

- California Native Plant Society
- Returned Peace Corps Volunteer Association

Appendix A

Plant Species Observed

Appendix A **Plant Species Observed** **Torrey Pines Golf Course Storm Drain Repair Project**

<u>Family</u>	<u>Scientific Name</u>	<u>Common Name</u>
Agavaceae	<i>Chlorogalum parviflorum</i>	Small-Flower Soap-Plant/Amole
Aizoaceae	<i>Carpobrotus chilensis</i>	Sea-Fig
	<i>Carpobrotus edulis</i>	Hottentot-Fig
Anacardiaceae	<i>Malosma laurina</i>	Laurel Sumac
	<i>Rhus integrifolia</i>	Lemonadeberry
Apiaceae	<i>Foeniculum vulgare</i>	Sweet Fennel
	<i>Tauschia arguta</i>	Southern Tauschia
Arecaceae	<i>Phoenix canariensis</i>	Canary Island Date Palm
Asteraceae	<i>Artemisia californica</i>	Coastal Sagebrush
	<i>Baccharis pilularis</i> subsp. <i>consanguinea</i>	Chaparral Broom, Coyote Brush
	<i>Bidens pilosa</i>	Common Beggar's Tick, Spanish Needles
	<i>Cirsium vulgare</i>	Bull Thistle
	<i>Deinandra fasciculata</i>	Fascicled Tarweed
	<i>Erigeron canadensis</i>	Horseweed
	<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	Long-Stem Golden-Yarrow
	<i>Gnaphalium palustre</i>	Lowland Cudweed
	<i>Logfia gallica</i>	Narrow-Leaf Cottonrose
	<i>Matricaria discoidea</i>	Common Pineapple-Weed
	<i>Pseudognaphalium californicum</i>	California Everlasting
	<i>Pseudognaphalium stramineum</i>	Cotton-Batting Plant
	<i>Psilocarphus tenellus</i>	Slender Woolly-Marbles
	<i>Sonchus asper</i> subsp. <i>asper</i>	Prickly Sow-Thistle
	<i>Sonchus oleraceus</i>	Common Sow-Thistle
Boraginaceae	<i>Stephanomeria diegensis</i>	San Diego Wreath-Plant
	<i>Cryptantha intermedia</i> var. <i>intermedia</i>	Nievitans Cryptantha
Brassicaceae	<i>Raphanus sativus</i>	Wild Radish
Cactaceae	<i>Ferocactus viridescens</i> *	San Diego Barrel Cactus
	<i>Opuntia littoralis</i>	Coast Prickly-Pear
Caryophyllaceae	<i>Spergularia bocconi</i>	Boccone's Sand-Spurrey
Cistaceae	<i>Crocanthemum scoparium</i> var. <i>vulgare</i>	Coast Peak Rush-Rose
Crassulaceae	<i>Crassula connata</i>	Pygmyweed
	<i>Dudleya edulis</i>	Ladies' Fingers
	<i>Dudleya lanceolata</i>	Lance-Leaf Dudleya
Cucurbitaceae	<i>Marah macrocarpa</i>	Manroot, Wild-Cucumber
Cyperaceae	<i>Cyperus eragrostis</i>	Tall Flatsedge
Dryopteridaceae	<i>Dryopteris arguta</i>	Coastal Wood Fern
Ericaceae	<i>Xylococcus bicolor</i>	Mission Manzanita

Fabaceae	<i>Acacia cyclops</i>	Western Coastal Wattle
	<i>Acmispon glaber</i> var. <i>glaber</i>	Coastal Deerweed
	<i>Melilotus indicus</i>	Indian Sweetclover
Fagaceae	<i>Quercus dumosa</i> *	Nuttall's Scrub Oak
Geraniaceae	<i>Erodium cicutarium</i>	Red-Stem Filaree/Storksbill
Grossulariaceae	<i>Ribes speciosum</i>	Fuchsia-Flower Gooseberry
Iridaceae	<i>Sisyrinchium bellum</i>	Blue-Eyed-Grass
Lamiaceae	<i>Salvia mellifera</i>	Black Sage
Montiaceae	<i>Claytonia perfoliata</i> subsp. <i>perfoliata</i>	Miner's-Lettuce
Myrsinaceae	<i>Anagallis arvensis</i>	Scarlet Pimpernel, Poor Man's Weatherglass
Namaceae	<i>Eriodictyon crassifolium</i> var. <i>crassifolium</i>	Felt-Leaf Yerba Santa
Nyctaginaceae	<i>Mirabilis laevis</i> var. <i>crassifolia</i>	Coastal Wishbone Plant
Onagraceae	<i>Camissoniopsis hirtella</i>	Field Sun Cup
Oxalidaceae	<i>Oxalis pes-caprae</i>	Bermuda-Buttercup
Phrymaceae	<i>Diplacus puniceus</i>	Coast Monkey Flower
Plantaginaceae	<i>Antirrhinum nuttallianum</i> subsp. <i>nuttallianum</i>	Nuttall's Snapdragon
	<i>Linaria bipartita</i>	Clovenlip Toadflax
	<i>Plantago erecta</i>	Dot-Seed Plantain
Poaceae	<i>Avena barbata</i>	Slender Wild Oat
	<i>Brachypodium distachyon</i>	Purple False Brome
	<i>Bromus diandrus</i>	Ripgut Grass
	<i>Bromus rubens</i>	Foxtail Chess, Red Brome
	<i>Cortaderia selloana</i>	Selloa Pampas Grass
	<i>Cynodon dactylon</i>	Bermuda Grass
	<i>Ehrharta longiflora</i>	Long-Flower Veldt Grass
	<i>Elymus condensatus</i>	Giant Wild-Rye
	<i>Poa secunda</i> subsp. <i>secunda</i>	One-Sided Blue Grass
	<i>Polypogon monspeliensis</i>	Annual Beard Grass
	<i>Stipa pulchra</i>	Purple Needle Grass
Polemoniaceae	<i>Navarretia hamata</i> subsp. <i>hamata</i>	Hooked Skunkweed
Polygonaceae	<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	Coast California Buckwheat
Rhamnaceae	<i>Rhamnus crocea</i>	Spiny Redberry
Rosaceae	<i>Adenostoma fasciculatum</i> var. <i>fasciculatum</i>	Chamise
	<i>Heteromeles arbutifolia</i>	Toyon, Christmas Berry
Rutaceae	<i>Cneoridium dumosum</i>	Coast Spice Bush, Bush-Rue
Salicaceae	<i>Salix lasiolepis</i>	Arroyo Willow
Scrophulariaceae	<i>Myoporum laetum</i>	Ngaio, Mousehole Tree
Selaginellaceae	<i>Selaginella cinerascens</i> *	Ashy Spike-Moss
Solanaceae	<i>Nicotiana glauca</i>	Tree Tobacco
	<i>Solanum americanum</i>	White Nightshade
	<i>Solanum lycopersicum</i>	Garden Tomato

*Sensitive Species

Appendix B

Animal Species Observed

Appendix B
Animal Species Observed or Detected
Torrey Pines Golf Course Storm Drain Repair Project

Common Name

Scientific Name

Amphibians

Baja California Chorus Frog

Pseudacris hypochondriaca

Reptiles

Great Basin Fence Lizard

Sceloporus occidentalis longipes

Orange-throated Whiptail*

Aspidoscelis hyperythra beldingi

San Diegan Tiger Whiptail

Aspidoscelis tigris stejnegeri

Birds

American Robin

Turdus migratorius

Anna's Hummingbird

Calypte anna

Bewick's Wren

Thryomanes bewickii

Black Phoebe

Sayornis nigricans

Bushtit

Psaltiriparus minimus

Coastal California Gnatcatcher*⁺

Poliophtila californica californica

California Scrub-Jay

Aphelocoma californica

California Thrasher

Toxostoma redivivum

California Towhee

Melospiza crissalis

Cassin's Kingbird

Tyrannus vociferans

Common Raven

Corvus corax

House Finch

Haemorhous mexicanus

Mourning Dove

Zenaidura macroura

Northern Mockingbird

Mimus polyglottos

Pacific-slope Flycatcher

Empidonax difficilis

Rufous Hummingbird

Selasphorus rufus

Song Sparrow

Melospiza melodia

Wrentit

Chamaea fasciata

Mammals

California Ground Squirrel

Otospermophilus beecheyi nudipes

*Sensitive Species

⁺Observed outside the study area to the north

Appendix C

Federal and State Regulations

Appendix C
Federal and State Regulations
Torrey Pines Golf Course Storm Drain Repair Project

Federal

Endangered Species Act

The federal Endangered Species Act (FESA) designates threatened and endangered animals and plants and provides measures for their protection and recovery. “Take” of listed animal species and of listed plant species in areas under federal jurisdiction is prohibited without obtaining a federal permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Harm includes any act that actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage the habitat of (i.e., harm) listed wildlife species require approval from the USFWS for terrestrial species. The FESA also generally requires determination of Critical Habitat for listed species. If a project would involve a federal action potentially affecting Critical Habitat, the federal agency would be required to consult with USFWS. No Critical Habitat occurs in the study area.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 U.S. Code Sections 703-711) includes provisions for protection of migratory birds, including the non-permitted take of migratory birds. The MBTA regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations Section 10.13. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many others (including those that are not sensitive). Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a “take.” The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country, and is enforced in the United States by the USFWS. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). As a general/standard condition, the project must comply with the MBTA.

Specifically, this compliance would be either through having construction occur outside of the general avian breeding season (February 1 through September 15), or if construction cannot occur outside the general avian breeding season, a pre-construction avian nesting survey would be conducted by a qualified biologist within seven calendar days prior to construction. If nests are not observed, construction may proceed. If nests are found, work may proceed provided that construction activity is: 1) located at least 900 feet from raptor nests; 2) located at least 300 feet from listed bird species’ nests; and 3) located at least 100 feet from non-listed bird species’ nests. A qualified biologist would conspicuously mark a no-construction buffer so that vegetation clearing does not encroach into the buffer until the nest is no longer active (i.e., the nestlings fledged, the nest fails, or the nest is abandoned, as determined by a qualified biologist). With the incorporation of these measures into the project, project construction would be in compliance with the MBTA for the protection of nesting avian species.

Clean Water Act/Rivers and Harbors Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands) is overseen by the Corps under Section 404 of the Clean Water Act. Projects could be permitted on an individual basis or be covered under one of several approved nationwide permits. Individual permits are assessed independently based on the type of action, amount of fill, etc. Individual permits typically require substantial time (often longer than 6 months) to review and approve, while nationwide permits are pre-approved if a project meets appropriate conditions. Given the lack of potential jurisdictional features within the project impact footprint, a Section 404 Permit would not be required for the project.

State of California

California Environmental Quality Act

Primary environmental legislation in California is found in the CEQA and its implementing guidelines (State CEQA Guidelines), requiring that projects with potential adverse effects or impacts on the environment undergo environmental review. Adverse impacts to the environment are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations. The City is the Lead Agency under the CEQA for the project, and this report is part of that environmental review process.

California Endangered Species Act

The California Endangered Species Act (CESA) established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. CESA authorizes that private entities may “take” plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal incidental take permit if the CDFW certifies that the incidental take is consistent with CESA (Fish & Game Code Section 2080.1[a]). For State-only listed species, Section 2081 of the CESA authorizes the CDFW to issue an incidental take permit for a State listed threatened and endangered species if specific criteria are met.

California Fish and Game Code

The California Fish and Game Code (Sections 1600 through 1603) requires a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement. A 1602 Streambed Alteration Agreement (SAA) would be required for the proposed project if impacts occur to CDFW jurisdictional areas. In addition, any project that requires a Section 404 Permit also would require a Water Quality Certification by the California RWQCB under Section 401 of the Clean Water Act. CEQA and its implementing guidelines (CEQA Guidelines) require discretionary projects with potentially significant effects (or impacts) on the environment to be submitted for environmental review. Mitigation for significant impacts to the environment is determined through the environmental review process in accordance with existing laws and regulations. The project would not impact potential State

jurisdictional features; therefore, a SAA and 401 Water Quality Certification would not be required.

Pursuant to California Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW and/or USFWS. As a general/standard condition, the project must comply with California Fish and Game Code Sections 3503 and 3503.5.

As noted above under the MBTA under federal regulations, above, compliance with California Fish and Game Codes Sections 3503 and 3503.5 would be either through having construction occur outside of the general avian breeding season, or if construction cannot occur outside the general avian breeding season, a pre-construction avian nesting survey would be conducted by a qualified biologist within 7 calendar days prior to construction. See MBTA under federal regulations, above, for more details. With the incorporation of these measures into the project, project construction would be in compliance with California Fish and Game Code for the protection of nesting avian species.



May 1, 2019
Kleinfelder Project No: 20170893.037A

Ms. Julie Adam
City of San Diego Public Works Department
525 B Street, Suite 750
San Diego, California 92101

**SUBJECT: Report of Geotechnical Investigation
Storm Drain Improvements
Torrey Pines Golf Course
San Diego, California**

Dear Ms. Adam:

This report presents the results of our geotechnical investigation for proposed storm drain improvements at Torrey Pines Golf Course in San Diego, California. Specifically, this report addresses the geologic conditions in the area of an existing storm drain outfall located on the edge of a canyon where slope erosion is occurring within its surroundings. The observed erosion has created a near-vertical slope face at the head of the canyon.

The existing storm drain is an 18-inch reinforced concrete pipe (RCP) that runs northwestly from the 18th Hole of the North Course of the Torrey Pines Golf Course and outfalls to the subject adjacent canyon. The storm drain is the property of the City of San Diego and current preliminary design plans show the existing storm drain outfall will be rerouted north from its original location to reduce slope erosion. The project location is presented in Figure 1, Vicinity Map and the specific site location is presented in Figure 2, Existing Site Conditions and Boring Location Map.

The purpose of our geotechnical investigation was to characterize the subsurface soil and groundwater conditions at two locations in support of the project design and construction. A description of the proposed project and the results of our field investigation, laboratory testing, geotechnical analyses, and our conclusions and recommendations are given in the following sections.

1.0 PROJECT DESCRIPTION

Proposed construction will consist of replacing an existing 18-inch diameter RCP pipe segment with a new 42-inch diameter pipe segment. The existing storm drain is a 100-foot-long by 18-inch diameter storm drain located northwest of the 18th Hole of the North Course of the Torrey Pines Golf Course. Storm drain improvements will include a new 480-foot long by 42-inch RCP, including cleanouts, manholes, headwall, and energy dissipator. Based on preliminary design plans the pipe replacement will extend north from the 18th Hole and at approximately 280 feet will bend westerly outfalling at the base of the existing canyon, as presented in Figure 2.

Existing topography across the site is generally level between approximate elevations of +365 feet to +360 feet mean sea level (MSL). The existing canyon to the west of the site has a change

in elevation from approximately +360 feet to +290 feet MSL. The replacement pipe segment will connect to an existing storm drain at an approximate elevation of +360 feet MSL and outfall at an approximate elevation of +300 feet MSL. Due to the depth of the replacement section below grade, open-trench installation techniques concurrent with temporary excavation support will be necessary for the replacement of the storm drain.

2.0 SCOPE OF SERVICES

Our scope of services included completing two exploratory borings, geologic reconnaissance of the canyon slopes, conducting associated laboratory testing on soil samples, and preparation of this geotechnical report. Specifically, our scope of work consisted of the following:

- Description of the site and proposed construction;
- Boring location map showing the approximate location of each boring;
- Logs for each boring showing:
 - Approximate elevation of ground surface;
 - Visual classification of each soil strata;
 - Number, type, and location of samples; and
 - Location of groundwater table (if encountered);
- Laboratory test results;
- Description of encountered subsurface conditions;
- Evaluation of potential geologic hazards;
- Preliminary corrosive soil screening;
- Recommendations for temporary excavation and construction; and
- Recommendations for proposed manhole structures.

3.0 FIELD INVESTIGATION

Our field investigation consisted of drilling and sampling two borings, designated as B-1 and B-2, using a limited access drill rig with hollow stem auger. Boring B-1 was located near the edge of the canyon and boring B-2 was located north of hole 18 in the golf course area. The approximate locations of the borings are shown in Figure 2.

Borings were drilled near the approximate alignment of the proposed pipe replacement and locations were adjusted for rig access, existing utility locations, and golf course operations. Borings B-1 and B-2 were drilled to depths of approximately 17½ and 20 feet below ground surface (bgs) respectively. Drilling was performed by Pacific Drilling of San Diego, California using a limited access Fraste PL-G Drill Rig.

Our field geotechnical engineer supervised the field operations and logged the borings. Selected bulk and intact samples were retrieved from the borings, sealed and transported to our San Diego laboratory for further evaluation. Additional descriptions of the field exploration program and the logs of borings are presented in Appendix A.

4.0 GEOLOGY AND SUBSURFACE CONDITIONS

4.1 Regional Geology

The project site is situated within the coastal portion of the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin, south to the southern tip of Baja California (Mexico), and varies in width from approximately 30 to 100 miles (Norris and Webb, 1990). The province is characterized by mountainous terrain on the east composed mostly of Mesozoic igneous and metamorphic rocks, and relatively low-lying coastal terraces to the west underlain by late Cretaceous, Tertiary, and Quaternary-age sedimentary rocks. The sedimentary deposits are configured in a wedge-shaped mass which thickens to the west across the coastal plain area of San Diego that generally extends between the eastern foothills and the coastline. The sediments are comprised of a variety of claystones, siltstones, sandstones, and conglomerates.

The most recent sedimentary deposits consist of early to middle Pleistocene-age near-shore marine, estuarine, and delta deposits, also typically identified as terrace deposits. Most of these sediments were deposited on wave-cut surfaces (terraces) developed in response to sea level fluctuations during the Pleistocene. The oldest terrace deposits have been identified in the past as the Lindavista Formation and consist of conglomerate and sandstone with minor clay and silt strata. More recent geologic maps (Kennedy and Tan, 2008), however, have subdivided the Lindavista Formation and the Bay Point Formation into numerous sub-terrace units deposited during different time intervals through the Pleistocene. These units are now identified as the very old paralic deposits (Qvop1 – Qvop13) which were previously grouped into the Lindavista Formation. The regional geologic map identifies very old paralic deposits (Qvop) underlain by Eocene-age Scripps Formation that overlies the Eocene-age Ardath Shale bedrock material within the site vicinity (Kennedy and Tan, 2008). The regional geology of the project area is depicted on the Regional Geologic Map on Figure 3.

Based on our subsurface investigation, shallow fill materials were likely placed during development of the Torrey Pines Golf Course and the very old paralic deposits directly underlies these fill materials. Scripps Formation and Ardath Shale were not encountered within either of our borings. However, the Scripps Formation was observed at the exposed surfaces of the canyon sidewalls directly below the very old paralic deposits during our site reconnaissance. The top of the Scripps Formation was observed approximately 25 to 30 feet below the upper edge of the canyon.

4.2 Subsurface Conditions

Artificial fill placed during the development of the Torrey Pines Golf Course was encountered in our field investigation. The fill is underlain by the very old paralic deposits materials. Descriptions of the subsurface materials encountered in the borings are provided in the subsequent sections.

4.2.1 Artificial Fill (af)

The borings encountered 5 inches of top soil at boring B-1 and 8 inches of top soil at boring B-2. Below the surficial top soil, artificial fill was encountered in boring B-2 to a depth of approximately 4 feet below ground surface (bgs), or at approximate elevation +359 feet MSL. The fill was comprised of light yellowish-brown silty sand to yellowish-brown clayey sand.

4.2.2 Very Old Paralic Deposits (Qvop)

Pleistocene-age very old paralic deposits were encountered during our investigation below the artificial fill materials at depths of approximately 1 to 4 feet bgs. The encountered very old paralic deposits generally consisted of a brownish-yellowish to brownish-gray silty sandstone. The sandstone was very dense and moderately cemented. Drilling conditions in the very old paralic Deposits were observed to be stiff and generally increased in drilling difficulty with depth.

4.2.3 Groundwater

Groundwater was not encountered in either of our borings to a maximum depth of 20 feet below grade, or approximate elevation +343 ft MSL. However, it is possible that perched groundwater may be encountered during construction, particularly within a few feet of contact zones, i.e. near the contact between the fill and very old paralic deposits.

4.3 Potential Geologic Hazards

Based on the results of our review of regional geologic data and borings completed to date, the project site has a low potential for fault surface rupture since active faults have been identified through the project site and adjacent areas. The potential risk for landslides and slope instability is nominal on the level terrain of the golf course area and low to moderate risk on the canyon slope area of the proposed replacement pipe alignment, as mapped by the 2008 City of San Diego Seismic Safety Study. Seismically-induced liquefaction and seismic settlement potential are also considered low due to the dense nature of the very old paralic deposits and underlying Scripps Formation.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our field investigation and our review of the proposed project construction, it is our professional opinion that the proposed storm drain improvements are feasible from a geotechnical standpoint. We understand the existing storm drain outfall will be abandoned and replaced using open-trench installation techniques. Due to the depth of the replacement drain segment, temporary shoring and excavation support for the installation of the proposed improvements will be required.

The following sections present our evaluation of potential geologic hazards and our recommendations regarding the geotechnical aspects of the proposed storm drain improvement installations.

5.1 Anticipated Excavation Characteristics

The soil conditions at the site primarily consist of shallow fill materials overlying Very Old Parallic Deposits, consisting of moderately cemented sandstone. Excavation in these materials will require moderate effort using conventional heavy-duty excavation equipment. If soil and groundwater conditions encountered during construction differ from those described herein, Kleinfelder should be notified to review those conditions encountered to provide supplemental recommendations, if necessary.

5.2 Temporary Excavation Support

Due to site constraints and the depth of the replacement storm drain and access manholes, temporary shoring and excavation support will be required for installation of the proposed improvements. All excavations must comply with applicable local, state, and federal regulations including the current OSHA Excavation and Trench Safety Standards. Construction site safety is the sole responsibility of the Contractor who shall also be solely responsible for the means, methods, and sequencing of all construction operations.

Temporary excavation support systems should be selected, designed, and installed by a specialty contractor licensed in the state of California in accordance with all applicable local, state, and federal regulations, including all applicable OSHA regulations. Temporary excavation support systems consisting of a trench box, prefabricated strut and/or waler systems manufactured from aluminum or steel, timber shoring with a strut and/or waler system, or stacked trench boxes are typical for support systems used in utility trench installations.

The maximum vertical height for an unbraced excavation is 4 feet. If stability of an excavation becomes questionable during construction, the excavation should be shored and evaluated promptly by the contractor's responsible person. We recommend that contractors be pre-qualified and highly experienced in deep shoring design and construction and that construction monitoring and quality control be implemented during shoring installation. The contractor should carefully review the boring logs in this report and perform their own assessment of potential construction difficulties. We recommend that the contractor's selected method of construction be evaluated by the geotechnical and structural engineers prior to construction to verify that the installation method is consistent with the design assumptions.

5.3 Lateral Earth Pressures

Lateral earth pressures used in the design of excavation support systems that are unrestrained at the top should be calculated using an active equivalent fluid weight of 35 pcf. For braced excavations, a rectangular pressure distribution equal to $22H$ in pounds per square foot is recommended, where H is the height of the braced excavation. Temporary and permanent surcharge loading due to traffic loads, construction equipment, and/or stockpiles should be added to the recommended earth pressures or be kept back a horizontal distance equal to the depth of the excavation.

