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May 3, 2022 01391.00002.002

Mr. Tim Thiele, PE, QSD
City Engineer | Michael Baker International
City of Del Mar
1050 Camino Del Mar
Del Mar, CA 92014

Subject: Biological Resources Letter Report for the Camino Del Mar Bridge Replacement Project

Dear Mr. Thiele:

This letter report presents the results of a biological resources technical study conducted by HELIX Environmental Planning, Inc. (HELIX) for the proposed Camino Del Mar Bridge Replacement project (project) located in the City of Del Mar (City), San Diego County, California. This letter report summarizes the existing biological resources within the site and provides an analysis of the proposed project's impacts in accordance with the California Environmental Quality Act (CEQA) and other applicable federal, state, and local policies related to biological resources. The City would be the Lead Agency for the project responsible for conducting the environmental review process under CEQA, ensuring the project is consistent with pertinent federal/state laws and local ordinances.

INTRODUCTION

Project Location

The Camino del Mar Bridge (bridge) is located 1.01 miles west of Interstate (I-) 5, within the City of Del Mar (City) in western San Diego County (Figure 1, *Regional Location*). The project site is situated in Township 14 South, Range 4 West on the U.S. Geological Survey (USGS) 7.5-minute Del Mar quadrangle (Figure 2, *Project Location – USGS*). Specifically, the bridge is located on Camino del Mar, south of Via de la Valle and Border Avenue, north of 23rd Street, and crosses the San Dieguito River Lagoon mouth with the Pacific Ocean (Figure 3, *Project Location* – Aerial). The project is located in the City's Floodway Zone and is in the Coastal Zone; however, is not within a review area under the National Oceanic and Atmospheric Administration (NOAA). The project is located within the Lagoon Overlay Zone of the City's Local Coastal Program Implementing Ordinances (LCP; City 2001).

Project Description

The proposed project involves the demolition of the existing Camino del Mar Bridge No. 57C-0209 and replacement with a new bridge as well as the terminal north and south existing roadway connections to the Camino del Mar roadway. The new bridge design consists of a five-span cast-in-place prestressed concrete box girder bridge with a length span of approximately 624 feet between outer abutments, a width of approximately 68.5 linear feet, comprising an area of approximately 41,800 square feet (0.96 acre). Figure 4, *Project/Bridge Plan View*, depicts the overhead and cross-section views of the proposed replacement bridge. As presented on Figure 4, the proposed bridge foundation would consist of two abutments and four piers supported by columns and piles that would support the bridge. The new bridge would utilize the existing abutments, if determined to be needed by the construction contractor, and riprap would be added to the existing riprap.

In comparison to the existing bridge, the new replacement bridge would be located along the same horizontal alignment, would be slightly longer, wider, and higher, and would result in a reduction in the number of piers in the San Dieguito River Lagoon. The new replacement bridge would provide approximately 29 feet in additional bridge length and an additional 7.5 feet in bridge height near the center of the bridge, which would accommodate a mid-range sea level rise scenario of 38 inches by the year 2100 during a 100-year flood event. Due to the increase in bridge height compared to the existing bridge, the roadway approach zones at the north and south end of the bridge would also require modifications to tie into and accommodate the raised elevation of the bridge. These modifications include reconstructing portions of the road as well as the sidewalks to meet the newly established pedestrian sidewalks on both sides of the replacement bridge.

The additional bridge width of approximately 7.5 feet would accommodate two-way pedestrian and bicycle movement across the bridge. Ultimately, there would be no change in vehicle capacity on the bridge as the existing two-lane Camino del Mar roadway would continue to provide two-vehicle traffic lanes.

The proposed project is estimated to be constructed over 27 months during five distinct construction stages: (1) site preparation; (2) demolition and replacement of the east side; (3) demolition and replacement of the west side; (4) bridge median improvements; and (5) final improvements. With the exception of approximately 12 temporary short-term night closures (one to four nights per construction stage), the contractor would maintain continuous vehicular, pedestrian, and bicycle access along the Camino del Mar bridge throughout construction by shifting travel lanes from one side to another as the bridge is replaced. Bridge demolition and replacement would occur at one half of the bridge at a time, beginning with the east side (lagoon side) followed by the west side (ocean side). During the demolition and replacement of each side of the bridge, the opposite side would be used to re-route both lanes of traffic.

During project construction, a temporary work trestle, consisting of an approximately 50-foot-wide elevated platform that spans the entire Lagoon mouth floodway from each existing abutment, would be installed on each side of the bridge, one side at a time. Cofferdam systems would be required for the removal of existing piers as well as the installation of the new bridge foundations and piers. Temporary falsework would be installed to form and construct the bridge foundations (piers and abutments) and bridge spans. Existing wood pier pilings would be removed to at least one foot below the general scour depth or entirely removed if they conflict with the new pier/abutment foundations of the replacement

bridge. Temporary access for construction equipment at the ground level along the beach areas would be required for the installation and removal of the falsework.

Due to limited on-site construction staging areas, the contractor is anticipated to need additional off-site staging areas for materials, equipment, and office. Several potential staging areas have been identified, all of which are currently developed lands, including: the Del Mar State Fairgrounds located at 2260 Jimmy Durante Boulevard to the east of the Project site, and the City's Public Works Yard located at 2240 Jimmy Durante Blvd to the southeast of the Project site. Both of the potential staging areas are evaluated herein for environmental clearance.

METHODS

Literature Review

Prior to conducting biological surveys, a review of existing literature, previous reports (HELIX 2012 and 2015), and pertinent biological resources databases was conducted to identify the existence or potential occurrence of special-status biological resources (e.g., plants, animals, and vegetation communities) in or within the immediate vicinity of the project site. Database searches included but were not limited to the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) online database, the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) database, and the San Diego Natural History Museum's (SDNHM) San Diego County Plant Atlas online searchable database.

General Biological Surveys

A general biological survey, including vegetation mapping, was conducted for the project site and an approximately 200-foot surrounding area (i.e., study area) by HELIX biologists Jason Kurnow and Stacy Nigro on July 16, 2018 (Table 1, *Survey Information*) to verify and update the previous mapping conducted in 2012, 2013, and 2015 (HELIX 2012, 2015, and 2016). HELIX biologist Angelia Bottiani conducted an additional biological survey of the study area on June 30, 2021, to verify site conditions were consistent with the results of previous studies and to update supporting maps.

Vegetation was mapped on a 1"=150'-scale aerial photograph. The study area was surveyed on foot with the aid of binoculars; observed or detected plant and animal species were recorded in field notes and/or on the aerial photograph. Animal identifications were made in the field by direct, visual observation, or indirectly, by detection of calls, burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. Data from the field maps were digitized into a geographic information system using ArcGIS. Comprehensive lists of plant and animal species that were incidentally observed or detected during HELIX's 2015 and 2018 surveys of the project site were generated in the field and are provided in Appendices A and B, respectively. These lists of species identified are not necessarily comprehensive accounts of all species that occur in the study area, as species that are nocturnal, secretive, or seasonally restricted may not have been observed.

Table 1
SURVEY INFORMATION

Survey Date(s)	Personnel	Focus
	2018	
January 12	T. Liddicoat	Western snowy plover survey
January 19	T. Liddicoat	Western snowy plover survey
January 25	T. Liddicoat	Western snowy plover survey
March 8	J. Konecny	Belding's Savannah sparrow survey, Ridgway's rail survey
March 16	J. Konecny	Belding's Savannah sparrow survey, Ridgway's rail survey
March 16	K. Bellon	Coastal California gnatcatcher survey
March 23	K. Bellon	Coastal California gnatcatcher survey
March 25	J. Konecny	Ridgway's rail survey
March 30	K. Bellon	Coastal California gnatcatcher survey
April 6	K. Bellon	Coastal California gnatcatcher survey
April 8	J. Konecny	Belding's Savannah sparrow survey, Ridgway's rail survey
April 13	K. Bellon	Coastal California gnatcatcher survey
April 16	J. Kurnow	Rare plant survey
April 20	J. Konecny	Ridgway's rail survey
April 23	K. Bellon	Coastal California gnatcatcher survey
April 23	T. Liddicoat	California least tern survey
April 27	J. Konecny	Ridgway's rail survey
May 14	T. Liddicoat	California least tern survey
May 31	T. Liddicoat	California least tern survey
June 12	T. Liddicoat	California least tern survey
June 18	A. Mattson	Rare plant survey
June 27	T. Liddicoat	California least tern survey
July 11	T. Liddicoat	California least tern survey
July 16	J. Kurnow, S. Nigro	General biological survey, jurisdictional delineation
July 31	T. Liddicoat	California least tern survey
August 14	T. Liddicoat	California least tern survey
September 25	Daniel Kahl	Caulerpa and eelgrass survey
September 26	Daniel Kahl	Caulerpa and eelgrass survey
		2021
June 30	A. Bottiani	Vegetation mapping, waters, general biological survey
	2022	
March 6	J. Konecny	Ridgway's rail survey, Belding's Savannah sparrow survey
March 13	J. Konecny	Ridgway's rail survey
March 16	J. Konecny	Belding's Savannah sparrow survey, Coastal California gnatcatcher survey, Snowy plover survey
March 22	J. Konecny	Ridgway's rail survey
March 25	J. Konecny	Belding's Savannah sparrow survey, Coastal California gnatcatcher survey
April 9	J. Konecny	Ridgway's rail survey
April 13	J. Konecny	Belding's Savannah sparrow survey, Coastal California gnatcatcher survey
April 17	J. Konecny	Ridgway's rail survey

Survey Date(s)	Personnel	Focus
April 19	J. Konecny	Coastal California gnatcatcher survey, California least tern
April 21	J. Konecny	Belding's Savannah sparrow survey, Coastal California gnatcatcher survey
April 28	J. Konecny	Ridgway's rail survey

Focused Surveys

Focused surveys for rare plants and sensitive animal species were conducted as part of the biological assessment in 2018. Additional focused surveys for special status animals were conducted in 2022 and are currently in progress. Information on the focused surveys conducted for the project to date is presented in Table 1 above as well as discussed further below. Rare plants or sensitive animals detected during surveys were mapped directly in the field.

Special-Status Plants

Focused surveys for rare plants within the study area were conducted on April 16, 2018, by HELIX biologist Jason Kurnow and on June 18, 2018, by HELIX biologist Amy Mattson (Table 1). The surveys were performed on-foot via meandering transects through potential suitable habitat.

Special-Status Animals

Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*)

Focused surveys for the Belding's savannah sparrow (BSS) were conducted for the project site and a 500-foot surrounding radius. Surveys were conducted by HELIX subconsultant John Konecny in 2018 and 2022 (Table 1). Surveys were conducted by meandering and stopping at areas of potentially suitable habitat for BSS. Binoculars were used to aid in the detection and identification of this species. If BSS were observed, additional observation was conducted to evaluate behavior.

California Least Tern (*Sternula antillarum browni*)

Focused surveys were conducted for the California least tern (LETE) were conducted in 2018 by HELIX biologist Thomas Liddicoat and again in 2022 by HELIX subconsultant John Konecny (Table 1). Surveys were performed in appropriate habitat located within a 500-foot radius of the proposed project site. During the surveys, the biologist walked meandering transects along beach habitat within the survey area during various tide levels. Binoculars were used during the surveys to aid in bird detection and identification. If LETE were observed, additional observation was conducted to evaluate behavior.

Coastal California Gnatcatcher (*Polioptila californica californica*)

Focused surveys for the coastal California gnatcatcher (CAGN) were conducted in 2018 and 2022 within appropriate habitat located within a 500-foot radius of the proposed project site by HELIX biologist Katie Bellon (TE778195) and HELIX subconsultant John Konecny (TE837308-6), respectively. The surveys were conducted in accordance with the USFWS survey protocol (1997). Surveys were conducted with binoculars to aid in bird detection, and recorded CAGN vocalizations were played sparingly, and only if other means of detection had failed.

Ridgway's Rail (*Rallus obsoletus*)

Focused surveys for the Ridgway's rail (RIRA) were conducted within appropriate habitat located within a 500-foot radius of the proposed project site. The surveys were conducted by HELIX subconsultant John Konecny (TE837308-6) in 2018 and in 2022 (Table 1). Surveys were conducted in accordance with the recommendations provided to the USFWS by the Clapper Rail Study Team (2009). Surveys were conducted at least seven days apart, split between dawn and dusk, walking within the survey area, and stopping at areas where there was appropriate RIRA habitat and listening for vocalizations. If rails were not detected passively, a digital call-prompt was played.

Western Snowy Plover (*Charadrius nivosus* ssp. *nivosus*)

Surveys were conducted for wintering populations of the western snowy plover (SNPL) within appropriate habitat located within a 500-foot radius of the proposed project site in 2018 and 2022 (Table 1). The surveys were performed by HELIX biologist Thomas Liddicoat (TE139634) in 2018 and John Konecny (TE837308-6) in 2022. Methods were based on the Western Snowy Plover Winter Window Survey Protocol Final Draft (USFWS 2007). The surveys were conducted by walking meandering transects along beach habitat within the survey area during various tide levels. Surveys were conducted with binoculars to aid in bird detection.

Jurisdictional Delineation

HELIX biologists Stacy Nigro and Jason Kurnow conducted a jurisdictional delineation of the project study area in July 2018 (Table 1). The delineation was conducted to verify and update previous delineation fieldwork conducted by HELIX in 2012, 2013, and 2015 (HELIX 2012, 2015, and 2016). Prior to beginning fieldwork, aerial photographs and topographic maps (1"=125' scale) were reviewed to determine the location of potential jurisdictional areas that may be affected by the proposed project.

Areas within and immediately surrounding the project site were evaluated for the presence of potentially jurisdictional waters of the U.S., including wetlands.

If an area was suspected of being a wetland, vegetation and hydrology indicators were noted, and a soil pit was excavated and described. The area was then determined to be a wetland waters of the U.S. if it satisfied the three wetland criteria (i.e., hydrophytic vegetation, wetland hydrology, and hydric soil) described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Areas were determined to be non-wetland waters of the U.S. if there was evidence of regular surface flow (e.g., bed and bank), but the vegetation and/or soils criterion were not met.

The upper elevational limits of Section 404 and Section 10 waters were based on elevations provided by the USACE (Robert Smith, pers. comm.). The upper limit of Section 404 waters is the High Tide Line, or 7.12 feet (mean lower low water [MLLW] datum). The Mean High Water, or 4.6 feet (MLLW datum), was used as the upper limit of Section 10 waters. Baseline elevation data reported in NAVD 88 was modified to reflect an elevation using MLLW as the datum.

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code (CFGC), the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. CDFW does not have a specific definition of

what constitutes a stream as it relates to regulation under Sections 1600-1603 of the CFGC. In practice, CDFW defines a stream channel as that area where water uniformly or habitually flows over a given course, and where the width of the water course can reasonably be identified by physical or biological indicators. CDFW jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream. CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW jurisdictional boundaries within the project site were determined based on the presence of riparian vegetation or regular surface flow.

Potential CCC jurisdictional boundaries were determined based on the "one-parameter" definition, which only requires evidence of a single parameter to establish wetland conditions: "Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate" (CCR Title 14, Section 13577).

Nomenclature

Nomenclature for this report is from Baldwin et al. (2012) for plants, Holland (1986) and Oberbauer (2008) for vegetation communities; Society for the Study of Amphibians and Reptiles (SSAR; 2020) for reptiles and amphibians; American Ornithologists' Society (2020) for birds; and Bradley et al. (2014) for mammals. Sensitive plant species status is taken from CNPS (2021). Sensitive animal species status is taken from the CDFW (CDFW 2021a-c).

REGIONAL CONTEXT

The project site is located within the boundaries of the County of San Diego Multiple Species Conservation Program (MSCP 1998). Within the MSCP, the project is in the City of Del Mar Subarea, as well as the San Dieguito Lagoon Core Area. The City is a local jurisdiction participant in the MSCP but has yet to prepare an approved/adopted Subarea Plan. The project is not within an area targeted for MSCP conservation. Also, the project site does not incorporate areas designated or proposed by the U.S. Fish and Wildlife Service (USFWS) as critical habitat.

RESULTS

General Land Uses

The project site is primarily developed and includes an existing concrete multi-lane roadway bridge and areas immediately surrounding the bridge (see Figures 1 through 3). The bridge serves as an important north-south connection for coastal residents and visitors in the vicinity and the greater San Diego region and is frequently used by motorists, bicyclists, and pedestrians. The bridge is situated between the State Fairgrounds to the east across the lagoon and the Pacific Ocean is immediately to the west of the bridge. A public beach is located adjacent to the west of the bridge. The bridge supports a north-to-south arterial roadway (i.e., Camino del Mar) near coastal destinations and provides access to local beaches, open space areas, hiking trails, the Del Mar Village (the City's central business district), and Torrey Pines State Beach.

Topography and Soils

Topography within the project site (as well as in the immediately surrounding areas) is relatively flat. Elevations of the existing bridge platform surface range from approximately 9 feet above mean sea level (AMSL) at the northern terminus of the bridge, to approximately 15 feet AMSL at the southern terminus of the bridge. Project areas to the north at Via de la Valle and to the south of the bridge near 24th Street are approximately 60 feet AMSL and approximately 13 feet AMSL, respectively.

The project site is generally underlain by an upper layer of Recent Alluvial Deposits (Qa) overlying successive strata of Young Alluvial Deposits (Qya), Young Estuarine Deposits (Qyes), Old Alluvial Deposits (Qoa), and the Del Mar Formation (Td). Based on the review of the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) web soil survey results (accessed May 2020), the surficial deposits at the site consist of lagoon water (LG-W) underneath the existing bridge, Tujunga Sand (TuB) to the south of the bridge, and tidal flats (Tf) to the north of the bridge.

