



**DRAFT INITIAL STUDY AND MITIGATED
NEGATIVE DECLARATION**

Cleo Street Beach Access Improvement
Project (CIP 21-9525)

April 2024

Prepared for:

City of Laguna Beach
505 Forest Avenue
Laguna Beach, California 92651

Prepared by:

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Project Number:

2042652100

Draft Initial Study and Mitigated Negative Declaration—Cleo Street Beach Access Improvement Project (CIP 21-9525)

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Prepared by



Signature

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Abbreviations

AB	Assembly Bill
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
BERD	Built Environment Resource Directory
BMP	Best Management Practices
BSA	Biological Survey Area
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CDS	Continuous deflection separation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CIDH	cast-in-drilled-hole
CMU	Concrete masonry unit
CNPS	California Native Plant Society
CO	carbon dioxide
CO _{2e}	carbon dioxide equivalent
CPAP	Climate Protection Action Plan
CRPR	California Rare Plant Rank
CRWQCB	California Regional Water Quality Control Board
DAMP	Drainage Area Management Plan
EIR	Environmental Impact Report



EO	Executive Order
ESHA	Environmentally Sensitive Habitat Area
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	fiscal year
GHG	Greenhouse Gas Emissions
GTIOC	Gabrieliño Tongva Indians of California
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
lb	pound
LBUSD	Laguna Beach Unified School District
LCP	Local Coastal Program
LED	light emitting diode
LOT	Lifeguard Observation Tower
LST	localized significance threshold
LUE	Land Use Element
MBTA	Migratory Bird Treaty Act
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MPA	Marine Protected Area
MT	metric ton
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NOI	Notice of Intent
NO _x	nitrous oxides
NPDES	National Pollutant Discharge Elimination System
OPR	Office of Planning and Research
OSC	Open Space and Conservation
Pb	Lead
PM ₁₀	Particulate Matter with diameters that are generally 10 micrometers or smaller
PM _{2.5}	Particulate Matter with diameters that are generally 2.5 micrometers or smaller
PMMP	Paleontological Monitoring and Mitigation Plan



PRC	Public Resource Code
RCNM	Roadway Construction Noise Model
RMS	root mean square
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCH	State Clearinghouse
SMR	State Marine Reserve
SO _x	Sulfur oxides
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State of California Water Resource Control Board
U.S.C.	U.S. Code (of Federal Regulations)
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VdB	vibration decibels
VHD	Village High Density
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker's Environmental Awareness Program



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1 Introduction

The City of Laguna Beach (hereinafter “City”) has prepared this Initial Study (IS) and Mitigated Negative Declaration (MND) to evaluate the potentially significant environmental impacts that could occur from the proposed construction and operation of the Cleo Street Beach Access Improvement Project (hereinafter referred to as the “proposed Project; Project”). This introductory section briefly describes the agency use of the document and related studies. A detailed project description is presented in Section 2.0 (Project Description) of this document.

Pursuant to Section 15367 of the California Environmental Quality Act (CEQA) Guidelines, the City is the Lead Agency responsible for preparing this IS/MND to address the potential impacts associated with the proposed Project.

1.1 Incorporation by Reference

Pursuant to CEQA Guidelines, Section 15150, this IS incorporates by reference all or portions of other technical documents that are a matter of public record. Those documents either relate to the proposed Project or provide additional information concerning the environmental setting for it. Where all or a portion of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of this IS. These are identified within the Appendix section of the IS (see Table of Contents) and within Section 5.0, References.

1.2 Responsible Agencies and Agencies Consulted

Responsible and/or Trustee agencies include all public agencies other than the lead agency that have discretionary approval power over the Project (CEQA Guidelines Section 15381). Responsible and/or Trustee agencies in respect to this Project may include:

- California Coastal Commission
- California Regional Water Quality Control Board – San Diego (CRWQCB)
- California Department of Fish and Wildlife (CDFW)

1.3 Environmental Process and Agency Use of Document

This environmental document has been prepared consistent with CEQA of 1970 (Public Resources Code, Sections 21000–21177), the CEQA Guidelines (2024), and the City of Laguna Beach CEQA Implementation Handbook. This environmental document is intended to be used as a decision-making tool for the City in considering and acting on the proposed Project. Responsible and/or Trustee Agencies (i.e., regulatory agencies) may elect to use this environmental analysis for discretionary actions associated with the implementation of the proposed Project.

This document is intended to provide decision makers and the public with information concerning the potential environmental effects associated with the adoption and implementation of the proposed Project, and potential ways to reduce or avoid possible environmental impacts. The environmental analyses presented in this document primarily focus on the changes in the environment that would result from the Project. This environmental document also evaluates all phases of the Project including construction and operation.



1.4 Organizations Affiliated with the Project

Pursuant to the provisions of the CEQA Guidelines, the City is the Lead Agency for this proposed Project. The proposed Project will be subject to a public hearing which will be heard by the City. Contact persons for the entities involved in the preparation of this IS/MND are:

- City of Laguna Beach
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1.5 Native American Consultation

Have California Native American Tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The Project area is considered positive for Native American and tribal cultural resources based on the results of the Sacred Lands Files Search, conducted by the Native American Heritage Commission on behalf of the City on February 17, 2023. As part of its Assembly Bill (AB) 52 consultation requirements, on March 20, 2023, the City sent letters to 16 tribal representatives making them aware of the proposed Project and opportunity for tribal resources consultation. An overview of AB 52 consultation and analysis of cultural resources and tribal cultural resources is provided in Section 3.6 (Cultural Resources) and Section 3.19 (Tribal Cultural Resources), respectively.

1.6 Findings from the Initial Study

Based upon the analysis contained in the IS, the proposed Project would have no impact or a less than significant impact on the following environmental categories listed from Appendix G of the CEQA Guidelines.

- Aesthetics
- Agricultural and Forest Resources
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality



1 Introduction

- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

Based upon the analysis contained in the IS, the proposed Project would have a less than significant with mitigation incorporated impact on the following environmental categories listed from Appendix G of the CEQA Guidelines.

- Biological Resources
- Cultural Resources
- Geology and Soils
- Noise
- Tribal Cultural Resources

1.7 Process for Adopting a Mitigated Negative Declaration

Based on the responses to the IS checklist questions (described above and analyzed below), the City has determined that an MND is the appropriate level of CEQA environmental documentation. As such, prior to adoption of the MND and consideration of the proposed Project, the City will issue a Notice of Availability (NOA)/Notice of Intent (NOI) to adopt an MND and the IS will be provided to Responsible Agencies, Trustee Agencies, Agencies with jurisdiction by law, and the public for 30 days to review and comment.

Approval of the proposed Project by the lead agency (City) is contingent on adoption of the IS/MND after considering agency and any public comments. By adopting the IS/MND, the lead agency certifies that the analyses provided in the IS/MND were reviewed and considered by the City and reflect its independent judgment and analysis.