5.4 Temporary Slopes

If shallow excavations (less than 20 feet in depth) are required at the site and sufficient space exists for temporary construction slopes, we recommend that temporary construction slopes in existing fill materials be no steeper than the OSHA "Soil Type C" slope; which is a 1½ to 1 horizontal to vertical slope inclination. In undisturbed Qvop material, excavations could be no steeper than the OSHA "Soil Type B" slope; which is a 1 to 1 horizontal to vertical slope inclination. These slope inclinations are provided for planning purposes and should be evaluated for field conditions during excavations for temporary slopes.

If temporary slopes are left open for extended periods of time, exposure to weathering or rain events could have detrimental effects to the stability of the slope, such as sloughing. Care should be taken to prevent temporary construction slopes from potential weathering or erosion.

Slope height and inclinations should be in accordance with OSHA guidelines and should in no case exceed those specified in local, state, and/or federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations).

5.5 Storm Drain Manholes

Based on the depth of proposed manhole structures and results of our subsurface investigation, manhole structures will likely be founded in Qvop material. We recommend manholes bearing on Qvop material be designed using an allowable bearing pressure of 3,000 psf. This value may be increased by one-third for short-term loads such as those due to seismic forces. An at-rest lateral earth pressure, in terms of an equivalent fluid weight, of 55 pcf may be used for design of the manhole structures. Surcharge loading due to traffic loads should be added to the earth pressures.

All manhole excavations should be cleaned of all loose materials, debris, and/or ponded water prior to placement of the manhole structure. The manhole excavations should be observed by a representative from Kleinfelder to check that the subsurface conditions are consistent with those contained in this report and loose material has been removed.

5.6 Pipe Bedding and Trench Backfill

Pipe bedding should consist of granular material having a Sand Equivalent value of at least 30. The sand should be placed in a zone that extends a minimum of 3 inches below and 12 inches above the pipe for the fill trench width. The bedding material should be compacted by mechanical means to a minimum of 90 percent of the maximum dry density (ASTM D1557).

Trench backfill above the pipe bedding may consist of approved, on-site or imported soils placed in lifts no greater than 8 inches in loose thickness. Trench backfill should be compacted to at least 90 percent of the maximum dry density at an optimum moisture content between optimum and 2 percent above optimum content. Backfill should not contain clay soils or particles over 3 inches in size. Any oversized materials should be removed prior to placing as backfill.

Additional fill lifts should not be placed if the previous lift did not meet the required minimum dry unit weight and/or optimum moisture content range, if soil conditions are observed to be unstable, or if water, debris, or other deleterious material is present in the excavation. Water used in

construction or from surface runoff should not be allowed to pond in excavations. Backfill materials should be brought up at substantially the same rate on both sides of the pipe.

5.7 Protection of Existing Utilities

Several other existing utilities, such as water, gas, electric, sewer, and telecommunication lines, may be present in the vicinity of the proposed storm drain replacement section. Therefore, field location of underground utilities near the alignment needs to be performed prior to excavation. The utilities should be protected by the Contractor in order to not be impacted by the pipeline installation. Care should be taken during the storm drain excavations to avoid removing support for any existing buried utilities that are to remain in place.

5.8 Preliminary Corrosive Soil Screening

Preliminary laboratory corrosive soil screening of the on-site soils was performed on a bulk sample from boring B-1 to evaluate the potential effect on concrete and ferrous metals. The results of the testing are provided in Appendix B and indicate a minimum resistivity of 650 ohm-cm, a pH of 5.7, a sulfate concentration of 440 ppm, and a chloride concentration of 290 ppm.

The minimum electrical resistivity tests performed indicate that the soil is considered severely corrosive to buried unprotected metal objects per the National Association of Corrosion Engineers (NACE) correlation between soil resistivity and corrosivity towards unprotected ferrous metals.

Caltrans considers the subsurface conditions at a site to be aggressive to below-grade concrete if one or more of the following conditions exist: a pH of 5.5 or less, sulfate concentrations of 2,000 ppm or greater, or chloride concentrations of 500 ppm or greater. Additionally, the Portland Cement Associations (PCA) correlates sulfate concentrations of 1,500 ppm or greater as severe to concrete in contact with subgrade soils.

Preliminary corrosion testing was conducted by Kleinfelder for information only and should be used only as an indicator of potential soil aggressivity for the sample tested. We recommend that the corrosion test results be reviewed and evaluated by a qualified corrosion engineer and project designers with consideration for the proposed improvements and project lifespan requirements.

6.0 LIMITATIONS

This report has been prepared for the exclusive use of the City of San Diego and their consultants for specific application to the subject project. The findings, conclusions, and recommendations presented in this report were prepared in accordance with generally accepted geotechnical engineering practice. No warranty, express, or implied is made.

The scope of services was limited to the field exploration program described in this report. It should be recognized that definition and evaluation of subsurface conditions is difficult. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. Although risk can never be eliminated, more detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed

study and analysis involves greater expense, our clients participate in determining levels of service which provide information for their purposes at acceptable levels of risk. The client and key members of the design team should discuss the issues addressed in this report with Kleinfelder so that the issues are understood and applied in a manner consistent with the owner's budget, tolerance of risk, and expectations for future performance and maintenance.

The data contained in this report are based on our field observations and subsurface explorations and our present knowledge of the proposed construction. It is possible that soil or groundwater conditions could vary between or beyond the points explored. If soil or groundwater conditions are encountered during construction that differ from those described herein, the client is responsible for ensuring that Kleinfelder is notified immediately so that we may re-evaluate the recommendations of this report. If the scope of the proposed construction or locations of the improvements changes from that described in this report, the conclusions and recommendations contained in this report are not considered valid until the changes are reviewed and the conclusions of this report are modified or approved in writing by Kleinfelder.

Our geotechnical scope of services did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site. Kleinfelder cannot be responsible for interpretation by others of this report or the conditions encountered in the field. Kleinfelder must be retained so that all geotechnical aspects of construction will be monitored on a full-time basis by a representative from Kleinfelder. These services provide Kleinfelder the opportunity to observe the actual soil and groundwater conditions encountered during construction and to evaluate the applicability of the recommendations presented in this report to the site conditions. If Kleinfelder is not retained to provide these services, we will cease to be the engineer of record for this project and will assume no responsibility for any potential claim during or after construction on this project. If changed site conditions affect the recommendations presented herein, Kleinfelder must also be retained to perform a supplemental evaluation and to issue a revision to our original report.

This report, and any future addenda or reports regarding this project, may be made available to bidders to supply them with only the data contained in the report regarding subsurface conditions at the point and time noted. Bidders may not rely on interpretations, opinion, recommendations, or conclusions contained in the report.

This report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance, but in no event later than one year from the date of the report. Land use, site conditions (both on site and off site), or other factors may change over time, and additional work may be required with the passage of time. Any party, other than the client, who wishes to use this report shall notify Kleinfelder of such intended use. Based on the intended use of this report and the nature of the project, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or any other party will release Kleinfelder from any liability resulting from the use of this report by an unauthorized party.

CLOSING

We appreciate this opportunity to be of professional service on this project. If you have any questions or need additional information, please contact the undersigned at 619.831.4600.

Respectfully submitted,

KLEINFELDER



Robert A. Torres, PE 43077
Senior Program Manager



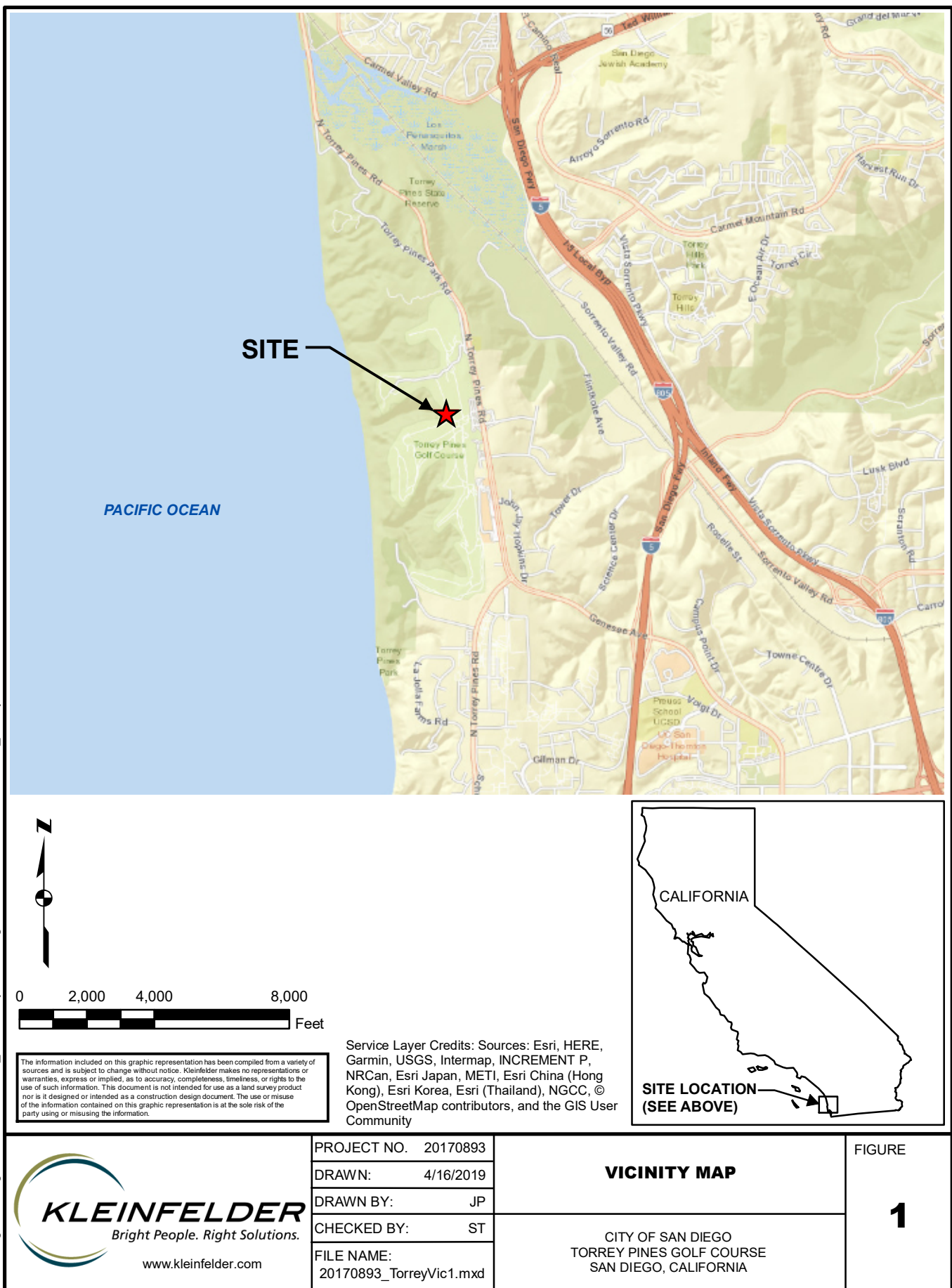
Scott Rugg, CEG 1651
Senior Engineering Geologist

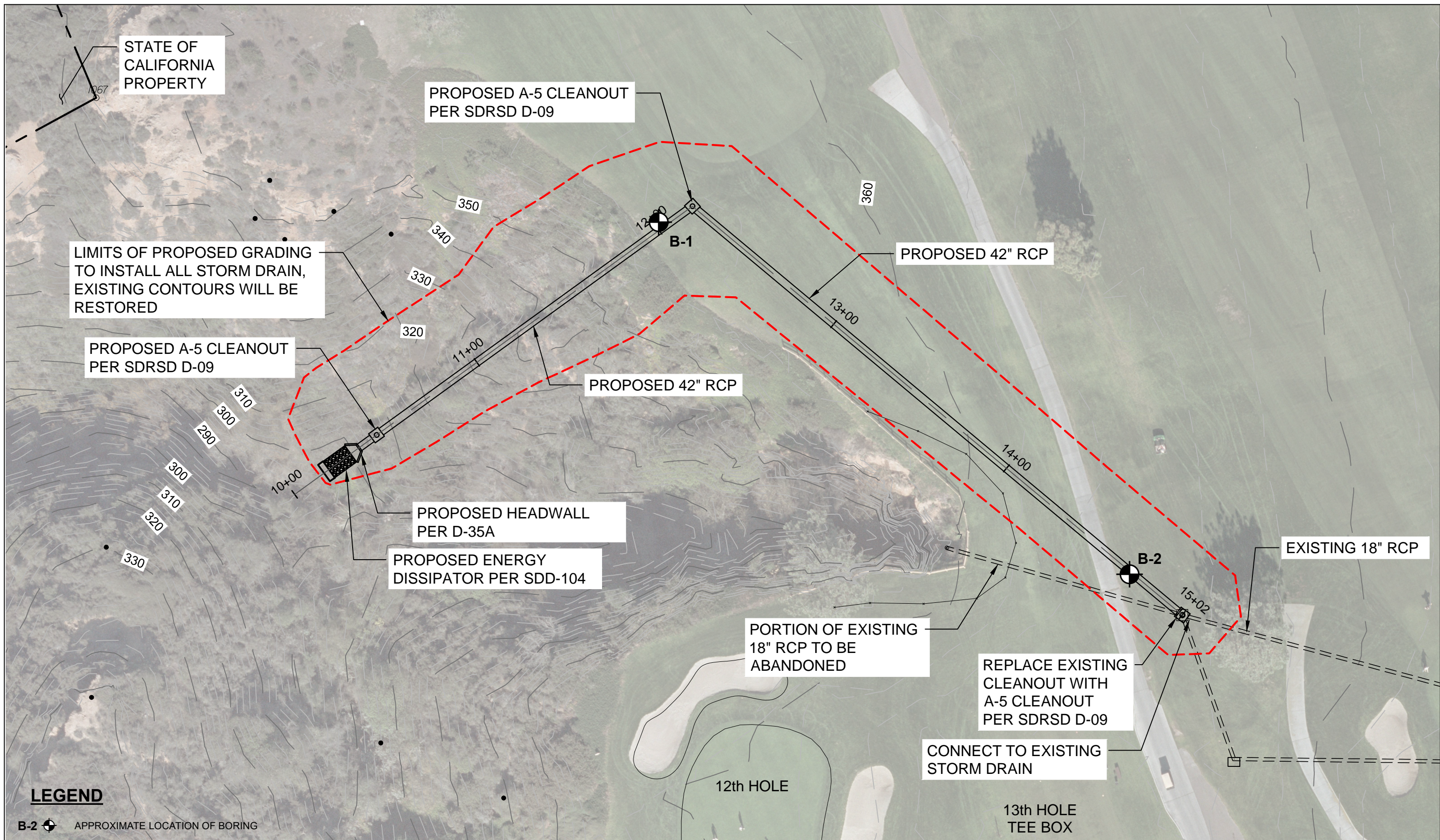


Attachments: Figure 1 – Vicinity Map
Figure 2 – Existing Site Conditions and Boring Location Map
Figure 3 – Regional Geologic Map
Appendix A – Field Exploration and Boring Logs
Appendix B – Laboratory Testing

FIGURES

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LEGEND

B-2 APPROXIMATE LOCATION OF BORING

PLAN VIEW

NOTES:
1. REMEDIAL GRADING SHOULD BE PERFORMED AT THE TOP OF SLOPE TO DIVERT RUNOFF AWAY FROM THE TOP OF SLOPE.
2. UNDER THIS ALTERNATIVE, THERE WOULD NOT BE ANY IMPACT TO THE WETLAND.



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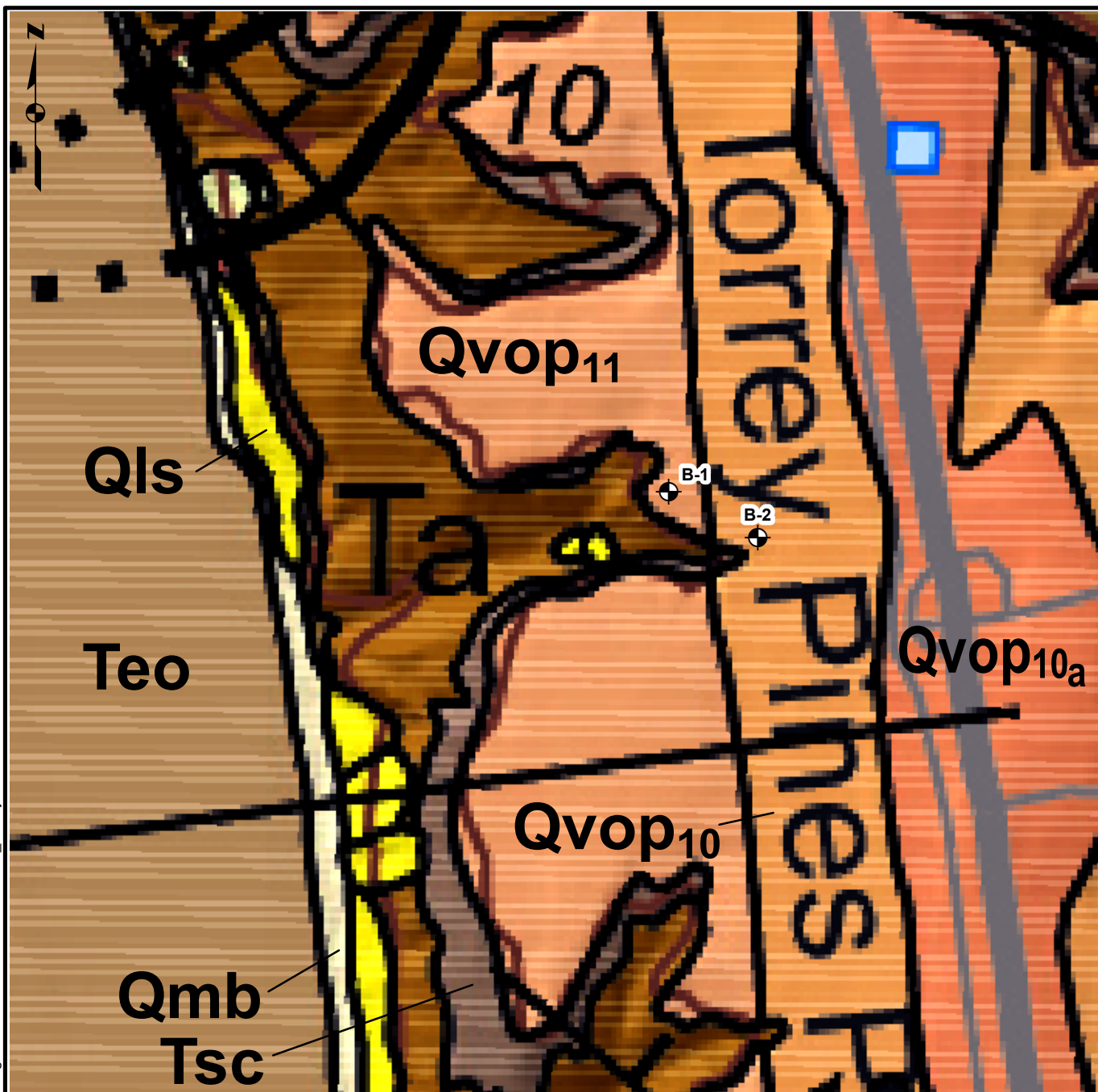
BORING LOCATION MAP

CITY OF SAN DIEGO
TORREY PINES GOLF COURSE
SAN DIEGO, CALIFORNIA

FIGURE

2

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SOURCE:
GEOLOGIC MAP OF THE SAN DIEGO
30' X 60' QUADRANGLE, CALIFORNIA,
BY KENNEDY AND TAN, 2008.

The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.

LEGEND

	Qls - LANDSLIDE DEPOSITS
	Qmb - MARINE BEACH DEPOSITS
	Qvop ₁₁ - VERY OLD PARALIC DEPOSITS, UNIT 11
	Qvop ₁₀ - VERY OLD PARALIC DEPOSITS, UNIT 10
	Qvop _{10a} - VERY OLD PARALIC DEPOSITS, UNIT 10a
	Tsc - SCRIPPS FORMATION
	Ta - ARDATH SHALE
	Teo - UNDIVIDED EOCENE ROCKS IN OFFSHORE REGION



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REGIONAL GEOLOGIC MAP

CITY OF SAN DIEGO
TORREY PINES GOLF COURSE
SAN DIEGO, CALIFORNIA

FIGURE

3

APPENDIX A

Field Exploration and Boring Logs

APPENDIX A

FIELD EXPLORATION AND BORING LOGS

Prior to our subsurface exploration, Kleinfelder notified Underground Service Alert (USA) to clear proposed boring locations of conflicts with utilities. Additionally, we hand augered the near-surface materials to practical refusal of the hand auger to clear the potential of shallow utilities not marked by USA.

Our subsurface exploration program included drilling and sampling two borings using hollow stem auger drilling techniques for subsurface characterization purposes. The field exploration took place on April 5, 2019.

The borings were advanced by Pacific Drilling to depths of approximately 20 feet below the ground surface. The boreholes were advanced using a limited access Fraste PL-G Drill Rig. Bulk and intact samples were collected from the boreholes for further analysis.

The excavations were logged by a geotechnical engineer from our firm using methods outlined in the Unified Soil Classification System (USCS) and general procedures established in ASTM D2488. A legend to the logs is presented as Figures A-1 and A-2. The Logs of Borings describe the materials encountered, samples obtained, and field and laboratory tests performed and are presented as Figures A-3 and A-4.

SAMPLER AND DRILLING METHOD GRAPHICS

	BULK / GRAB / BAG SAMPLE
	MODIFIED CALIFORNIA SAMPLER (2 or 2-1/2 in. (50.8 or 63.5 mm.) outer diameter)
	CALIFORNIA SAMPLER (3 in. (76.2 mm.) outer diameter)
	STANDARD PENETRATION SPLIT SPOON SAMPLER (2 in. (50.8 mm.) outer diameter and 1-3/8 in. (34.9 mm.) inner diameter)
	HQ CORE SAMPLE (2.500 in. (63.5 mm.) core diameter)
	SHELBY TUBE SAMPLER
	HOLLOW STEM AUGER
	SOLID STEM AUGER
	WASH BORING
	SONIC CONTINUOUS SAMPLER

GROUND WATER GRAPHICS

	WATER LEVEL (level where first observed)
	WATER LEVEL (level after exploration completion)
	WATER LEVEL (additional levels after exploration)
	OBSERVED SEEPAGE

NOTES

- The report and graphics key are an integral part of these logs. All data and interpretations in this log are subject to the explanations and limitations stated in the report.
- Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual or differ from those shown.
- No warranty is provided as to the continuity of soil or rock conditions between individual sample locations.
- Logs represent general soil or rock conditions observed at the point of exploration on the date indicated.
- In general, Unified Soil Classification System designations presented on the logs were based on visual classification in the field and were modified where appropriate based on gradation and index property testing.
- Fine grained soils that plot within the hatched area on the Plasticity Chart, and coarse grained soils with between 5% and 12% passing the No. 200 sieve require dual USCS symbols, ie., GW-GM, GP-GM, GW-GC, GP-GC, GC-GM, SW-SM, SP-SM, SW-SC, SP-SC, SC-SM.
- If sampler is not able to be driven at least 6 inches then 50/X indicates number of blows required to drive the identified sampler X inches with a 140 pound hammer falling 30 inches.