Vegetation Communities and Habitat Types

The project study area, which consists of the project site and immediately surrounding areas, supports 14 different vegetation communities. Existing vegetation communities and habitat types identified and mapped within the study area are shown in Figure 5, *Vegetation Communities and Habitat Types*, and Table 2, *Existing Vegetation Communities and Habitat Types Within the Project Study Area*.

Table 2
EXISTING VEGETATION COMMUNITIES AND HABITAT TYPES WITHIN THE PROJECT STUDY AREA[1]

Vegetation Community or Habitat Type[2]	Acreage
Sensitive	
Alkali Marsh 52300	0.12
Beach 64400	7.26
Diegan Coastal Sage Scrub (including disturbed) 32500	1.69
Estuarine 64130	0.93
Intertidal Area (Open Water) 64112	4.39
Mudflat 64300	0.26
Southern Coastal Bluff Scrub 31200	1.24
Southern Coastal Salt Marsh 52120	1.02
Southern Willow Scrub 63320	0.10
Subtotal	17.01
Non-Sensitive	
Developed 12000	34.72
Disturbed Habitat 11300	0.05
Non-native Vegetation 11000	0.68
Ornamental N/A	0.15
Subtotal	35.60
TOTAL	**52.61**

[1] Acreage rounded to the nearest 0.01.
[2] Vegetation classifications and numerical codes are from Holland (1986) and Oberbauer (2008).

Alkali Marsh

Alkali marsh is a dense to fairly open growth of perennial grasses and sedges comprised of only a few species. It occurs on permanently moist, alkaline soils. Characteristic species may include yerba mansa (*Anemopsis californica*), sedges (*Carex* spp.), saltgrass (*Distichlis spicata*), and alkali mallow (*Malvella leprosa*; Holland 1986). Within the study area, this vegetation community is dominated by saltgrass and fleshy jaumea (*Jaumea carnosa*). One patch of alkali marsh occurs within the study area northeast of the bridge between Diegan coastal sage scrub and southern coastal salt marsh.

Beach

Beach is sandy and/or cobbly habitat on coastal strands, lagoons, or lakes. Ocean beaches are a shoreline feature of deposited sand formed by waves and tides off the coast. Beaches tend to be unvegetated areas; however, upper portions may be sparsely populated with herbaceous species. Beach is located in the northwestern portion of the study area, west of Camino del Mar. Within the study area, beach is heavily used by the public and is, therefore, unvegetated. In addition, beach habitat to the west of the bridge is open to off-leash dogs and is heavily used by dog owners.

Developed Land

Developed land includes areas that have been constructed upon or otherwise covered with a permanent, unnatural surface and may include, for example, structures, pavement, irrigated landscaping, or hardscape to the extent that no natural land is evident. These areas no longer support native or naturalized vegetation (Oberbauer 2008). Developed lands include paved roads and commercial and residential development in the northern and southern portions of the study area.

Diegan Coastal Sage Scrub (Including Disturbed)

Diegan coastal sage scrub is comprised of low, soft-woody subshrubs that are most active in winter and early spring. Many taxa are facultatively drought-deciduous. It is characterized by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*) together with laurel sumac (*Malosma laurina*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*). It often occurs on low moisture-availability sites such as steep, xeric slopes or clay-rich soils that are slow to release stored water. Within the study area, this vegetation community occurs as linear strips on both the western and the eastern sides of Camino Del Mar roadway and is dominated by California sagebrush and California buckwheat. In the northeastern portion of the study area, there is a patch of disturbed Diegan coastal sage scrub. This disturbed form has sparse shrub cover and a high percentage of non-native herbaceous species relative to the undisturbed form of Diegan coastal sage scrub in the study area.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. Disturbed habitat within the study area consists primarily of dirt pathways and previously disturbed lands characterized by bare ground or non-native, weedy vegetation located immediately northwest of the bridge.

Estuarine

Estuarine habitat consists of periodically and permanently flooded substrates and includes open water portions of semi-enclosed coastal waters where salty water from the ocean mixes with freshwater from the land. The area is open water, but in the intertidal zones the substrate is exposed during low tides. Estuarine areas are partially enclosed or cut off from the ocean, and may consist of channels, sloughs, and mud and sand flats. River mouths, lagoons, and bays often constitute estuarine habitat. Within the study area, a small patch of estuarine habitat occurs on the east side of the bridge, north of the mouth of the river.

Intertidal Area (Open Water)

Open water habitat consists of open, intertidal water between the beach areas and is generally the area below the observed high tide line. Open water occurs at the central portion of the study area, east and west of the bridge, as well as underneath the bridge.

Mudflat

Mudflats are mostly unvegetated coastal lowlands habitat that are commonly found in sheltered bays or estuaries, interspersed with coastal salt marsh. When mud flats dry out, they may form saltpans. Mudflats in the study area are unvegetated areas with scattered small patches of cord grass (*Spartina foliosa*) and inhabited by fiddler crabs (*Uca crenulata*). Mudflats occur in the northeastern portion of the study area in close association with southern coastal salt marsh and brackish water estuary.

Non-native vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* spp.]), many of which originated in landscaping. This vegetation is not irrigated. Characteristic species in this vegetation community in the study area include Brazilian peppertree (*Schinus terebinthifolius*) and acacia. Non-native vegetation occurs in the northwestern portion of the study area adjacent to beach access areas, east of the northern bridge abutment, and along the southern banks of the river/lagoon channel and beach areas south of the bridge.

Ornamental

This vegetation classification is comprised of non-native plant species, typically planted for landscaping schemes, and often irrigated. Ornamental vegetation is often associated with developed lands. Within the project study area, a relatively small area of ornamental vegetation was mapped northwest of the bridge at the trail entrance to the beach. This planted/landscaped area consists of a succulent garden comprised of a variety of non-native ornamental succulent plants such as agave species (*Agave* spp.), yucca species (*Yucca* spp.), and aloe species (*Aloe* spp.).

Southern Coastal Bluff Scrub

Southern coastal bluff scrub is a short scrub up to two meters tall, often forming continuous mats. It consists of dwarf shrubs, herbaceous perennials, and annuals with varying degrees of succulence. It is exposed to varying, moisture-laden winds with high salt content, and the soil is usually rocky and poorly developed. Characteristic species in this community include saltbush (*Atriplex* spp.), dudleyas (*Dudleya* spp.), California encelia (*Encelia californica*), coast prickly pear (*Opuntia littoralis*), and lemonadeberry

(*Rhus integrifolia*). Within the study area, this vegetation community is dominated by big saltbush (*Atriplex lentiformis*). Southern coastal bluff scrub occurs in one area along the northwestern edge of the study area, northwest of the Camino del Mar bridge.

Southern Coastal Salt Marsh

Southern coastal salt marsh is a highly productive, herbaceous and suffrutescent, salt-tolerant vegetation community of hydrophytes forming a moderate to dense cover up to 1 meter tall (Holland 1986). This vegetation occurs at the inland margins of bays, lagoons, and estuaries along the southern California coast. Characteristic, species in this vegetation community include saltgrass, spiny rush (*Juncus acutus*), pickleweeds (*Salicornia* spp.), and fleshy jaumea. Southern coastal salt marsh occurs primarily in the northeastern portion of the study area and is dominated by Pacific pickleweed (*Salicornia pacifica*) and fleshy jaumea.

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*), and with scattered emergent cottonwood (*Populus fremontii*) and western sycamores (*Platanus racemosa*). This vegetation community occurs on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. This vegetation type within the project study area is dominated by arroyo willow and occurs as a small stand along the toe of slope of Camino Del Mar, northeast of the bridge.

Plants

A total of 48 plant species were observed in the study area during project surveys of which 20 (approximately 42 percent) are non-native species (Appendix A, *Plant Species Observed*).

Animals

A total of 40 animal species were observed or detected within the study area during project surveys, including three invertebrate, one fish, and 36 bird species (Appendix B, *Animal Species Observed or Detected*).

Sensitive Biological Resources

Sensitive Vegetation Communities and Habitats

Sensitive vegetation communities and habitats are those considered rare within the local region or sensitive by CDFW; are listed as sensitive under a regional planning program (MSCP for example); or support sensitive plants or animals as defined by Section 15380 of the State CEQA Guidelines. They are considered sensitive because they have been depleted, are naturally uncommon, or support sensitive species. Within the project study area, nine sensitive vegetation communities and habitat types were identified: alkali marsh, beach, Diegan sage scrub (including disturbed), estuarine, intertidal area, mudflat, southern coastal bluff scrub, southern coastal marsh, and southern willow scrub. Developed land, disturbed habitat, ornamental, and non-native vegetation are not considered sensitive vegetation/ habitat under CEQA.

Sensitive Plants

Special status plant species have been afforded special status and/or recognition by the USFWS and/or CDFW. They may also be included in the CNPS' Inventory of Rare and Endangered Plants. Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size.

Within the project study area, three sensitive plant species were detected: red sand-verbena (*Abronia maritima*), southwestern spiny rush (*Juncus acutus* var. *leopoldii*), and Torrey pine (*Pinus torreyana* ssp. *torreyana*). Although found present in the study area, none of these three plant species were detected within the project site itself. No federally or state listed endangered or threatened plant species were found to be present in the study area during project-specific surveys conducted in 2012, 2013, 2014, and 2018. Additional information on the three special-status plant species is provided below and their spatial distribution in the study area is presented on Figure 6 – *Special-Status Plants and Animals*.

Red sand-verbena (*Abronia maritima*)
Status: CNPS CRPR 4.2
Distribution: Nearly extirpated in southern California, but may occur in Los Angeles, Orange, San Diego, San Luis Obispo, Ventura, Santa Barbara, and Santa Cruz counties; Baja California, Mexico
Habitat: Coastal dunes
Presence in the Project Study Area: Five red sand-verbena plants were detected in beach habitat east of the bridge, outside the project site footprint.

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)
Status: CNPS CRPR 4.2
Distribution: Los Angeles, San Bernardino, San Luis Obispo, Ventura, and San Diego counties; Baja California, Mexico
Habitat: Coastal bluffs and coastal scrub
Presence in the Project Study Area: Two individuals of southwestern spiny rush were found during biological surveys for the project, located within Diegan Coastal sage scrub in the study area, but outside of the project site footprint. These plants were found.

Torrey pine (*Pinus torreyana* ssp. *torreyana*)
Status: CNPS Rare Plant Rank 1B.2
Distribution: Northern portions of San Diego County, along the coast.
Habitat(s): Coastal sage scrub and chaparral vegetation types (e.g., southern maritime and southern mixed chaparrals).
Presence in the Project Study Area: A single Torrey pine was detected in the northern portion of the project study area, just outside and to the east of the project site footprint, within Diegan coastal sage scrub habitat.

Overall, special-status plant species were evaluated for the potential to occur in the project study area based on the vegetation communities/habitat types present, soils and geographic location, sightings reported to the CNDDB and/or CNPS databases, or documentation in nearby studies. Special-status plant species evaluated for the potential to occur at the project site are listed in Attachment C. Based on the species evaluations and results of focused rare plants surveys for the project, no additional sensitive plants are expected to occur on-site.

Sensitive Animals

One special-status animal species was detected in the project study area during surveys for the project, Belding's savannah sparrow. No other sensitive animal species were found to be present on-site during project-specific surveys conducted in 2012, 2013, and 2018. Other than Belding's savannah sparrow, no other special-status animal species have been detected during focused surveys in 2022, which are currently in-progress. Additional information on this special-status animal species is provided below and presented on Figure 6.

Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)
Status: State listed endangered (SE)
Distribution: In San Diego County, occurs throughout coastal lowlands
Habitat: Coastal marshes
Presence in the Project Site: Three territories of the Belding's savannah sparrow were found east of the bridge during the 2013 surveys. No individuals were observed during surveys in 2018. Focused surveys in 2022 found two territories in the project study area, east of the bridge in habitat on the east side of the lagoon.

In addition to Belding's savannah sparrow, other special-status animal species that were evaluated for the potential to occur at the project site are listed in Appendix D. No other species were determined to have the potential to occur on-site, based on the habitat types present, geographic location, sightings reported to the CNDDB and/or USFWS databases, or documentation in nearby studies.

Jurisdictional Resources

Approximately 12.83 acres of potentially jurisdictional waters of the U.S. were identified in the project study area, consisting of 1.71 acres of wetlands and 11.12 acres of non-wetland waters. Wetlands in the project study area are also considered special aquatic sites. Areas considered waters of the U.S. may be subject to USACE and RWQCB jurisdiction. These 12.83 acres as well as an additional 0.01-acre are also considered potentially jurisdictional habitats and coastal wetlands, under the jurisdiction of CDFW and California Coastal Commission, respectively. Specifically, these areas consist of 1.72 acres of wetlands/special aquatic sites and 11.12 acres of non-wetland waters. Potentially jurisdictional aquatic resources are presented below in Table 3, *Potentially Jurisdictional Aquatic Resources Summary,* and reflected on Figures 7a, *Waters of the United States*, 7b, *CDFW Jurisdiction*, and 7c, *California Coastal Commission Wetlands.* No isolated waters potentially subject to RWQCB jurisdiction were detected in the study area; thus, no areas of jurisdiction that are exclusively regulated by the RWQCB under the Porter-Cologne Water Quality Control Act are present.

Table 3
POTENTIALLY JURISDICTIONAL AQUATIC RESOURCES SUMMARY[1]

Vegetation Community or Habitat Type	USACE Waters of the U.S.[2]	CDFW Jurisdiction and Coastal Commission Wetlands
Special Aquatic Sites including Wetlands		
Alkali Marsh	0.12	0.12
Mudflat	0.26	0.26
Southern Coastal Salt Marsh	1.23	1.24
Southern Willow Scrub	0.10	0.10
Subtotal	*1.71*	*1.72*

Vegetation Community or Habitat Type	USACE Waters of the U.S.[2]	CDFW Jurisdiction and Coastal Commission Wetlands
Non-wetland Waters		
Beach	5.60	5.60
Estuarine	0.92	0.92
Intertidal (Open Water)	4.60	4.60
Subtotal	*11.12*	*11.12*
TOTAL	**12.83**	**12.84**

1 Acreage rounded to the 0.01.

2 Potentially subject to RWQCB jurisdiction.

The descriptions of jurisdictional resources and maps provided in the project's Aquatic Resources Delineation Report represent HELIX's recommendation based on the information available at the time of the delineation (HELIX 2021). The final determination on the extent of features subject to jurisdiction are subject to USACE, RWQCB, CDFW, and/or CCC regulation would be made by these agencies during regulatory permitting for the project.

Wildlife Corridors and Movement

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Wildlife corridors can be local or regional in scale. Their functions may vary temporally and spatially based on conditions and species presence. Corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Local corridors provide access to resources such as food, water, and shelter. Animals use these corridors in their daily routine to move between different habitats. Regional corridors also provide these functions and link two or more large habitat areas providing avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

The San Dieguito River lagoon outlets into the Pacific Ocean approximately 400 feet west of the bridge. The San Dieguito River and the associated lagoon area are mapped as a Biological Core Area (BCA) in the County's MSCP. BCAs are defined as areas generally supporting high concentrations of sensitive biological resources which, if lost or fragmented, could not be replaced or mitigated elsewhere (County 1998). The San Dieguito River and San Dieguito Lagoon provide regionally important feeding and resting areas for migratory birds along the Pacific Flyway, as well as tidal, open water, mudflat, and salt marsh habitats that support a variety of birds, fishes, and invertebrates. Eastward movement of terrestrial wildlife from the study area is constrained by the State Fairgrounds and developed areas around it. The river is highly constrained for the approximately 0.5-mile reach situated between Camino Del Mar, eastward past the railroad tracks to Jimmy Durante Boulevard. More extensive areas of native habitat occur east of Jimmy Durante Boulevard on both sides of I-5.

San Dieguito Lagoon is mapped as Essential Fish Habitat (EFH) under two fishery management plans (FMPs): the Coastal Pelagic Species FMP and the Pacific Coast Groundfish FMP (Pacific Fishery Management Council 2016a and 2016b, respectively). As defined by the U.S. Congress in the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act, EFH includes the waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH for coastal pelagic species includes all marine and estuarine waters from the shoreline along the U.S. west coast offshore to the limits of the Exclusive Economic Zone (the 200-nautical mile limit) and down to specific depths depending upon the species and temperature regimes. The EFH for Pacific Coast groundfish extends to the high tide line, but no higher, along the entire West Coast of the U.S. (NOAA-

NMFS 2016). The estuarine habitat within lagoon is also designated as a Habitat Area of Particular Concern for EFH.

Within the project study area, some movement of wildlife, particularly marine birds, occur north and south of the river, on either side of the bridge among the mudflats, beach, and intertidal waters. Other than these localized areas, the disturbed nature of the surroundings with its developed, urbanized environment likely deters wildlife from moving between areas of habitat associated with the river to other areas surrounding the project study area and immediately surrounding vicinity.

REGIONAL AND REGULATORY CONTEXT

The following federal, state, and/or local regulations apply to biological resources on-site.

Federal

Federal Endangered Species Act

Administered by the USFWS, the federal ESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species, and the habitats upon which they rely, are considered take under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 7 and 4(d) of the Federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7, administered by the USFWS, describes a process of Federal interagency consultation for use when Federal actions may adversely affect listed species. A Section 7 Consultation (formal or informal) is required when there is a nexus between a listed species' use of a site and if the project is funded (wholly or in part) by the State Revolving Fund. A biological assessment is required for any major construction activity if it may affect a listed species. Take can be authorized via a letter of Biological Opinion, issued by the USFWS, for non-marine related listed species issues. The project would be funded in part by the State Resolving Fund. A Section 7 Consultation would be required if impacts to a federally listed species would occur.

Identified by the USFWS, critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat, so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat.