1.8 Mitigation Monitoring and Reporting Program

As noted above and contained within the analysis provided below, mitigation measures are required to reduce impacts for some environmental parameters analyzed in the IS/MND. These are included in the Project's Mitigation Monitoring and Reporting Program (MMRP) (see Appendix A of this IS/MND) and will be incorporated into the Project's overall requirements. The MMRP ensures implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified through the use of monitoring and reporting. Monitoring is generally an ongoing or periodic process of Project oversight; reporting generally consists of a written compliance review that is presented to the decision-making body (e.g., City Council) or authorized staff person.

The MMRP contains a table which includes the mitigation measures denoting impacts, mitigation measures adopted by the City in connection with approval of the proposed Project, level of significance after mitigation, responsible and monitoring parties, and the Project phase in which the measures are to be implemented.



1.9 **Project Schedule**

The proposed Project schedule is as follows:

- Fiscal year (FY) 2023-24 – Initiate Final Plans, Specifications, and Estimates Phase
- FY 2024-25 – Ready to Bid
- FY 2024-25 – Complete construction



2 Project Description

2.1 Project Description

The project description for this environmental document provides an understanding of all components of the Project. The following sections describe the Project location, surrounding site uses, and existing site characteristics, as well as Project details.

2.1.1 Project Location and Boundaries

The Cleo Street Beach Access Improvement Project is located within the City at the south end of Cleo Street at its intersection with Ocean Front, where it dead ends at the City Beach, just one block southwest of South Coast Highway. The street end features a series of existing improvements that are designed to facilitate access to the beach and public viewing of the beach/ocean environment at Cleo Street. The existing beach access facility needs rehabilitation and improvement to enhance accessibility and enhance landscaping and to ensure continued beach safety. Figure 1 (Regional Vicinity Map) illustrates the geographic location of the Project.

2.1.2 Existing Site Characteristics

The Project site is located along the coast of Laguna Beach, surrounded by urban development and in immediate proximity to the City Beach and the Pacific Ocean. The existing beach access is on a steep slope between the beach and roadway and is a popular spot for snorkeling and swimming located less than one-half mile south of Main Beach. Beach access currently consists of a 3-ft wide sidewalk with concrete barrier wall and decorative rock framing the street edge, then four flights of concrete stairs in tight formation. The alignment features two 90-degree turns, one upper landing, three mid-stairs landings and a small landing before ending at the beach level. There is an existing pump facility located between the street and beach levels adjacent to the stairs. There is an existing 66-inch storm drainpipe and headwall outlet structure along the southeast of the stairs. The storm drain system features a continuous deflection separation (CDS) unit and low flow diversion to the sewer lift station. There is also an abandoned partially exposed sewer pipe near the bottom of stairs at beach level. There is currently no Lifeguard Observation Tower (LOT) at this beach access location. The Project site is primarily used by the public, including residents and visitors to the City. The surrounding and nearby uses are predominantly commercial and residential uses along South Coast Highway.

2.1.3 Project Characteristics

To maximize public access to and along the coast of Laguna Beach, the Project proposes to enhance and restore an access area to the beaches and coastal resources of the City. Specifically, a coastal access facility will be restored and enhanced at Cleo Street. The Project will remove a portion of the sidewalk while protecting most of the decorative concrete barrier and preserving the decorative trash receptacle at the top of stairs, the historical dedication sign, and lamp post. Where sidewalk is removed, new asphalt concrete pavement will be constructed with striping to delineate a “No Parking” zone with a wider safer walkway for pedestrians. A small segment of barrier will be removed to introduce a new upper viewing area. Sidewalk adjacent to the new upper viewing area will be replaced and regraded to reduce slopes while adding stairs where required to improve Americans with Disabilities Act (ADA) access. The existing beach access stairs will be removed and replaced with new stairs. The new stairs features expanded intermediate landings, aesthetic Kernel-type benches at select locations, improved pile foundations, supplemental trash and recycling receptacles, and continuous hand railing. Access to the



pump house will be maintained while improving safety and security of the upper pump station deck slab with new perimeter hand railing and lockable gate. The lower flight of stairs will extend and key into bedrock to ensure safe access regardless of seasonal fluctuations in sand level. Other appurtenant improvements include new rock slope protection, rehabilitation of deteriorated reinforced concrete storm drain outlet structure, removals of exposed deteriorated abandoned steel pipe, and replacement with concrete plugs and grouted riprap. Adjacent landscape areas and irrigation impacted by the work will be restored in kind. A permanent LOT is not proposed at this location.

The City's General Plan land use designation and zoning around the Project site are VHD (Village High Density) and R-3 (Residential High Density) and C-1 (Local-Business District). The proposed Project uses are consistent with the surrounding land use designations (see Section 3.12, Land Use and Planning). The Project plans for the proposed access and associated amenities are presented in Figure 2 (Civil Concept Plan), Figure 3 (Landscape Concept Plan), Figure 4 (Planting Palette), and Figure 5a/5b (Sections). Figure 6 (Photo Log) shows the existing condition of the stairs.

2.1.4 Approvals Required

The Project requires compliance with the CEQA Guidelines, Planning Commission Design Review approval, and a Coastal Development Permit, which will be issued by the City under its certified Local Coastal Program.

2.2 Project Construction and Phasing

The Project is proposed to be constructed as funding becomes available for each coastal access Project. Below is a brief description of anticipated Project phasing:

- Mobilization – This phase would entail mobilization of equipment and personnel to the work site.
- Clearing and Grubbing – This phase would include the demolition and removal of the existing stairs, landings, one decorative trash receptacle, and railings, clearing of any conflicting vegetation, trees and associated roots or stumps from the Project site. The existing river rock walls, terraced concrete masonry unit (CMU) and Keystone retaining walls, pump station (including wet well, valve vault, mid-slope diversion vault [only top of structure would be reconstructed], active pump house, and existing bench), and marine protected area sign would be maintained in place.
- Grading – This phase involves making sure that there is a level base and appropriate slopes for the beach access stairs.
- Trenching and Structures – This phase includes structure excavation and preparing trenches for the relocation of any affected utilities or other underground components of the beach access stairway. It also entails the construction of any above or below ground structures.
- Landscaping and Demobilization – This phase includes removing equipment, material, and personnel from the worksite and restoring the existing landscaping and associated irrigation and addition of planting (if required).