ABBREVIATIONS

WOH - Weight of Hammer
WOR - Weight of Rod

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

GRAVELS (More than half of coarse fraction is larger than the #200 sieve)	CLEAN GRAVEL WITH <5% FINES	Cu ≥ 4 and 1 ≤ Cc ≤ 3		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
		Cu < 4 and/or 1 > Cc > 3		GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
	GRAVELS WITH 5% TO 12% FINES	Cu ≥ 4 and 1 ≤ Cc ≤ 3		GW-GM	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES
				GW-GC	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES
		Cu < 4 and/or 1 > Cc > 3		GP-GM	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES
				GP-GC	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES
	GRAVELS WITH > 12% FINES			GM	SILTY GRAVELS, GRAVEL-SILT-SAND MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
				GC-GM	CLAYEY GRAVELS, GRAVEL-SAND-CLAY-SILT MIXTURES
SANDS (Half or more of coarse fraction is smaller than the #4 sieve)	CLEAN SANDS WITH <5% FINES	Cu ≥ 6 and 1 ≤ Cc ≤ 3		SW	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
		Cu < 6 and/or 1 > Cc > 3		SP	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
	SANDS WITH 5% TO 12% FINES	Cu ≥ 6 and 1 ≤ Cc ≤ 3		SW-SM	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES
				SW-SC	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES
		Cu < 6 and/or 1 > Cc > 3		SP-SM	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES
				SP-SC	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES
	SANDS WITH > 12% FINES			SM	SILTY SANDS, SAND-GRAVEL-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-GRAVEL-CLAY MIXTURES
				SC-SM	CLAYEY SANDS, SAND-SILT-CLAY MIXTURES
FINE GRAINED SOILS (Half or more of material is smaller than the #200 sieve)	SILTS AND CLAYS (Liquid Limit less than 50)			ML	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				CL-ML	INORGANIC CLAYS-SILTS OF LOW PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
	SILTS AND CLAYS (Liquid Limit 50 or greater)			OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY
				MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS & ORGANIC SILTS OF MEDIUM-TO-HIGH PLASTICITY



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REVISED: 4/9/2019

GRAPHICS KEY

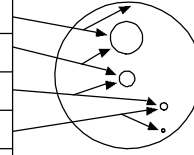
City of San Diego
Torrey Pines Golf Course
San Diego, California

FIGURE

A-1

GRAIN SIZE

DESCRIPTION	SIEVE SIZE	GRAIN SIZE	APPROXIMATE SIZE
Boulders	>12 in. (304.8 mm.)	>12 in. (304.8 mm.)	Larger than basketball-sized
Cobbles	3 - 12 in. (76.2 - 304.8 mm.)	3 - 12 in. (76.2 - 304.8 mm.)	Fist-sized to basketball-sized
Gravel	coarse 3/4 - 3 in. (19 - 76.2 mm.)	3/4 - 3 in. (19 - 76.2 mm.)	Thumb-sized to fist-sized
	fine #4 - 3/4 in. (#4 - 19 mm.)	0.19 - 0.75 in. (4.8 - 19 mm.)	Pea-sized to thumb-sized
Sand	coarse #10 - #4	0.075 - 0.19 in. (2 - 4.9 mm.)	Rock salt-sized to pea-sized
	medium #40 - #10	0.017 - 0.075 in. (0.43 - 2 mm.)	Sugar-sized to rock salt-sized
	fine #200 - #40	0.0029 - 0.017 in. (0.07 - 0.43 mm.)	Flour-sized to sugar-sized
Fines	Passing #200	<0.0029 in. (<0.07 mm.)	Flour-sized and smaller

**SECONDARY CONSTITUENT**

	AMOUNT	
Term of Use	Secondary Constituent is Fine Grained	Secondary Constituent is Coarse Grained
Trace	<5%	<15%
With	≥5 to <15%	≥15 to <30%
Modifier	≥15%	≥30%

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

CEMENTATION

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

CONSISTENCY - FINE-GRAINED SOIL

CONSISTENCY	SPT - N ₆₀ (# blows / ft)	Pocket Pen (tsf)	UNCONFINED COMPRESSIVE STRENGTH (Q _u)(psf)	VISUAL / MANUAL CRITERIA
Very Soft	<2	PP < 0.25	<500	Thumb will penetrate more than 1 inch (25 mm). Extrudes between fingers when squeezed.
Soft	2 - 4	0.25 ≤ PP < 0.5	500 - 1000	Thumb will penetrate soil about 1 inch (25 mm). Remolded by light finger pressure.
Medium Stiff	4 - 8	0.5 ≤ PP < 1	1000 - 2000	Thumb will penetrate soil about 1/4 inch (6 mm). Remolded by strong finger pressure.
Stiff	8 - 15	1 ≤ PP < 2	2000 - 4000	Can be imprinted with considerable pressure from thumb.
Very Stiff	15 - 30	2 ≤ PP < 4	4000 - 8000	Thumb will not indent soil but readily indented with thumbnail.
Hard	>30	4 ≤ PP	>8000	Thumbnail will not indent soil.

FROM TERZAGHI AND PECK, 1948; LAMBE AND WHITMAN, 1969; FHWA, 2002; AND ASTM D2488

APPARENT / RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPT-N ₆₀ (# blows/ft)	MODIFIED CA SAMPLER (# blows/ft)	CALIFORNIA SAMPLER (# blows/ft)	RELATIVE DENSITY (%)
Very Loose	<4	<4	<5	0 - 15
Loose	4 - 10	5 - 12	5 - 15	15 - 35
Medium Dense	10 - 30	12 - 35	15 - 40	35 - 65
Dense	30 - 50	35 - 60	40 - 70	65 - 85
Very Dense	>50	>60	>70	85 - 100

FROM TERZAGHI AND PECK, 1948

STRUCTURE

DESCRIPTION	CRITERIA
Stratified	Alternating layers of varying material or color with layers at least 1/4-in. thick, note thickness.
Laminated	Alternating layers of varying material or color with the layer less than 1/4-in. thick, note thickness.
Fissured	Breaks along definite planes of fracture with little resistance to fracturing.
Slickensided	Fracture planes appear polished or glossy, sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay; note thickness.

REACTION WITH HYDROCHLORIC ACID

DESCRIPTION	FIELD TEST
None	No visible reaction
Weak	Some reaction, with bubbles forming slowly
Strong	Violent reaction, with bubbles forming immediately

PLASTICITY

DESCRIPTION	LL	FIELD TEST
Non-plastic	NP	A 1/8-in. (3 mm.) thread cannot be rolled at any water content.
Low (L)	< 30	The thread can barely be rolled and the lump or thread cannot be formed when drier than the plastic limit.
Medium (M)	30 - 50	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump or thread crumbles when drier than the plastic limit.
High (H)	> 50	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump or thread can be formed without crumbling when drier than the plastic limit.

ANGULARITY

DESCRIPTION	CRITERIA
Angular	Particles have sharp edges and relatively plane sides with unpolished surfaces.
Subangular	Particles are similar to angular description but have rounded edges.
Subrounded	Particles have nearly plane sides but have well-rounded corners and edges.
Rounded	Particles have smoothly curved sides and no edges.



PROJECT NO.: 20170893
 DRAWN BY: ST
 CHECKED BY: SHR
 DATE: 4/8/2019
 REVISED: 4/9/2019


SOIL DESCRIPTION KEY

City of San Diego
 Torrey Pines Golf Course
 San Diego, California

FIGURE

A-2

Date Begin - End: 4/05/2019	Drilling Company: Pacific Drilling	BORING LOG B-1
Logged By: S.Tena	Drill Crew: Rory & Gerardo	
Hor.-Vert. Datum: Not Available	Drilling Equipment: Fraste PL-G	
Plunge: -90 degrees	Drilling Method: Hollow Stem Auger	
Weather: Cloudy	Auger Diameter: 6 in. O.D.	
Hammer Type - Drop: 140 lb. Auto - 30 in.		

Approximate Elevation (feet)	Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS								
			Approximate Ground Surface Elevation (ft.): 360.00 Surface Condition: Bare Earth		Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in.	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
			Lithologic Description													
			S1			42"										pH= 5.7 Resistivity= 650ohm-cm Sulfates= 440ppm Chlorides= 290ppm
355	5	yellowish red (5YR 5/6), very dense, highly cemented	S2		BC=50/6"	5"		7.0	105.0	100	23					
350	10	-mottled with very dark gray (5YR 3/1), micaceous medium-grained	S3		BC=25 50/6"	12"		8.7	108.5							
345	15		S4		BC=28 50/5"	10"		9.0	108.6							
			S5		BC=50/6"	6"										Hard drilling at 17 feet.
340	20	The boring was terminated because of practical auger refusal (↑) at approximately 17.5 ft. below ground surface. The boring was backfilled with auger cuttings on April 05, 2019.														
		GROUNDWATER LEVEL INFORMATION: Groundwater was not observed during drilling or after completion. GENERAL NOTES: The exploration location and elevation are approximate and were estimated by Google Earth.														
335	25															



PROJECT NO.: 20170893
DRAWN BY: ST
CHECKED BY: SHR
DATE: 4/8/2019
REVISED: 4/9/2019

BORING LOG B-1


City of San Diego
Torrey Pines Golf Course
San Diego, California

FIGURE

A-3

PAGE: 1 of 1

Date Begin - End: 4/05/2019	Drilling Company: Pacific Drilling	BORING LOG B-2
Logged By: S.Tena	Drill Crew: Rory & Gerardo	
Hor.-Vert. Datum: Not Available	Drilling Equipment: Fraste PL-G	Hammer Type - Drop: 140 lb. Auto - 30 in.
Plunge: -90 degrees	Drilling Method: Hollow Stem Auger	
Weather: Cloudy	Auger Diameter: 6 in. O.D.	

Approximate Elevation (feet)	Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							
			Approximate Ground Surface Elevation (ft.): 363.00 Surface Condition: Grass	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in.	Recovery (NP=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/Remarks
			TOPSOIL: (8 INCHES)												
			ARTIFICIAL FILL (af)												
			Silty SAND (SM): medium-grained, non-plastic, light yellowish brown (10YR 6/4), moist brown (7.5YR 4/2), little clay content	S1						10.3		97	32		ASTM D1557 Method B= Max. Dry Unit Wt.: 134.2 pcf Opt. Water Content: 6.8%
360			Clayey SAND (SC): medium-grained, low plasticity, yellowish brown (10YR 5/4), moist												
	5		VERY OLD PARALIC DEPOSITS (Qvop ₁₀)	S2		BC=33 50/6"	12"								
			Silty SANDSTONE (SM): medium-grained, non-plastic, light brownish gray (10YR 6/2) with brownish yellow (10YR 6/6), moist, very dense, moderate cemented												
355															
	10		yellowish red (5YR 5/6)	S3		BC=23 25 27	18"		10.7	113.5	100	25			
350				S4		BC=16 20 29	18"								
	15														
345				S5		BC=24 31 50/5"	18"								
	20														
		The boring was terminated at approximately 20 ft. below ground surface. The boring was backfilled with auger cuttings on April 05, 2019.													
		GROUNDWATER LEVEL INFORMATION: Groundwater was not observed during drilling or after completion. GENERAL NOTES: The exploration location and elevation are approximate and were estimated by Google Earth.													
340															
	25														
335															

APPENDIX B

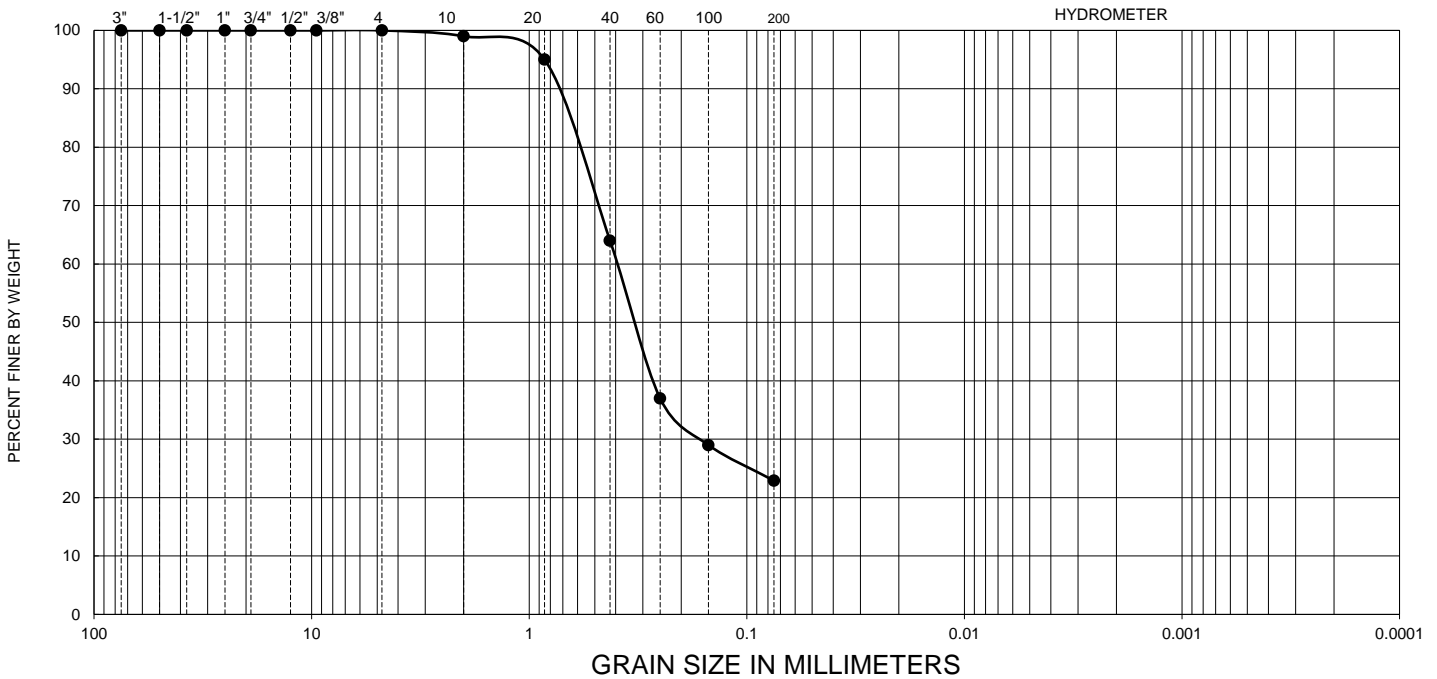
Laboratory Test Results

Date Tested: 4/17/2019

USCS

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay

U.S. STANDARD SIEVE NUMBERS



Boring No.	Sample No.	Depth (ft)	Passing 200 (%)	USCS Classification
B1	S2	5.5-6	22.9	SM

Sample Description	Silty sand
--------------------	------------

Sieve Analysis	Sieve Size		% Passing
	3"	75 mm	100
	2"	50 mm	100
	1.5"	37.5 mm	100
	1"	25 mm	100
	3/4"	19 mm	100
	1/2"	12.5 mm	100
	3/8"	9.5 mm	100
	No. 4	4.75 mm	100
	No. 10	2.0 mm	99
	No. 20	0.85 mm	95
	No. 40	0.425 mm	64
	No. 60	0.25 mm	37
	No 100	0.15 mm	29
	No 200	.075 mm	22.9

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 6913



GRADATION TEST RESULTS

**CITY OF SAN DIEGO
TORREY PINES GOLF COURSE
SAN DIEGO, CALIFORNIA**

FIGURE

B-1

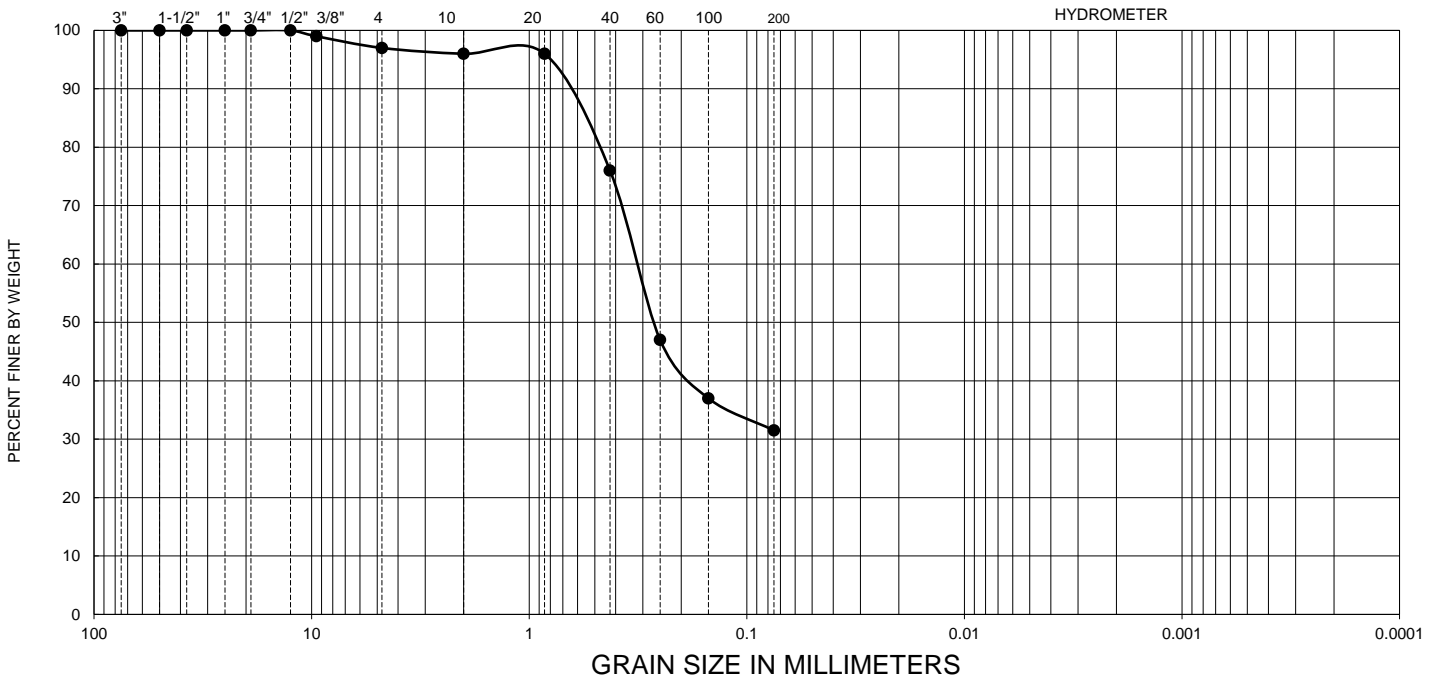
Checked by:	S.Tena	Tech:	Uly
Project No.	20170893.037A	Date:	18-Apr-19

Date Tested: 4/17/2019

USCS

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay

U.S. STANDARD SIEVE NUMBERS



Boring No.	Sample No.	Depth (ft)	Passing 200 (%)	USCS Classification
B2	S1	0.5-4	31.5	SM

Sample Description	Silty sand
--------------------	------------

Sieve Analysis	Sieve Size		% Passing
	3"	75 mm	100
	2"	50 mm	100
	1.5"	37.5 mm	100
	1"	25 mm	100
	3/4"	19 mm	100
	1/2"	12.5 mm	100
	3/8"	9.5 mm	99
	No. 4	4.75 mm	97
	No. 10	2.0 mm	96
	No. 20	0.85 mm	96
	No. 40	0.425 mm	76
	No. 60	0.25 mm	47
	No 100	0.15 mm	37
	No 200	.075 mm	31.5

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 6913



GRADATION TEST RESULTS

CITY OF SAN DIEGO
TORREY PINES GOLF COURSE
SAN DIEGO, CALIFORNIA

FIGURE

B-2

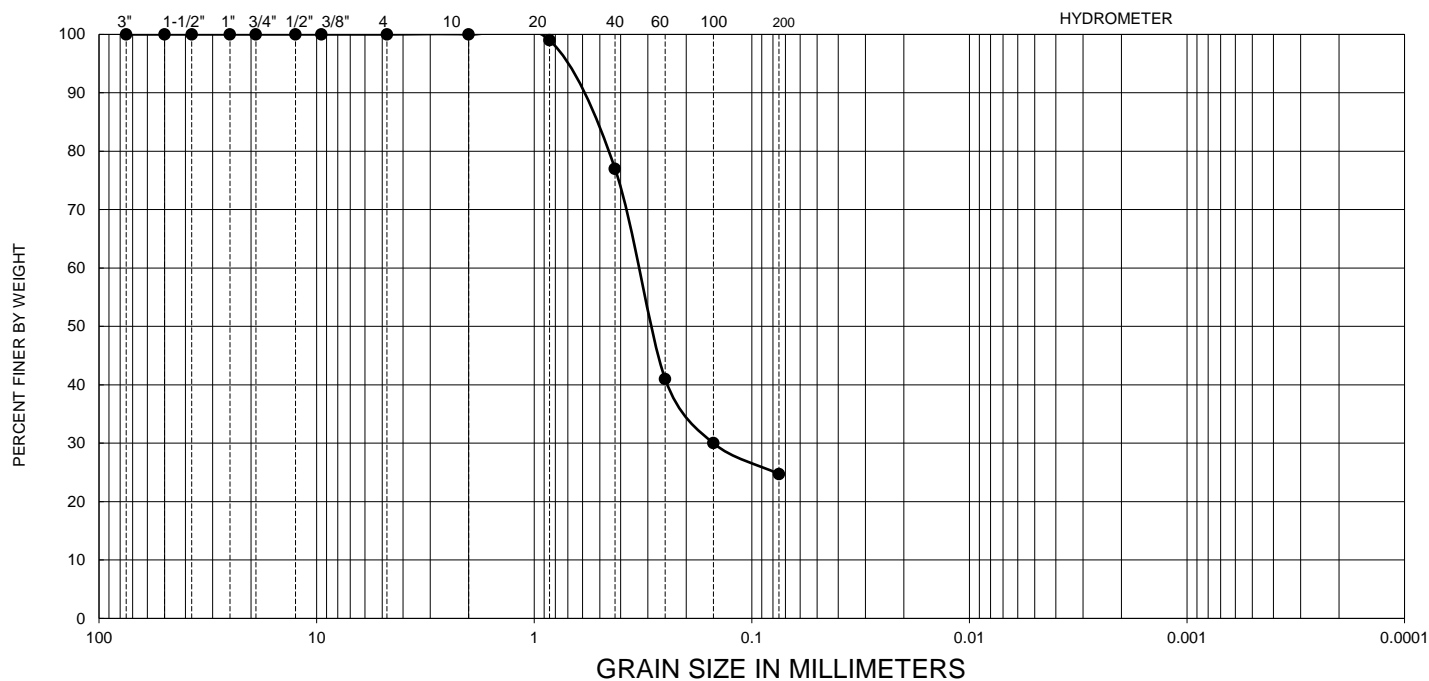
Checked by:	S.Tena	Tech:	Uly
Project No.	20170893.037A	Date:	18-Apr-19