Migratory Bird Treaty Act

All migratory bird species native to the United States and its territories are protected under the Migratory Bird Treaty Act (MBTA), as amended. The MBTA mandates protection for eggs and chicks of all migratory bird species but does not stipulate specific protection measures. In common practice, the MBTA is used to place restrictions on the disturbance of active bird nests during the nesting season

(generally February 1 to August 31). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

Clean Water Act and Rivers and Harbors Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA 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. is overseen by the USACE under Section 404 of the CWA. Most development projects are permitted using Individual Permit or Nationwide Permit instruments.

Coastal Zone Management Act of 1972

The Coastal Zone Management Act (CZMA) creates a broad program for the management of coastal lands based on land development control. It was enacted to encourage the participation and cooperation of state, local, regional, federal agencies, and governments to have programs affecting the coastal zone. The CZMA allows state involvement through the development of Coastal Zone Management Plans (CZMP) for comprehensive management at the state level. The CZMPs define permissible land and water use within the state coastal zone. This coastal zone extends three miles seaward and inland as far as necessary to protect the coast. The CZMA also requires federal agencies or licensees to carry out their activities in such a way that they conform to the maximum extent practicable with a state's coastal zone management program. The California Coastal Act is California's coastal zone management program under the CZMA. This program is discussed below.

State of California

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), requiring that projects with potential adverse effects or impacts to 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.

California Endangered Species Act

The CESA established it is state policy to conserve, protect, restore, and enhance state 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. The 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 (CFG Code Section 2080.1[a]). For state-only listed species, Section 2081 of the CFG Code authorizes the CDFW to issue an Incidental Take Permit for state-listed threatened and endangered species if specific criteria are met. The MSCP is a regional Natural Communities Conservation Plan that was granted take coverage under Section 2081 of the CESA.

California Fish and Game Code

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.

California Coastal Act of 1976

The California Coastal Act (CCA) provides for the protection of environmentally sensitive habitat identified by the CDFW from adjacent developments in the coastal zone. The CCA is California's coastal zone management program under the CZMA, discussed above. The CCA establishes the CCC as having jurisdiction over California's coastal zone. The CCA identifies environmentally sensitive habitat areas as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. Compliance with requirements in the CCA is ensured for specific development projects in the coastal zone through the issuance of a Coastal Development Permit (CDP). In most incorporated areas within the coastal zone, compliance with the CCA is regulated by local government through the implementation of a certified LCP. The local government typically issues CDPs and implements their approved LCP in regulating developments within the coastal zone. Portions of the project are within areas under the jurisdiction of the City's certified LCP and the CCC permit authority area.

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the State's NCCP Act of 1991, legislation broader in its orientation and objectives than the CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The NCCP Act of 1991 and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003. The MHCP is an enrolled NCCP program and was adopted in 2003 by the County.

Local

County of San Diego Multiple Species Conservation Program

The California NCCP Act of 1991 (Section 2835) allows the CDFW to authorize take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program, initiated by the State of California, focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and state listing of coastal sage scrub-dependent species.

The MSCP Plan was approved in August 1998 covers 85 species and includes a 900-square mile area in southwestern San Diego County (County 1998). The Draft City of Del Mar Subarea, portions of the unincorporated County, and 10 additional city jurisdictions comprise the MSCP Plan area. It is a

comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. The MSCP is one of several large multiple jurisdictional habitat planning efforts in San Diego County, each of which constitutes a subregional plan under the NCCP Act of 1991. The MSCP includes incorporated cities in southwestern San Diego County that will implement their respective portions of the MSCP through citywide "subarea" plans, which describe the specific implementing mechanisms each city will institute for the MSCP. The City of Del Mar has not approved or adopted its Draft Subarea Plan; therefore, the project is not subject to the provisions of the MSCP, although it is referenced for project planning considerations and demonstration of voluntary consistency.

City of Del Mar General Plan

The Environmental Management Element of the City's Community Plan (General Plan) provides goals and policies applicable to the project site as they relate to the conservation of natural resources as well as the protection and preservation of sensitive species and their habitats (City 2019).

Del Mar Municipal Code

The Del Mar Municipal Code includes a Lagoon Overlay Zone to protect wetland resources of the San Dieguito Lagoon, including sensitive upland habitats. The proposed project is within the Lagoon Overlay Zone, which is codified and described in Chapter 30.53.10 of the Del Mar Municipal Code. All development activities in the Lagoon Overlay Zone are to be designed and implemented in a manner consistent with the required wetland protection, wetland enhancement, and permitted uses specified under Sections 30.53.040 through 30.53.170 of the City's Municipal Code. Additionally, development in the Lagoon Overlay Zone requires the approval of both a Conditional Use Permit (CUP) and CDP by the City. Permitted uses in wetlands are limited to aquaculture, scientific research, and wetland restoration projects. Section 30.52.080 prohibits activities that would involve "grading, filling, construction, or placement of structures within the boundaries of wetlands as determined pursuant to the provisions of this Chapter."

PROJECT IMPACTS/EFFECTS, SIGNIFICANCE, AND PROPOSED MITIGATION

For the purpose of evaluating potential project effects (i.e., impacts) and as prescribed by the Issues in CEQA Appendix G Section IV Biological Resources, the proposed project would result in a significant impact if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the USFWS or CDFW;

2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by USFWS or CDFW;

3. Have a substantial adverse effect on federally protected wetlands as defined by Clean Water Act Section 404;

4. Interfere substantially with the movement of any native resident, migratory fish, or wildlife species, or established native resident or migratory wildlife corridors; or impede use of native wildlife nursery sites;

5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state conservation plan.

The significance of impacts to biological resources present or those with the potential to occur was determined based upon the sensitivity of the resource and the extent of the anticipated impacts. For certain highly sensitive resources (e.g., a federally listed species), impacts would be significant. Conversely, other resources that are of low sensitivity (e.g., species with a large, locally stable population in the County but declining elsewhere) could sustain some impact with a less than significant effect. Analyses of project impacts to biological resources are discussed in detail below.

IMPACTS

This section describes potential direct and indirect effects (impacts) on biological resources associated with the proposed project. Direct impacts are immediate impacts and typically result in permanent removal. Direct impacts for the project were quantified by overlaying the limits of project-related ground disturbance on the biological resources map of the site (Figure 8, *Project Impacts*). Indirect impacts are actions by the project that are not direct removal of resources but affect the surrounding resources either as a secondary effect of the direct impacts (e.g., construction noise, runoff, nighttime lighting, fugitive dust, etc.) or as the cause of degradation of a biological resource over time (e.g., edge/adjacency effects). The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes longer to become apparent.

Issue 1 – Sensitive Species

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Issue 1 Analysis of Project Effects

Sensitive Plants

Less than Significant Impact. The project would have no impact on federal or State-listed plant species. Three sensitive plant species were detected within the project study area but located outside of the project impact footprint; thus, no impacts to these species are expected. Based on the results of focused plant surveys for the project, no additional sensitive plant species were detected or are expected to occur. Thus, project impacts to sensitive plants are not anticipated.

Sensitive Animals

Less than Significant Impact with Mitigation Incorporated. Implementation of the project is not anticipated to result in direct impacts to the State listed endangered Belding's savannah sparrow or its

habitat/territory, as suitable nesting and foraging habitat for this species does not occur within the impact area. No other direct impacts to sensitive animal species are expected as a result of the project. Indirect impacts to Belding's savannah sparrow may occur if the species is present within suitable habitat adjacent to project construction activities. Specifically, construction-related noise could cause breeding birds to temporarily or permanently leave their territories to avoid disturbances from human activities, which could lead to reduced reproductive success and increased mortality. Noise effects would be considered potentially significant if noise levels generated during construction exceed a level of 60 A-weighted decibels (dBA) hourly average (L_{EQ}) or ambient (whichever is greater) adjacent to sensitive nesting bird species such as Belding's savannah sparrow. During construction, up to 12 temporary night closures of the bridge during the 27-month construction period are expected during which lighting would be needed. Night lighting that extends onto adjacent wildlife habitat can discourage use of the habitat by nocturnal wildlife and can also provide nocturnal predators with an unnatural advantage over their prey, resulting in a potentially significant impact. Temporary lighting would be required to be oriented downward (toward the bridge deck), and the lighting source would be required to be shielded in order to minimize light spill and avoid adverse effects on adjacent wildlife habitat. With the implementation of mitigation measures **BIO-1** and **BIO-2** potential indirect impacts to Belding's savannah sparrow would be avoided or reduced to below a level of significance.

Given the location of the project within the San Dieguito River, there are a variety of birds that migrate seasonally through the project area on the Pacific flyway, as well as certain birds that permanently reside locally. Pursuant to the Migratory Bird Treaty Act (MBTA), the development of the proposed project could disturb or destroy active migratory bird nests if vegetation clearing occurs during the general bird nesting season (February 15 through September 30) and/or raptor nesting season (January 15 through July 31). Disturbance to or destruction of migratory bird nests are in violation of the MBTA and are, therefore, considered to be a potentially significant impact. Implementation of mitigation measure **BIO-3** would ensure that potential impacts to birds protected under the MBTA and California Fish and Game Code are avoided during construction.

Issue 1 Mitigation Measures

BIO-1 **Pre-construction Protocol Surveys and Listed Species Avoidance.** If construction activities are scheduled to start during the breeding season for Belding's savannah sparrow (February 15 to June 30), a qualified biologist shall conduct pre-construction surveys to determine the presence or absence of this species. The final survey shall not be completed more than three days prior to the beginning of construction or grading activities. If it is determined at the completion of pre-construction surveys that active nests belonging to this species are absent within 300 feet of construction, construction shall be allowed to proceed. If Belding's savannah sparrow is detected within the project impact footprint during pre-construction surveys, the City shall notify CDFW, and if required by CDFW, shall prepare and submit an application for a Section 2081(b) Incidental Take Permit for impacts to Belding's savannah sparrow.

If pre-construction surveys determine the presence of active nests belonging to this species within 300 feet of construction, then construction shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint and/or around construction equipment to ensure that noise levels are reduced to below 60 A-weighted decibels (dBA) or ambient. Decibel output shall be confirmed

by a qualified noise specialist, and intermittent monitoring by a qualified biologist shall be required to ensure that conditions have not changed.

BIO-2 **Construction Noise Abatement.** If noise-generating construction activities are not completed prior to the breeding season for Belding's savannah sparrow (February 15 through June 30) and this species is found present during the pre-construction surveys completed in accordance with **BIO-1**, then appropriate noise attenuation measures shall be implemented to reduce construction noise levels at the edge of occupied habitat to below 60 dBA L_{EQ} (one hour average). Such measures shall include, but not be limited to, the following:

- Construction equipment shall be properly outfitted and maintained with manufacturer-recommended noise-reduction devices.
- Diesel equipment shall be operated with closed engine doors and equipped with factory-recommended mufflers.
- Mobile or fixed "package" equipment (e.g., arc-welders and air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- Electrically powered equipment shall be used instead of pneumatic or internal- combustion powered equipment, where feasible.
- Unnecessary idling of internal combustion engines (e.g., in excess of five minutes) shall be prohibited.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- No project-related public address or music system shall be audible at any adjacent sensitive receptor.
- Temporary sound barriers or sound blankets shall be installed between construction operations and adjacent noise-sensitive habitat. The project Contractor shall construct a temporary noise barrier at least six feet in height meeting the specifications listed below (or of a Sound Transmission Class 19 rating or better) to attenuate noise.
- All barriers shall be solid and constructed of wood, plastic, fiberglass, steel, masonry, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least 3⁄4-inch thick or have a surface density of at least 3.5 pounds per-square-foot. Sheet metal of 18-gauge (minimum) may be used if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation.

BIO-3 **Nesting Bird and Raptor Avoidance**. In order to avoid violation of the federal MBTA and California Fish and Game Code, site-preparation activities (removal of trees and vegetation) shall

be avoided during the general avian breeding season (January 15 to July 30 for raptors; February 15 to September 30 for other avian species).

If site-preparation activities are to occur during the general avian or raptor breeding season, a pre-construction nesting survey shall be conducted within 30 days prior to the commencement of construction. A qualified biologist shall perform the nesting survey to ascertain whether there are active raptor nests or sensitive avian species nesting within 500 feet of the project footprint as well as other bird nests within 300 feet of the project footprint. This survey shall identify the species of nesting bird and to the degree feasible, nesting stage (e.g., incubation of eggs, feeding of young, near fledging). Nests shall be mapped (not by using GPS because close encroachment may cause nest abandonment). A follow-up nesting survey shall be conducted no more than three days prior to clearing. If an active nest is observed, the nest location shall be fenced off surrounding an adequate radius buffer zone as determined by the biological monitor. This nest avoidance buffer zone shall not be disturbed until a qualified biologist has verified that the young have fledged, or the nest has otherwise become inactive.

Issue 2 – Sensitive Natural Communities

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

Issue 2 Analysis of Project Effects

Less Than Significant with Mitigation Incorporated. No impacts to riparian habitat would occur as a result of the project; however, direct impacts (permanent and temporary) to other sensitive natural communities/habitats would occur, including beach, Diegan coastal sage scrub (including disturbed), intertidal (open water), and mudflat. Impacts to non-sensitive vegetation communities are not considered significant and, therefore, do not require mitigation.

Permanent impacts by the project consist of direct effects which alter the pre-construction condition permanently, whereas temporary impacts reflect areas of the project that would be directly impacted but replaced to a pre-construction condition following construction. Table 4, *Project Impacts to Sensitive Natural Communities*, provides the quantities of proposed project impacts, and Figure 8, *Project Impacts*, presents the spatial distribution of project impacts and impact footprint.

Table 4
PROJECT IMPACTS TO SENSITIVE NATURAL COMMUNITIES[1]

Vegetation Community or Habitat Type	Temporary Impacts	Permanent Impacts	Total Impacts
Beach	0.88	0.36	1.24
Diegan Coastal Sage Scrub (including disturbed)	0.02	0.16	0.18
Intertidal (Open water)	0.41	0.04	0.45
Mudflat	0.00	<0.01	<0.01
TOTAL	**1.31**	**0.56**	**1.87**

[1] Acreage rounded to the nearest 0.01.

While the project has been designed to minimize impacts to sensitive natural communities/habitats to the greatest extent practicable, direct impacts could not be completely avoided due to the location of the bridge structures in relation to existing natural resources.

Direct impacts to intertidal open water, mudflat, and beach habitats would occur during the removal of the existing bridge pilings and the replacement of new piers. However, the removal of the existing pilling structures, which are greater in quantity and diameter than the piers proposed for the replacement bridge, would result in a net environmental benefit due to the expected uplift and improvement of tidal circulation and related functions. Additionally, the ebb and flow of tidal current under the bridge would be enhanced due to the fewer number and smaller size of piers being installed for the replacement bridge, which would result in more natural tidal flows compared to that which currently exists. In addition, the construction activities within the intertidal open water habitat are temporally and spatially a minor undertaking and would not entail a long-term construction phase. Tidal flow beneath the bridge would be maintained during construction. Ultimately, such direct impacts to intertidal open water are considered less than significant and no mitigation is proposed. Additionally, direct impacts to less than 0.01-acre of mudflat (approximately 40 square feet) adjacent/below the bridge are considered less than significant. Because the beach habitat is primarily unvegetated, the proposed direct impacts would result in relatively minor surface disturbance, and impacted areas of the beach would be rehabilitated and recontoured to restore it to natural sand grade and pre-construction conditions, impacts are considered less than significant. No mitigation to beach is proposed.

Direct impacts (permanent and temporary) to relatively narrow strips/patches of Diegan coastal sage scrub located alongside Camino del Mar, north of the bridge, would occur as a result of the project. Permanent impacts to Diegan coastal sage scrub would be considered significant and would require mitigation. A 2:1 mitigation ratio is proposed for permanent impacts to Diegan coastal sage scrub. Mitigation would occur through on-site or off-site restoration, enhancement, and/or establishment/re-establishment with a minimum 1:1 establishment/re-establishment component (due to Coastal Zone requirements and to ensure no-net-loss), or the purchase of credits at an approved mitigation bank.

Temporary impacts to Diegan coastal sage scrub would be replaced/restored to previous (pre-construction) condition or better (biologically equivalent or superior in function). By restoring this habitat to pre-construction condition or better, the temporary impacts would be considered less than significant; thus, no mitigation is proposed. If restoration to pre-construction condition or better is not completed, the impacts by the project would be considered significant. To ensure replacement of temporary impact areas, a habitat restoration plan would be required for the project to address/replace temporary impacts to Diegan coastal sage scrub.

Potential indirect impacts to natural communities as a result of the project are not expected. Appropriate and typical construction Best Management Practices would be selected and installed for the project per compliance with National Pollutant Discharge Elimination System and Storm Water Quality Management Plan requirements prior to the onset of construction activities and throughout construction to reduce potential water quality impacts. These may include, but not limited to: (1) installing erosion and sediment control devices such as silt fences, fiber rolls, bonded fiber matrix, and gravel bags in appropriate locations; (2) placing temporary filters at storm drain inlets (e.g., gravel bags/filter fabric); (3) designating containment areas for material storage (e.g., covering/berming of soil stockpiles); and (4) providing containment areas for solid waste storage and concrete washout.

Mitigation for permanent impacts to 0.16 acre of Diegan coastal sage scrub may occur on- or off-site using habitat mapped as disturbed, non-native vegetation, and/or ornamental. A total of 0.37 acre of these habitat types was identified in the study area and could be available for potential Diegan coastal sage scrub establishment/re-establishment, which would meet the 1:1 establishment/re-establishment requirement. Potential Diegan coastal scrub enhancement is also available, totaling approximately 0.75 acre. This is greater than the 0.32-acre mitigation required. Ultimately, implementation of mitigation measure **BIO-4** would ensure that impacts to sensitive natural communities would be reduced to less than significant.