2 Project Description

The proposed Project would remove and reconstruct the existing beach access (stairs) located at the western terminus of Cleo Street. The Project would entail demolition and disposal of existing stairs. The construction methods would entail the following:

- Cast-In-Drilled-Hole (CIDH) foundations installed with a small drill rig or by hand digging with jackhammer (30-inch maximum diameter piles)
- Slotted spread footing type foundations in shallow bedrock excavated by hand with jackhammer (minimum 2-ft embedment in competent bedrock)
- Low retaining walls (with a total height less than three feet to facilitate landscape terracing, if required)
- Suspended slab stairway construction
- Slab on grade stairway construction
- Concrete forming, reinforcement, and placement
- Salvage and reconstruct decorative river rock cladding on new trash receptacle enclosure
- Minor associated structural earthwork and grading with a backhoe or small excavator or jackhammers
- Installation of new aluminum hand railings
- Miscellaneous landscaping, irrigation, and amenities
- Repair of exposed face of the existing storm drain headwall and baffle structure
- Removal of exposed abandoned sewer pipe, cap, and plug the remaining portion
- Placement of new grouted and un-grouted riprap slope protection

The concept design preserves the approximate beginning elevation and alignment of stairs; however, location and end elevation of the stairs would need to be changed to provide proper landing at bedrock elevation to address the current drop off condition and estimated long-term beach erosion. Profile rise and run of the stairs will be controlled by the California Building Code, while the ramp design and landings will be controlled by ADA requirements. The construction duration is estimated to take up to four months to complete.

2.3 Construction Vehicle Access and Staging

Access to Cleo Street by residents and contractors during construction would be achieved via South Coast Highway. Cleo Street and Ocean Front would remain open during the construction period. No temporary closure of South Coast Highway is anticipated. However, public access to the beach at Cleo Street would not be available until the improvements are complete.

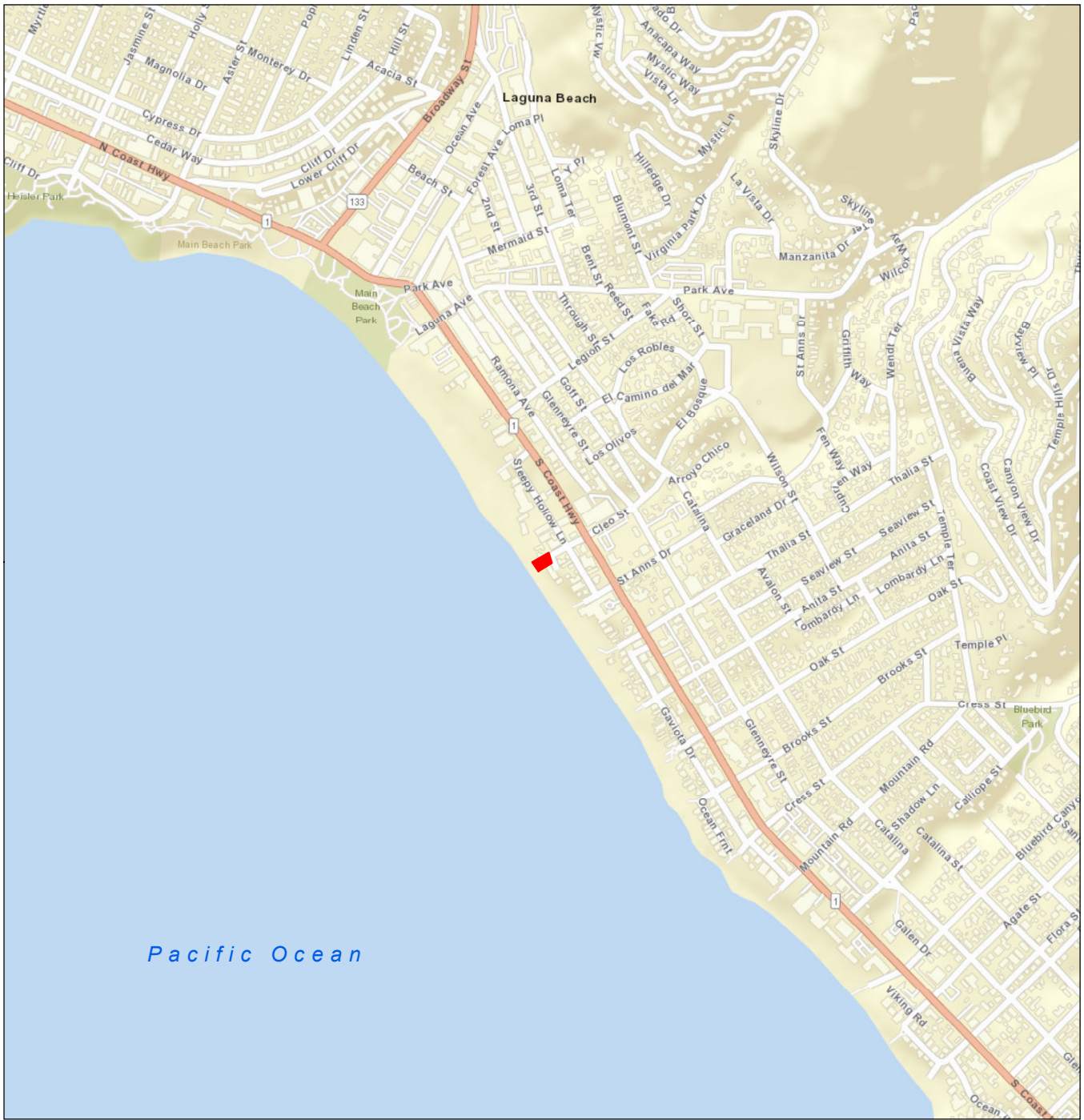
Construction staging and equipment/material storage would be located at the terminus of Cleo Street and Ocean Front. There may also be opportunities to allocate construction parking areas on the north side of Cleo Street, adjacent to South Coast Highway (metered parking area adjacent to “The Taco Stand”).

2.4 Project History and Background

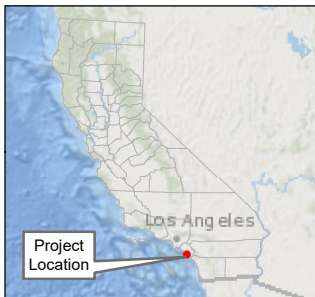
The City has 29 pedestrian beach stairways that serve as the primary access to the City’s beaches. Due to the harsh marine conditions, the stairways and ramps have deteriorated. The City has rehabilitated several of the access stairways and associated vista platforms and also beautified the street ends at these access points. This document evaluates the next beach access rehabilitation Project that the City has planned for Cleo Street.