Date Tested: 4/17/2019

USCS

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay

U.S. STANDARD SIEVE NUMBERS



Boring No.	Sample No.	Depth (ft)	Passing 200 (%)	USCS Classification
B2	S3	10.5-11	24.7	SM

Sample Description	Silty sand
--------------------	------------

Sieve Analysis	Sieve Size		% Passing
	3"	75 mm	100
	2"	50 mm	100
	1.5"	37.5 mm	100
	1"	25 mm	100
	3/4"	19 mm	100
	1/2"	12.5 mm	100
	3/8"	9.5 mm	100
	No. 4	4.75 mm	100
	No. 10	2.0 mm	100
	No. 20	0.85 mm	99
	No. 40	0.425 mm	77
	No. 60	0.25 mm	41
	No 100	0.15 mm	30
	No 200	.075 mm	24.7

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 6913



GRADATION TEST RESULTS

CITY OF SAN DIEGO
TORREY PINES GOLF COURSE
SAN DIEGO, CALIFORNIA

FIGURE

B-3

Checked by:	S.Tena	Tech:	Uly
Project No.	20170893.037A	Date:	18-Apr-19

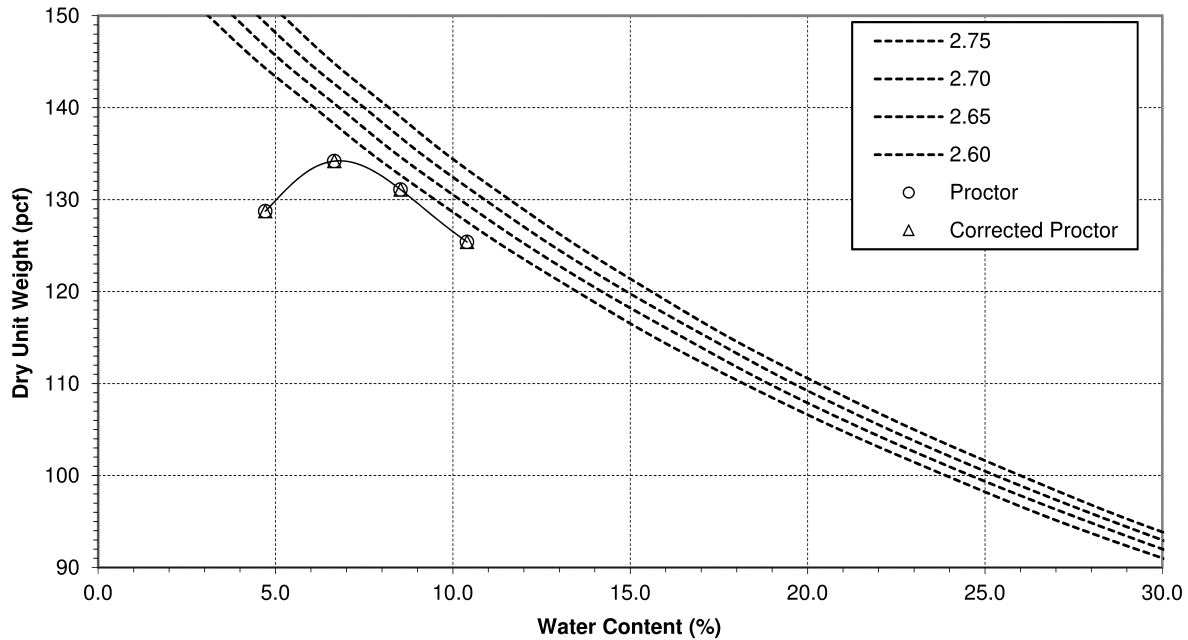
Laboratory Test Report

Client: **City of San Diego, CA**
Project: **20170893.037A**
Torrey Pines 15CK37
02-000L - Phase 2 - Laboratory Testing

Report No.: **19-SAN-00314 Rev. 0**
Sampled by: **S. Tena**
Submitted by: **S. Tena**

Issued: **4/18/2019**
Field ID: **various borings**
Date: **4/5/2019**
Date: **4/8/2019**

Tested on **4/16/2019** by **U. Panuncialman**
Material Description: **Brown silty clayey sand**
Location: **B2/S1 depth 0.5'-4'**



Test Method: ASTM D1557 B	Uncorrected	Corrected
Maximum Dry Unit Weight (pcf)	134.2	na
Optimum Water Content (%)	6.8	na
Oversize Fraction, retained on (%)		<5
Bulk Specific Gravity of Oversize Fraction		na

Rammer Type: Mechanical
Specimen Preparation: Moist

Reviewed on 4/18/2019 by Ulysses Panuncialman,
Lab Supervisor

[Signature]

L A B O R A T O R Y R E P O R T

Telephone (619) 425-1993

Fax 425-7917

Established 1928

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350 Trousdale Dr. Chula Vista, Ca. 91910 www.clarksonlab.com
A N A L Y T I C A L A N D C O N S U L T I N G C H E M I S T S

Date: April 17, 2019

Purchase Order Number: 20170893.037A

Sales Order Number: 44017

Account Number: KLE

To:

Kleinfelder Inc.

550 West C Street Ste 1200

San Diego, CA 92101

Attention: Uly Panuncialman

Laboratory Number: S07285

Customers Phone: 831-4600

Fax: 831-4619

Sample Designation:

One soil sample received on 04/16/19 at 11:40am,
taken on 04/05/19 from Job# 20170893.037A marked as
B1 S1@0.5-4'.

Analysis By California Test 643, 1999, Department of Transportation
Division of Construction, Method for Estimating the Service Life of
Steel Culverts.

pH 5.7

Water Added (ml)

Resistivity (ohm-cm)

10	1500
5	850
5	800
5	730
5	660
5	650
5	680
5	710

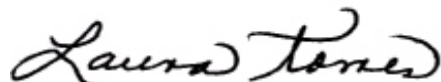
6 years to perforation for a 16 gauge metal culvert.
8 years to perforation for a 14 gauge metal culvert.
11 years to perforation for a 12 gauge metal culvert.
15 years to perforation for a 10 gauge metal culvert.
18 years to perforation for a 8 gauge metal culvert.

Water Soluble Sulfate Calif. Test 417

0.044% (440ppm)

Water Soluble Chloride Calif. Test 422

0.029% (290ppm)



Laura Torres

LT/ilv

CULTURAL RESOURCES
INVENTORY REPORT FOR THE
TORREY PINES GOLF COURSE STORM
DRAIN OUTFALL REPAIR PROJECT,
CITY OF SAN DIEGO,
COUNTY OF SAN DIEGO, CALIFORNIA

Prepared for / Submitted to:

The City of San Diego

Spindrift Project No. 2019-002

Prepared by Trisha M. Drennan

July 2019



SPINDRIFT ARCHAEOLOGICAL
CONSULTING, LLC

8895 Towne Centre Drive #105-248
San Diego, California 92122
Phone: 858-333-7202 Fax: 855-364-3170

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Figure 3	Records Search Boundary Map
Figure 4	Survey Coverage Map
Figure 5	TPGC North with Project APE Overlay

Appendices

Appendix A	Records Search Confirmation
Table A-1	Previous Investigations Within a 1-mile Radius of the Project APE
Table A-2	Previously Recorded Sites
Table A-3	Caltrans Bridges within the Project APE and Vicinity
Appendix B	Native American Coordination
Appendix C	Photos and Photo Log
Appendix D	Confidential DPR Forms
Figure 6	Confidential Records Search Results Map

List of Acronyms and Abbreviations

AD	Anno Domini
BC	Before Christ
BP	Before Present
BOR	Bureau of Reclamation
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CHL	California Historical Landmarks
CHRIS	California Historical Resources Information System
cmbs	centimeters below the ground surface
City	City of San Diego
County	County of San Diego
CRHR	California Register of Historical Resources
CRM	Cultural Resource Management
EIR	Environmental Impact Report
HRG	Historical Resources Guidelines
LDC	Land Development Code
LF	Linear Feet
NAHC	Native American Heritage Commission
NEPA	National Environmental Protection Act
NFHL	National Flood Hazard Layer
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
MLD	Most Likely Descendant
Project	Torrey Pines Golf Course Storm Drain Outfall Repair
PI	Principal Investigator
PRC	Public Resources Code
SCIC	South Coastal Information Center
SDMoM	San Diego Museum of Man
SFHA	Special Flood Hazard Area
SSURGO	Soil Survey Geographic
Spindrift	Spindrift Archaeological Consulting, LLC
TPGC	Torrey Pines Golf Course
UCSB	University of California Santa Barbara
USGS	United States Geological Survey

National Archaeological Database

Author: Trisha M. Drennan

Consulting Firm: Spindrift Archaeological Consulting

Report Date: July 2019

Report Title: Cultural Resources Inventory Report for the Torrey Pines Golf Course Storm Drain Outfall Repair Project, City of San Diego, County of San Diego, California

Prepared by: Spindrift Archaeological Consulting, 8895 Towne Centre Drive #105-248, San Diego, California 92122

Submitted to: The City of San Diego

Project No. 2019-002

Acreage approximately 0.422 acres

Keywords: Torrey Pines Golf Course Storm Drain Outfall Repair Project, Site P-37-033597

EXECUTIVE SUMMARY

In 2019, the City of San Diego retained Spindrift Archaeological Consulting, LLC (Spindrift) to conduct a cultural resources inventory of the Torrey Pines Golf Course Storm Drain Outfall Repair Project (hereafter known as Project) in the County of San Diego. The entire Project Area is composed of approximately 0.422 acres.

The study included records searches, a literature review and a field site visit. The records search results indicated that one hundred thirty-five (135) previous cultural resources studies were conducted within a one-mile radius of the Project Area (Table 1 in Appendix A), and eighty (80) cultural resources have previously been recorded within a one-mile radius of the Project Area (Table 2 in Appendix A). There is one (1) cultural resource that is documented within the Project Area (P-37-033597).

A field site visit was conducted as part of this study on the 3rd of May 2019 and on the 22nd of July 2019. No portions of the previously documented archaeological site (P-37-033597) were identified during the field site survey in the Project Area. Recommendations for site evaluations and the management of unanticipated discoveries are provided in this report. The Lead Agency, the City of San Diego, is responsible for ensuring compliance with these mitigation measures because impacts or adverse effects to significant cultural resources is not in compliance with CEQA.

1 INTRODUCTION

In 2019, Spindrift was retained by the City of San Diego to conduct a cultural resources inventory of the Torrey Pines Golf Course Storm Drain Outfall Repair Project (Project), located in San Diego County (County), California. A records search, literature review and field site visit of the approximately 0.716-acre Project was required to identify potentially significant cultural resources that could be affected by the Project.

1.1 PROJECT LOCATION

The 0.422-acre site is located within the Torrey Pines Golf Course, North Course (TPGC, North Course) at 11480 North Torrey Pines Road, La Jolla, CA 92037 in the University Community Planning Area (Council District 1). The Project Area is shown on the United States Geological Survey (USGS) 7.5-minute Del Mar topographic quadrangle (1967; photorevised 1975) (Figure 3).

1.2 PROJECT DESCRIPTION

The proposed project would repair an existing storm drain, which is located northwest of the 18th Hole at the Torrey Pines Golf Course, North Course. The storm drain consists of a 18-inch diameter RCP pipe segment with a new 42-inch diameter pipe segment. Based on previous drawings, additions to the storm drain occurred in 1960 with the construction of a straight concrete headwall. The headwall has eroded from its original location along the side of the bluff and is now requiring repair.

The City of San Diego's design alternative for the storm drain improvements will remove the existing cleanout east of the outfall. Constructed in its place will be a new A-5 cleanout to accommodate a new 480-foot long by 42-inch RCP storm drain. The new storm drain will extend north from the 18th Hole and turn westerly outfalling at the base of the existing canyon. Ground disturbances include removing a portion of the existing golf cart path and sections of the golf course and existing slope would be disturbed and restored. The design alternative would avoid work within the steep canyon slopes.

The Project Area is approximately 0.422 acres in size.

1.3 REGULATORY CONTEXT SUMMARY

This report, prepared in compliance the California Environmental Quality Act (CEQA), details the methods and results of the cultural resources study for the proposed project. The study included a records search, a Sacred Lands File (SLF) search by the Native American Heritage Commission (NAHC), a review of historic maps and aerial photographs, and an archaeological field survey. This report recommends measures to protect undetected historic resources that may be present on the parcels.

1.4 PROJECT AREA

The Project Area consists of the horizontal (surficial) and vertical (above ground and subterranean) limits of the project, and includes the area within which significant impacts or adverse effects to Archaeological Resources under California Environmental Quality Act (CEQA) could occur as a result of the project. The Project Area, subject to environmental review under CEQA, consists of all areas where activities associated

with the Project are proposed. This includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements described in the project description and is 0.422 acres in size (Figure 2).

The Project Area includes the maximum depth below the surface to which excavations for the project will extend. Thus, it includes all subsurface areas where archaeological deposits could be affected and varies across the project, depending on the type of infrastructure. Ground disturbance of greater than 18 inches below the surface is assumed.

2 SETTING

The Project Area is located in the County of San Diego (Figures 1 and 2).

2.1 Existing Conditions

Chapter 2 establishes the context for the evaluation of cultural resources through an overview of the environmental setting, the prehistory, and the ethnographic identity of the Project Area, as well as the regulatory setting.

2.1.1 Natural Setting

The Project Area is predominately sandy soil with sandstone bedrock on a mid-slope and lower-slope. The Project Area appears to have been terraced mechanically. Large amounts of disturbance can be observed throughout the project area. The vegetation in the Torrey Pines Golf Course, North Course and adjacent State Natural Reserve include a mixture of plants from the coastal sage scrub, chaparral, and Woodland Pine plant communities.

2.1.2 Soils and Geology

Two (2) soil units, or types, have been mapped within the Project Area, the Carlsbad Soil Series is a gravelly loamy sand, 5 to 9 percent slopes; and Terrace escarpments. Carlsbad soils are gently to moderate sloping at elevations of 30 to 300 feet. The soils have brown, pale brown, and very pale brown slightly acid, gravelly loamy sand A horizons; and pale brown and light brown, slightly and strongly acid heavy loamy sand C horizons underlain by weakly cemented duripans at a depth of 38 inches. Terrace Escarpments are considered miscellaneous areas by the NRCS; thus, they provide no unit description for them (NRCS 1973).

There is one (1) geologic deposit within the Project Area: Quaternary Alluvium, Paralic estuarine deposit (Qpe, late Holocene). Geologic and surficial units present within the study area include Holocene-age (less than approximately 11,000 years old) artificial fill, native topsoils and alluvial/estuarine deposits; Quaternary-age Old Paralic Deposits, and have low sensitivity for buried cultural resources (Rogers, 1965). These deposits have moderate to high sensitivity for buried cultural resources.

The Project Area is located within the "areas outside 0.2-percent-annual-chance flood zone" or moderate flood hazard area, as mapped on the National Flood Hazard Layer determined by the Federal Emergency Management Agency (FEMA 2018). Flood hazard areas identified on the Flood Insurance Rate Map (FIRM) are identified as a Special Flood Hazard Area (SFHA). The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA) on NFIP maps ("Regulatory Floodway" and "1% Annual Chance Flood Hazard"). A Regulatory Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height, and has high to moderate sensitivity for buried cultural deposits. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30, and has moderate sensitivity for buried cultural deposits. Moderate flood hazard areas,

labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood, and has moderate to low sensitivity for buried cultural deposits. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (un-shaded), and has low sensitivity for buried cultural deposits.

2.1.3 Cultural Setting

The following sections have been excerpted from the City of San Diego Historical Resources Guide (HRG, 2001) and serves to provide a comparative framework for the prehistory of the region and context for this report. The history of San Diego can be divided into four prehistoric periods, one ethnohistoric period and three historic periods. The references cited in this section can be found in HRG (2001:Appendix A).

EARLY MAN PERIOD (BEFORE 8500 Before Christ (BC))

No firm archaeological evidence for the occupation of San Diego County before 10,500 years ago has been discovered. The myths and history that is repeated by the local Native American groups now and at the time of earlier ethnographic research indicate both their presence here since the time of creation and, in some cases, migration from other areas. There are some researchers who advocate an occupation of southern California prior to the Wisconsin Glaciation, around 80,000 to 100,000 years ago (Carter 1957, 1980; Minshall 1976). Local proposed Early Man sites include the Texas Street, Buchanan Canyon and Brown sites, as well as Mission Valley (San Diego River Valley), Del Mar and La Jolla (Bada et al. 1974; Carter 1957, 1980; Minshall 1976, 1983, 1989; Moriarty and Minshall 1972; Reeves 1985; Reeves et al. 1986). However, two problems have precluded general acceptance of these claims. First, artifacts recovered from several of the localities have been rejected by many archaeologists as natural products rather than cultural artifacts. Second, the techniques used for assigning early dates to the sites have been considered unsatisfactory (Moratto 1984; Taylor et al. 1985).

PALEO-INDIAN PERIOD (8500-6000 BC)

The earliest generally-accepted archaeological culture of present-day San Diego County is the Paleo-Indian culture of the San Dieguito Complex. This complex is usually assigned to the Paleo-Indian Stage and dates back to about 10,500 years ago. It would therefore appear to be contemporary with the better-known Fluted Point Tradition of the High Plains, and elsewhere, and the Western Pluvial Lakes Tradition of the Desert West. The San Dieguito Complex, is believed to represent a nomadic hunting culture by some investigators of the complex (Davis et al. 1969; Moriarty 1969; Rogers 1929, 1966; Warren 1966, 1967), characterized by the use of a variety of scrapers, choppers, bifaces, large projectile points and crescentics, a scarcity or absence of milling implements, and a preference for fine-grained volcanic rock over metaquartzite.

Careful scientific investigation of San Dieguito Complex sites in the region would also be assigned a high research priority.

EARLY ARCHAIC PERIOD (6000 BC-Anno Domini (AD) 0)

As a result of climatic shifts and a major change in subsistence strategies, a new cultural pattern assignable to the Archaic Stage is thought by many archaeologists to have replaced the San Dieguito culture before

6000 BC. This new pattern, the Encinitas Tradition, is represented in San Diego County by the La Jolla and Pauma complexes. The coastal La Jolla Complex is characterized as a gathering culture which subsisted largely on shellfish and plant foods from the abundant littoral resources of the area. The La Jolla Complex is best known for its stone-on-stone grinding tools (mano and metate), relatively crude cobble-based flaked lithic technology and flexed human burials. Inland Pauma Complex sites have been assigned to this period on the basis of extensive stone-on-stone grinding tools, Elko Series projectile points and the absence of remains diagnostic of later cultures.

LATE PREHISTORIC PERIOD (AD 0-1769)

The Late Prehistoric Period in San Diego County is represented by two distinct cultural patterns, the Yuman Tradition from the Colorado Desert region and the Shoshonean Tradition from the north. These cultural patterns are represented locally by the Cuyamaca Complex from the mountains of southern San Diego County and the San Luis Rey Complex of northern San Diego County. The people of the Cuyamaca and San Luis Rey complexes are ancestral to the ethnohistoric Kumeyaay (Diegueño) and Luiseño, respectively. Prehistorically, the Kumeyaay were a hunting and gathering culture that adapted to a wide range of ecological zones from the coast to the Peninsular Range. A shift in grinding technology reflected by the addition of the pestle and mortar to the mano and metate, signifying an increased emphasis on acorns as a primary food staple, as well as the introduction of the bow and arrow (i.e., small Cottonwood Triangular and Desert Side-notched projectile points), obsidian from the Obsidian Butte source in Imperial County and human cremation serve to differentiate Late Prehistoric populations from earlier peoples. Pottery is also characteristic of the Cuyamaca Complex, but is absent from the San Luis Rey Complex until relatively late (post AD 1500).

Late Prehistoric sites appear to be proportionately much less common than Archaic sites in the coastal plains subregion of southwestern San Diego County (Christenson 1990:134-135; Robbins-Wade 1990). These sites tend to be located on low alluvial terraces or at the mouths of coastal lagoons and drainages. Of particular interest is the observation that sites located in the mountains appear to be associated with the Late Prehistoric Period. This suggests that resource exploitation broadened during that time, as populations grew and became more sedentary.

ETHNOHISTORIC PERIOD

The founding of Mission San Diego de Alcalá in 1769 by Father Junípero Serra and Mission San Luis Rey de Francia in 1798 by Father Lasuén brought about profound changes in the lives of the Yuman-speaking Kumeyaay (Diegueño) and Shoshonean-speaking Luiseño of San Diego County. The coastal Kumeyaay and Luiseño were quickly brought into their respective missions or died from introduced diseases. Ethnographic work, therefore, has concentrated on the mountain and desert peoples who were able to retain some of their aboriginal culture. As a result, ethnographic accounts of the coastal Kumeyaay and Luiseño are few. Today, the descendants of the Kumeyaay bands are divided among 12 reservations in the South County; the descendants of the Luiseño bands among five reservations in the North County.

The Kumeyaay are generally considered to be a hunting-gathering society characterized by central-based nomadism. While a large variety of terrestrial and marine food sources were exploited, emphasis was placed on acorn procurement and processing as well as the capture of rabbit and deer. Shipek (1963, 1989b) has

strongly suggested that the Kumeyaay, or at least some bands of the Kumeyaay, were practicing proto-agriculture at the time of Spanish contact. While the evidence is problematic, the Kumeyaay were certainly adept land and resource managers with a history of intensive plant husbandry.

As with most hunting-gathering societies, Kumeyaay social organization was formed in terms of kinship. The Kumeyaay had a patrilineal type of band organization (descent through the male line) with band exogamy (marriage outside of one's band) and patrilocal marital residence (married couple integrates into the male's band). The band is often considered as synonymous with a village or *rancheria*, which is a political entity.

Almstedt (1980:45) has suggested that the term *rancheria* should be applied to both a social and geographical unit, as well as to the particular population and territory held in common by a native group or band. She also stressed that the territory for a *rancheria* might comprise a 30 square mile area. Many households would constitute a village or *rancheria* and several villages were part of a larger social system usually referred to as a consanguineal kin group called a *cimuL*. The members of the *cimuL* did not intermarry because of their presumed common ancestry, but they maintained close relations and often shared territory and resources (Luomala 1963:287-289).

Territorial divisions among Kumeyaay residential communities were normally set by the circuit of moves between villages by *cimuLs* in search of food. As Spier (1923:307) noted, the entire territory was not occupied at one time, but rather the communities moved between resources in such a manner that in the course of a year all of the recognized settlements may have been occupied. While a *cimuL* could own, or more correctly control, a tract of land with proscribed rights, no one from another *cimuL* was denied access to the resources of nature (Luomala 1963:285; Spier 1923:306); since no individual owned the resources, they were to be shared.

The Kumeyaay practiced many forms of spiritualism with the assistance of shamans and *cimuL* leaders. Spiritual leaders were neither elected to, nor inherited their position, but achieved status because they knew all the songs involved in ceremonies (Shipek 1991), and had an inclination toward the supernatural. This could include visions, unusual powers, or other signs of communication with the worlds beyond. Important Kumeyaay ceremonies included male and female puberty rites, the fire ceremony, the whirling dance, the eclipse ceremony, the eagle dance, the cremation ceremony, and the yearly mourning ceremony (Spier 1923:311-326).