Issue 2 Mitigation Measures

BIO-4 **Habitat Restoration Plan.** The City shall prepare and implement of a habitat restoration plan. Temporary impacts to 0.02 acre of Diegan coastal sage scrub shall be restored to a pre-construction or superior condition at a 1:1 replacement within the area impacted. Permanent impacts to 0.16 acre of Diegan coastal sage scrub shall be mitigated at a 2:1 ratio. Mitigation shall occur through on- or off-site restoration, enhancement, and/or establishment with a minimum 1:1 establishment component, or the purchase of credits at an approved mitigation bank. Mitigation may occur on-site or off-site by converting habitat that has been mapped as disturbed, non-native vegetation, and/or ornamental into native habitat.

Issue 3 – Wetlands

Would the project have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Issue 3 Analysis of Project Effects

Less Than Significant with Mitigation Incorporated. The project would result in impacts to wetlands defined by Section 404 of the CWA. Approximately 2.21 acres of direct impacts to intertidal open water, mudflat, and adjacent beach would occur as a result of the project. These direct impacts consist of approximately 1.90 acres of temporary impacts and approximately 0.31-acre permanent impacts during the removal of existing bridge components and replacement with a new bridge (Table 4, *Project Impacts to Potentially Jurisdictional Aquatic Resources*). Although permanent impacts would occur, ultimately the project would result in smaller footprint within the jurisdictional area through the removal of the existing bridge piers and replacement with fewer piers. As a result, there would be a net gain in open intertidal water upon completion of the project and enhanced aquatic functions (e.g., improved tidal/flood processes, increased water column, expansion of benthic habitat, etc.).

Direct temporary impacts would primarily be for construction access and would be restored to pre-project conditions; permanent impacts would be negligible to these unvegetated habitats. The localized nature of the activities means that the temporal and spatial impacts to the surrounding environment from the replacement of the pilings are negligible. In addition, as stated above, the removal of the larger diameter existing pilings and replacement with structures with lesser girth is expected to improve tidal circulation and create a better tidal circulation; therefore, offsetting temporary impacts. The beach environment is unvegetated and impacts from project activities are expected to be surficial. Replacement of the beach environment to pre-project condition by stabilizing it and contouring as a part of the project design is expected to offset temporary impacts. Overall, because the project would result

in a smaller development footprint and provides increased function and value, project impacts are considered less than significant.

Although the project was designed and sited to avoid and minimize impacts to jurisdictional resources to the extent practicable, the project would impact potentially protected wetlands and waters under Section 404 of the CWA subject to the jurisdiction of the USACE. The project would also result in impacts to potentially jurisdictional waters of the state subject to jurisdiction by the RWQCB under Section 401 of the CWA and protected streambed and associated riparian habitat under the jurisdiction of the CDFW per Section 1602 of the CFGC. Lastly, project construction would result in impacts to wetlands subject to the permit authority of the CCC. Table 5, *Project Impacts to Potential Jurisdictional Areas*, depicts the potential impacts to jurisdictional waters under the purview of the USACE, RWQCB, CDFW, and CCC.

Table 5
PROJECT IMPACTS TO POTENTIALLY JURISDICTIONAL AQUATIC RESOURCES[1]

Vegetation Community or Habitat Type	USACE / RWQCB / CDFW / CCC Jurisdiction		
	Temporary Impacts	Permanent Impacts	Total Impacts
Beach	1.28	0.29	1.57
Intertidal (Open Water)	0.60	0.05	0.65
Mudflat	0.00	<0.01	<0.01
TOTAL	**1.90**	**0.31**	**2.21**

[1] Acreage rounded to the nearest 0.01.

Impacts to areas regulated under the CWA could require regulatory permitting by the USACE under Section 404 of the CWA and are expected to be authorized by the USACE under Nationwide Permit 14 (Linear Transportation Projects). In addition to a USACE Nationwide Permit, the RWQCB may also require a Water Quality Certification be required pursuant to Section 401 of the CWA. Impacts areas under the jurisdictional authority of the RWQCB would be the same as that of the USACE. Additionally, such impacts to intertidal open water, mudflat, and adjacent beach would be under the jurisdictional authority of CDFW pursuant to the CFGC, and CDFW could require a Streambed Alteration Agreement. Furthermore, these project impacts would also include CCC jurisdictional areas, and CCC would require the issuance of a coastal development permit (CDP) from the CCC and/or the City. Coordination between the City and CCC has occurred during regularly scheduled interagency meetings; topics of discussion for this project have included conducting pre-construction exploratory borings at future abutment locations and review of bridge design scenarios accounting for projected flooding and sea level rise.

Final requirements for regulatory permits for impact to open water and jurisdictional beach habitat would be determined in consultation with the resource agencies (i.e., USACE, RWQCB, CDFW, and CCC). In addition to permits, the resource agencies may require mitigation for project impacts. Implementation mitigation measure **BIO-5** would verify whether regulatory permits and/or mitigation would be required by the resource agencies and ensure that potential temporary and permanent impacts to jurisdictional aquatic resources would be less than significant.

Issue 3 Mitigation Measures

BIO-5 **Regulatory Permits.** Prior to project impacts to potentially jurisdictional resources, demonstration that regulatory permits from USACE, RWQCB, CDFW, and CCC, have been issued

or that no such permits are required shall be provided to the City. Implementation of permit requirements, including additional mitigation, shall be required.

Issue 4 – Wildlife Movement and Nursery Sites

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

Issue 4 Analysis of Project Effects

Less Than Significant with Mitigation Incorporated. While the project site and immediately adjacent native habitats associated with the lagoon support localized use by wildlife, particularly birds, the project site does not function as a wildlife corridor/habitat linkage for non-avian terrestrial wildlife due to its relatively small size and constrained connectivity to larger habitat areas (i.e., narrow river connection with development abutting both edges of the open water).

Relative to potential interference with the movement of native resident or migratory fish, construction of the replacement bridge would temporarily disturb benthic and aquatic habitats within the lagoon. Construction impacts would occur to primarily unvegetated soft-bottom habitat, which typically recovers faster than benthic environments which are more sensitive. Although impacts would occur as a result of bridge replacement, the project ultimately provides a net increase of subtidal habitat via the reduction of pilings/piers from twelve associated with the existing bridge to four proposed for the new bridge. Construction would result in temporary and short-term impacts to tidal areas beneath and adjacent to the bridge; however, substantial impacts to tidal flow are not anticipated.

Although substantial impacts would not occur, the presence of subtidal and intertidal marine vegetation within the lagoon provides habitat for fish species and fish movement. To evaluate potential impacts to fish movement and habitat, waters within 150 feet of the bridge were surveyed by Merkel & Associates in September 2018 for the presence of eelgrass (*Zostera marina*). Eelgrass within the survey area consisted of narrow marginal eelgrass beds extending along the shoreline between the deeper water areas and the beach and revetted shoreline northwest and southwest of the bridge (Merkel & Associates 2018). Eelgrass identified during the surveys was located in areas that would be avoided and protected in place during construction; thus, avoiding potential impacts to fish or other aquatic species. Because eelgrass is a dynamic habitat type that is continuously changing in density, biomass, and distribution and has the potential to occur within the project footprint at the time of construction preconstruction eelgrass surveys would be conducted, and applicable mitigation per the Southern California Eelgrass Mitigation Policy would be implemented should eelgrass be impacted by the project. With the implementation of mitigation measure BIO-6, the project would not interfere with wildlife movement or impede the use of nursery sites and impacts would be less than significant.

Issue 4 Mitigation Measures

BIO-6 **Eelgrass Avoidance and Mitigation.** A pre-construction eelgrass survey shall be conducted in accordance with NOAA Fisheries California Eelgrass Mitigation Policy and Implementation Guidelines. If the pre-construction survey demonstrates eelgrass presence within the 100 feet of the construction footprint, then a mitigation plan to achieve no net loss in eelgrass function shall be developed and conducted in accordance with the California Eelgrass Mitigation Policy

and Implementation Guidelines. The mitigation plan shall be reviewed and approved in consultation with NOAA Fisheries prior to project impacts to eelgrass. Mitigation options shall include (1) development of comprehensive management plans that protect eelgrass resources within the context of broader ecosystem needs and management objectives; (2) in-kind compensatory mitigation (e.g., creation, restoration, or enhancement of the same habitat type to mitigate for adverse impacts) that achieves a minimum final mitigation ratio of 1.38:1 once mitigation is complete (3) credits purchased through a mitigation bank or in-lieu fee program at a 1:1 ratio where the credits have been established for a full three-year period prior to use (or higher ratio should the bank credits have been in place for a period less than three years); (4) out-of-kind compensatory mitigation (e.g., creation, restoration, or enhancement of another habitat type to mitigate for adverse impacts) that demonstrates to the satisfaction of NOAA Fisheries such that it can be demonstrated that the proposed mitigation will compensate for the loss of eelgrass habitat function within the ecosystem; or (5) alternate mitigation recommendations provided by NOAA Fisheries that will achieve no net loss.

Issue 5 – Local Policies and Ordinances

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Issue 5 Analysis of Project Effects

Less Than Significant with Mitigation Incorporated. The project is located within the City's Lagoon Overlay Zone (LO-Z), which guides development within areas identified as "wetlands" and "wetland buffer areas." To the extent practicable, the project has been sited and designed to occur within and immediately adjacent to the existing roadway/edge, outside of areas in which plant or animal life and their habitats are rare or especially valuable because of their special nature or role in an ecosystem, and in areas currently subject to disturbance or degradation by human activities and developments. The biological resources within the project site are in narrow strips of vegetation (native and non-native uplands) directly adjacent to the existing Camino Del Mar Bridge and are currently subject to disturbance from vehicle traffic, noise, and pedestrian/bicycle activities. Project consistency with the City's Municipal Code and LO-Z was considered as a guide for the proposed design and project design was modified to avoid wetland areas to the extent practicable. As described above, the project would result in temporary and permanent impacts to jurisdictional resources, which would conflict with the permitted activities within the City's LO-Z as development in wetland habitat is prohibited. Although the project would conflict with the City's LO-Z that protects biological resources in the Lagoon, physical impacts on biological resources, including wetlands, would be less than significant with implementation of mitigation measure **BIO-5**.

The City's Municipal Code also includes a tree preservation/protection ordinance. This ordinance protects Torrey pine, Monterey Cypress (*Cupressus macrocarpa*), and trees of any species that are located in the public right-of-way. Permits to remove protected trees are typically granted or denied by the Director of Planning and Community Development reflecting associated mitigation requirements within an approved Tree Removal Permit. Pursuant to Section 23.050.070, the Design Review Board is responsible for administering and enforcing this DMMC chapter when a request for a Tree Removal Permit is a direct result of a concurrent development permit application reviewed by the Design Review Board, with powers to grant or deny the permit, as well as determination of mitigation requirements. For City projects, the City Council is the decision maker. The affected trees located within the project

impact footprint are isolated to a small area of the construction zone: one is located southwest of the southern bridge abutment and six are within the Camino del Mar roadway median south of the bridge, adjacent to residential plantings (including trees) on either side of the road. The trees are within public right-of-way and their removal is required in order to allow bridge removal and replacement. Consistent with DMMC Section 23.50.090, the impacts/loss of these trees would be mitigated. As proposed, two new street canopy trees would be installed within Greet Streets tree wells. Additional mitigation to cover the loss of street trees would be covered by the City's Public Tree/Landscape Management program that is administered by the City of Del Mar Public Works Department. The Program currently has a net excess of 78 public trees that were added via various Capital Improvement Program projects within the last five years including the Civic Center Redevelopment, Court Street Park, and Downtown Streetscape Plan. These credits can be applied towards future mitigation associated with City projects.

Because the project would implement regulatory permitting with the resource agencies (**BIO-5**) and adhere to the City's tree protection ordinance, project impacts are considered less than significant.

Issue 5 Mitigation Measures

No additional mitigation is required.

Issue 6 – Adopted Conservation Plans

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?

Issue 6 Analysis of Project Effects

No Impact. The project does not occur within the boundaries of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

Del Mar occurs within the planning boundaries of the County MSCP (County 1998). The MSCP is a multi-jurisdictional planning program designed to develop an ecosystem preserve within San Diego's incorporated and unincorporated areas. While the MSCP has been adopted for the County, no subarea plan has been approved or adopted for Del Mar. Therefore, the draft policies and guidelines of these plans are not applicable to the project. The project, however, considered the context of such draft plans and implementation of the proposed project would not preclude or prevent finalizing and adopting the plan. Compliance with existing regulations and implementation of measures **BIO-1 through BIO-5** would ensure consistency with the general conservation goals and objectives of the County MSCP.

Issue 6 Mitigation Measures

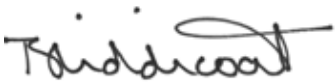
No mitigation is required.

CONCLUSION

Implementation of the proposed project could result in potential significant impacts to biological resources specifically nesting birds, sensitive natural communities, and jurisdictional aquatic resources. However, the timing of project construction and implementation of the mitigation measures **BIO-1** through **BIO-6** described above would ensure potential impacts to biological resources are either

avoided or minimized to remain below a level of significance. Please contact me at (619) 462-1515 or ThomasL@helixepi.com if you have questions or need assistance with project mitigation compliance.

Sincerely,



Thomas Liddicoat
Biology Project Manager/Senior Biologist

Enclosures:

Figure 1 Regional Location
Figure 2 Project Location - USGS
Figure 3 Project Location - Aerial
Figure 4 Project/Bridge Site Plan
Figure 5 Vegetation Communities
Figure 6 Special-Status Plants and Animals
Figure 7a Waters of the United States
Figure 7b CDFW Jurisdiction
Figure 7c California Coastal Commission Wetlands
Figure 8 Project Impacts

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Attachment B Animal Species Observed or Detected
Attachment C Sensitive Plant Species Potential to Occur
Attachment D Sensitive Animal Species Potential to Occur
Attachment E Explanation of Status Codes

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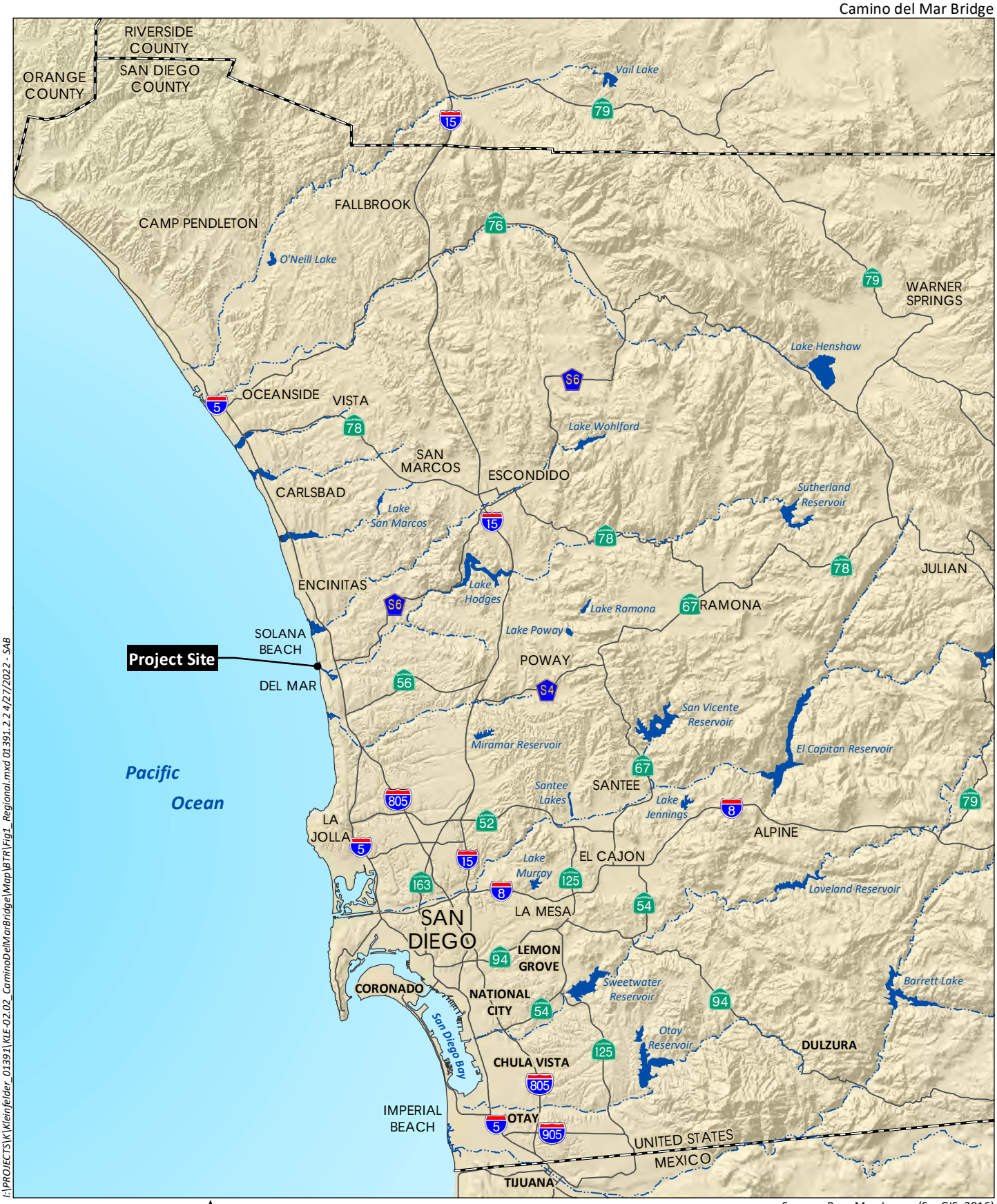
Figures



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0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 1

Source: DEL MAR 7.5' Quad (USGS)