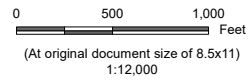
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Pacific Ocean



 Project Location



Project Location: Cleo Street Beach Access, Laguna Beach, California
Prepared by DL on 2023-03-23, TR by SET on 2023-03-23, IR by GR on 2023-03-23
Client/Project: 2042652100

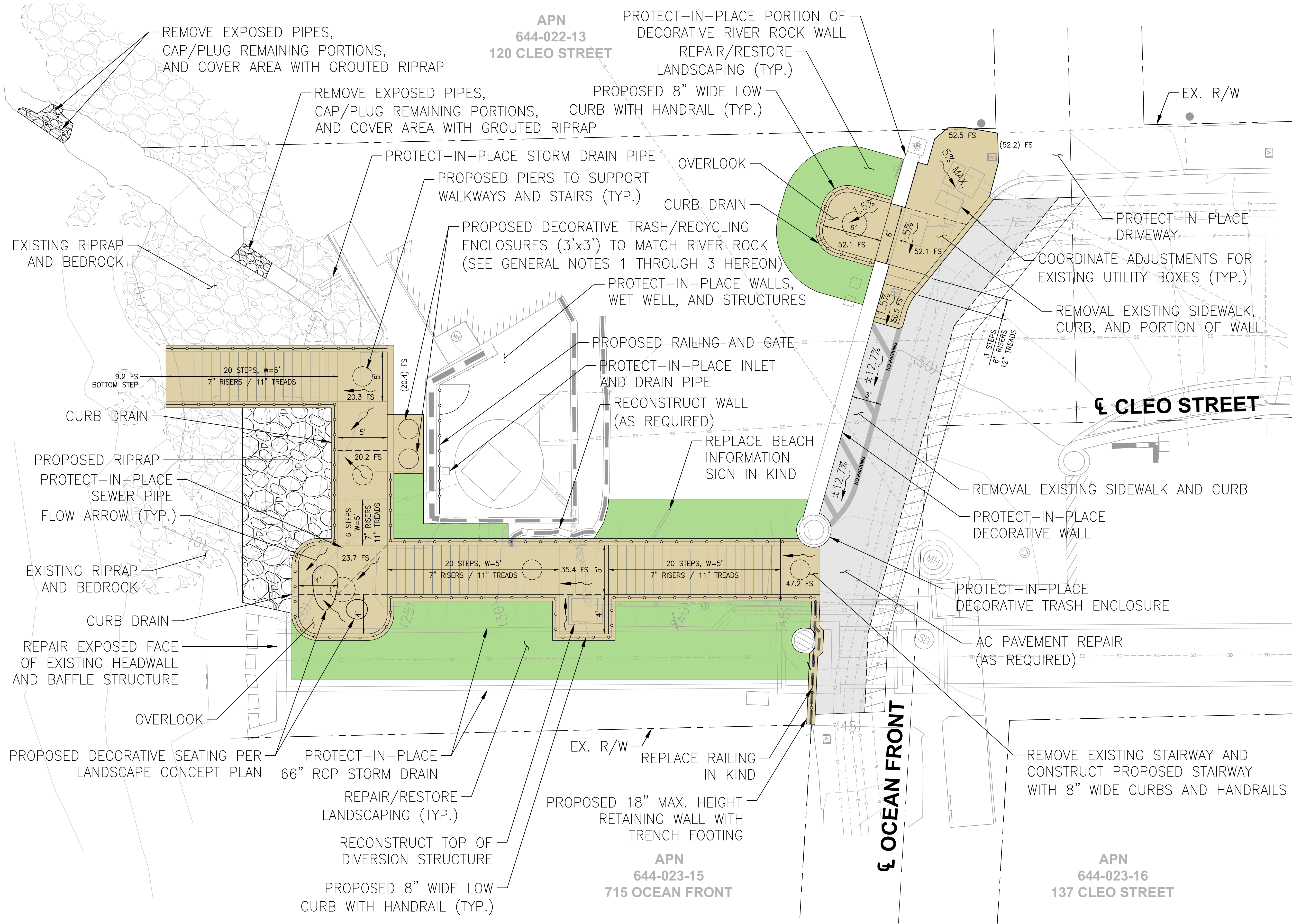
City of Laguna Beach
Cleo Street Beach Access Project

Figure No. 1

Title
Project Location Map





- Notes**
1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
 2. Data Sources: Stantec 2023.
 3. Background: Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

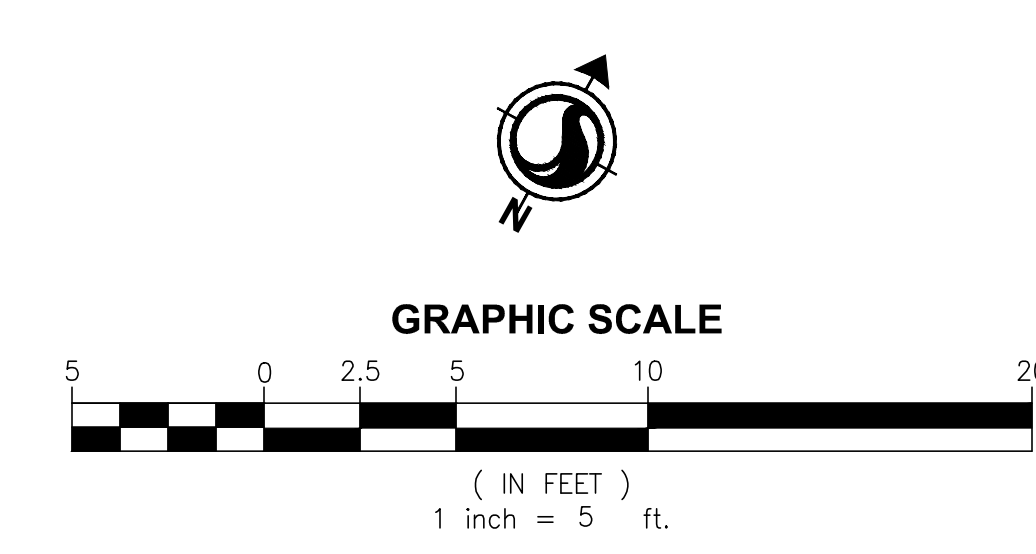
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- GENERAL NOTES:**
1. RIVER ROCK ON THE UPPER LEVEL EXISTING TOP OF WALL CAP, LOWER LEVEL EXISTING DECORATIVE TRASH ENCLOSURE, AND LOWER LEVEL EXISTING WALL FACE WHERE PROPOSED DECORATIVE TRASH/RECYCLING ENCLOSURES WILL BE CONSTRUCTED SHALL BE REMOVED AND SALVAGED.
 2. ALL SALVAGED RIVER ROCK SHALL BE USED TO CONSTRUCT THE PROPOSED DECORATIVE TRASH/RECYCLING ENCLOSURES AND TO REPAIR DECORATIVE RIVER ROCK FACING AS DIRECTED BY THE CITY.
 3. ANY ADDITIONAL RIVER ROCK REQUIRED TO CONSTRUCT THE PROPOSED DECORATIVE TRASH/RECYCLING ENCLOSURES OR TO REPAIR DECORATIVE RIVER ROCK FACING SHALL MATCH EXISTING.