Important areas of research for the Ethnohistoric Period include identifying the location of Kumeyaay settlements at the time of historic contact and during the following 50 years of the Spanish Period; delineating the effects of contact on Kumeyaay settlement/subsistence patterns; investigating the extent to which the Kumeyaay accepted or adopted new technologies or material goods from the intrusive Spanish culture; and examining the changes to Kumeyaay religious practices as a result of contact.

HISTORIC PERIODS

San Diego's history can be divided into three periods: the Spanish, Mexican and American periods.

SPANISH PERIOD (AD 1769-1822)

In spite of Juan Cabrillo's earlier landfall on Point Loma in 1542, the Spanish colonization of Alta California did not begin until 1769. Concerns over Russian and English interests in California motivated the Spanish government to send an expedition of soldiers, settlers and missionaries to occupy and secure the northwestern borderlands of New Spain. This was to be accomplished through the establishment and cooperative inter-relationship of three institutions: the Presidio, Mission and Pueblo. In 1769 a land expedition led by Gaspar de Portola reached San Diego Bay, where they met those who had survived the trip by sea on the San Antonio and the San Carlos. Initially camp was made on the shore of the bay in the area that is now downtown San Diego. Lack of water at this location, however, led to moving the camp on May 14, 1769 to a small hill closer to the San Diego River and near the Kumeyaay village of Cosoy. Father Junipero Serra arrived in July of the same year to find the Presidio serving mostly as a hospital. The Spanish built a primitive mission and presidio structure on the hill near the river. The first chapel was built of wooden stakes and had a roof made of tule reeds. Brush huts and temporary shelters were also built.

Bad feelings soon developed between the native Kumeyaay and the soldiers, resulting in construction of a stockade whose wall was made from sticks and reeds. By 1772 the stockade included barracks for the soldiers, a storehouse for supplies, a house for the missionaries and the chapel, which had been improved. The log and brush huts were gradually replaced with buildings made of adobe bricks. Flat earthen roofs were eventually replaced by pitched roofs with rounded roof tiles and clay floors were eventually lined with fired-brick.

In August 1774, the Spanish missionaries moved the Mission San Diego de Alcalá to its present location six miles up the San Diego River valley (modern Mission Valley), near the Kumeyaay village of Nipaguay. What started as a thatched jacal chapel and compound built of willow poles, logs and tules, the new Mission was sacked and burned in the Kumeyaay uprising of November 5, 1775. The first adobe chapel was completed in October 1776, and the present church was built the following year. A succession of building programs through 1813 resulted in the final rectilinear plan that included the church, bell tower, sacristy, courtyard, residential complex, workshops, corrals, gardens and cemetery (Neuerburg 1986). Orchards, reservoirs, and other agricultural installations were built to the south on the lower San Diego River alluvial terrace and were irrigated by a dam and aqueduct system.

In 1798, the Spanish constructed the Mission San Luis Rey de Francia in northern San Diego County. They also established three smaller mission outposts (asistencias) at Santa Ysabel, Pala and Las Flores (Smythe 1908; Englehardt 1920; Pourade 1961). The mission system had a great effect on all Native American groups from the coast to the inland areas and was a dominant force in San Diego County.

Life for the new settlers at the San Diego Presidio was isolated and difficult. The arid desert climate and aggressive Native American population made life hard for the Spanish settlers. They raised cattle and sheep, gathered fish and seafood and did some subsistence farming in the San Diego River valley to generate enough food to keep the fledgling community of a few hundred Spaniards and hundreds of Native American neophytes alive. The situation for Spanish Period San Diegans' was complicated by the Spanish government's insistence on making trade with foreign ships illegal. Although some smuggling of goods into San Diego was done, the amounts were likely small (Smythe 1908:81-99; Williams 1994).

MEXICAN PERIOD (AD 1822-1846)

In 1822 the political situation changed. Mexico won its independence from Spain and San Diego became part of the Mexican Republic. The Mexican government opened California to foreign ships, and a healthy trade soon developed, exchanging the fine California cattle hides for the manufactured goods of Europe and the eastern United States. Several of these American trading companies erected rough sawn wood-plank sheds at La Playa on the bay side of Point Loma. The merchants used these "hide-houses" for storing the hides before transport to the east coast (Robinson 1846:12; Smythe 1908:102). As the hide trade grew, so did the need for more grazing lands. Thus the Mexican government began issuing private land grants in the early 1820s, creating the rancho system of large agricultural estates. Much of the land came from the Spanish missions, which the Mexican government secularized in 1833. The mission system, however, had begun to decline when the Mission Indians became eligible for Mexican citizenship, and refused to work in the mission fields. The ranchos dominated California life until the American takeover in 1846 (Smythe 1908:101-106; Robinson 1948; Killea 1966; Pourade 1963). The Mexican Period brought about the continued displacement and acculturation of the native populations.

Another change in Mexican San Diego was the decline of the presidio and the rise of the civilian Pueblo. The establishment of Pueblos in California under the Spanish government met with only moderate success and none of the missions obtained their ultimate goal, which was to convert to a Pueblo. Pueblos did, however, begin to form somewhat spontaneously, near the California Presidios. As early as 1791, presidio commandants in California were given the authority to grant small house lots and garden plots to soldiers and their families (Richman 1911:346). Sometime after 1800, soldiers from the San Diego Presidio began to move themselves and their families from the presidio buildings to the tableland down the hill near the San Diego River. Historian William Smythe noted that Don Blas Aguilar, who was born in 1811, remembered at least 15 such grants below Presidio Hill by 1821 (Smythe 1908:99). Of these 15 grants only five within the boundaries of what would become Old Town had houses in 1821.

The new Pueblo of San Diego did not prosper as some other California towns did during the Mexican Period. In 1834 the Mexican government secularized the San Diego and San Luis Rey missions. The secularization in San Diego County had the adverse effect of triggering increased Native American hostilities against the Californios during the late 1830s. The attacks on outlying ranchos, along with unstable political and economic factors helped San Diego's population decline to around 150 permanent residents by 1840. San Diego's official Pueblo status was removed by 1838 and it was made a sub prefecture of the Los Angeles Pueblo. When the Americans took over after 1846, the situation had stabilized somewhat, and the population increased to roughly 350 non-Native American residents (Killea 1966:24-32; Hughes 1975:6-7).

AMERICAN PERIOD (AD 1846-PRESENT)

When United States military forces occupied San Diego in July 1846, the town's residents split on their course of action. Many of the town's leaders sided with the Americans, while other prominent families opposed the United States invasion. A group of Californios under Andres Pico, the brother of the Governor Pio Pico, harassed the occupying forces in Los Angeles and San Diego during 1846. In December 1846, Pico's Californios engaged U.S. Army forces under General Stephen Kearney at the Battle of San Pasqual

and inflicted many casualties. However, the Californios resistance was defeated in two small battles near Los Angeles and effectively ended by January 1847 (Harlow 1982; Pourade 1963).

The Americans raised the United States flag in San Diego in 1846, and assumed formal control with the Treaty of Guadalupe-Hidalgo in 1848. In the quarter of a century following 1848, they transformed the Hispanic community into a thoroughly Anglo-American one. They introduced Anglo culture and society, American political institutions and especially American entrepreneurial commerce. By 1872, they even relocated the center of the city and community to a new location that was more accessible to the bay and to commerce (Newland 1992:8). Expansion of trade brought an increase in the availability of building materials. Wood buildings gradually replaced adobe structures. Some of the earliest buildings to be erected in the American Period were "Pre-fab" houses, which were built on the east coast of the United States and shipped in sections around Cape Horn and reassembled in San Diego.

In 1850, the Americanization of San Diego began to develop rapidly. On February 18, 1850, the California State Legislature formally organized San Diego County. The first elections were held at San Diego and La Playa on April 1, 1850 for county officers. San Diego grew slowly during the next decade. San Diegans attempted to develop the town's interests through a transcontinental railroad plan and the development of a new town closer to the bay. The failure of these plans, added to a severe drought, which crippled ranching and led to the onset of the Civil War, that left San Diego as a remote frontier town. The troubles led to an actual drop in the town's population from 650 in 1850 to 539 in 1860 (Garcia 1975:77). Not until land speculator and developer Alonzo Horton arrived in 1867 did San Diego begin to develop fully into an active American town (MacPhail 1979).

Alonzo Horton's development of a New San Diego (modern downtown) in 1867 began to swing the community focus away from Old Town. After the county seat was moved in 1871 and a fire destroyed a major portion of the business block in April 1872, Old Town rapidly declined in importance.

American Period resources can be categorized into remains of the frontier era, rural farmsteads and urban environments, with different research questions applicable to each category. Important research topics for the frontier era, include studying the changing function of former Mexican ranchos between 1850 and 1940, and investigating the effect on lifestyles of the change from Hispanic to Anglo-American domination of the pueblo of San Diego. Research domains for rural farmsteads include the definition of a common rural culture, comparing the definition of wealth and consumer preferences of successful rural farm families versus middle and upper-middle class urban dwellers, definition of the evolution and adaptation of rural vernacular architecture, and identification of the functions of external areas on farmsteads.

There is no evidence of any of these cultural periods within the Project Area, but this brief discussion is included as a guideline for studies in the project vicinity.

2.2 REGULATORY SETTING

This section provides summary background information regarding applicable historical resources regulations at the federal, state, and local levels.

2.2.1 State: California Environmental Quality Act (CEQA)

Compliance with the California Environmental Quality Act (CEQA) requires consideration of impacts to cultural resources as historical resources within projects, specifically CEQA Guidelines Section 15064.5(a) and 15064.5(c).

According to Section 15064.5 (a) of the CEQA Guidelines, a historical resource includes the following:

1. A resource listed in, or determined to be eligible for listing on, the California Register of Historical Resources,
 - A. A resource included in the local register, and
 - B. A resource which an agency determines to be historically significant.

A resource may be considered historically significant if it meets one of the following criteria for listing on the California Register of Historical Resources (CRHR; PRC Section 5024.1):

1. Associated with events that have made a significant contribution to the broad patterns local or regional history and cultural heritage of California or the United States.
2. Associated with the lives of persons important to the nation or to California's past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history of the state or nation.

In addition to meeting one of the above criteria, a resource must retain enough of its integrity of location, design, setting, materials, workmanship, feeling, and association. A resource does not need to have integrity of all, but of a sufficient number so that it conveys the essence of why it might be significant in the first place (California Code of Regulations [CCR] Title 14, Chapter 11.5 Section 4852(c)). CEQA also recognizes resources listed in a local historic register or deemed significant in a historical resource survey.

A project that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (Sections 15064.5(b) and 21084.1). CEQA Section 15064.5(b) defines substantial adverse change in the significance of an historical resource as the physical demolition, destruction, relocation, or alteration of an historical resource or its immediate surroundings such that the significance is materially impaired.

2.2.2 Local: City of San Diego

The purpose and intent of the City's Historical Resources Regulations of the LDC (Chapter 14, Division 3, and Article 2) is to protect, preserve and, where damaged, restore the historical resources of San Diego. The regulations apply to all proposed development within the City of San Diego when historical resources are present on the premises regardless of the requirement to obtain a Neighborhood Development Permit or Site Development Permit. When any portion of premises contains historical resources, as defined in the LDC Chapter 11, Article 3, Division 1, the regulations apply to the entire premises.

Historical resources consist of designated historical resources, historical districts, historical buildings, structures, objects, and landscapes, important archaeological sites and traditional cultural properties. Only minor alteration of a designated historical resource or of a historical building or structure within a historical district may be allowed if the alteration does not affect the special character or special historical, architectural, archaeological, or cultural value of the resource. Traditional cultural properties are required to be protected and preserved as a condition of development approval. Development within an area containing an important archaeological site is permitted if necessary to achieve a reasonable development area with up to 25 percent encroachment into the site. Additional encroachment of 15 percent is allowed for essential public service projects.

Any loss of a historical resource through alteration or encroachment is required to be offset by mitigation, in accordance with Section III of these Guidelines. Mitigation measures include preservation in whole or in part or avoidance as the preferred method of mitigation with other methods such as documentation and/or salvage of the resource prior to its disturbance allowed when preservation is not feasible.

The regulations include a deviation process by which project approval could occur without compliance with the historical resources regulations to afford relief from the regulations when all feasible measures to mitigate for the loss of the resource have been provided by the applicant and when denial of the development would result in economic hardship.

The City's Historical Resources Guidelines amended in April 2001 are designed to implement the Historical Resources Regulations noted above. If any resources have been recorded on the property, those resources must be evaluated for significance/importance in accordance with criteria listed in the Historical Resources Guidelines. Resources determined to be significant/important must either be avoided or a data recovery program for important archaeological sites must be developed and approved prior to permit issuance in order to assure adequate mitigation for the recovery of cultural and scientific information related to the resource's significance/importance.

The Historical Resources Board was established by the City Council as an advisory board to identify, designate, and preserve the historical resources of the City; to review and make a recommendation to the appropriate decision-making authority on applications for permits and other matters relating to the demolition, destruction, substantial alteration, removal or relocation of designated historical resources; to establish criteria and provide for a Historical Resources Inventory of properties within the boundaries of the City; and to recommend to the City Council and Planning Commission procedures to facilitate the use of the Historical Resources Inventory results in the City's planning process in accordance with Section 111.0206 of the LDC.

The City of San Diego also maintains a Historical Resources Register. Per the City, any improvement, building, structure, sign, interior element and fixture, feature, site, place, district, area or object may be designated as historic by the City of San Diego Historical Resources Board, if it meets any of the following criteria:

- Exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;

- Is identified with persons or events significant in local, state or national history;
- Embodies distinctive characteristics of a style, type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
- Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist or craftsman;
- Is listed or has been determined eligible by National Park Service for listing on the NRHP or is listed or has been determined eligible by the State Historic Preservation Officer for listing on the CRHR; or
- Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

3 METHODS

Chapter 3 discusses the methods utilized during the cultural resources inventory survey of the Project Area.

3.1 PERSONNEL QUALIFICATIONS

All phases of the archaeological resources investigation were conducted by Ms. Trisha Drennan, MSc., RPA, under the supervision of project manager and principal investigator, Ms. Arleen Garcia-Herbst, C.Phil., RPA, who provided technical report review and quality control. A second field site visit was completed by Ms. Kellie Kandybowicz, B.A.. Resumes are available upon request.

Ms. Drennan has been working in the field of archaeology for 20 years and is a highly diverse cultural resources project manager. For the last fifteen years, her focus has been conducting and managing both terrestrial and maritime projects that involve federal, state and local protection of cultural resources (e.g., Section 106/110 of the National Historic Preservation Act [NHPA], National Environmental Policy Act [NEPA], and the California Environmental Quality Act [CEQA]). These projects have included the Department of Defense, the U.S. Forest Service, the Department of Transportation, the Federal Communications Commission, municipal governments, as well as numerous commercial clients. Her experience in cultural resource management encompasses all phases of archaeological fieldwork, including archaeological surveys, site significance and evaluation testing, data recovery mitigation and burial treatment plans, and archaeological monitoring projects.

Ms. Kellie Kandybowicz, has more than 6 years in cultural resources management. She has experience conducting archaeological fieldwork including survey, testing, data recovery, excavation, and construction monitoring and artifact analysis in the laboratory.

Ms. Garcia-Herbst is a Secretary of the Interior-qualified Archaeologist and has been professionally involved with cultural resources management in California, Colorado and Hawaii since 2006. She has extensive experience with the cultural and paleontological resources requirements of the City and County of San Diego, CEQA, Hawaii Revised Statutes and Administrative Rules, the National Environmental Policy Act (NEPA), and Section 106 of the National Historic Preservation Act (NHPA). She is a City of San Diego, County of San Diego, and County of Riverside Qualified Archaeologist. While Ms. Garcia-Herbst's professional focus is in California and Hawaii, she also has project experience in Arizona, Nevada, Germany, Peru, and Argentina. She received her B.A. in Anthropology with a minor in Geosciences from the University of Arizona (1996), and completed her M.A. in Anthropology at the University of California, Santa Barbara (UCSB, 2000), is advanced to candidacy (C.Phil., 2006) and working on completing her Ph.D. thesis at the University of California, Santa Barbara.

3.2 RECORD SEARCH

A records search for the Project Area was completed by the San Diego Museum of Man on 9 May 2019, and an in-house records search was completed by Spindrift Senior Archaeologist, Trisha Drennan, RPA, at the South Coastal Information Center (SCIC) of the CHRIS at San Diego State University on 22 April 2019 (Appendix A; see records search request map in Figure 3). The purpose of the records search was to determine the extent of previous surveys within a one-mile (1600-meter) radius of the proposed project

location, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within the Project Area area.

A records search for the Project Area was also requested on 13 May 2019 to the California State Land Commission for a list of shipwrecks and other submerged archaeological sites within a one-mile (1600-meter) radius of the proposed project location.

In addition to the official records and maps for archaeological sites and surveys in San Diego County, the following historic references were also reviewed: Historic Property Data File for San Diego County (Office of Historic Preservation 2013a); The National Register Information System website (National Park Service 2013); Office of Historic Preservation, California Historical Landmarks website (Office of Historic Preservation 2013b); California Historical Landmarks (Office of Historic Preservation 1996 and updates); and California Points of Historical Interest (Office of Historic Preservation 1992 and updates).

3.3 NATIVE AMERICAN COORDINATION

Spindrift contacted the California Native American Heritage Commission (NAHC) on 28 April 2019 to request a search of the Sacred Lands File for the Project Area. In a letter dated 10 May 2019, the NAHC said a search of the SLF was completed for the project with negative results. The NAHC also provided a list of individuals and organizations in the Native American community that may be able to provide information about unrecorded sites in the project vicinity (Appendix B).

Spindrift contacted all persons and organizations on the NAHC contact list on 11 May 2019 by email, and on 13 June 2019 by fax or certified mail. Spindrift requested information about unrecorded cultural resources that may exist within the current Project Area, and inquired about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action. A complete correspondence record is provided in Appendix B.

3.4 FIELD SURVEY

Field work was conducted by Spindrift Senior Archaeologist Trisha Drennan, RPA, on 3 May 2019 during which the 0.422 acres of the Project Area were subjected to an intensive systematic pedestrian survey under the guidance of the Secretary of the Interior's Standards for the Identification of Historic Properties (National Park Service 1983) using transects spaced less than three (3) meters apart (see survey coverage map in Figure 4). Notes were taken on the environmental setting and disturbances within the Project Area. The Project Area was mapped utilizing a handheld Global Positioning System (GPS) unit application (APP). This GPS unit was also used to update the boundaries of the previously existing site, and record the location of any new archaeological sites encountered during survey. A second field site visit was conducted on 22 July 2019 by Kellie Kandybowicz, accompanied by Redtail Environmental native american monitor Korin Griep following an identical field survey protocol.

The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as mounds, circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

4 RESULTS AND MANAGEMENT RECOMMENDATIONS

Chapter 4 analyses information about cultural resources in and around the Project Area, as a result of the records search and literature review. Management recommendations are also provided.

4.1 RECORDS SEARCH

The records search results indicated that one-hundred thirty-two (132) previous cultural resources studies (Table A-1 in Appendix A) were conducted within a one-mile radius of the Project Area, and one-hundred eight (108) cultural resources have previously been recorded within a one-mile radius of the Project Area (Table A-2 in Appendix A).

There is one cultural resource (P-37-033597) that has been previously documented within the Project Area.

A review of California Inventory of Historic Resources (March 1976) and National Register of Historic Places (National Park Service 2013), indicated that there are no inventoried historic properties within the Project Area and a one-mile radius. Resources listed as California Historical Landmarks (CHL; Office of Historic Preservation 1996) and on the Office of Historic Preservation website (Office of Historic Preservation 2015) were reviewed. There are no inventoried CHL within the Project Area and a one-mile radius.

The Caltrans Historic Bridge Local Inventory (Caltrans 2013a) listed no historic bridges within the Project Area and a one-mile radius. Additionally, the Caltrans State Historic Bridge Inventory (Caltrans 2013b) listed no historic bridges within the Project Area and a one-quarter-mile radius (Table A-3 in Appendix A).

4.1.1 Previously Recorded Resources within the Project Area

There is one cultural resource (P-37-033597) that has been previously documented within the Project Area.

P-37-033597

P-37-033597 (Torrey Pines Golf Course, North Course) was originally recorded and evaluated in 2014 by Sarah Stringer-Bowsher and Shannon Davis of ASM Affiliates, Inc. (Stringer-Bowsher and Shannon Davis 2014). The Torrey Pines Golf Course, North Course is an 18-hole golf course that includes a lodge, clubhouse, a driving range, and ancillary support buildings (restroom buildings, maintenance sheds, and pump/lift station).

The Torrey Pines Golf Course (TPGC), North Course was recommended eligible for the NRHP and CRHR as a District under Criteria A-1, and the City of San Diego Register under Criterion A (as a golf course under the theme of Recreation in the history of golf in San Diego and California, with a period of significance of 1957-1964). The TPGC, North Course was also recommended eligible for the NRHP and CRHR as a District under C-3 and for the City of San Diego Register under C, and D (the work of a master architect). The TPGC, South Course was not included in the eligibility determinations as a district, since it lacks integrity due to modifications made for championship play.

Despite some alterations to some bunkers, tees, and greens over time, the overall integrity of design and workmanship throughout the remainder of the course was viewed as intact. As a result, the TPGC North Course, was recommended as maintaining sufficient integrity of location, setting, materials, feeling, and association to convey its historical associations under NRHP Criteria A and C, CRHR Criteria 1 and 3, and City of San Diego Register under Criteria A, C, and D.

P-37-033597 (Torrey Pines Golf Course, North Course) was updated by Loveless et al. 2016 as a result of previously unrecorded discovery of prehistoric and historic artifacts during archaeological monitoring on a golf course improvement project. As a result of the site update, nine loci were identified (Loci A-I). Loci B, C, and G contained both historic and prehistoric artifacts, while Loci A, D, E, F, and H are prehistoric. Locus A and F are exclusively prehistoric midden sites. Locus I was recorded while visiting the TPGC, South Course, and is historic. Locus C (prehistoric/historic) also contained concrete footings. In addition, the prehistoric site, CA-SDI-15112, was subsumed since this site boundary neighbored Locus C.

As a result of the survey update, it was determined that P-37-033597 (Torrey Pines Golf Course, North Course) is most likely an extension and part of neighboring sites. Boundaries were originally created as hypothetical based off previous archaeological work and by mapping a boundary around the North Course. Disturbances to the landscape resulting from Camp Callan, the Torrey Pines Road Race, and TPGC, North Course improvement projects have resulted in various instances of grading, cut/fill and excavation. It is not known whether soils were imported to the site or taken off site. It is suggested that the site is a part of a greater district and continuous site.

4.2 NATIVE AMERICAN COORDINATION

Thus far, there have been no responses from the Tribes contacted by email, facsimile or certified mail.

If any comments are received after the submission of this report, they will be forwarded to the lead agency for further consideration and appropriate action. A complete record is provided in Appendix B.

4.3 FIELD SURVEY

There is one cultural resource (P-37-033597) that has been previously documented within the Project Area.

Field work was conducted by Spindrift Senior Archaeologist Trisha Drennan, RPA, on 3 May 2019 during which the 0.422 acres of the Project Area were subjected to an intensive systematic pedestrian survey.