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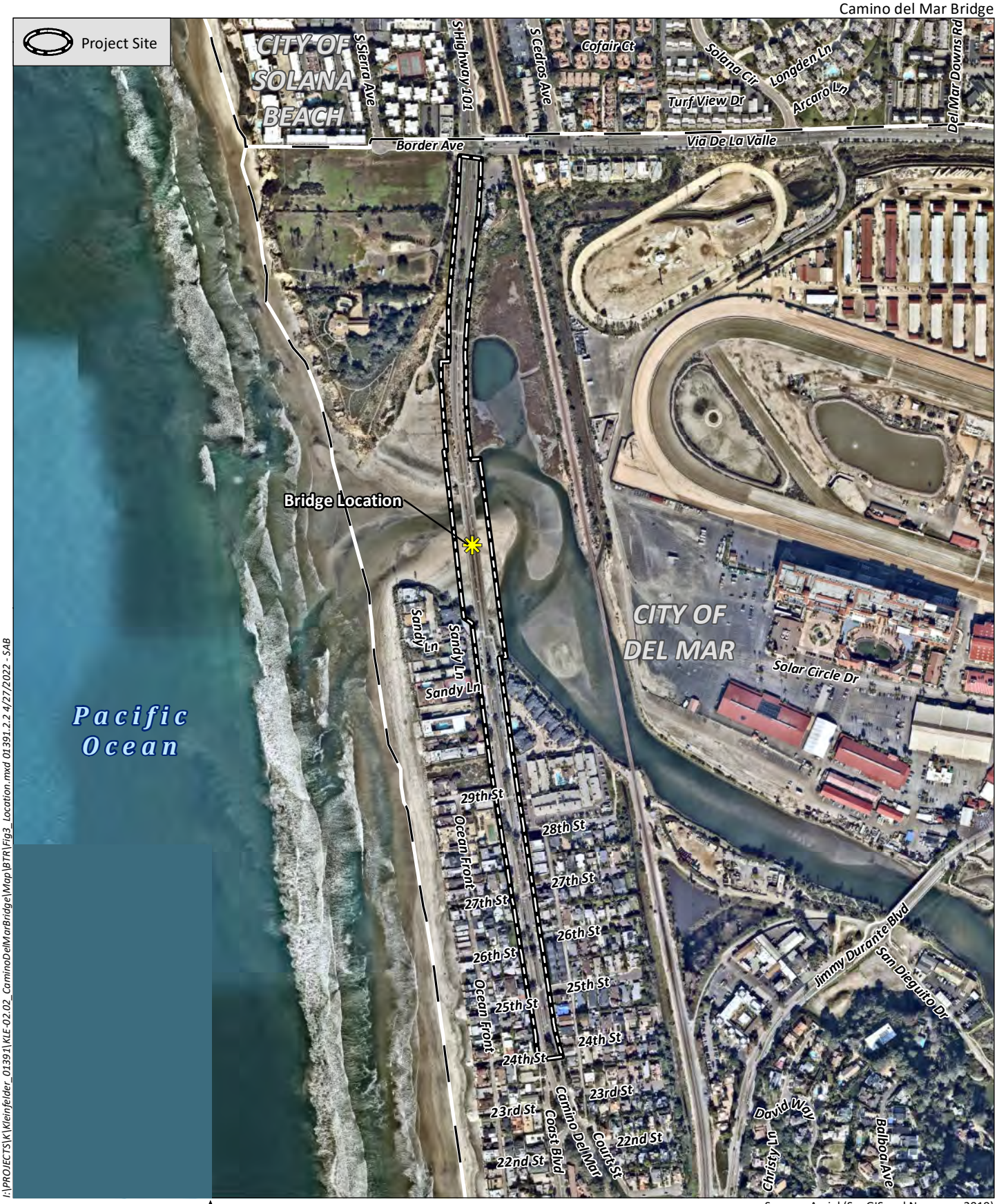
Project Location – USGS

Figure 2

Camino del Mar Bridge



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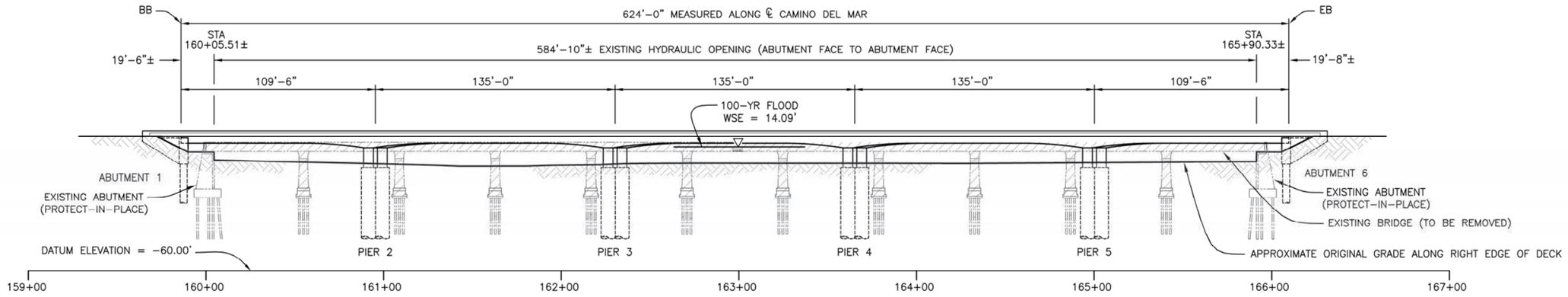
0 600 Feet

Source: Aerial (SanGIS and Nearmap, 2019)

HELIX Environmental Planning

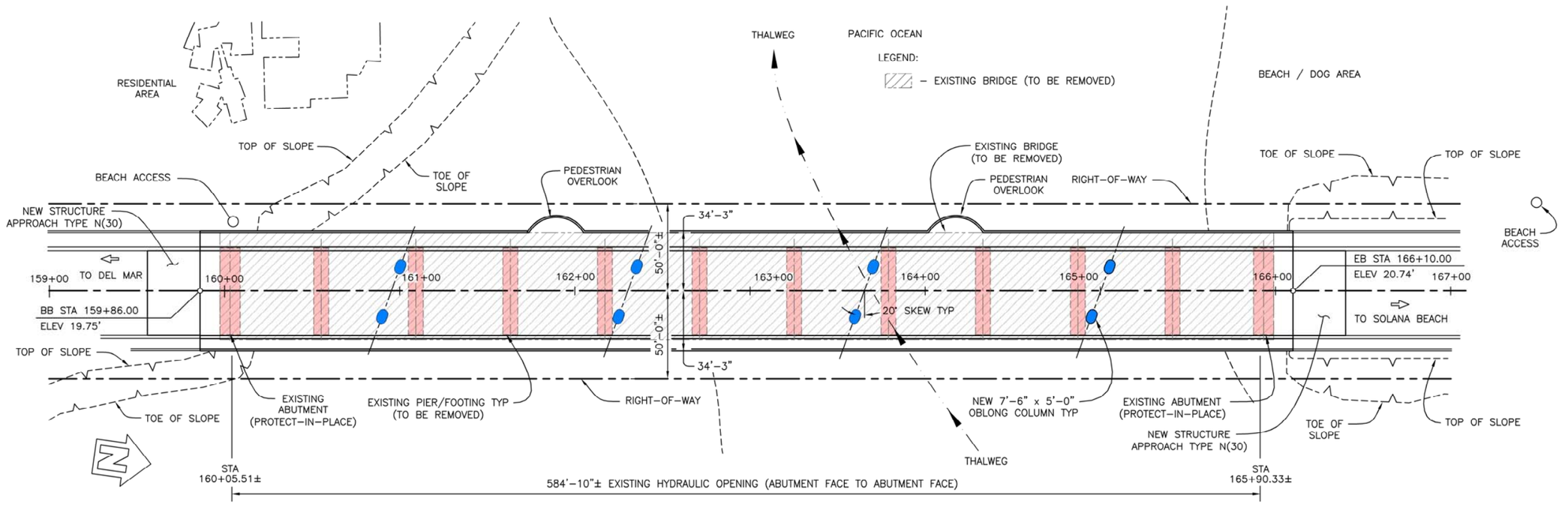
Project Location - Aerial

Figure 3



ELEVATION

1" = 30'–0"



PLAN

1" = 30'–0"

Number of Spans	Total Permanent Obstruction Area (Sq. Ft.)
11	2,350±

Number of Spans	Total Permanent Obstruction Area (Sq. Ft.)
5	257

STAGE 5 - FINAL CONDITION

ALTERNATIVE 1.1: 5-SPAN VARIABLE DEPTH CAST-IN-PLACE PRESTRESSED CONCRETE BOX GIRDER BRIDGE WITH TWO COLUMNS PER PIER

Source: Kleinfelder 2021

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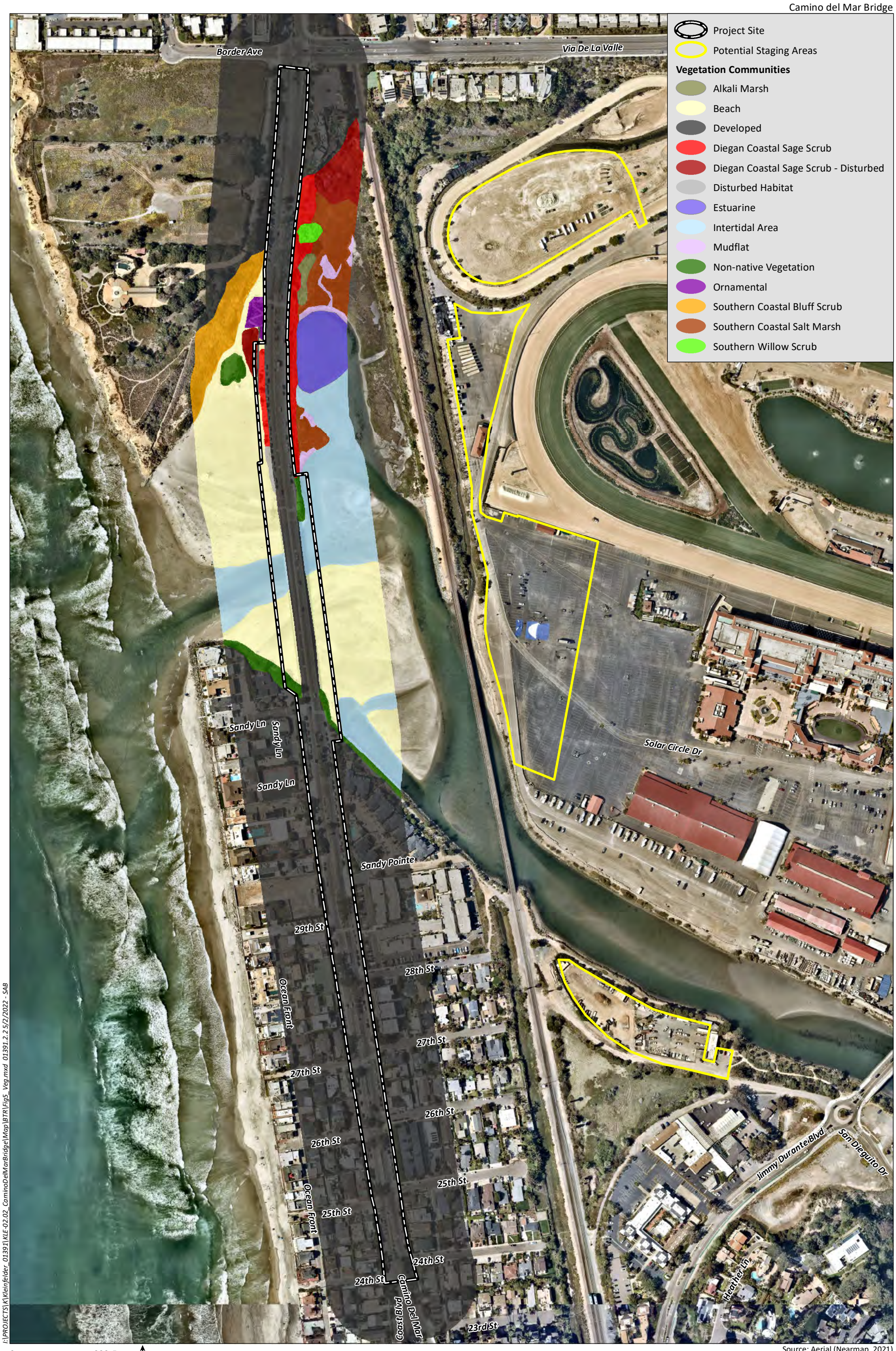
Camino del Mar Bridge



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0 300 Feet

Source: Aerial (Nearmap, 2021)

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Vegetation Communities

Figure 5

Camino del Mar Bridge

0 300 Feet

Source: Aerial (Nearmap, 2021)

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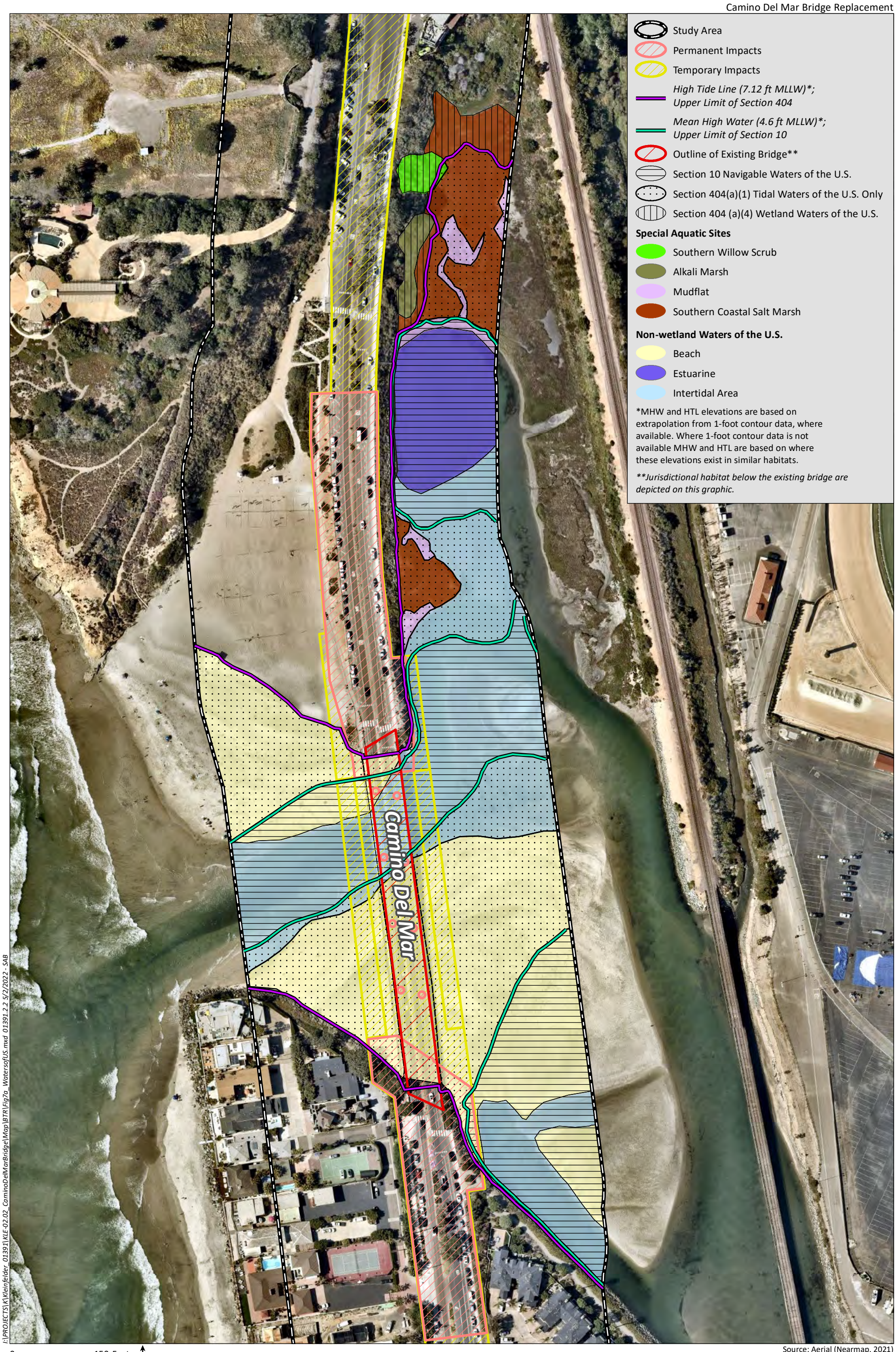
HELIX Environmental Planning

Special-Status Plants and Animals

Figure 6



Source: Aerial (Nearmap, 2021)