PAVEMENT LEGEND:

	REPAIRED/RESTORED LANDSCAPING
	PORTLAND CEMENT CONCRETE HARDSCAPE
	ASPHALT CONCRETE PAVEMENT
	COLD MILL AND ASPHALT CONCRETE OVERLAY



**CLEO STREET
CIVIL CONCEPT PLAN**
April 18, 2024

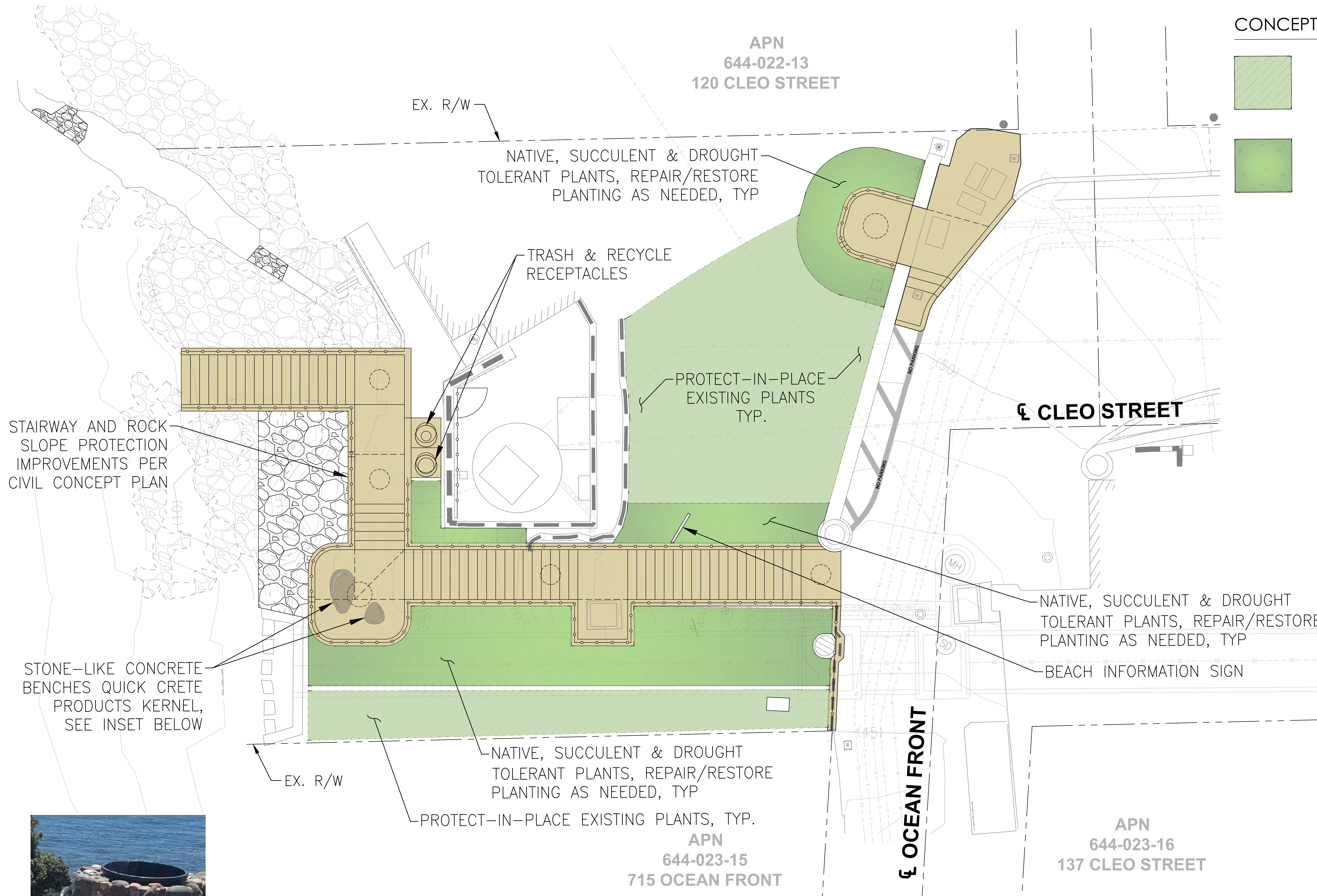


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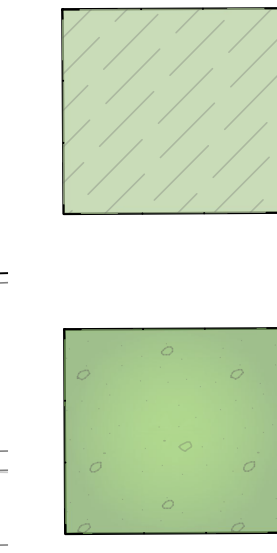
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CONCEPT PLANT SCHEDULE

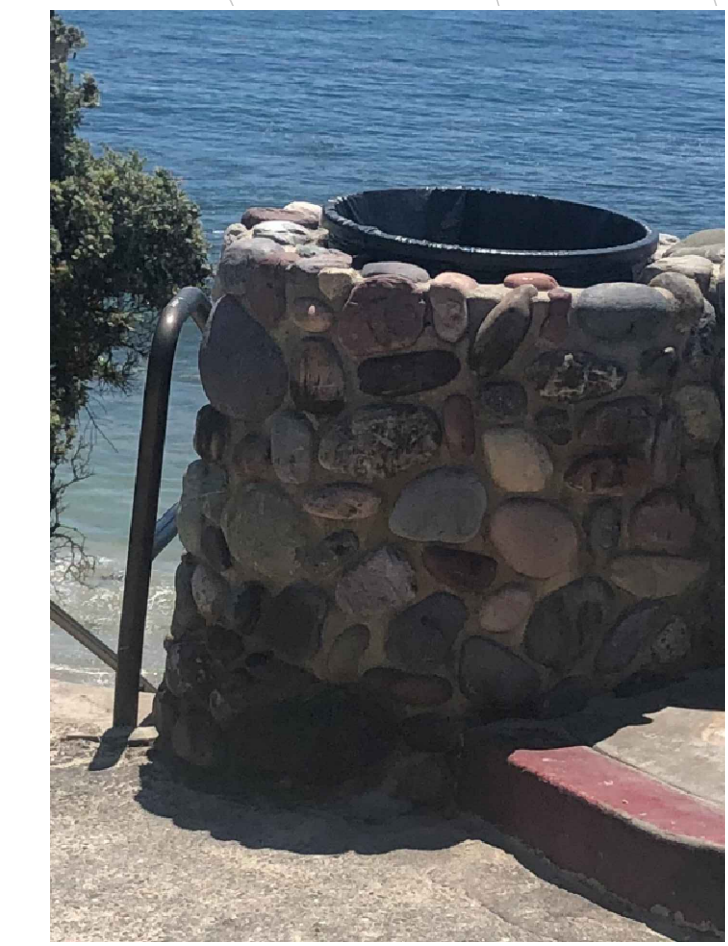
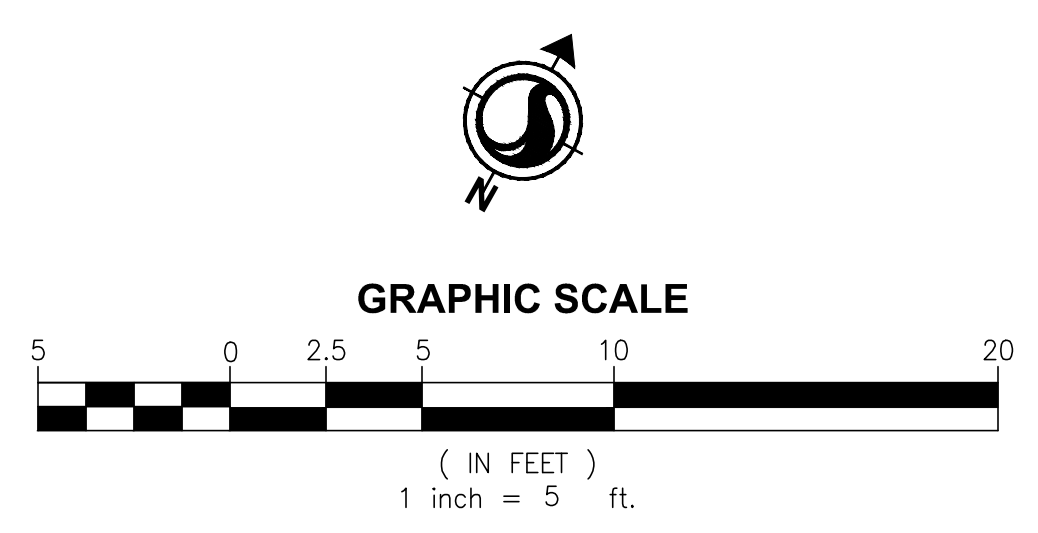