Elevation in the survey area ranges from +/-290 to approximately 365 feet above mean sea. The Project Area forms the shape of a boomerang and slopes sharply downhill within the sandstone bluff and ravine (see Figure 4).

During the survey, approximately 0.24 acres were not intensively surveyed due to the steep slopes of the bluff and ravines (i.e., greater than 30-degree slope) and/or dense vegetation. In addition, the slopes showed evidence of recent erosion and cutbacks close to the golf course green. Therefore, special attention was paid by visually scanning the areas from the bluff for evidence of any eroded prehistoric shell middens,

lithic quarries, and/or historic features or architectural remnants. Overall, survey accessibility and surface visibility within the survey area was fair to good ranged between 30 to 100 percent.

There were no cultural resources observed during the intensive pedestrian survey within the Project Area. No historic or prehistoric features or artifacts were observed that could be associated with the previously documented site (P-37-033597) within the Project Area.

A second field site visit was conducted on 22 July 2019 by Spindrift Archaeologist Kellie Kandybowicz, accompanied by Redtail Environmental native american monitor Korin Griep following an identical field survey protocol to the previous field site visit. The original field observations were confirmed, and the field site visit findings were negative. No cultural materials were observed within the project area.

4.4 MANAGEMENT CONSIDERATIONS

This section summarizes recommendations for continued research, evaluation, designation, and protection of the TPGC, North Course cultural resources. These recommendations are based upon standard preservation guidelines and practice provided for in the local, state and federal policies and regulations that form the basis for the City of San Diego's development review process (see Sec. 2.1 - Regulatory Setting).

4.4.1 Summary and Findings

This systematic intensive pedestrian survey covered 0.422 acres (0.171 hectares) of the Project Area associated with the TPGC, North Course Project. There is one cultural resource (P-37-033597) that has been previously documented within the Project Area. However, no portions of the site updates for P-37-033597 are present within the current Project Area (Loveless et al. 2016).

The results of fieldwork were negative of the Project Area.

The previously recorded cultural resource (P-37-033597) within the Project Area is recommended eligible for the NRHP and CRHR as a District under Criteria A-1, and with the City of San Diego Register under Criterion A; it is recommended eligible for the NRHP and CRHR as a District under C-3 and for the City of San Diego Register under C, and D.

4.4.2 Recommendations

Due to the noted landscape modifications of the Project Area, and the relatively closely spaced (3-ft [1-m]) transect interval, reliable survey coverage was achieved for identifying and recording historic properties within the Project Area that may be impacted by the proposed Project. However, since the proposed Project falls within the boundaries of a previously recorded site, archaeological and Native American monitoring are recommended during construction.

The Project as it is currently designed falls within the recorded boundaries of site P-37-033597. P-37-033597 was evaluated for listing on the National Register of Historic Places and the California Register of

Historical Resources, and was found eligible under Criteria A and C/1 and 3. In addition, the site is considered locally significant under the criteria and guidelines outlined in the San Diego Municipal Code Land Development Code/Historical Resources. No surface evidence of cultural materials or sites was observed within the site boundary of this site within the Project Area. However, monitoring during ground disturbances is recommended to avoid impacts to any potential buried cultural resources. The results of monitoring during ground disturbance should be reported in a separate document.

Should additional intact buried cultural deposits be encountered during monitoring, a subsurface testing program to determine the extent of in situ significant archaeological deposits within the portion of the sites within the Project Area and their integrity is recommended. The results and an evaluation of eligibility for listing on the CRHR should be reported in a separate document. The Project Area as currently designed may intersect with the mapped boundary for this resource, resulting in a significant impact under CEQA, if the site is determined as eligible for listing on the CRHR.

4.4.3 Monitoring

Due to the moderate sensitivity of the Project Area for prehistoric-period resources, Spindrift recommends that all ground-disturbing activity within the Project Area be monitored by an archaeological and Native American monitor, who has the authority to halt construction activity, in accordance with the unanticipated discovery procedures discussed below.

In the event of any unanticipated discoveries during construction, a less than significant impact to buried resources, if present, would occur with implementation of Mitigation Measures C-1 and C-2.

Mitigation Measures

- C-1. If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery. A qualified archaeological monitor or Principal Investigator, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained and afforded a reasonable amount of time to evaluate the significance of the find. Work cannot continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the CRHR. If a *potentially*-eligible resource is encountered, then the archaeologist, lead agency, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, total data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead agency as verification that the provisions in CEQA for managing unanticipated discoveries have been met.
- C-2. In the event that evidence of human remains is discovered, construction activities within 50 feet of the discovery will be halted or diverted, and the requirements above will be implemented. Depending on the occurrence, a larger radius may be necessary and will be required at the discretion of the on-site archaeologist. In addition, the provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. When

human remains are discovered, state law requires that the discovery be reported to the County Coroner (Section 7050.5 of the Health and Safety Code) and that reasonable protection measures be taken during construction to protect the discovery from disturbance (AB 2641). If the Coroner determines the remains are Native American, the Coroner notifies the Native American Heritage Commission, which then designates a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code). The MLD may not be the same person as the tribal monitor. The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

Implementation of the above mitigation measures will reduce impacts to buried cultural resources to a less than significant level.

The Lead Agency, the City of San Diego, is responsible for ensuring compliance with these mitigation measures because damage to significant cultural resources is in violation of CEQA and Section 106. Section 15097 of Title 14, Chapter 3, Article 7 of CEQA, *Mitigation Monitoring or Reporting*, “the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.”

5 REFERENCES

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- 1971 *Stratigraphic relations of Upper Cretaceous and Eocene formations, San Diego coastal area, California*. American Association of Petroleum Geologists Bulletin 55 (5): 709-722].

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- 2008 *Geologic Map of the San Diego 30' x 60' Quadrangle, California*. California Geological Survey, Map No. 3, Scale 1:100,000. Electronic Document, <http://www.quake.ca.gov/gmaps/RGM/sandiego/sandiego.html>, Viewed 15 October 2018 using Google Earth.

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2016 Archaeological Site Record Update for CA-SDI-22051 (P-37-033597). On file at the South Coastal Information Center, San Diego State University.

National Park Service (NPS)

1983 Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. 48 FR (Federal Register) 44716-68.

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1992 *California Points of Historical Interest*. California Department of Parks and Recreation, Sacramento, California.

1996 *California Historical Landmarks*. California Department of Parks and Recreation, Sacramento, California.

2017 *Office of Historic Preservation California Historical Landmarks Website*, Electronic document. http://ohp.parks.ca.gov/?page_id=21387, Viewed 20 May 2019.

Stringer-Bowsher, Sarah and Shannon Davis

2014 Historical Resources Technical Report for Torrey Pines Golf Course, 11480 North Torrey Pines Road, San Diego, California

United States Department of Agriculture, Natural Resources Conservation Service (NRCS)

2017 SoilWeb: An Online Soil Survey Browser, Soil Survey Geographic (SSURGO) Database for the United States. Available online: <http://casoilresource.lawr.ucdavis.edu/soilweb/>, Viewed 14 May 2019 using Google Earth.

FIGURES

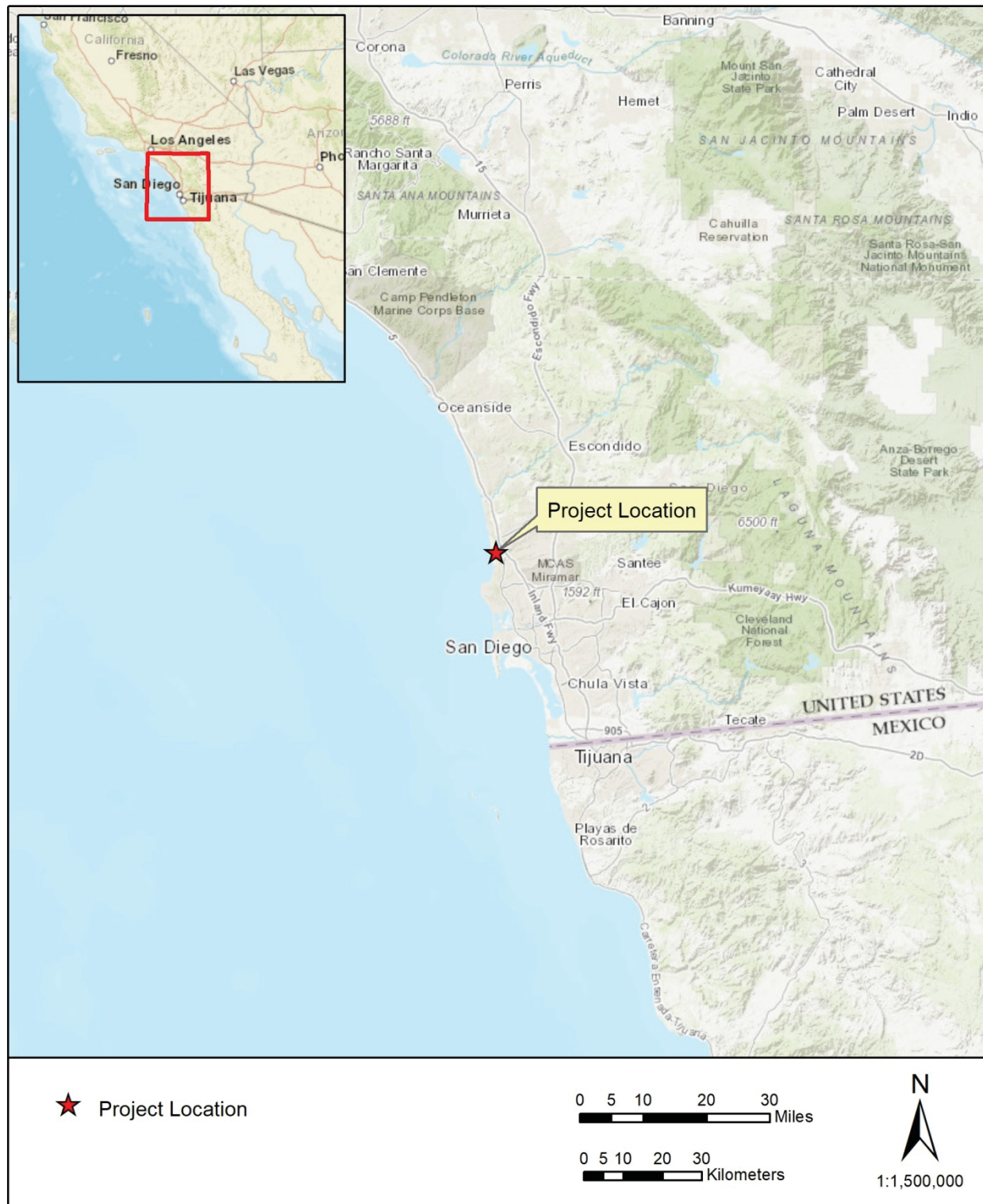


Figure 1. Project Location Map



Figure 2. Project Area Map





Figure 4. Survey Coverage Map

APPENDIX A



CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM CLIENT IN-HOUSE RECORDS SEARCH

Company: Spindrift
Company Representative: Trisha Drennan
Date: 4/22/2019
Project Identification: Torrey Pines Storm Drain Survey

Search Radius: 1 mile

Historical Resources: SELF

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: SELF

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: SELF

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: SELF

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Copies: 1442

Hours: 3

Excel Lines = 180 Lines

REPORT ON



ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: Spindrift Archaeological Consulting, LLC
Name of Project: Torrey Pines Golf Course
Date of Request: April 28, 2019
Date Request Received: April 29, 2019

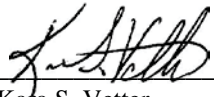
The Record Search for the above referenced project has been completed. Archaeological site file information is enclosed for the following sites located within a **one- mile radius** of the project area indicated on map attached to the request:

W-6	W-1075	W-2561	W-3824	W-6846
W-7	W-1076	W-2562	W-3826	W-6848
W-8	W-1467	W-2563	W-3933	W-6849
W-13	W-1760	W-2564	W-3954	W-6850
W-14(3813)	W-1761	W-2745	W-5026	W-6852
W-54(3825)	W-1762	W-2956	W-5240	W-6853
W-16	W-2463	W-3455	W-6713	W-6939
W-28	W-2466	W-3627	W-6734	W-7085
W-31	W-2467	W-3812	W-6735	W-7086
W-340	W-2560	W-3816	W-6845	

Bibliographic information is enclosed for the following archaeological environmental impact studies conducted within a **one- mile radius** of the project area indicated on map attached to the request:

EIS – 48	EIS – 674	EIS – 1109	EIS – 1413
EIS – 195	EIS – 691	EIS – 1119	EIS – 1414
EIS – 202	EIS – 700	EIS – 1188	EIS – 1423
EIS – 297	EIS – 720	EIS – 1195	EIS – 1547
EIS – 331	EIS – 784	EIS – 1206	EIS – 1550
EIS – 438	EIS – 802	EIS – 1218	EIS – 1568
EIS – 616	EIS – 862	EIS – 1334	EIS – 1602
EIS – 651	EIS – 864	EIS – 1353	EIS – 1606

This Record Search is based only on information contained in the files of the San Diego Museum of Man. Archaeological site records and/or environmental impact studies pertaining to the project area may exist in other repositories.

Search completed by: 
Kara S. Vetter

Date of Record Search: May 9, 2019



Arleen Garcia-Herbst <arleen@spindriftarchaeology.com>

Fwd: Record Search North Torrey Pines Drain Repair Project3 messages

----- Forwarded message -----

From: **Garrett, Jamie@SLC** <Jamie.Garrett@slc.ca.gov>

Date: Wed, May 22, 2019 at 11:46 AM

Subject: Re: Record Search North Torrey Pines Drain Repair Project

To: trisha@spindriftarchaeology.com <trisha@spindriftarchaeology.com>Cc: Griggs, Pamela@SLC <Pam.Griggs@slc.ca.gov>

Dear Ms. Drennan,

Thank you for your inquiry concerning submerged cultural resources that might be affected by a proposed drain repair project near North Torrey Pines. I reviewed our database for any potential shipwrecks near your project site and did not find any nearby in our records. The closest record I did find was the shipwreck *Noya*, which, our records indicate, was a steamship built in 1887 that sank in 1915 when it was grounded on La Jolla Reef while being towed to San Diego.

Except as verified by actual surveys, our data was taken from books, old newspapers, and other contemporary accounts that do not contain precise locations. Our database reflects information from many sources and does not reflect actual fieldwork unless stated otherwise. It would be prudent to corroborate information before relying on it.

You should note that not all shipwrecks are listed in our Shipwrecks Database and their listed locations may be inaccurate. Ships were often salvaged or re-floated. It is also possible that previously unidentified vessels or parts of vessels may be in your project area.

In addition, submerged Native American sites are also a possibility, for which we have no data. Therefore, you must not rely on our database to determine the presence or absence of cultural resources. You may wish to consult historians, archaeologists, or others who have special knowledge or expertise in the history of shipwrecks and Native American sites in your project areas.

Please note that the above information is not intended to be, nor shall it be construed as, a waiver or limitation of any interest of the State in the land or property described.

If you have questions or need additional information, please let me know.

Best regards,

Jamie



Jamie L. Garrett, Staff Attorney

CALIFORNIA STATE LANDS COMMISSION

100 Howe Avenue, Suite 100-South | Sacramento | CA 95825

Phone: 916.574.0398 | Email: Jamie.garrett@slc.ca.gov



----- Forwarded message -----

From: Trisha Drennan <trisha@spindriftarchaeology.com>

To: "Shipwre@slc.ca.gov" <Shipwreck.Database@slc.ca.gov>

Cc:

Bcc:

Date: Mon, 13 May 2019 23:58:55 +0000

Subject: Record Search North Torrey Pines Drain Repair Project

Dear SLC Database Coordinator,

Spindrift Archaeology is conducting a Cultural Resources Inventory for the above-referenced project.

Please find attached a 1.0-mile search radius for our records search.

If there are any shipwrecks listed in your database, we would appreciate including their information in our investigation.

Thanks very much,

Trisha Drennan, RPA

2 attachments



TPDrain_Fig_3_RS_Area.jpg
4095K

 **Record Search North Torrey Pines Drain Repair Project.eml**
5610K

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-00007	DAY, SANDRA, FRAANKLIN, RANDY, AND CARRICO, RICHARD L.	1979	ARCHAEOLOGICAL INVESTIGATION AT SITE W-1761: TORREY PINES SCIENCE PARK UNIT 3	ARCHAEOLOGICAL, EVALUATION
SD-00182	BARTER, ELOISE RICHARDS	1986	TORREY PINES STATE RESERVES RESOURCE MANAGEMENT PLAN	ARCHAEOLOGICAL, OTHER RESEARCH
SD-00281	CARRICO, RICHARD	1978	ARCHAEOLOGICAL STUDY OF THE PROPOSED SORRENTO WEST INDUSTRIAL COMPLEX SAN DIEGO, CALIFORNIA.	ARCHAEOLOGICAL FIELD STUDY
SD-00419	CARRICO, RICHARD	1982	APPENDIX E ARCHAEOLOGICAL AND HISTORICAL SURVEY REPORT SORRETO HILLS COMMUNITY PLAN.	ARCHAEOLOGICAL FIELD STUDY
SD-00573	CARRILLO, CHARLES AND CHARLES BULL	1979	LINKABIT DATA RECOVERY ARCHAEOLOGICAL TESTING AT SDM-W-1076 SAN DIEGO, CA	ARCHAEOLOGICAL FIELD STUDY
SD-00596	CHEEVER, DAYLE AND DENNIS GALLEGOS	1986	CULTURAL RESOURCE SURVEY OF BROWN-LEARY OFFICE SITE, SORRENTO VALLEY, CALIFORNIA.	ARCHAEOLOGICAL, FIELD STUDY
SD-00773	CHEEVER, DAYLE AND DENNIS GALLEGOS	1986	CULTURAL RESOURCE SURVEY AND TEST OF SDI-5218, LAJOLLA, CALIFORNIA	ARCHAEOLOGICAL, EXCAVATION, FIELD STUDY

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-00809	LAYLANDER, DON	1985	ARCHAEOLOGICAL SURVEY REPORT FOR PROPOSED WIDENING AND RAMP CONSTRUCTION ROUTE I-5/CARMEL VALLEY ROAD SAN DIEGO COUNTY.	ARCHAEOLOGICAL, FIELD STUDY
SD-00827	GALLEGOS, DENNIS, ROXANA PHILLIPS, ANDREW PIGNIOLO, TOM DEMERE, AND PATRICIA M. MASTERS	1989	A CULTURAL AND PALEONTOLOGICAL INVENTORY UPDATE FOR THE UNIVERSITY OF CALIFORNIA AT SAN DIEGO AND SCRIPPS INSTITUTION OF OCEANOGRAPHY	ARCHAEOLOGICAL, FIELD STUDY
SD-00974	HECTOR, SUSAN	1986	ARCHAEOLOGICAL SURVEY OF THE SCRIPPS CLINIC PARKING STRUCTURE (RECON NUMBER R-1519)	ARCHAEOLOGICAL, FIELD STUDY
SD-01397	EIDSNESS, JANET, DOUGLAS FLOWER, DARCY IKE, AND LINDA ROTH	1979	ARCHAEOLOGICAL INVESTIGATION OF THE SORRENTO VALLEY ROAD PIPELINE PROJECT LIMITED LINEAR TEST, CITY OF SAN DIEGO SDM-W-654	ARCHAEOLOGICAL, EXCAVATION
SD-01583	WADE, SUE A.	1985	EXCAVATION OF FIVE SITES IN THE SORRENTO HILLS GATEWAY PROJECT AREA SDM-W-2480, SDM-W-2481, SH-81-1, SH-81-2, AND SH-81-3	ARCHAEOLOGICAL, EXCAVATION, FIELD STUDY
SD-01628	WESTEC SERVICES, INC.	1978	ARCHAEOLOGICAL RECONNAISSANCE FOR TORREY PINES SCIENCE PARK UNIT NO. 3	ARCHAEOLOGICAL, FIELD STUDY
SD-01638	WOODWARD, JIM AND GEORGE STAMMERJOHAN	1985	RESOURCE INVENTORY CULTURAL RESOURCES SAN DIEGO COAST STATE BEACHES	ARCHAEOLOGICAL, FIELD STUDY

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-01660	WADE, SUE A.	1985	EXCAVATION OF FIVE SITES IN THE SORRENTO HILLS GATEWAY PROJECT AREA SDM-W-2480, SDM-W-2481, SH-81-1, SH-81-2, AND SH-81-3	ARCHAEOLOGICAL, EXCAVATION
SD-01794	SCHAEFER, JERRY AND MICHAEL C. ELLING	1987	AN ASSESSMENT OF CULTURAL RESOURCES IN LOS PENASQUITOS CANYON RESERVE SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, FIELD STUDY
SD-01795	RECON-REGIONAL ENVIRONMENTAL CONSULTANTS	1981	ARCHAEOLOGICAL AND BIOLOGICAL SURVEY REPORTS FOR THE SAN ANDRES PROJECT COUNTY OF SAN DIEGO	ARCHAEOLOGICAL, FIELD STUDY
SD-01869	HECTOR, SUSAN	1984	TORREY PINES SCIENCE PARK ARCHAEOLOGY	ARCHAEOLOGICAL, FIELD STUDY
SD-01920	HANNA, DAVID JR.	1980	A CULTURAL RESOURCE INVENTORY OF THE UNIVERSITY OF CALIFORNIA AT SAN DIEGO	ARCHAEOLOGICAL, FIELD STUDY
SD-02200	PIERSON, LARRY J., GERARD I. SHILLER, AND RICHARD A. SLATER	1987	CALIFORNIA OUTER CONTINENTAL SHELF ARCHAEOLOGICAL RESOURCE STUDY: MORRO BAY TO MEXICAN BORDER	ARCHAEOLOGICAL, OTHER RESEARCH
SD-02520	EIGHMEY, JAMES AND DAYLE CHEEVER	1992	SIGNIFICANCE TESTING ON A PORTION OF SDI-12581(SDM-W-6), A COASTAL ARCHAIC SITE, SAN DIEGO	ARCHAEOLOGICAL, EVALUATION, EXCAVATION