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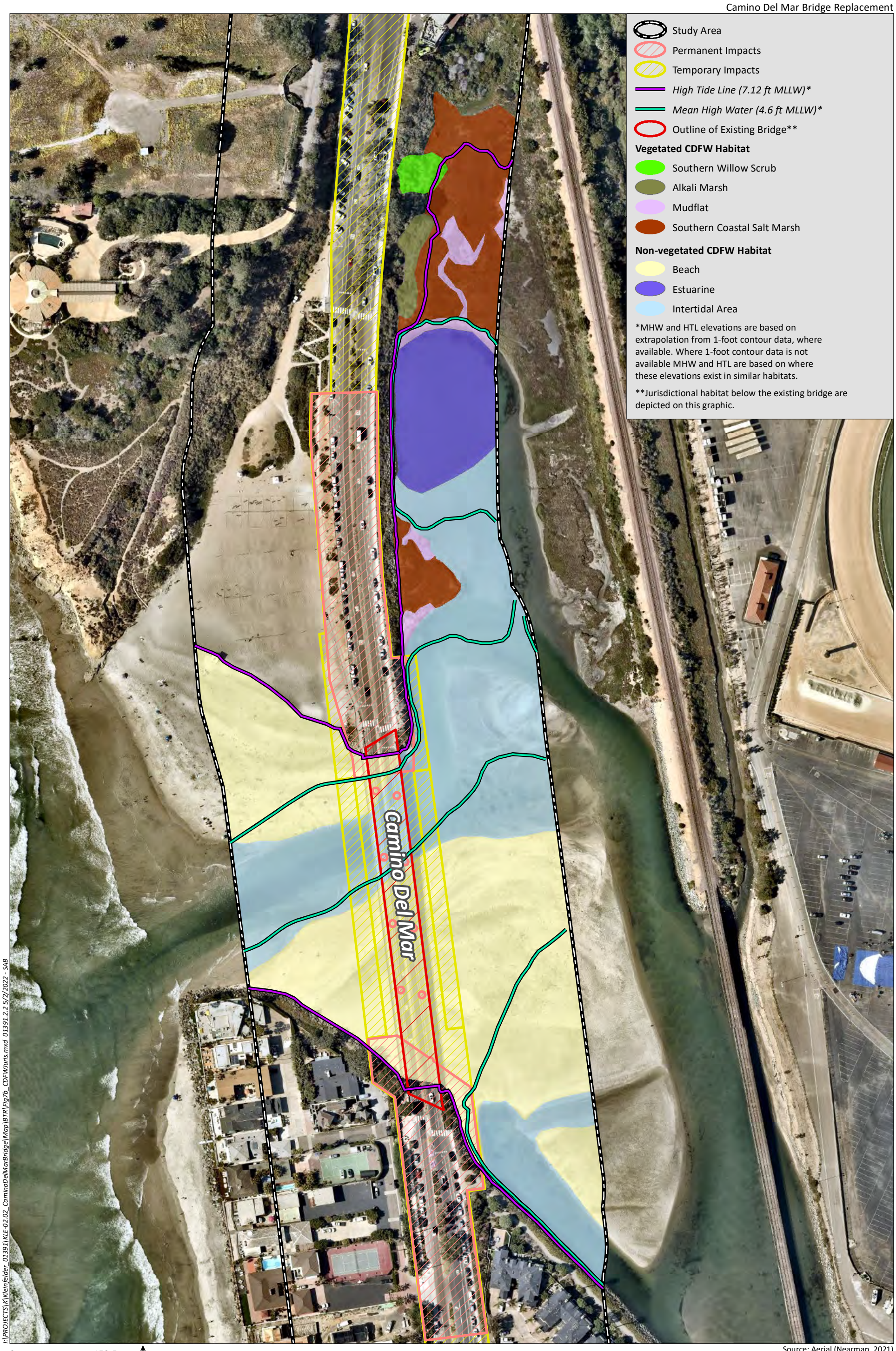
Waters of the United States

Figure 7a



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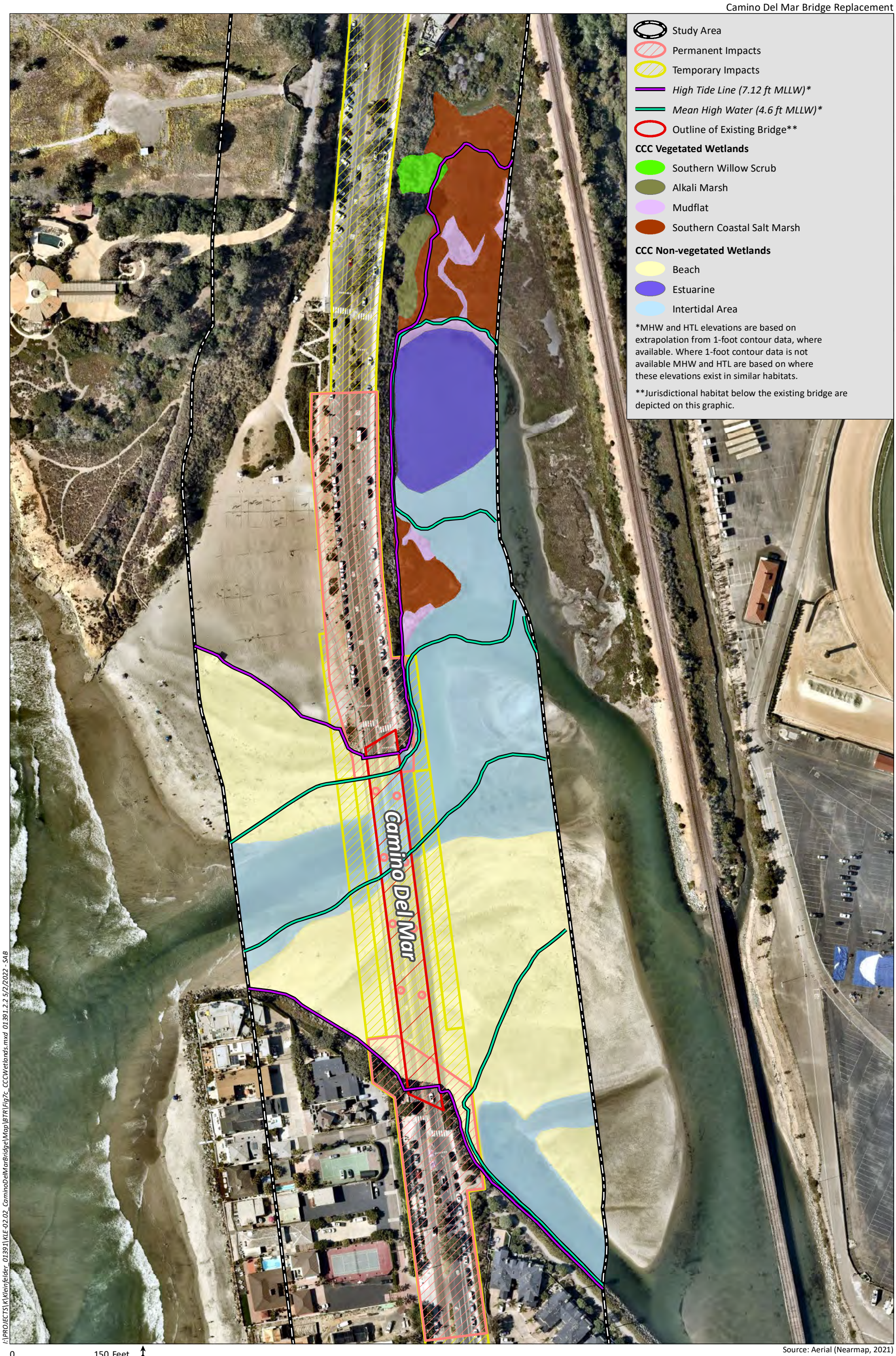
0 150 Feet

Source: Aerial (Nearmap, 2021)

HELIX Environmental Planning

CDFW Jurisdiction

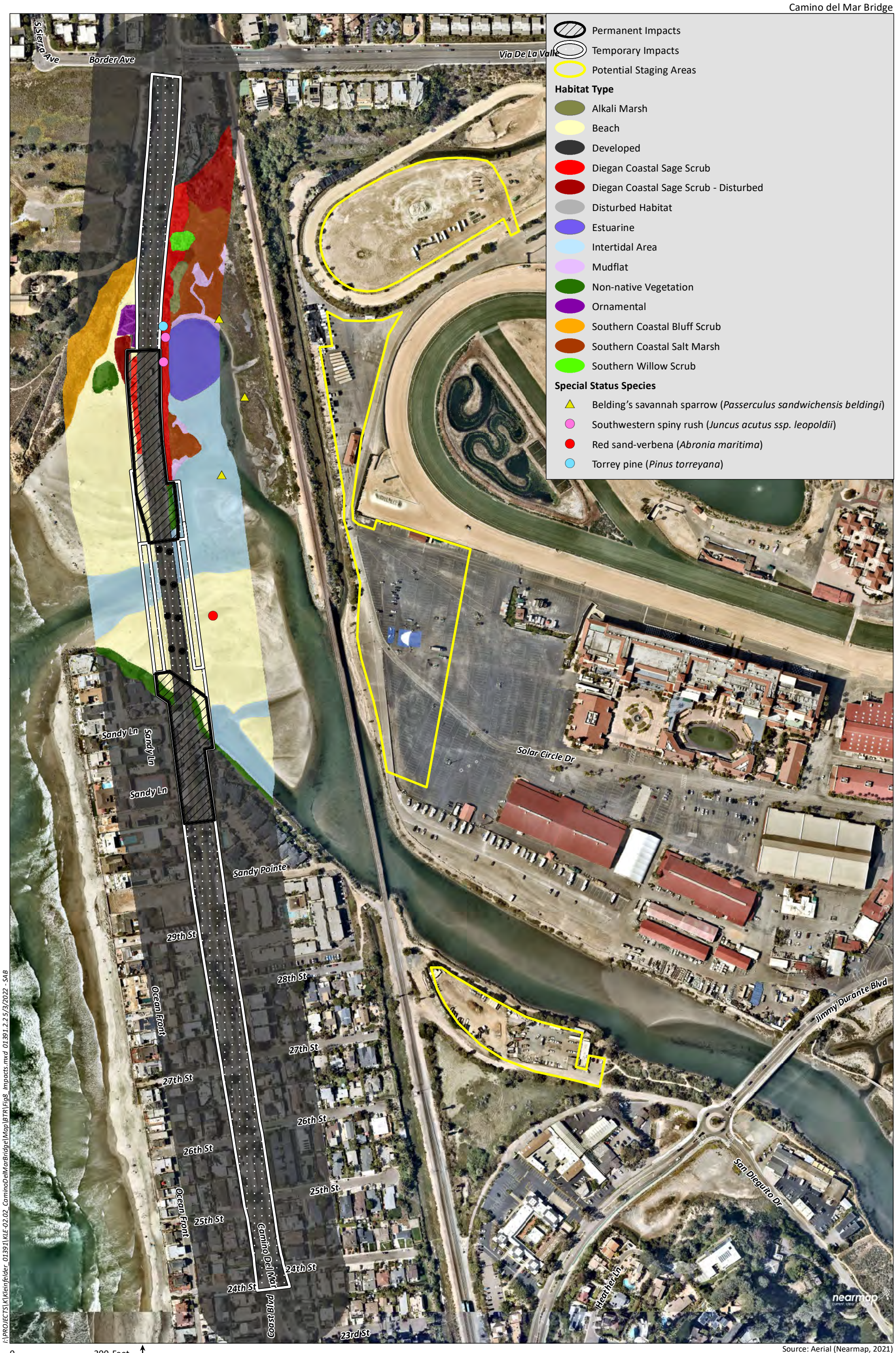
Figure 7b



HELIX Environmental Planning

California Coastal Commission Wetlands

Figure 7c



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0 300 Feet

Source: Aerial (Nearmap, 2021)

HELIX Environmental Planning

Project Impacts

Figure 8

Attachment A

Plant Species Observed

Attachment A
Plant Species Observed

Family	Scientific Name	Common Name
Conifers		
Cupressaceae	*Juniperus californica*	California juniper
Pinaceae	*Pinus torreyana* ssp. *torreyana*†	Torrey pine
Eudicots		
Aizoaceae	*Carpobrotus edulis**	freeway ice plant
	*Mesembryanthemum crystallinum**	crystalline iceplant
Anacardiaceae	*Schinus terebinthifolius**	Brazilian pepper tree
Apiaceae	*Foeniculum vulgare**	fennel
Asteraceae	*Ambrosia psilostachya*	western ragweed
	Baccharis pilularis	coyote brush
	Encelia californica	California encelia
	Isocoma menziesii var. *menziesii*	Menzies' goldenbush
	Jaumea camosa	fleshy jaumea
	Malosma laurina	laurel sumac
	*Sonchus asper**	prickly sow thistle
	*Sonchus oleraceus**	common sow thistle
Boraginaceae	*Cakile maritima**	European searocket
Brassicaceae	*Brassica nigra**	black mustard
Cactaceae	*Opuntia ficus-indica**	Indian-fig
	Opuntia littoralis	coast pricky pear
Chenopodiaceae	*Salsola tragus**	Russian thistle
	Salicornia pacifica	pickleweed
	Atriplex lentiformis	big saltbush
	Atriplex confertifolia	shadscale
	Chenopodium album	lamb's quarters
Convolvulaceae	*Cuscuta californica*	California dodder
	Cuscuta salina	saltmarsh dodder
Euphorbiaceae	*Ricinus communis**	castor bean
Fabaceae	*Medicago polymorpha**	burclover
	*Melilotus indicus**	Indian sweet clover
	Acacia sp.*	acacia
Frankeniaceae	*Frankenia salina*	alkali heath
Lamiaceae	*Salvia X palmeri*	sage hybrid
	Salvia apiana	white sage
	Salvia mellifera	black sage
Myoporaceae	*Myoporum parvifolium**	slender myoporum
Nyctaginaceae	*Abronia maritima*†	red sand verbena
Plumbaginaceae	*Limonium perezii**	Canary Island sea lavender
	Limonium californicum	California sea lavender
Polygonaceae	*Eriogonum fasciculatum*	buckwheat
Saururaceae	*Anemopsis californica*	yerba mansa
Solanaceae	*Nicotiana glauca**	tree tobacco
Monocots		
Cyperaceae	*Carex* spp.	sedge
Juncaceae	*Juncus acutus* ssp. *leopoldii*†	southwestern spiny rush

Attachment A
Plant Species Observed

Family	Scientific Name	Common Name
Poaceae	*Avena* spp.*	oats
	*Bromus diandrus**	common ripgut grass
	Distichlis spicata	Salt grass
	Distichlis littoralis	Shore grass
	Hordeum sp.*	barley
	Spartina foliosa	California cord grass

* Non-native species

† Sensitive Species

Attachment B

Animal Species Observed or Detected

Appendix B
Animal Species Observed or Detected

Taxon		Scientific Name	Common Name
Order	**Family**		
INVERTEBRATES			
Decapoda	Ocypodidae	*Leptuca crenulata*	fiddler crab
Lepidoptera	Nymphalidae	*Vanessa annabella*	west coast lady
	Pieridae	*Pieris rapae*	cabbage white
VERTEBRATES			
Fish			
Mugiliformes	Mugilidae	*Mugil cephalus*	striped mullet
Birds			
Anseriformes	Anatidae	*Anas platyrhynchos*	mallard
Apodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
Charadriiformes	Charadriidae	*Charadrius vociferus*	killdeer
	Scolopacidae	*Actitis macularius*	spotted sandpiper
		Calidris minutilla	least sandpiper
		Limosa fedoa	marbled godwit
		Numenius americanus	long-billed curlew
		Tringa semipalmata	willet
		Numenius phaeopus	whimbrel
	Laridae	*Larus occidentalis*	western gull
Columbiformes	Columbidae	*Columba livia*	rock pigeon
		Zenaida macroura	mourning dove
Gruiformes	Rallidae	*Fulica americana*	American coot
Pelecaniformes	Pelecanidae	*Pelecanus occidentalis*	brown pelican
	Ardeidae	*Ardea alba*	great egret
		Ardea herodias	great blue heron
		Egretta thula	snowy egret
Passeriformes	Aegithalidae	*Psaltriparus minimus*	bushtit
		Pheucticus melanocephalus	black-headed grosbeak
	Corvidae	*Corvus brachyrhynchos*	American crow
		Corvus corax	common raven
	Fringillidae	*Haemorhous mexicanus*	house finch
		Spinus psaltria	lesser goldfinch
	Mimidae	*Mimus polyglottos*	Northern mockingbird
	Parulidae	*Geothlypis trichas*	common yellowthroat
	Passerellidae	*Melospiza melodia*	song sparrow
		Melozone crissalis	California towhee
		Passerculus sandwichensis beldingi	Belding's savannah sparrow†
		Pipilo maculatus	spotted towhee
		Zonotrichia leucophrys	white-crowned sparrow
	Sturnidae	*Sturnus vulgaris*	European starling
	Troglodytidae	*Thryomanes bewickii*	Bewick's wren
	Tyrannidae	*Sayornis nigricans*	black phoebe
		Sayornis saya	Say's phoebe
		Tyrannus vociferans	Cassin's kingbird
Suliformes	Phalacrocoracidae	*Nannopterum auritum*	double-crested cormorant