EXISTING PLANTS TO PRESERVE
 PLANTS TO PROTECT IN PLACE
 TO THE EXTENT POSSIBLE

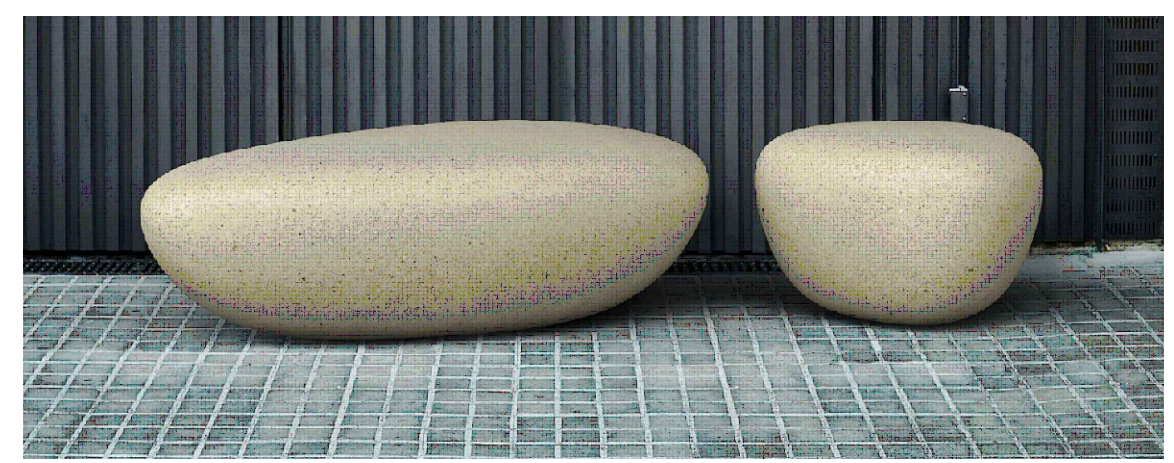
- NATIVE, SUCCULENT & DROUGHT TOLERANT PLANTS
- AGAVE ATTENUATA 'NOVA'
 - ALOE BARBERAE
 - ALOE X 'CYNTHIA GIDDY'
 - ARCTOSTAPHYLOS X 'PACIFIC MIST'
 - CISTUS SALVIIFOLIUS 'PROSTRATUS'
 - CRASSULA OVATA 'CROSBY'S DWARF'
 - DUDLEYA CAESPITOSA
 - ECHIUUM CANDICANS
 - ERIOGONUM PARVIFOLIUM
 - LIMONIUM PEREZII

NOT SHOWN ON PLAN:
 CALIFORNIA COASTAL NATIVE WILDFLOWER MIX FOR
 TEMPORARY EROSION CONTROL MEASURE.

IRRIGATION NOTE:
 CONTRACTOR SHALL PROTECT EXISTING IRRIGATION
 WHERE POSSIBLE AND TO REPAIR ANY IRRIGATION
 THAT IS DAMAGED DURING CONSTRUCTION.



DECORATIVE TRASH RECEPTACLES
 CONSTRUCT NEW WITH RECYCLED RIVER ROCK



QUICK CRETE PRODUCTS - KERNEL BENCHES
 PRODUCT NUMBER: Q2-KERNEL-S, LATTE POLISHED FINISH

**CLEO STREET
 LANDSCAPE
 CONCEPT PLAN**
 April 18, 2024

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 38 TECHNOLOGY DRIVE, SUITE 200
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California Coastal Native Wildflower Mix from S&S Seeds