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-02559	WADE, SUE	1992	CULTURAL RESOURCES RECONNAISSANCE FOR THE SDGE RECONDUCTOR ALIGNMENT CITY OF SAN DIEGO	MANAGEMENT/PLANNING
SD-02699	CARRICO, RICHARD AND ET AL	1992	PHASE 1 HISTORIC PROPERTIES INVENTORY OF THE MID-COAST CORRIDOR TRANSPORTATION ALTERNATIVES, SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, FIELD STUDY
SD-02700	ALTER, RUTH AND MARY ROBBINS-WADE	1992	HISTORIC PROPERTIES INVENTORY FOR THE NORTH CITY WATER RECLAMATION PLANT EFFLUENT PIPELINE PROJECT (NORTH CITY AND EAST MISSION BAY PIPELINES) CLEAN WATER PROGRAM FOR GREATER SAN DIEGO, SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, FIELD STUDY, MANAGEMENT/PLANNING
SD-02733	WHITEHOUSE, JOHN, FRANK RITZ, AND DAYLE M. CHEEVER	1993	CULTURAL RESOURCE SURVEY AND ARCHAEOLOGICAL TEST EXCAVATIONS AT SDI-8121, 531, 8117, 10685 ON TORREY RESERVE HEIGHTS PARCEL, CITY OF SAN DIEGO	ARCHAEOLOGICAL, FIELD STUDY
SD-02770	CITY OF SAN DIEGO	1993	SORRENTO HILLS COMMUNITY PLAN AMENDMENT/TORREY RESERVE HEIGHTS/SORRENTO HILLS PHASE 11, UNIT 4. SAN DIEGO COUNTY, CALIFORNIA	ARCHAEOLOGICAL, FIELD STUDY, MANAGEMENT/PLANNING, OTHER RESEARCH
SD-03305	CHEEVER, DAYLE, JOHN L.R. WHITEHOUSE, AND FRANK RITZ	1996	TORREY HILLS CULTURAL RESOURCE SURVEY AND ARCHAEOLOGICAL TEST EXCAVATION: TECHNICAL APPENDICES	ARCHAEOLOGICAL, FIELD STUDY
SD-03410	WADE SUE	1991	CULTURAL RESOURCE SURVEY OF THE LA JOLLA SPECTRUM PROPERTY	ARCHAEOLOGICAL, FIELD STUDY

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-03768	CHEEVER, DAYLE M., JOHN L.R. WHITEHOUSE, AND FRANK RITZ	1993	CULTURAL RESOURCE SURVEY AND ARCHAEOLOGICAL TEST EXCAVATIONS AT SDI-8121/SDI-531, SDI-8117, AND SDI10,685 ON THE TORREY RESERVE HEIGHTS PARCEL CITY OF SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, EXCAVATION, MANAGEMENT/PLANNING
SD-04174	GALLEGOS, DENNIS R. AND NINA M. HARRIS	1999	CULTURAL RESOURCE MONITORING REPORT FOR 11388 SORRENTO VALLEY ROAD CITY OF SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, FIELD STUDY
SD-04330	WESTEC	1986	CULTURAL RESOURCE SURVEY: TEST OF SDI-5218, LA JOLLA	ARCHAEOLOGICAL, EVALUATION, FIELD STUDY, MANAGEMENT/PLANNING
SD-04383	ERC ENVIRONMENTAL AND ENERGY SERVICES	1989	A CULTURAL AND PALAEONTOLOGICAL INVENTORY UPDATE FOR THE UNIVERSITY OF CALIFORNIA AT SAN DIEGO AND SCRIPPS INSTITUTION OF OCEANOGRAPHY	ARCHAEOLOGICAL, EVALUATION
SD-04387	WESTEC AND RICHARD CARRICO	1977	ARCHAEOLOGICAL INVESTIGATIONS OF THE PROPOSED SCRIPPS CLINIC EXTENSION	ARCHAEOLOGICAL, FIELD STUDY
SD-04398	KYLE, CAROLYN	1995	NORTH TORREY PINES BRIDGE OVER LOS PENASQUITOS CREEK	ARCHAEOLOGICAL, EVALUATION
SD-04480	ROSEN, MARTIN	1987	2ND SUPPLEMENTAL HISTORIC PROPERTY SURVEY - 11-SD-5, P.M. R29.51	ARCHITECTURAL/HISTORICAL

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-04622	WAHOFF, TANYA AND JAMES CLELAND	2001	CULTURAL RESOURCES SURVEY SORRENTO VALLEY TRUNK SEWER PROJECT SAN DIEGO COUNTY, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, FIELD STUDY
SD-04753	DAY, SANDRA	1977	ARCHAEOLOGICAL INVESTIGATION AT SITE W-1761: TORREY PINES SCIENCE PARK UNIT 3	ARCHAEOLOGICAL, EVALUATION
SD-04754	CARRICO, RICHARD	1977	RESULTS OF SURFACE AND SUBSURFACE TESTING AND MAPPING OF ARCHAEOLOGICAL SITES ON TORREY PINES SCIENCE PARK UNIT NO. 2	ARCHAEOLOGICAL, EVALUATION
SD-04813	MEALEY, MARLA	1997	STATEWIDE RESOURCE MANAGEMENT PROGRAM PROJECT STATUS REPORT: ARCHAEOLOGICAL SITE REEVALUATION AND MAPPING AT TORREY PINES STATE	MANAGEMENT/PLANNING
SD-04911	LAYLANDER, DON	1985	ARCHAEOLOGICAL SURVEY REPORT FOR PROPOSED WIDENING & RAMP CONSTRUCTION ROUTE I-5/ CARMEL VALLEY ROAD SAN DIEGO COUNTY	ARCHAEOLOGICAL, EVALUATION
SD-05040	CALTRANS	1985	HISTORIC PROPERTY SURVEY 11-SD-5 R30.0-R34.1	ARCHAEOLOGICAL, FIELD STUDY
SD-05147	BERRYMAN, JUDY	2000	CULTURAL RESOURCES SURVEY OF SEWER PUMP STATION 45, TASK 19, CITY OF SAN DIEGO	ARCHAEOLOGICAL, FIELD STUDY

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-05170	CITY OF SAN DIEGO	1997	PUBLIC NOTICE OF DRAFT ENVIRONMENTAL IMPACT REPORT THE LODGE AT TORREY PINES	OTHER RESEARCH
SD-05485	DUKE CURT	2002	CULTURAL RESOURCE ASSESSEMENT CINGULAR WIRELESS FACILITY NO SD.513-01 SAN DIEGO COUNTY CA	OTHER RESEARCH
SD-06198	LAYLANDER, DON	1986	FIRST SUPPLEMENTAL HISTORIC PROPERTY SURVEY 11-SD-5 P.M.R30.0-R34.5 11222-030100	ARCHAEOLOGICAL, EVALUATION
SD-06417	CITY OF SAN DIEGO	1997	EIR FOR THE LODGE AT TORREY PINES	OTHER RESEARCH
SD-06994	CITY OF SAN DIEGO	2000	PUBLIC NOTICE OF DRAFT MITIGATED NEGATIVE DECLARATION SORRENTO CREEK DRAINAGE CHANNEL	OTHER RESEARCH
SD-07059	CITY OF SAN DIEGO	2000	PUBLIC NOTICE OF PROPOSED MITIGATED NEGATIVE DECLARATION-SORRENTO CREEK DRAINAGE CHANNEL	OTHER RESEARCH
SD-07530	LSA	2002	CULTURL RESOURCE ASSESSMENT AT&T WIRELESS SERVICES FACILITY #10002A-03	OTHER RESEARCH

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-07733	WESTEC	1982	SORRENTO HILLS COMMUNITY PLAN DRAFT EIR	OTHER RESEARCH
SD-07756	WADE, SUE	1991	CULTURAL RESOURCE SURVEY OF THE LA JOLLA SPECTRUM PROPERTY, LA JOLLA, CA	ARCHAEOLOGICAL, FIELD STUDY
SD-07759	CITY OF SAN DIEGO	2002	SIDNEY KIMMEL CANCER CENTER SITE DEVELOPMENT PERMIT AND COASTAL DEVELOPMENT PERMIT	OTHER RESEARCH
SD-07871	DUKE, CURT	2002	CULTURAL RESOURCE ASSESSMENT AT&T WIRELESS SERVICES FACILITY NO. 10002B SAN DIEGO COUNTY, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION
SD-07896	JOHN R. COOK	1998	LA JOLLA SPECTRUM DEVELOPMENT PROJECT	ARCHAEOLOGICAL, EVALUATION
SD-08202	CITY OF SAN DIEGO	2002	PUBLIC NOTICE OF A PROPOSED MITIGATED NEGATIVE DECLARATION; SORRENTO VALLEY TRUNK SEWER AND PUMP STATION 89	OTHER RESEARCH
SD-08356	ROSEN, MARTIN	2003	NORTH TORREY PINES BRIDGE BIO	ARCHAEOLOGICAL, FIELD STUDY, OTHER RESEARCH

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-08532	KALDENBERG, RUSSELL L.	1976	AN ARCHAEOLOGICAL IMPACT SURVEY FOR NORTH SORRENTO VALLEY WEST INDUSTRIAL PARK	ARCHAEOLOGICAL, EVALUATION
SD-08534	SMITH, BRIAN F.	1989	RESULTS OF AN ARCHAEOLOGICAL DATA RECOVERY PROGRAM AT SITES CA-SDI-4618A, CA-SDI-4619, AND CA-SDI-10915	ARCHAEOLOGICAL, EVALUATION
SD-08535	FINK, GARY	1983	THE CULTURAL RESOURCES OF LOS PENASQUITOS REGIONAL PARK, SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION
SD-09145	GALLEGOS, DENNIS AND CAROLYN KYLE	1991	CULTURAL RESOURCE SURVEY REPORT SAN DIEGO BIKEWAYS PROJECT SAN DIEGO, CALIFORNIA	OTHER RESEARCH
SD-09376	KYLE, CAROLYN	2004	CULTURAL RESOURCE INVENTORY UPDATE AND RECOMMENDATIONS FOR THE UNIVERSITY OF CALIFORNIA AT SAN DIEGO 2004 LONG RANGE DEVELOPMENT PLAN	MANAGEMENT/PLANNING
SD-09518	MEALEY, MARLA	2005	ARCHAEOLOGICAL SITE CONDITION ASSESSMENT WITHIN TORREY PINES STATE RESERVE FOR STORM DAMAGE FOLLOWING THE 2004/2005 RAINFALL SEASON	OTHER RESEARCH
SD-09558	GUERRERO, MONICA AND GALLEGOS, DENNIS	2002	CULTURAL RESOURCE SURVEY FOR THE TORREY PINES RESERVE HABITAT RESTORATION SITE, SAN DIEGO, CALIFORNIA	OTHER RESEARCH

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-10271	BONNER, WAYNE H. AND MARNIE AISLIN-KAY	2006	CULTURAL RESOURCE RECORDS SEARCH RESULTS AND SITE VISIT FOR CINGULAR TELECOMMUNICATIONS FACILITY CANDIDATE SNDGCA0648 (PALA AND MISSION ROADS), 10690 "C" HIGHWAY 76, PALA, SAN DIEGO COUNTY, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-10627	LOSEE, CAROLYN	2007	CULTURAL RESOURCES ANALYSIS FOR VERIZON WIRELESS SITE # 61070112: 10350 NORTH TORREY PINES ROAD, SAN DIEGO, CA 92037	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-10664	PIERSON, LARRY J.	2006	MITIGATION MONITORING OF THE TORREY PINES GOLF COURSE IMPROVEMENTS PROJECT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-10758	COOK, JOHN R.	1988	CULTURAL RESOURCES SURVEY AND SIGNIFICANCE EVALUATION OF THE LA JOLLA PINES TECHNOLOGY CENTER PROJECT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-10885	MATTINGLY, SCOTT A.	2007	ARCHAEOLOGICAL AND GEOSPATIAL INVESTIGATIONS OF FIRE-ALTERED ROCK FEATURES AT TORREY PINES STATE RESERVE, SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-11103	ROBBINS-WADE, MARY AND ANDREW GILETTI	2007	ARCHAEOLOGICAL MONITORING: 10996 TORREY ANA, LA JOLLA, SAN DIEGO, CALIFORNIA PROJECT NO. 5844	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-11318	VARIOUS	N.D.	TORREY PINES GLIDERPORT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-11499	GROSS, G. TIMOTHY	2005	TEST EXCAVATIONS AT CA-SDI-9588 AND CA-SDI-14447, TWO SITES ON TORREY PINES STATE RESERVE	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-11689	PIERSON, LARRY J.	2008	ARCHAEOLOGICAL RESOURCE REPORT FORM: MITIGATION MONITORING OF THE TORREY PINES GOLD COURSE CLUBHOUSE REPLACEMENT - PHASE I IMPROVEMENTS - PARKING LOT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-11761	DOMINICI, DEB	2007	HISTORIC PROPERTY SURVEY REPORT, I-5 NORTH COAST WIDENING PROJECT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-11826	ROBBINS-WADE, MARY	2008	ARCHAEOLOGICAL RESOURCES ANALYSIS FOR THE MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM, SAN DIEGO, CALIFORNIA PROJECT. NO. 42891	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-11878	BONNER, WAYNE H., MARNIE AISLIN-KAY, AND KATHLEEN CRAWFORD	2008	CULTURAL RESOURCE RECORDS SEARCH AND SITE VISIT RESULTS FOR AT&T MOBILITY, LLC FACILITY CANDIDATE SD0942 (TORREY PINES LODGE), 11480 NORTH TORREY PINES ROAD, LA JOLLA, SAN DIEGO COUNTY, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-12200		2009	DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM (MSWSMP)	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-12422	NI GHABHLAIN, SINEAD AND DREW PALLETTE	2001	A CULTURAL RESOURCES INVENTORY FOR THE ROUTE REALIGNMENT OF THE PROPOSED PF. NET / AT&T FIBER OPTICS CONDUIT OCEANSIDE TO SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-12548	BONNER, WAYNE, MARNIE AISLIN-KAY, AND KATHLEEN CRAWFORD	2008	CULTURAL RESOURCES RECORDS SEARCH AND SITE VISIT RESULTS FOR VERIZON WIRELESS CANDIDATE "SCRIPPS GREEN," NORTH TORREY PINES ROAD, SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-13006	CITY OF SAN DIEGO	2011	MASTER STORM WATER SYSTEM MAINTENANCE PROGRAM - DRAFT RECIRCULATED PROGRAM ENVIRONMENTAL IMPACT REPORT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-13462	DANIELS JR., JAMES T. AND MICAH J. HALE	2012	ARCHAEOLOGICAL TESTING AND EVALUATION FOR SITES CA-SDI-4624 AND CA-SDI-20664, TORREY PINES CITY PARK GENERAL DEVELOPMENT PLAN, SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-13503	STROPES, TRACY A. AND BRIAN F. SMITH	2011	A PHASE I CULTURAL RESOURCES STUDY FOR THE 11099 NORTH TORREY PINES ROAD PROJECT SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-13916	CALTRANS	2012	INTERSTATE 5 NORTH COAST CORRIDOR PROJECT SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT REPORT/ ENVIRONEMENTAL IMPACT STATEMENT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-14066	GUNDERMAN, SHELBY, SARAH STRINGER-BOWSHER, AND SINEAD NI GHABHLAIN	2012	CULTURAL AND HISTORICAL RESOURCES REPORT FOR THE SORRENTO VALLEY DOUBLE TRACK PROJECT	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-14086	PHAM, ANGELA N. AND SINEAD NI GHABHLAIN	2012	CULTURAL AND HISTORICAL RESOURCES CONSTRAINTS REPORT FOR THE SAN DIEGUITO BRIDGE REPLACEMENT AND SECOND TRACK PROJECT; DEL MAR TUNNEL ALTERNATIVES ANALYSIS	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-14416	LOFTUS, SHANNON	2012	CULTURAL RESOURCE RECORDS SEARCH AND SITE SURVEY AT&T SITE SS0074 HILTON TORREY PINES 10950 TORREY PINES ROAD SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA 92037	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-14495	CALTRANS	2013	INTERSTATE 5 NORTH COAST CORRIDOR PROJECT FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT AND SECTION 4(F) EVALUATION	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-14615	CALTRANS	2013	I-5 NORTH CORRIDOR PROJECT SUPPLEMENTALS	ARCHAEOLOGICAL, EVALUATION, OTHER RESEARCH
SD-15681	HARRY J. PRICE	2014	RESULTS OF HISTORICAL RESOURCES SURVEY OF THE SPECTRUM, 3013 SCIENCE PARK ROAD PROJECT	ARCHITECTURAL/HISTORICAL, EVALUATION
SD-15708	IAN SCHARLOTTA	2014	ARCHAEOLOGICAL SURVEY, TESTING AND EVALUATION FOR SITES CA-SDI-200 AND CA-SDI-9594, TORREY PINES NORTH GOLF COURSE GENERAL DEVELOPMENT PLAN, SAN DIEGO, CALIFORNIA PROJECT NO. 346889	ARCHAEOLOGICAL, EVALUATION, MANAGEMENT/PLANNING
SD-15996	SARAH STRINGER-BOWSHER AND SHANNON DAVIS	2014	HISTORICAL RESOURCES TECHNICAL REPORT FOR TORREY PINES GOLF COURSE, 11480 NORTH TORREY PINES ROAD, SAN DIEGO, CALIFORNIA	ARCHITECTURAL/HISTORICAL
SD-16091	SHANNON L. LOFTUS	2014	CULTURAL RESOURCE RECORDS SEARCH AND SITE SURVEY AT&T SITE SS0074 HILTON TORREY PINES 10950 TORREY PINES ROAD SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA 92037	ARCHAEOLOGICAL, FIELD STUDY

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-16104	DON C. PEREZ	2014	ARCHAEOLOGICAL SENSITIVITY ASSESSMENT SCIENCE PARK / ENSITE #18294 (276768) 10905 ROAD TO THE CURE SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA 92121 EBI PROJECT #61142543	ARCHAEOLOGICAL, EVALUATION
SD-16127	DEB DOMINICI AND DON LAYLANDER	2008	2007 CULTURAL RESOURCES TREATMENT PLAN NORTH COAST INTERSTATE 5 CORRIDOR	ARCHAEOLOGICAL, MANAGEMENT/PLANNING
SD-16131	MICHELLE BLAKE	2013	SIXTH SUPPLEMENTAL HISTORIC PROPERTY SURVEY REPORT (HPSR): REVISED AREA OF POTENTIAL EFFECTS (APE) I-5 NORTH COAST CORRIDOR	MANAGEMENT/PLANNING
SD-16172	BRIAN WILLIAMS	2015	ARCHAEOLOGICAL SURVEY FOR SAN DIEGO GAS & ELECTRIC'S PROPOSED P60971 REMOVAL FROM SERVICE AND P60953 ANCHOR INSTALLATION PROJECT, TORREY PINES STATE NATURAL RESERVE, SAN DIEGO COUNTY, CALIFORNIA (SDG&E ETS #30611, ASM PROJECT# 2001.64, STATE PARKS 412 A PERMIT #28-15)	ARCHAEOLOGICAL, FIELD STUDY
SD-16801	PRICE, HARRY J.	2015	ARCHAEOLOGICAL RESOURCES REPORT FOR THE SPECTRUM 3 AND 4, 3115 AND 3215 MERRYFIELD ROW PROJECT SAN DIEGO, CALIFORNIA	ARCHAEOLOGICAL
SD-17050	MEALEY, MARLA AND ROSARIO, A. DEL	2017	ARCHAEOLOGICAL SURVEY REPORT TPSNR UTILITY MODERNIZATION SURVEY	ARCHAEOLOGICAL, FIELD STUDY, LITERATURE SEARCH
SD-17051	LOWER, KELLY AND BORWN, KAITLIN	2016	ARCHAEOLOGICAL MONITORING REPORT FOR TORREY PINES STATE NATURAL RESERVE TRAILS AND OVERLOOKS ACCESSIBILITY PROJECT 2008-2015	ARCHAEOLOGICAL, MONITORING

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
SD-17103	FOGLIA, SHANNON E., THEODORE G. COOLEY, MONICA MELLO, BRIAN SPELLS, RACHEL DROESSLER, TIM WOLFE, AND EARL MORALES	2017	CULTURAL RESOURCES SURVEY REPORT FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC TL674A RECONFIGURATION & TL666D REMOVAL PROJECT, SAN DIEGO COUNTY, CALIFORNIA	ARCHAEOLOGICAL, ARCHITECTURAL/HISTORICAL, FIELD STUDY
SD-17232	BRUNZELL, DAVID	2017	SAN DIEGO 55 FIBER PROJECT, SAN DIEGO COUNTY, CALIFORNIA (BCR CONSULTING PROJECT NO. SYN1628)	ARCHAEOLOGICAL, FIELD STUDY, LITERATURE SEARCH
EIS-48	CARRICO, RICHARD	1977	RESULTS OF SURFACE AND SUBSURFACE TESTING AND MAPPING OF ARCHAEOLOGICAL SITES ON TORREY PINES SCIENCE PARK UNIT NO. 2. SAN DIEGO: WESTEC	ENVIRONMENTAL DOCUMENT
EIS-195	CARRICO, RICHARD	1978	ARCHAEOLOGICAL STUDY OF PROPOSED SORRENTO WEST INDUSTRIAL COMPLEX. SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-202	CARRICO, RICHARD	1978	ARCHAEOLOGICAL RECONNAISSANCE FOR TORREY PINES SCIENCE PARK UNIT NO. 3, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-297	DAY, SANDRA, RANDY FRANKLIN, AND RICHARD CARRICO	1979	ARCHAEOLOGICAL INVESTIGATION AT SITE W-1761: TORREY PINES SCIENCE PARK, UNIT 3	ENVIRONMENTAL DOCUMENT
EIS-331	BULL, CHARLES AND CAROL WALKER	1979	LINKABIT DATA RECOVERY ARCHAEOLOGICAL TESTING AT SDM-W-1076, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
EIS-438	POLAN, R. KEITH	1981	AN ARCHAEOLOGICAL RECONNAISSANCE OF BORDER HIGHLANDS, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-616	WOODARD, JIM AND GEORGE STAMMERJOHAN	1982	RESOURCE INVENTORY, CULTURAL RESOURCES, SAN DIEGO STATE BEACHES, CARLSBAD, SOUTH CARLSBAD, LEUCADIA, MOONLIGHT, SAN ELIJO, CARDIFF, TORREY PINES, SILVER STRAND, SACRAMENTO DEPARTMENT OF PARKS AND REC.	ENVIRONMENTAL DOCUMENT
EIS-651	GALLEGOS, D.	1986	CULTURAL RESOURCES SURVEY FOR THE SORRENTO WEST PROPERTY	ENVIRONMENTAL DOCUMENT
EIS-674	GALLEGOS, D. AND DAYLE CHEEVER	1986	CULTURAL RESOURCES SURVEY OF BROWN-LEARY OFFICE SITE, SORRENTO VALLEY, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-691	BARTER, ELOISE	1986	TORREY PINES STATE RESERVE RESOURCE MANAGEMENT PROGRAM, CALIFORNIA DEPARTMENT OF PARKS AND RECREATION	ENVIRONMENTAL DOCUMENT
EIS-700	HECTOR, SUSAN	1986	ARCHAEOLOGICAL SURVEY OF THE SCRIPPS CLINIC PARKING STRUCTURE	ENVIRONMENTAL DOCUMENT
EIS-720	GALLEGOS, D. AND DAYLE CHEEVER	1986	CULTURAL RESOURCES SURVEY AND TEST OF SDI-5218 (W-1462), LA JOLLA, CALIFORNIA	ENVIRONMENTAL DOCUMENT