† Sensitive Species

Attachment C

Sensitive Plant Species Potential to Occur

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Red sand-verbena (*Abronia maritima*)	--/-- CRPR 4.2	Perennial herb. Occurs in coastal dunes. Elevation: below 328 feet (100 meters). Flowering period: February–December.	**Presumed Absent.** Suitable habitat present on-site. This species was found (one individual) during focused plant surveys off site east of the project site within beach habitat, but this species was not detected on site within the project footprint. This perennial species would have been observed during surveys.
San Diego thornmint *(Acanthomintha ilicifolia)*	FT/SE CRPR 1B.1	Annual herb. Occurs in chaparral, coastal scrub, valley, and foothill grassland vernal pools supported by clay soils. Elevation: below 3,281 feet (1,000 meters). Flowering period: April–June.	**None.** Clay soils are not mapped on site, there are no vernal pools on-site, and the species was not detected during biological surveys.
Nuttall's lotus (*Acmispon prostratus*)	--/-- CRPR 1B.1	Annual herb. Found in the coastal regions of southern California and Baja California. Habitats include coastal dunes, coastal scrub with sandy soils, and disturbed areas. Elevation: below 33 feet (10 meters). Flowering Period: March-June.	**Not Expected.** Coastal sage scrub with sandy soils present on-site; however, this species would have been detected during focused plant surveys if present.
California adolphia (*Adolphia californica*)	--/-- CRPR 2B.1	Perennial shrub. Most often found in sage scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks on clay soils. Elevation: below 1,312 feet (400 meters). Flowering period: December-April.	**Presumed Absent.** Suitable coastal sage scrub habitat present on-site, but this perennial shrub would have been observed during surveys and was not detected.
Shaw's agave (*Agave shawii* var. *shawii*)	--/-- CRPR 2B.1	Perennial. Occurs in coastal bluff scrub and coastal sage scrub often on volcanic soils. Elevation: below 328 feet (100 meters). Flowering period: September-May.	**Presumed Absent.** Suitable coastal sage scrub habitat present on-site, but no volcanic soils. Species is perennial and would have been observed during surveys.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
San Diego ambrosia *(Ambrosia pumila)*	FE/None CRPR 1B.1	Perennial rhizomatous herb. Generally found along creeks or seasonal drainages along the upper terraces of rivers or periphery of willow riparian areas, primarily on sandy loam or clay soils. Also found in native grassland, valley bottoms, dry drainages, and vernal pool margins. Occurs on loam or clay soils. Often on disturbed sites. Elevation: 65 - 2000 ft. Flowering period: Apr – Oct.	**None.** Clay soils are not mapped on site, there are no vernal pools on-site, and the site occurs outside of the known elevation for the species.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE/-- CRPR 1B.1	Perennial shrub. Found within Relatively open, coastal chaparral. At occasional inland sites it occurs in denser mixed chaparral vegetation. Elevation: below 1,200 feet (365 meters). Flowering Period: December-June.	**Presumed Absent.** Coastal sage scrub habitat present on-site and however, this species would have been detected during focused plant surveys if present.
San Diego sagewort (*Artemisia palmeri*)	--/-- CRPR 4.2	Medium shrub. Occurs along streams in coastal sage scrub and chaparral. Identifiable from leaves year-round. Elevation: below 3,000 feet (914 meters). Flowering period: May-September.	**Presumed Absent.** Coastal sage scrub habitat present on-site, but this perennial shrub would have been observed during surveys.
Coastal dunes milk-vetch *(Astragalus tener var. titi)*	FE/SE CRPR 1B.1	Annual herb. Occurs on moist, sandy depressions on coastal bluffs or dunes. Elevation range 1–50 meters. Flowering March–May.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species, however this species has not been observed in San Diego County since 1969. This species would have been detected during focused plant surveys if present.
South coast saltscale (*Atriplex pacifica*)	--/-- CRPR 1B.2	Annual herb. Found coastally on dunes and within playas in alkali sinks, sage scrub, and wetland riparian communities. Elevation: below 984 feet (300 meters). Flowering period: March-October.	**Not Expected.** Sage scrub habitat present on-site, however this species has not been observed in San Diego County since 2009. This species would have been detected during focused plant surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Encinitas baccharis (*Baccharis vanessae*)	FT/SE CRPR 1B.1	Perennial shrub. Grows on sandstone within chaparral, maritime chaparral, woodlands, and Torrey-pine forest understory. Elevation: 196-2,400 feet (60-720 meters). Flowering period: August-December.	**None.** Coastal scrub present on-site, but the site occurs outside of the known elevation for the species.
golden-spined cereus *(Bergerocactus emoryi)*	None/None CRPR 2B.2	Shrub (stem succulent). Occurs on sandy soils and dry bluffs along the coast associated with maritime succulent scrub. Elevation below 328 ft. Flowering period May-Jun.	**Presumed Absent.** Suitable habitat is present on-site, but this shrub would have been observed during focused surveys and was not detected.
San Diego goldenstar (*Bloomeria clevelandii*)	None/None CRPR 1B.1	Perennial bulbiferous herb. Occurs in valley grasslands, particularly near mima mound topography or in the vicinity of vernal pools, on clay soils. Elevation below 328 ft. Flowering period Apr – May.	**None.** Clay soils are not mapped on site, there are no vernal pools on-site, and the species was not detected during biological surveys.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CRPR 1B.1	Perennial bulbiferous herb. Occurs within closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Prefers mesic or clay soils. Elevation: 98-5,550 feet (30-1,692 meters). Flowering period: May to July.	**None**. Clay soils are not mapped on site, there are no vernal pools on-site, and site occurs outside of the known elevation for the species.
Lewis' evening-primrose *(Camissoniopsis lewisii)*	None/None CRPR 3	Annual herb. Occurs in very sandy substrates near the beach, typically on beach bluffs. Elevation below 984 ft. Flowering period Mar-Jun.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species; however, this species would have been detected during focused plant surveys if present.
Lakeside ceanothus Ceanothus cyaneus	None/None CRPR 1B.2	Perennial shrub. Occurs in inland mixed chaparral, specifically in the region from Crest to the Lakeside foothills. Elevation range 148–3,445 ft. Flowering period Apr–Jun.	**None.** No inland mixed chaparral habitat is present on site, and the site occurs outside of the known elevation for the species.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Wart-stemmed ceanothus (*Ceanothus verrucosus*)	--/-- CRPR 2B.2	Perennial shrub. Found on rocky slopes within chaparral, particularly southern maritime chaparral. Elevation: below 1,148 feet (350 meters). Flowering period: December-May.	**Presumed Absent.** Coastal sage scrub present on-site and does support few chaparral species; however, this species has not been observed on-site and there are no records of this species occurring within 0.25 miles of the site. This species would have been detected during focused plant surveys if present.
Southern tarplant *(Centromadia parryi ssp. australis)*	None/None CRPR 1B.1	Annual herb. Occurs in seasonally moist (saline) grasslands. Mesic areas in valley and foothill grasslands, alkaline locales, and peripheral salt marsh are utilized. Elevation below 200 meters. Flowering period May – November.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species; however, this species would have been detected during focused plant surveys if present.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	--/-- CRPR 1B.1	Annual herb. Found on coastal dunes and sandy coastal bluff scrub. Typically, in proximity to moist ocean breezes. Elevation: below 328 feet (100 meters). Flowering Period: January-August.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species; however, this species would have been detected during focused plant surveys if present.
Salt marsh bird's-beak *(Chloropyron maritimum ssp. maritimum)*	FE/SE CRPR 1B.2	Annual herb. Occurs in salt marshes, particularly slightly raised hummocks, and dunes. Elevation below 33 ft. Flowering period May-Oct.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species; however, this species would have been detected during focused plant surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE/SE CRPR 1B.1	Annual herb. Found in sandy openings of coastal sage scrub, chaparral, and coniferous forests. Elevation: below 410 feet (125 meters). Flowering period: March-May.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species; however, this species would have been detected during focused plant surveys if present.
Long-spined spineflower *(Chorizanthe polygonoides* var. *longispina)*	--/-- CRPR 1B.2	Annual herb. Occurs in chaparral, coastal scrub, and native grassland, often in sandy soils. Elevation: 98-4,920 feet (30-1,500 meters). Flowering period: April-June.	**None:** Suitable coastal sage scrub, grassland, and sandy soils occur on site, but the site occurs outside of the known elevation for the species. This species would have been detected during focused plant surveys if present.
Seaside cistanthe (*Cistanthe maritima*)	--/-- CRPR 4.2	Annual herb. Occurs on sandy bluffs near the beach. Sandy openings in Diego sage scrub are the preferred habitat. Elevation: below 984 feet (300 meters). Flowering period: March-June.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species; however, this species would have been detected during focused plant surveys if present.
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	--/-- CRPR 1B.2	Perennial shrub. Occurs in chaparral and cismontane woodland. Elevation: 328-1,804 feet (100-550 meters). Flowering period: May-June.	**None.** The site occurs outside of the known elevation for the species, and this perennial shrub would have been observed during biological surveys and was not detected.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Small-flowered morning-glory (*Convolvulus simulans*)	--/-- CRPR 4.2	Annual herb. Occurs on clay and serpentinite seeps in openings within chaparral, coastal scrub, and native grassland. Elevation: 98–2,871 feet (30-875 meters). Flowering period: March–July.	**None**. Clay soils are not mapped on site, there are no vernal pools on-site, and site occurs outside of the known elevation for the species.
San Diego sand aster *(Corethrogyne filaginifolia var. incana)*	None/None CRPR 1B.1	Perennial herb. Occurs in coastal sage scrub and chaparral. Elevation range 16-2,362 ft. Flowering period Jun-Sept.	**None.** Coastal scrub present on-site, but the site occurs outside of the known elevation for the species. This species would have been detected during focused plant surveys if present.
Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*)	--/-- CRPR 1B.1	Perennial herb. Found on sandy soils and disturbed areas within southern maritime chaparral, coastal sage scrub, and coastal bluffs. Elevation: below 492 feet (150 meters). Flowering Period: May-September.	**Presumed Absent.** Coastal sage scrub habitat present on-site and does support chaparral species; however, this perennial herb would have been observed during focused surveys and was not detected.
snake cholla *(Cylindropuntia californica var. californica)*	None/None CRPR 1B.1	Perennial herb (stem succulent). Occurs in chaparral and Diegan coastal sage scrub. Elevation below 820 ft. Flowering period Apr-Jul.	**Presumed Absent.** Coastal sage scrub habitat present on-site and does support chaparral species; however, this perennial herb would have been observed during focused surveys and was not detected.
Western dichondra (*Dichondra occidentalis*)	--/-- CRPR 4.2	Perennial rhizomatous herb. Occurs on dry, sandy banks in coastal sage scrub, chaparral, or southern oak woodland. Often proliferates on recently burned slopes. Elevation: below 1,706 feet (520 meters). Flowering period: March-July.	**Presumed Absent.** Suitable coastal sage scrub and sandy soils present on-site, but this perennial species would have been observed during focused surveys if present.
Short-leaved dudleya *(Dudleya brevifolia)*	None/SE CRPR 1B.1	Perennial herb. Occurs in open areas and sandstone bluffs of chamise chaparral or Torrey pine forest. Elevation below 820 ft. Flowering period Apr-May.	**Presumed Absent.** Suitable coastal sage scrub and sandy soils present on-site, but this perennial species would have been observed during focused surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Variegated dudleya *(Dudleya variegate)*	None/None CRPR 1B.2	Perennial herb. Occurs in chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland, and vernal pools. Elevation below 984 ft. Flowering period Apr-Jun.	**Presumed Absent.** Suitable coastal sage scrub and sandy soils present on-site, but this perennial species would have been observed during focused surveys if present.
Sticky dudleya *(Dudleya viscida)*	None/None CRPR 1B.2	Perennial herb. Occurs on rocky areas in coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub. Grows predominantly on very steep north-facing slopes in shady, mesic conditions. Elevation range 30–1,805 ft. Flowering period Apr–Jun.	**None.** Coastal scrub present on-site, but the site occurs outside of the known elevation for the species. This species would have been detected during focused plant surveys if present.
Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*)	--/-- CRPR 1B.1	Large evergreen shrub. Occurs in coastal drainages, mesic chaparral, and occasionally in coastal sage scrub. Elevation: below 1,968 feet (600 meters). Flowering period: September–November.	**Presumed Absent:** Suitable coastal sage scrub present on-site, but this perennial species would have been observed during surveys if present.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CRPR 1B.1	Perennial herb. Occurs in vernal pools or mima mound areas with vernally moist conditions, and in mesic areas on coastal scrub and native grassland. Elevation: below 1,640 feet (500 meters). Flowering period: Apr - August.	**None.** No vernal pool habitat on-site.
Sand-loving wallflower (*Erysimum ammophilum*)	--/-- CRPR 1B.2	Perennial herb. Occurs in coastal dunes and coastal strand. Elevation below 164 feet (50 meters). Flowering period February–June.	**Presumed Absent:** Suitable coastal sage scrub present on-site, but this perennial species would have been observed during focused surveys if present.
Cliff spurge (*Euphorbia misera*)	--/-- CRPR 2B.2	Perennial shrub. Occurs on rocky soils and coastal bluffs in coastal sage scrub and Mojavean desert scrub. Elevation below 1,640 feet (500 meters). Flowering period: December-August.	**Presumed Absent:** Suitable coastal sage scrub present on-site, but this perennial species would have been observed during focused surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
San Diego barrel cactus (*Ferocactus viridescens*)	--/-- CRPR 2B.1	Perennial (stem succulent) shrub. Grows in sandy to rocky areas within chaparral, valley grassland and coastal sage scrub communities. Elevation: 33-492 feet (10-150 meters). Flowering period: May-June.	**None.** Coastal scrub present on-site, but the site occurs outside of the known elevation for the species. This species would have been detected during focused plant surveys if present.
Palmer's frankenia *(Frankenia palmeri)*	None/None CRPR 2B.1	Perennial herb. Occurs on alkali flats, the edges of coastal salt marsh, and dunes. Elevation below 1,476 ft. Flowering period Apr-Sept.	**Presumed Absent:** Suitable coastal salt marsh present on-site, but this perennial species would have been observed during focused surveys if present.
Campbell's liverwort *(Geothallus tuberosus)*	None/None CRPR 1B.1	Ephemeral liverwort. Occurs on mesic soil, in coastal scrub and vernal pools. Elevation range 9-600 meters.	**Presumed Absent.** Coastal scrub present on-site, but this perennial species would have been observed during focused surveys if present.
San Diego gumplant *(Grindelia hallii)*	None/None CRPR 1B.2	Perennial herb. Occurs in montane meadows and lower montane coniferous forests, typically with sunny openings. Prefers very wet locales in early spring, although such places usually dry quickly as spring turns to summer. Elevation range 2,625-5,577 ft. Flowering period Jul-Oct.	**None.** Montane meadow or coniferous forest habitat is not present on-site, and the site occurs outside of the known elevation for the species.
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CRPR 4.2	Annual herb. Clay soils in annual grasslands and coastal sage scrub. Elevation: below 3,300 feet (1,005 meters). Flowering period: March-May.	**Not expected.** Suitable coastal sage scrub habitat present on-site, but clay soils are not mapped. This species would have been detected during focused plant surveys if present.
Beach goldenaster (*Heterotheca sessiliflora* ssp. *sessiliflora*)	--/-- CRPR 1B.1	Perennial herb. Occurs in coastal chaparral, coastal dunes, and coastal scrub. Elevation: below 4,020 feet (1,225 meters). Flowering Period: March-December.	**Presumed Absent.** Suitable coastal sage scrub present on-site, but this perennial species would have been observed during focused surveys and was not detected.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
graceful tarplant *(Holocarpha virgata ssp. elongate)*	None/None CRPR 4.2	Annual herb. Occurs in chaparral, cismontane woodland, coastal scrub, and native grassland. Elevation range 195–3,610 ft. Flowering period May–Nov.	**None.** Coastal scrub present on-site, but the site occurs outside of the known elevation for the species.
Vernal barley (*Hordeum intercedens*)	--/-- CRPR 3.2	Annual herb. Occurs in coastal dunes, coastal scrub, native grassland (saline flats and depressions), and vernal pools. Elevation: below 1,640 feet (500 meters). Flowering period March–June.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species, however, this species would have been detected during focused plant surveys if present.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	--/-- CRPR 1B.2	Perennial Shrub. Occurs in chaparral and sandy coastal sage scrub, often in disturbed areas. Elevation: below 656 feet (200 meters). Flowering period April-November.	**Presumed Absent.** Suitable coastal sage scrub present on-site, but this perennial species would have been observed during focused surveys if present.
San Diego marsh-elder (*Iva hayesiana*)	--/-- CRPR 2B.2	Perennial herb. Occurs preferentially in creeks of intermittent streambeds. Typically, the riparian canopy is open, allowing substantial sunlight to reach this marsh-elder. Sandy alluvial embankments with cobbles are frequently utilized. May occur in a variety of wetland/riparian areas. Elevation: generally below 984 feet (300 meters). Occasionally below 2,953 feet (900 meters). Flowering period: March-October.	**Presumed Absent.** No suitable intermittent streambed present on-site, and this perennial species would have been observed during surveys.
Southwestern spiny rush (*Juncus acutus* ssp*. leopoldii*)	--/-- CRPR 4.2	Perennial herb. Occurs in alkaline meadows and seeps, coastal salt marshes, and coastal dunes. Elevation: below 984 feet (300 meters). Flowering period: May–August.	**Presumed Absent.** This species was found (two individuals) adjacent to the project site during focused plant surveys but was not detected on site within the project footprint. This perennial species would have been observed during surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	--/-- CRPR 1B.1	Annual herb. Grows in vernal pools, playas, and saline habitats within alkali sinks, coastal salt marshes, and wetland communities. Elevation: below 3,281 feet (1,000 meters). Flowering period: April-May.	**Not Expected.** No vernal pools or playas on-site. Coastal salt marsh with sandy soils present on-site and the site occurs inside of the known elevation for the species. However, this species would have been detected during focused plant surveys if present.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	--/-- CRPR 4.3	Annual herb. Occurs in openings in chaparral and coastal scrub. Typically found in relatively dry, exposed locales. Elevation: below 9,186 feet (2,800 meters). Flowering period January–July.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species; however, this species would have been detected during focused plant surveys if present.
Sea dahlia (*Leptosyne maritima*)	--/-- CRPR 2B.2	Perennial herb. Occurs within coastal scrub and coastal bluffs scrub. Elevation: below 500 feet (150 meters). Flowering period: March-May.	**Presumed Absent.** Coastal scrub present on-site; however, this perennial species would have been observed during focused surveys if present.
California box-thorn *(Lycium californicum)*	None/None CRPR 4.2	Perennial shrub. Occurs in coastal sage scrub and coastal bluff scrub in exposed sites on southwestern-facing slopes. Flowering period March–August.	**Presumed Absent.** Coastal scrub present on-site; however, this perennial species would have been observed during focused surveys if present.
Small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*)	--/-- CRPR 4.2	Annual herb. Occurs on clay soils in cismontane woodland, coastal scrub, native grassland, and vernal pools. Elevation: below 3,609 feet (1,100 meters). Flowering period: March–May.	**Not Expected:** Suitable coastal sage scrub habitat present on-site, but clay soils are not mapped and species would have been detected during focused surveys if present.
Willowy monardella *(Monardella viminea)*	FE/SE CRPR 1B.1	Perennial herb. Occurs in riparian scrub, usually at sandy locales in seasonally dry washes. Generally, occurs where no canopy cover, and river cobbles may lie in close proximity. Elevation below 1,312 ft. Flowering period Jun – Aug.	**Presumed Absent.** No riparian scrub is present on-site, and this perennial species would have been observed during surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CRPR 3.1	Annual herb. Occurs in alkaline vernal pools in native grassland. Elevation: 65–2,100 feet (213-640 meters). Flowering period: March–June.	**None.** Vernal pool habitat not present and the site occurs outside of the known elevation for the species.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CRPR 1B.1	Annual herb. Occurs in vernal pools in chenopod scrub, marshes and swamps, and playas. Elevation: 98–4,265 feet (30-1,300 meters). Flowering period: April–June.	**None.** Vernal pool habitat not present and the site occurs outside of the known elevation for the species.
Coast woolly-heads (*Nemacaulis denudata* var. *denudata*)	--/-- CRPR 1B.2	Annual herb. Occurs within coastal dunes. The back dunes in mildly protected areas seem to be preferred. Elevation: below 330 feet (100 meters) Flowering Period: April-September.	**Not Expected.** Coastal beach habitat present on-site; however, this species would have been detected during focused plant surveys if present.
California adder's-tongue *(Ophioglossum californicum)*	None/None CRPR 4.2	Rhizomatous fern. Occurs in grassy, open areas where it is generally associated with short grasses and other herbs. Although often found near vernal pools, can also occur in relatively dry, stony areas. Elevation range 197-1,476 ft. Above-ground Jan – Jun.	**None.** Vernal pool habitat not present and the site occurs outside of the known elevation for the species.
California Orcutt grass (*Orcuttia californica*)	FE/SE CRPR 1B.1	Annual herb. Occurs in vernal pools. Seriously threatened by agriculture, development, non-native plants, grazing, and vehicles. Elevation: below 2,297 feet (700 meters). Flowering April–August.	**None.** Vernal pool habitat not present on-site.
Short lobed broomrape (*Orobanche parishii* ssp. *brachyloba)*	--/-- CNPS List 4.2	Perennial herb. Found in coastal bluff scrub and coastal dunes. Elevation: 195-6,235 feet (60-1,900 meters). Flowering period: April-October.	**None.** Coastal scrub present on-site, but the site occurs outside of the known elevation for the species. This species would have been detected during focused plant surveys if present.
South coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*)	--/-- CNPS List 3.2	Perennial herb. Found in diverse habitats, including sand dunes, salt marshes, coastal bluffs, canyons, washes, flats, meadows, and conifer forest. Elevation: below 12,467 feet (3,800 meters). Flowering period: April-October.	**Presumed Absent.** Suitable habitat on-site; however, this perennial herb would have been observed during focused surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Brand's star phacelia *(Phacelia stellaris)*	None/None CRPR 1B.1	Annual herb. Found in sandy openings in Diegan coastal sage scrub near the coast. Elevation: < 400 m. Flowering period Mar-May.	**Not Expected.** Coastal sage scrub with sandy soils present on-site and the site occurs inside of the known elevation for the species, however, this species would have been detected during focused plant surveys if present.
Torrey pine (*Pinus torreyana* ssp. *torreyana*)	--/-- CRPR 1B.2	Perennial evergreen tree. Occurs within closed cone coniferous forest and chaparral atop sandstone soils. Elevation: 98-430 feet (29-131 meters).	**Not Expected.** This species was detected (one individual) off site adjacent to the project during focused plant surveys but was not detected on site within the project footprint. This perennial species would have been observed during surveys.
Chaparral rein orchid *(Piperia cooperi)*	None/None CRPR 4.2	Perennial herb. Occurs in chaparral, cismontane woodland, and grassland habitats, in vernally moist areas and in shallow soils adjacent to water courses. Elevation below 4,921 ft. Flowering period Mar-Jun.	**Presumed Absent.** Coastal sage scrub habitat present on-site and does support chaparral species; however, this perennial shrub would have been observed during focused surveys and was not detected.
San Diego mesa mint *(Pogogyne abramsii)*	FE/SE CRPR 1B.1	Small annual herb. Occurs within vernal pools in grasslands, chamise chaparral, and coastal sage scrub on mesas. Elevation range 328–656 ft. Flowering period Mar-Jul.	**None.** Vernal pool habitat not present and the site occurs outside of the known elevation for the species.
Otay Mesa mint *(Pogogyne nudiuscula)*	FE/SE CRPR 1B.1	Small annual herb. Occurs within vernal pools. Elevation range 328–820 ft. Flowering period May-Jul.	**None.** Vernal pool habitat not present and the site occurs outside of the known elevation for the species.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Nuttall's scrub oak (*Quercus dumosa*)	--/-- CRPR 1B.1	Perennial shrub. Occurs on sandy or clay loam soils near the coast within coastal scrub, chaparral, cismontane woodland, and riparian woodland. Elevation: below 656 feet (200 meters). Flowering period: March-May.	**Presumed Absent.** Minimal suitable coastal sage scrub habitat present on-site and does support chaparral species; however, this perennial shrub would have been observed during focused surveys and was not detected.
Ashy spike-moss (*Selaginella cinerascens*)	--/-- CNPS List 4.1	Rhizomatous fern. Occurs on flat mesas in coastal sage scrub and chaparral. A good indicator of site degradation, as it rarely inhabits disturbed soils. Elevation: below 1,804 feet (550 meters).	**Presumed Absent.** Coastal sage scrub habitat present on-site and does support chaparral species; however, this perennial shrub would have been observed during focused surveys and was not detected.
Chaparral ragwort *(Senecio aphanactis)*	None/None CRPR 2B.2	Annual herb. Occurs in foothill woodlands and coastal sage scrub on alkali flats. Elevation range 33-1,804 ft. Flowering period Jan- Apr.	**None.** Coastal sage scrub habitat is present; however, the site occurs outside of the known elevation for the species. This species would have been detected during focused plant surveys if present.
Salt spring checkerbloom *(Sidalcea neomexicana)*	None/None CRPR 2B.2	Perennial herb. Occurs in alkaline springs, marshes, and playas. Elevation below 1,500 meters. Flowering period April – June.	**Not Expected.** Minimal suitable habitat present, however, this species would have been detected during focused plant surveys if present.
Bottle liverwort *(Sphaerocarpos drewei)*	None/None CRPR 1B.1	Ephemeral liverwort. Occurs on openings in chaparral and coastal scrub. Elevation range 295–1,970 ft.	**None.** Coastal scrub habitat is present, but the site occurs outside of the known elevation for the species.
San Diego County needle grass (*Stipa diegoensis*)	--/-- CRPR 4.2	Perennial grass. Occurs in chaparral, sage scrub, particularly near streams or the coast. The species is closely associated with metavolcanic soils and can been found in fine sandy loam and rocky silt loams. Peaks and upper ridgelines of mountains appear the preferred microhabitat. Elevation: below 7,480 feet (2,280 meters). Flowering period: February-June.	**Presumed Absent.** Suitable coastal sage scrub on-site, but this perennial species would have been observed during focused surveys if present.