Aloe 'Cynthia Giddy' / Cynthia Giddy Aloe



Crassula ovata 'Crosby's Dwarf' / Dwarf Jade



Aloe barberae / Tree Aloe



Agave attenuata 'Nova' / Foxtail Agave



Arctostaphylos 'Pacific Mist' / Pacific Mist Manzanita



Dudleya caespitosa / Sea Lettuce



Limonium perezii / Statice



Echium candicans / Pride of Madeira



Cistus salviifolius 'Prostratus' / Sageleaf Rockrose



Eriogonum parvifolium / Cliff Buckwheat

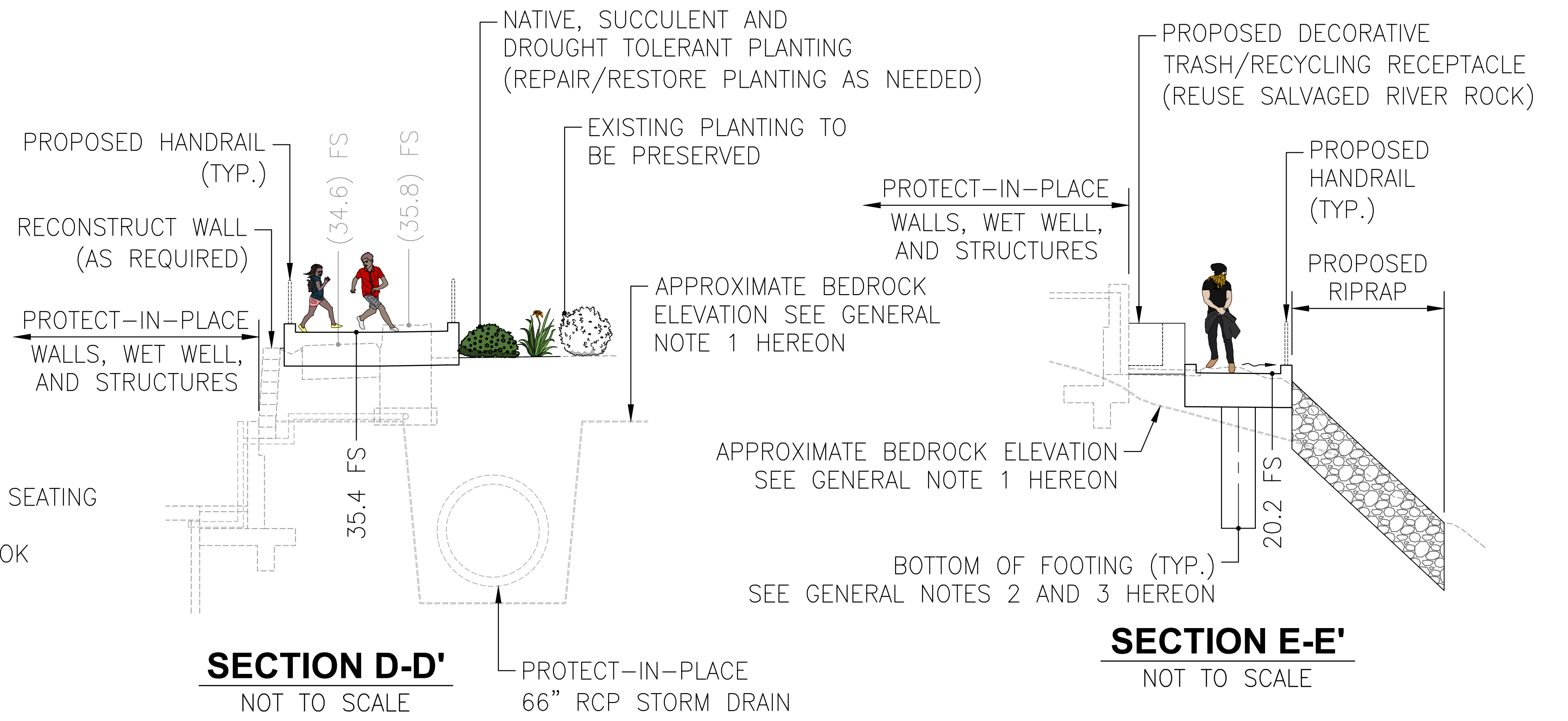
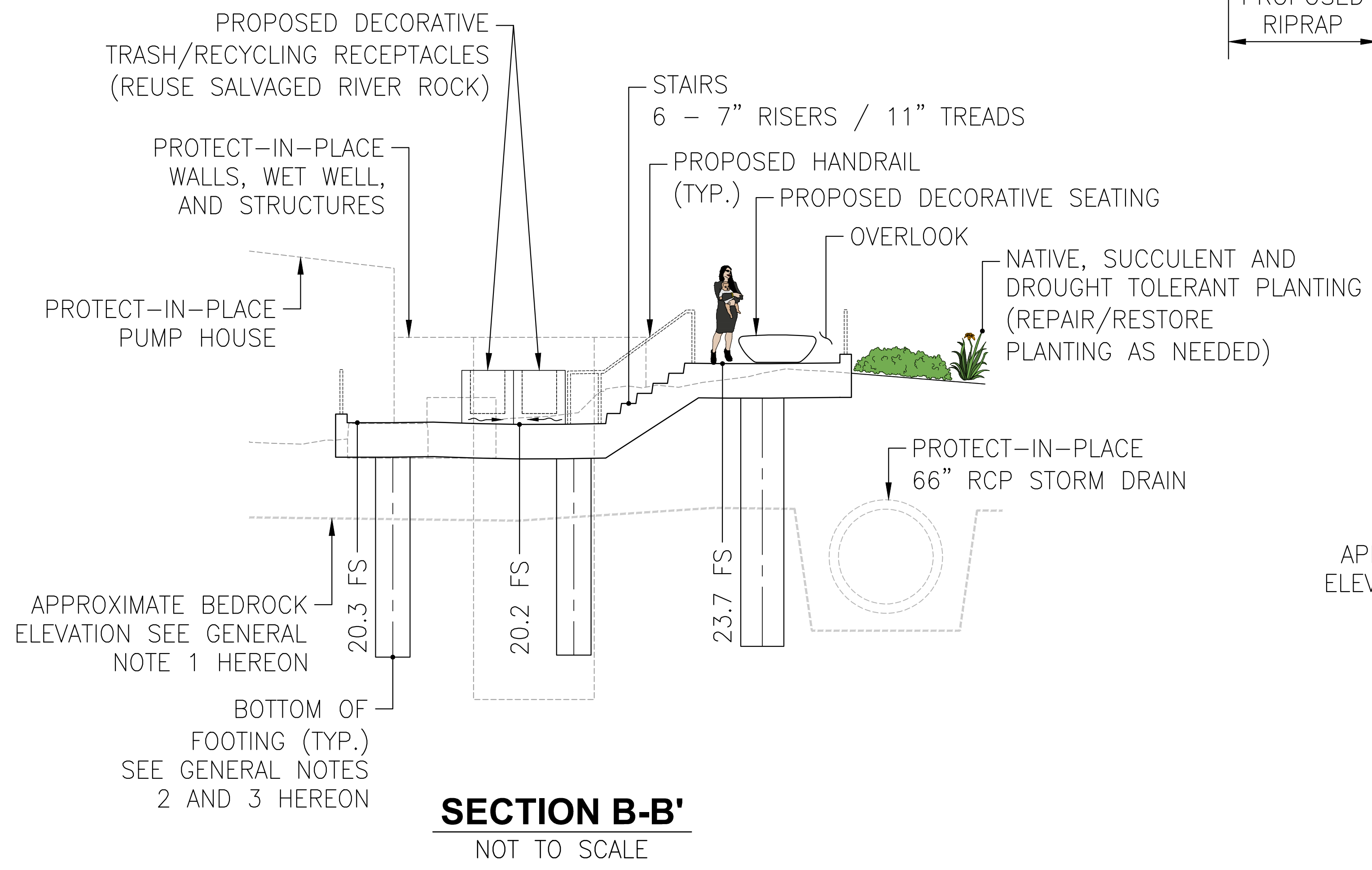
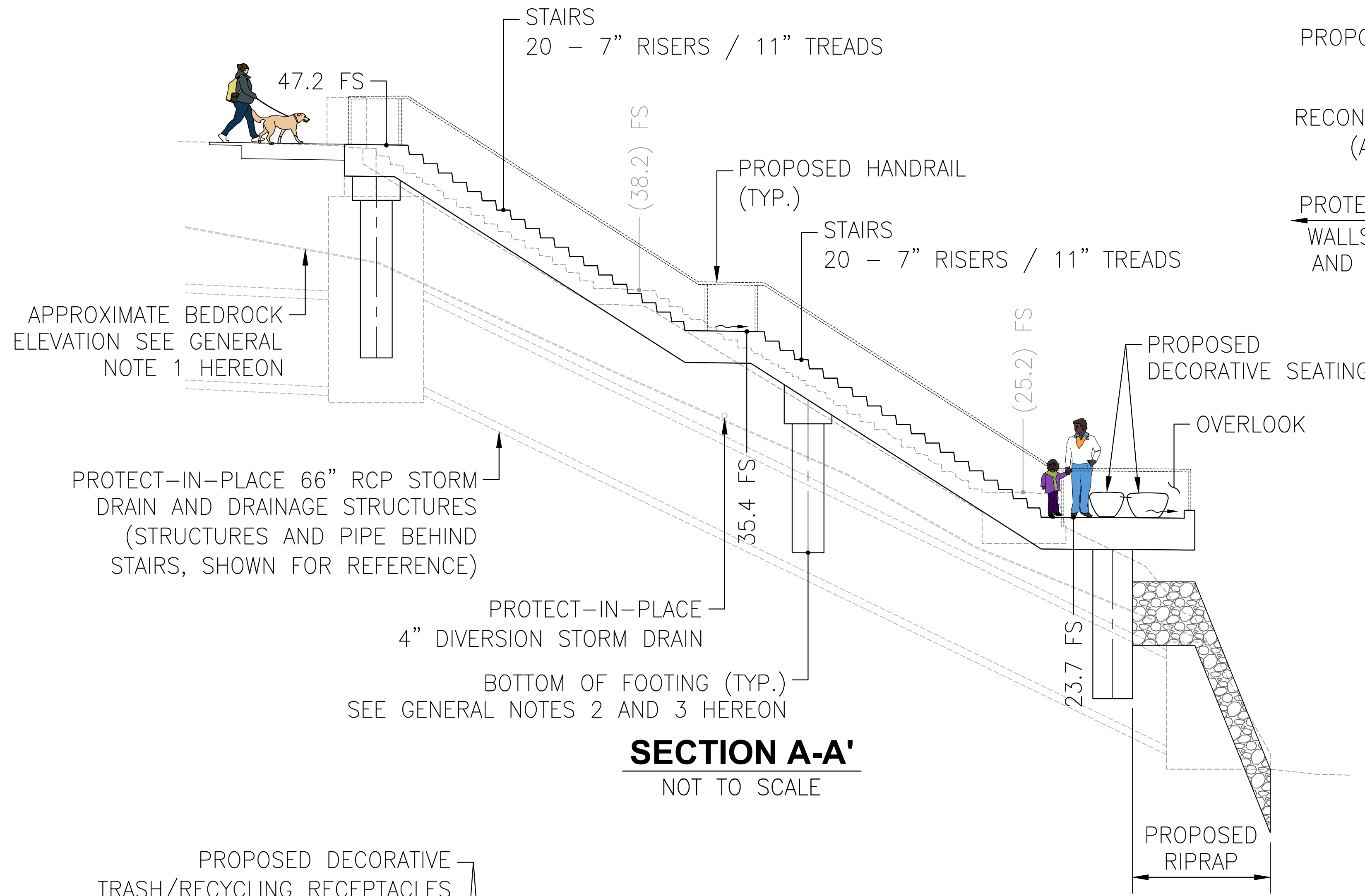
CLEO STREET
PLANTING PALETTE
April 18, 2024