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
EIS-784	GALLEGOS, D., CAROLYN KYLE, AND RICHARD CARRICO	1988	CEQA TEST AND EVALUATION OF PREHISTORIC SITE SDI-197, SORRENTO VALLEY, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-802	BARTER, ELOISE RICHARDS	1987	CA-SDI-10636, THE CACHE SITE, TORREY PINES STATE RESERVE, SAN DIEGO COUNTY, CALIFORNIA STATEWIDE RESOURCES MANAGEMENT PROGRAM	ENVIRONMENTAL DOCUMENT
EIS-862	HECTOR, SUSAN	1983	ARCHAEOLOGICAL SURVEY OF DEL MAR FINANCIAL, CARLSBAD, SAN DIEGO COUNTY, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-864	HECTOR, SUSAN	1984	TORREY PINES SCIENCE PARK ARCHAEOLOGY , SAN DIEGO COUNTY, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1109	KYLE, CAROLYN, AND DENNIS R. GALLEGOS	1991	CULTURAL RESOURCES SURVEY REPORT FOR THE SAN DIEGO BIKEWAYS PROJECT, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1119	HIGHMEY, JAMES AND DAYLE CHEEVER	1992	SIGNIFICANCE TESTING ON A PORTION OF SDI-12581, A COASTAL ARCHAIC SITE IN SAN DIEGO COUNTY, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1188	CHEEVER, DAYLE M.	1992	CULTURAL RESOURCE MONITORING OF THE SALK INSTITUTE EAST BUILDING AND NORTH PARKING LOT EXPANSION	ENVIRONMENTAL DOCUMENT

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
EIS-1195	HIGHMEY, JAMES D.	1992	EXCERPT FROM "SIGNIFICANCE TESTING ON A PORTION OF SDM-W-6, A COASTAL ARCHAIC SITE, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1206	HIGHMEY, JAMES AND DAYLE CHEEVER	1992	SIGNIFICANCE TESTING ON A PORTION OF SDI-12581, (SDM-W-6), A COASTAL ARCHAIC SITE IN SAN DIEGO COUNTY, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1218	WADE, SUE A.	1992	CULTURAL RESOURCE RECONNAISSANCE FOR THE SAN DIEGO GAS AND ELECTRIC RECONDUCTOR ALIGNMENT, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1334	CARRICO, RICHARD, ANDREW PIGNIOLO, AND DANIELLE HUEY	1992	PHASE I HISTORIC PROPERTIES INVENTORY OF THE MID-COAST CORRIDOR TRANSPORTATION ALTERNATIVES, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1353	GROSS, TIMOTHY G., AND ROBBINS-WADE, MARY	1990	CULTURAL RESOURCES SURVEY AND ASSESSMENT FOR THE SORRENTO VALLEY IMPROVEMENTS, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1413	GALLEGOS, DENNIA, ANDREW PIGNIOLO ET AL.	1989	A CULTURAL AND PALEONTOLOGICAL INVENTORY UPDATE FOR THE UNIVERSITY OF CALIFORNIA AT SAN DIEGO AND SCRIPPS INSTITUTION OF OCEANOGRAPHY, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1414	HECTOR, SUSAN M., AND DAYLE CHEEVER	1989	RESULTS OF AN ARCHAEOLOGICAL MONITORING PROJECT IN SORRENTO VALLEY, CITY OF SAN DIEGO, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT

1.1.1.1 TABLE 1. PREVIOUS INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

REPORT NUMBER	AUTHOR	YEAR	REPORT TITLE	TYPE OF STUDY
EIS-1423	GROSS, TIMOTHY G.	1994	CULTURAL RESOURCES MITIGATION PLAN AIRTOUCH CELLULAR PROJECT, SDI-197 SORRENTO VALLEY, SAN DIEGO, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1547	MEALEY, MARLA M., THERESE MURANAKA, AND RICHELE HELMGAERTNER	1997	STATEWIDE RESOURCE MANAGEMENT PROGRAM PROJECT REPORT; ARCHAEOLOGICAL SITE RE-EVALUATION AND MAPPING AT TORREY PINES STATE RESERVE. SAN DIEGO: CALIFORNIA DEPT. OF PARKS & RECREATION, SOUTHERN SERVICE CENTER	ENVIRONMENTAL DOCUMENT
EIS-1550	MEALEY, MARLA M., ET AL.	1995/1996	SALVAGE OF ERODING CULTURAL DEPOSITS AT THREE ARCHAEOLOGICAL SITES; TORREY PINES STATE RESERVE, SAN DIEGO, CALIFORNIA DEPT. OF PARKS & RECREATION, SOUTHERN SERVICE CENTER	ENVIRONMENTAL DOCUMENT
EIS-1568	U.S. DEPT. OF THE NAVY	1997	BEACH REPLACEMENT AT NORTH CARLSBAD, SOUTH CARLSBAD, ENCINITAS, AND TORREY PINES, CALIFORNIA	ENVIRONMENTAL DOCUMENT
EIS-1602	CARDENAS, SEAN, DEBORAH JOHNSON, ALLISON RAAP, ET AL.	1997	DRAFT ENVIRONMENTAL IMPACT REPORT: THE LODGE AT TORREY PINES, SAN DIEGO, CITY OF SAN DIEGO	ENVIRONMENTAL DOCUMENT
EIS-1606	NORWOOD, RICHARD H. AND CHARLES S. BULL	1977	AN ARCHAEOLOGICAL SURVEY OF A FIVE-ACRE PARCEL NORTH OF SCRIPPS CLINIC AND RESEARCH FOUNDATION LA JOLLA, CALIFORNIA	ENVIRONMENTAL DOCUMENT

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-000198	PREHISTORIC	SD-00182, SD-04813, SD-06192, SD-09518	NO
P-37-000199	PREHISTORIC	SD-00182, SD-00249, SD-04813, SD-06192, SD-09518	NO
P-37-000200	PREHISTORIC	SD-00182, SD-00249, SD-04813	NO
P-37-004624	PREHISTORIC	SD-01920, SD-13462	NO
P-37-004625	PREHISTORIC	SD-00182, SD-04813, SD-06192, SD-09518, SD-14065, SD-17050	NO
P-37-005218	PREHISTORIC	SD-00773, SD-04330	NO
P-37-007223	PREHISTORIC	SD-00182, SD-04753, SD-04813	NO
P-37-007224	PREHISTORIC	SD-00182, SD-04753, SD-04813, SD-13503	NO
P-37-007225	PREHISTORIC	SD-00182, SD-04813, SD-09518	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-008211	PREHISTORIC	N/A	NO
P-37-008212	PREHISTORIC	N/A	NO
P-37-008213	PREHISTORIC	N/A	NO
P-37-008214	PREHISTORIC	SD-05147	NO
P-37-008215	PREHISTORIC	N/A	NO
P-37-008721	PREHISTORIC	N/A	NO
P-37-009586	HISTORIC	SD-01638, SD-04813	NO
P-37-009594	PREHISTORIC	SD-00182	NO
P-37-009604	PREHISTORIC	SD-00182, SD-04813, SD-09518	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-009605	PREHISTORIC	SD-04813, SD-09518	NO
P-37-009606	PREHISTORIC	SD-00182	NO
P-37-010636	UNKNOWN	SD-00182, SD-04813, SD-09518	NO
P-37-010637	PREHISTORIC	SD-00182, SD-04813, SD-09518	NO
P-37-010815	PREHISTORIC	N/A	NO
P-37-011223	PREHISTORIC	N/A	NO
P-37-011224	PREHISTORIC	N/A	NO
P-37-011225	PREHISTORIC	N/A	NO
P-37-011226	PREHISTORIC	N/A	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-011227	PREHISTORIC	N/A	NO
P-37-012581	PREHISTORIC/HISTORIC	N/A	NO
P-37-013241	PREHISTORIC	N/A	NO
P-37-014500	PREHISTORIC	SD-04813, SD-09518	NO
P-37-014501	PREHISTORIC	SD-04813, SD-09518	NO
P-37-015849	UNKNOWN	N/A	NO
P-37-015850	UNKNOWN	N/A	NO
P-37-015851	UNKNOWN	SD-09518, SD-11499	NO
P-37-015852; replaced by 37-009604	UNKNOWN	SD-09518	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-015853	PREHISTORIC	N/A	NO
P-37-015854	PREHISTORIC	N/A	NO
P-37-015860	PREHISTORIC/HISTORIC	SD-09518, SD-17050	NO
P-37-017078	HISTORIC	N/A	NO
P-37-017079	PREHISTORIC	SD-13503	NO
P-37-024739	HISTORIC	N/A	NO
P-37-024764	HISTORIC	N/A	NO
P-37-024767	PREHISTORIC	SD-17050	NO
P-37-024768	HISTORIC	N/A	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-024769	PREHISTORIC	SD-09518	NO
P-37-024772	PREHISTORIC	SD-09518	NO
P-37-024773	PREHISTORIC	SD-09518	NO
P-37-024776	PREHISTORIC	N/A	NO
P-37-024777	PREHISTORIC	SD-09518	NO
P-37-024778	PREHISTORIC	SD-09518	NO
P-37-024779	PREHISTORIC	N/A	NO
P-37-026489	PREHISTORIC	N/A	NO
P-37-026490	PREHISTORIC	SD-13503	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-026495	PREHISTORIC/HISTORIC	N/A	NO
P-37-030720	PREHISTORIC	N/A	NO
P-37-032541	PREHISTORIC	SD-13462	NO
P-37-033597	PREHISTORIC/HISTORIC	N/A	YES
P-37-033783; replaced by 37-035638	HISTORIC	N/A	NO
P-37-033784	PREHISTORIC	N/A	NO
P-37-035124	HISTORIC	N/A	NO
P-37-035638	HISTORIC	N/A	NO
P-37-035662	PREHISTORIC	N/A	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-035663	HISTORIC	N/A	NO
P-37-035665	PREHISTORIC	N/A	NO
P-37-035666	PREHISTORIC	N/A	NO
P-37-035668	PREHISTORIC	N/A	NO
P-37-035669	PREHISTORIC/HISTORIC	N/A	NO
P-37-035677	PREHISTORIC	N/A	NO
P-37-035679	HISTORIC	N/A	NO
P-37-035837	PREHISTORIC	N/A	NO
P-37-036068	HISTORIC	N/A	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
P-37-036277	HISTORIC	N/A	NO
P-37-036278	HISTORIC	N/A	NO
P-37-036394	PREHISTORIC	N/A	NO
P-37-036414	HISTORIC	SD-17103	NO
P-37-036415	HISTORIC	SD-17103	NO
P-37-036430	HISTORIC	SD-17103	NO
P-37-036624	HISTORIC	N/A	NO
P-37-036625	PREHISTORIC	N/A	NO

TABLE 2. PREVIOUSLY RECORDED SITES WITHIN A ONE-MILE RADIUS OF THE PROJECT AREA

SITE IDENTIFIER	PREHISTORIC OR HISTORIC	REPORT REFERENCE	WITHIN PROJECT AREA
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TABLE 3. CALTRANS BRIDGES WITHIN THE PROJECT AREA AND A ONE-MILE RADIUS

BRIDGE NAME AND NUMBER	LOCATION	DATE BUILT/WIDENED	CALTRANS ELIGIBILITY EVALUATION
N/A	N/A	N/A	N/A

APPENDIX B

Native American Contacts
Cultural Resources Identification Effort for the City of SD Torrey Pines GC Storm Drain
Survey Project, San Diego County, California (Spindrift Project No. 2019-002). San Diego
County

Name	Affiliation	Date Contacted			Response Received?	Comments
		1. Letter	2. Phone	3. Phone		
Native American Heritage Commission 1550 Harbor Blvd Sacramento, CA 95814	N/A	05/10/2019 Email	N/A	N/A	Yes	05/10/2019 Rec'd response letter from NAHC, No Tribal Cultural Resources have been recorded in Project Area
Barona Group of the Capitan Grande Edwin Romero, Chairperson 1095 Barona Road Lakeside, CA, 92040 Phone: (619)443-6612 Fax: (619)443-0681 cloyd@barona-nsn.gov	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
Campo Band of Mission Indians Ralph Goff, Chairperson 36190 Church Road, Suite 1 Campo, CA, 91906 Phone: (619)478-9046 Fax: (619)478-5818 rgoff@campo-nsn.gov	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
Ewiiapaayp Tribal Office Michael Garcia, Vice Chairperson 4054 Willows Road Alpine, CA, 91901 Phone: (619)445-6315 Fax: (619)445-9126 michaelg@leaningrock.net	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
Ewiiapaayp Tribal Office Robert Pinto, Chairperson 4054 Willows Road Alpine, CA, 91901 Phone: (619)445-6315 Fax: (619)445-9126	Kumeyaay	05/10/2019 Email	N/A	N/A	No	

Native American Contacts
Cultural Resources Identification Effort for the City of SD Torrey Pines GC Storm Drain
Survey Project, San Diego County, California (Spindrift Project No. 2019-002). San Diego
County

Name	Affiliation	Date Contacted			Response Received?	Comments
		1. Letter	2. Phone	3. Phone		
Iipay Nation of Santa Ysabel Virgil Perez, Chairperson P.O. Box 130 Santa Ysabel, CA, 92070 Phone: (760)765-0845 Fax: (760)765-0320	Kumeyaay	06/13/2019 Fax 06/13/2019 Certified Mail	N/A	N/A	No	06/13/2019: AGH received message that fax was not successfully received.
Iipay Nation of Santa Ysabel Clint Linton, Director of Cultural Resources P.O. Box 507 Santa Ysabel, CA, 92070 Phone: (760) 803 - 5694 cjlinton73@aol.com	Kumeyaay	05/10/2019 Email	N/A	N/A	Yes	
Inaja Band of Mission Indians Rebecca Osuna, Chairperson 2005 S. Escondido Blvd. Escondido, CA, 92025 Phone: (760)737-7628 Fax: (760)747-8568	Kumeyaay	06/13/2019 Fax	N/A	N/A	No	06/13/2019: AGH received message that fax was successfully received.
Jamul Indian Village Erica Pinto, Chairperson P.O. Box 812 Jamul, CA, 91935 Phone: (619)669-4785 Fax: (619)669-4817	Kumeyaay	06/13/2019 Fax	N/A	N/A	No	06/13/2019: AGH received message that fax was successfully received.

Native American Contacts
Cultural Resources Identification Effort for the City of SD Torrey Pines GC Storm Drain
Survey Project, San Diego County, California (Spindrift Project No. 2019-002). San Diego
County

Name	Affiliation	Date Contacted			Response Received?	Comments
		1. Letter	2. Phone	3. Phone		
Kwaaymii Laguna Band of Mission Indians Carmen Lucas P.O. Box 775 Pine Valley, CA, 91962 Phone: (619)709-4207	Kumeyaay	06/13/2019 Certified Mail	N/A	N/A	No	
La Posta Band of Mission Indians Javaughn Miller, Tribal Administrator 8 Crestwood Road Boulevard, CA, 91905 Phone: (619)478-2113 Fax: (619)478-2125 jmiller@Lapostatribes.net	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
La Posta Band of Mission Indians Gwendolyn Parada, Chairperson 8 Crestwood Road Boulevard, CA, 91905 Phone: (619)478-2113 Fax: (619)478-2125 LP13boots@aol.com	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
Manzanita Band of Kumeyaay Nation Angela Elliott Santos, Chairperson P.O. Box 1302 Boulevard, CA, 91905 Phone: (619) 766-4930 Fax: (619) 766-4957	Kumeyaay	06/13/2019 Fax	N/A	N/A	No	06/13/2019: AGH received message that fax was successfully received.
Mesa Grande Band of Mission Indians Michael Linton, Chairperson P.O. Box 270 Santa Ysabel, CA, 92070 Phone: (760)782-3818 Fax: (760)782-9092 mesagrandeband@msn.com	Kumeyaay	05/10/2019 Email	N/A	N/A	No	

Native American Contacts
Cultural Resources Identification Effort for the City of SD Torrey Pines GC Storm Drain
Survey Project, San Diego County, California (Spindrift Project No. 2019-002). San Diego
County

Name	Affiliation	Date Contacted			Response Received?	Comments
		1. Letter	2. Phone	3. Phone		
San Pasqual Band of Mission Indians Allen E. Lawson, Chairperson P.O. Box 365 Valley Center, CA, 92082 Phone: (760)749-3200 Fax: (760)749-3876 allenl@sanpasqualtribe.org	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
San Pasqual Band of Mission Indians John Flores, Environmental Coordinator P. O. Box 365 Valley Center, CA, 92082 Phone: (760) 749 - 3200 Fax: (760) 749-3876 johnf@sanpasqualtribe.org	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
Sycuan Band of the Kumeyaay Nation Lisa Haws, Cultural Resources Manager 1 Kwaaypaay Court Kumeyaay El Cajon, CA, 92019 Phone: (619) 445 – 4564 lhaws@sycuan-nsn.gov	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
Sycuan Band of the Kumeyaay Nation Cody J. Martinez, Chairperson 1 Kwaaypaay Court El Cajon, CA, 92019 Phone: (619)445-2613 Fax: (619)445-1927 ssilva@sycuan-nsn.gov	Kumeyaay	05/10/2019 Email	N/A	N/A	No	
Viejas Band of Kumeyaay Indians Robert J. Welch, Chairperson 1 Viejas Grade Road Alpine, CA, 91901 Phone: (619)445-381 O Fax: (619)445-5337 jhagen@viejas-nsn.gov	Kumeyaay	05/10/2019 Email	N/A	N/A	No	

Native American Contacts
Cultural Resources Identification Effort for the City of SD Torrey Pines GC Storm Drain
Survey Project, San Diego County, California (Spindrift Project No. 2019-002). San Diego
County

Name	Affiliation	Date Contacted			Response Received?	Comments
		1. Letter	2. Phone	3. Phone		
Viejas Band of Kumeyaay Indians Ernest Pingleton, THPO, Resources Mgmt 1 Viejas Grade Road Alpine, CA, 91901 Phone: (619) 445 - 3810 Fax: (619) 445-5337 epingleton@viejas-nsn.gov	Kumeyaay	05/10/2019 Email	N/A	N/A	No	

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC



May 10, 2019

Arleen Garcia-Herbst
Spindrift Archaeological Consulting

VIA Email to: arleen@spindriftarchaeology.com

RE: City of SD Torrey Pines GC Storm Drain Survey Project, San Diego County

Dear Ms. Garcia-Herbst:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Steven Quinn".

Steven Quinn
Associate Governmental Program Analyst

Attachment

**Native American Heritage Commission
Native American Contact List
San Diego County
5/10/2019**

Barona Group of the Capitan Grande

Edwin Romero, Chairperson
1095 Barona Road Diegueno
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
cloyd@barona-nsn.gov

Campo Band of Diegueno Mission Indians

Ralph Goff, Chairperson
36190 Church Road, Suite 1 Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiapaayp Tribe

Robert Pinto, Chairperson
4054 Willows Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
wmicklin@leaningrock.net

Ewiiapaayp Tribe

Michael Garcia, Vice Chairperson
4054 Willows Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
michaelg@leaningrock.net

Iipay Nation of Santa Ysabel

Clint Linton, Director of Cultural Resources
P.O. Box 507 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
cjlinton73@aol.com

Iipay Nation of Santa Ysabel

Virgil Perez, Chairperson
P.O. Box 130 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 765 - 0845
Fax: (760) 765-0320

Inaja-Cosmit Band of Indians

Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. Diegueno
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village

Erica Pinto, Chairperson
P.O. Box 612 Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
epinto@jiv-nsn.gov

Kwaaymii Laguna Band of Mission Indians

Carmen Lucas,
P.O. Box 775 Kwaaymii
Pine Valley, CA, 91962 Diegueno
Phone: (619) 709 - 4207

La Posta Band of Diegueno Mission Indians

Gwendolyn Parada, Chairperson
8 Crestwood Road Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Diegueno Mission Indians

Javaughn Miller, Tribal Administrator
8 Crestwood Road Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

Manzanita Band of Kumeyaay Nation

Angela Elliott Santos, Chairperson
P.O. Box 1302 Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed City of SD Torrey Pines GC Storm Drain Survey Project, San Diego County.

**Native American Heritage Commission
Native American Contact List
San Diego County
5/10/2019**

***Mesa Grande Band of Diegueno
Mission Indians***

Michael Linton, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

***Viejas Band of Kumeyaay
Indians***

Robert Welch, Chairperson
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337

***San Pasqual Band of Diegueno
Mission Indians***

Allen Lawson, Chairperson
P.O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org

***Viejas Band of Kumeyaay
Indians***

Ernest Pingleton, Tribal Historic
Officer, Resource Management
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 659 - 2314
epingleton@viejas-nsn.gov

***San Pasqual Band of Diegueno
Mission Indians***

John Flores, Environmental
Coordinator
P. O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

***Sycuan Band of the Kumeyaay
Nation***

Cody J. Martinez, Chairperson
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov

***Sycuan Band of the Kumeyaay
Nation***

Lisa Haws, Cultural Resources
Manager
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 312 - 1935
lhaws@sycuan-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed City of SD Torrey Pines GC Storm Drain Survey Project, San Diego County.

APPENDIX C

Photo Log, Spindrift Archaeological Consulting

Project Name: Torrey Pines GC Drain Repair				Photographer: Trisha Drennan, RPA
Number	Date	Direction	Location/Subject	Description
8825	5-3-19	158°S	Torrey Pines North Golf Course	Survey transect SE corner of project area Azimuth/GPS and Grid Coordinates Vertical Altitude
8826	5-3-19	S	Torrey Pines North Golf Course	View looking south, Fairway 9 to East and Fairway 4 to West.
8827	5-3-19	285°W	Torrey Pines North Golf Course	Survey transect view of western extent of project area. Azimuth/GPS and Grid Coordinates Vertical Altitude
8828	5-3-19	W	Torrey Pines North Golf Course	View looking west, across Fairway 4 to terrace drainage.
8829	5-3-19	144°SE	Torrey Pines North Golf Course	View looking SE into terrace drainage. Azimuth/GPS and Grid Coordinates Vertical Altitude
8830	5-3-19	SE	Torrey Pines North Golf Course	View looking SE into terrace drainage
8846	5-3-19	S	Torrey Pines North Golf Course	View of vegetation looking S from bluff
8848	5-3-19	S	Torrey Pines North Golf Course	View looking S into terrace drainage
8849	5-3-19	164°S	Torrey Pines North Golf Course	View looking S into terrace drainage. Azimuth/GPS and Grid Coordinates Vertical Altitude
8850	5-3-19	Close-up	Torrey Pines North Golf Course	Close-up of exposed soils at bluff
8851	5-3-19	S	Torrey Pines North Golf Course	View looking S into terrace drainage
8854	5-3-19	209°SW	Torrey Pines North Golf Course	View past terrace to Fairway 3. Azimuth/GPS and Grid Coordinates Vertical Altitude
8855	5-3-19	S	Torrey Pines North Golf Course	View of bluff and fence line in Project APE
8856	5-3-19	247°SW	Torrey Pines North Golf Course	View looking SW into terrace drainage. Azimuth/GPS and Grid Coordinates Vertical Altitude
8857	5-3-19	SW	Torrey Pines North Golf Course	View looking SW into terrace drainage.
8858	5-3-19	Close-up	Torrey Pines North Golf Course	Close-up of vegetation on bluff
8859	5-3-19	Close-up	Torrey Pines North Golf Course	Close-up of vegetation on bluff
8860	5-3-19	Close-up	Torrey Pines North Golf Course	Close-up of vegetation on bluff
8862	5-3-19	N	Torrey Pines North Golf Course	Overview of Par 4 in Project APE
8863	5-3-19	56°NE	Torrey Pines North Golf Course	Overview of Par 4 and terrace drainage. Azimuth/GPS/Grid Coordinates Vertical Altitude
8864	5-3-19	NE	Torrey Pines North Golf Course	Overview of Par 4 and terrace drainage



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