Attachment C
Sensitive Plant Species Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur On-Site
Estuary seablite (*Suaeda esteroa*)	--/-- CRPR 1B.2	Perennial herb. Occurs in coastal salt marsh and wetland-riparian communities. Elevation: below 16 feet (5 meters). Flowering period: May-October.	**Presumed Absent.** Suitable habitat on-site; however, this perennial herb would have been observed during focused surveys of the project site and was not detected.
Woolly seablite *(Suaeda taxifolia)*	None/None CRPR 4.2	Perennial evergreen shrub. Found in Coastal bluff scrub, Coastal dunes, Marshes, and swamps (margins of coastal salt) Elevation: < 15 m. Flowering period: year-round.	**Presumed Absent.** Suitable coastal sage scrub and riparian areas occur on site. This species was detected (one individual) off site and across the lagoon during focused plant surveys but was not detected on site within the project footprint. This perennial species would have been observed during surveys.
Woven-spored lichen *(Texosporium sancti-jacobi)*	None/None CRPR 3	Lichen. Occurs on soil, small mammal pellets, dead twigs, and on *Selaginella* spp. in openings in chaparral. Elevation range 195–2,165 ft.	**None.** No suitable habitat is present, and the site occurs outside of the known elevation for the species.
San Diego County viguiera *(Viguiera laciniate)*	None/None CRPR 4.3	Perennial shrub. Occurs in coastal sage scrub, often at high density. Elevation range 295-2,460 ft. Flowering period Feb – Aug.	**None.** No suitable habitat is present, and the site occurs outside of the known elevation for the species.

[1] Listing codes as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; CE = Candidate Endangered; R = Rare
CRPR = California Native Plant Society Rare Plant Rank: 1A – presumed extirpated in California and either rare or extinct elsewhere; 1B – rare, threatened, or endangered in California and elsewhere; 2A – presumed extirpated in California, but more common elsewhere; 2B – rare, threatened, or endangered in California, but more common elsewhere; 3 – more information needed; 4 – watch list for species of limited distribution. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – not very endangered.

[2] Potential to Occur is assessed as follows: **None**: There are no present or historical records of the species occurring on or in the immediate vicinity (i.e. as defined by the 2 mile search radius) of the study area and the diagnostic habitats and soils associated with the species do not occur on or in the immediate vicinity of the project; **Not Expected**: There are no present or historical records of the species occurring on or in the immediate vicinity of the study area. Suitable habitat not present on site; or, suitable habitat is present; but the species would have been observed during focused surveys for the species. **Low**: Suitable habitat is present in the study area and a historical record of the species occurs in the immediate vicinity but existing conditions such as elevation, soils, density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, and/or isolation substantially reduce the possibility that the species may occur; **Moderate**: The diagnostic habitats associated with the species occur on or in the immediate vicinity of the study area, but there is not a recorded occurrence of the species within the immediate vicinity. Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity; **High**: Suitable habitat occurs in the study area and the species has been recorded recently on or in the immediate vicinity but the species was not observed during project surveys; **Present**: The species was observed during biological surveys for the project and is assumed to occupy the study area; **Presumed Absent**: Species would be visible all year and would have been observed if present.

Attachment D

Sensitive Animal Species Potential to Occur

Attachment D
Sensitive Animal Species Potential to Occur

Species Name	Status	Habitat Associations	Potential to Occur On-Site
VERTEBRATES			
Reptiles			
Southern California legless lizard (*Anniella stebbinsi*)	--/SSC	Occurs in sparsely vegetated areas with moist warm, loose soil with plant cover; moisture is essential. Common in several habitats but especially in beach dunes, coastal scrub, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Found primarily in areas with sandy or loose organic soils or where there is plenty of leaf litter. Sometimes found in suburban gardens in southern California.	**Not Expected**. Minimal suitable coastal sage scrub on-site. This species has not been recorded within 0.25 miles of the site since 1950 and was not detected during project surveys.
California glossy snake (*Arizona elegans occidentalis*)	--/SSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas and areas with soils loose enough for easy burrowing.	**Not expected.** Minimal scrub habitat on-site. This species has not been recorded within 0.25 miles of the since 1946 and was not detected during project surveys.
Birds			
Western Snowy Plover (*Charadrius alexandrinus nivosus*)	FT, BCC/SSC	Chiefly found on sea coasts, but also occur in open flats near brackish or saline lakes, lagoons, seasonal water courses, salt-works and depressions. Usually prefer sand, silt or dry mud with even surface, avoiding rocky or broken ground. This species exhibits breeding site fidelity.	**Not Expected**. Marginal suitable costal beach and sandy shoreline habitat present on-site. This species has not been detected during focused surveys for the project.
Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*)	--/SE	Generally found in salt marshes. Nests on the ground in natural depression or scrape, primarily in pickleweed habitat at the higher levels of the marsh, above the reach of the highest spring tides.	**Not Expected.** Suitable salt marsh and pickleweed habitat is present off-site. This species was detected within these off-site suitable habitats. No suitable habitat for this species is within the project site.

Attachment D
Sensitive Animal Species Potential to Occur

Species Name	Status	Habitat Associations	Potential to Occur On-Site
Coastal California Gnatcatcher (*Polioptila californica californica*)	FT/SSC	Typically occurs in arid, open sage scrub habitats on gently slopes hillsides to relatively flat areas at elevations below 3,000 feet. The composition of sage scrub in which gnatcatchers are found varies; however, California sagebrush is at least present as dominant or co-dominant species. The species is mostly absent from areas dominated by black sage, white sage, or lemonadeberry, though the species may occur more regularly in inland regions dominated by black sage.	**Not Expected.** Marginal and limited coastal sage scrub habitat present on-site. This species was not detected during focused surveys for the project.
Light-footed Ridgway's Rail (*Rallus obsoletus levipes*)	FE/SE, FP	Occurs in coastal marshes, lagoons and maritime environments with dense vegetation and shallow waters.	**Not Expected.** No suitable habitat present on-site. Marginally suitable habitat for this species occurs off-site; however, this species was not detected during focused surveys for the project.
California Least Tern (*Sternula antillarum browni*)	FE/SE, FP	Nest in colonies on relatively open beaches kept free of vegetation by natural scouring from tidal action. Found along the Pacific Coast of California.	**Not Expected**. Marginal suitable costal beach and sandy shoreline habitat present on-site. This species was detected flying over the site; however, has not been detected within habitats on-site during focused surveys for the project.
Mammals			
Monarch butterfly (*Danaus plexippus*)	—/—	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* spp.).	**None.** Wind-protected tree groves (eucalyptus, Monterey pine, cypress), and larval host plants do not occur on-site.

Attachment D
Sensitive Animal Species Potential to Occur

Species Name	Status	Habitat Associations	Potential to Occur On-Site
Pacific pocket mouse (*Perognathus longimembris pacificus*)	FE/SSC	Occurs on fine-grained, sandy or gravelly substrates in coastal strand, coastal dunes, river alluvium, and coastal sage scrub growing on marine terraces.	**Not expected.** Minimal **s**uitable coastal sage scrub present on-site. However, this species has not been within 0.2 miles of the site since 1994 and was not detected during project surveys.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	—/SSC	The roosts are located in caves, crevices, mines, tunnels, and man-made structures.	**Not expected.** Although the bridge is a man-made structure, due to the intertidal and wet conditions of the project site, the bridge is not considered suitable for this species roosting. This species was last detected in 2000 approximately 0.75-mile southeast of the project site.

[1] Listing codes are as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; CE = Candidate Endangered; R = Rare; BCC = Federal Bird of Conservation Concern; SSC = State Species of Special Concern; FP = State Fully Protected; WL = Watch List

[2] Potential to Occur is assessed as follows: **None**: Species is so limited to a particular habitat that it cannot disperse on its own, and habitat suitable for its establishment and survival does not occur in the study area; **Not Expected**: There are no present or historical records of the species occurring on or in the immediate vicinity of the study area. The species moves freely and might disperse through or across the study area, but suitable habitat for residence or breeding does not occur; **Low**: Suitable habitat is present in the study area and there is a historical record of the species in the project vicinity, but no sign of the species was observed during surveys. Existing conditions such as elevation, species composition, density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, and/or isolation may substantially reduce the possibility that the species may occur; **Moderate:** Diagnostic habitats associated with the species occur on or adjacent to the study area, but there is not a recorded occurrence of the species within the immediate vicinity. Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity; **High**: Suitable habitat associated with the species occurs in the study area and the species has been recorded recently on or near the project, but was not observed during biological surveys; **Present**: The species was observed during biological surveys for the project and is assumed to occupy the study area.

Attachment E

Explanation of Status Codes

Attachment E
Explanation of Status Codes for Plant and Animal Species

FEDERAL AND STATE CODES

U.S. Fish and Wildlife Service (USFWS)

BCC Bird of Conservation Concern
FE Federally listed endangered
FT Federally listed threatened

USFWS Birds of Conservation Concern (BCC)

The primary legal authority for Birds of Conservation Concern (2008) is the Fish and Wildlife Conservation Act of 1980 (FWCA), as amended. Other authorities include the Endangered Species Act, Fish and Wildlife Act (1956) and 16 USC §701. A FWCA 1988 amendment (Public Law 100-653, Title VIII) requires the Secretary of the Interior through the USFWS to "identify species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973." The 2008 BCC report is the most recent effort by the USFWS to carry out this proactive conservation mandate.

The BCC report aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the USFWS' highest conservation priorities and draw attention to species in need of conservation action. The USFWS hopes that by focusing attention on these highest priority species, the report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. Birds of Conservation Concern 2008 lists are available online at https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php.

California Department of Fish and Wildlife (CDFW)

SCE State candidate for listing as endangered
SCT State candidate for listing as threatened
SE State listed endangered
SR State listed rare
ST State listed threatened
SSC State species of special concern
WL Watch List
FP Fully Protected species refers to all vertebrate and invertebrate taxa of concern to the 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.
Special Animal Refers to all vertebrate and invertebrate taxa of concern to the Natural Diversity Database regardless of legal or protection status.

California Environmental Quality Act (CEQA)

For plants with no current federal or state legal standing, "CEQA" refers to the fact that under the Act, impacts to species may be found significant under certain circumstances (e.g., the species are regionally

Attachment E
Explanation of Status Codes for Plant and Animal Species

sensitive and/or are protected by a local policy, ordinance, or habitat conservation plan; or the impact involves interference with certain movements or migrations, with wildlife corridors or with nursery sites).

OTHER CODES AND ABBREVIATIONS

California Native Plant Society California Rare Plant Rank (CRPR) Codes

Lists

1A = Presumed extirpated in California and either rare or extinct elsewhere. Eligible for state listing.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2A = Presumed extirpated in California but common elsewhere. Eligible for state listing.

2B = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Review List: Plants about which more information is needed. Some eligible for state listing.

4 = Watch List: Plants of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 = Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

A “CA Endemic” entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.