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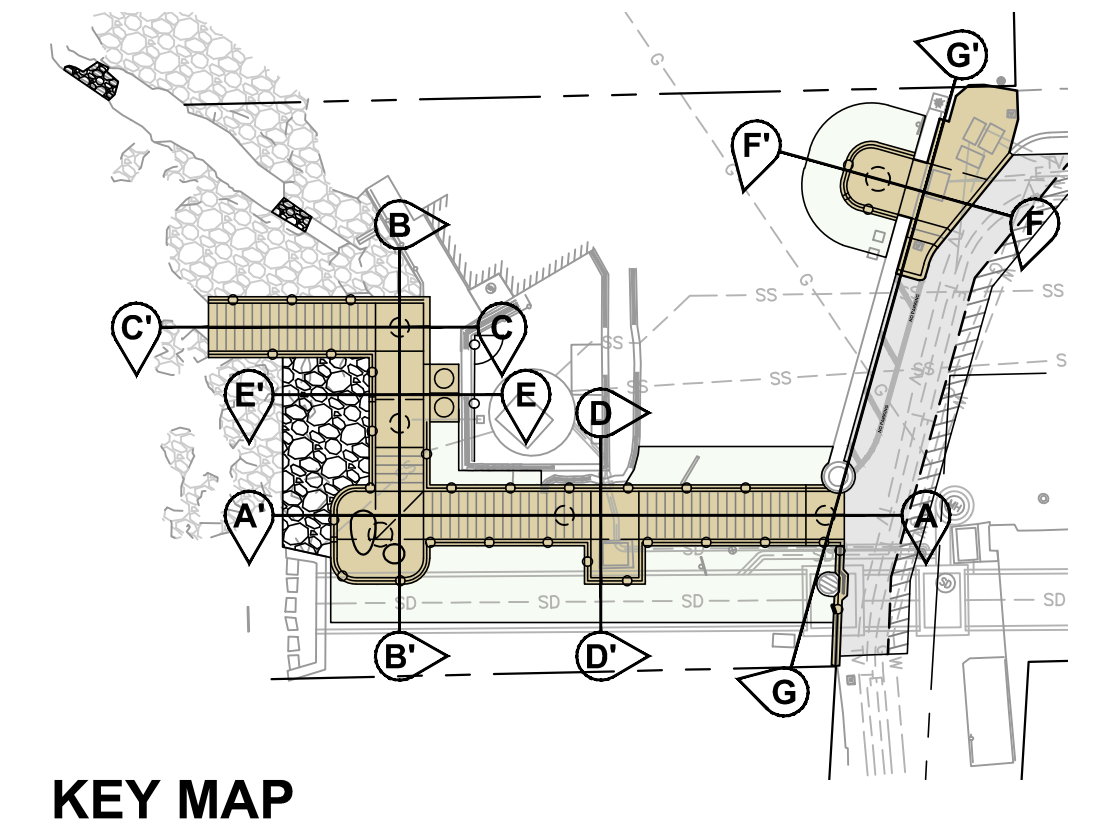
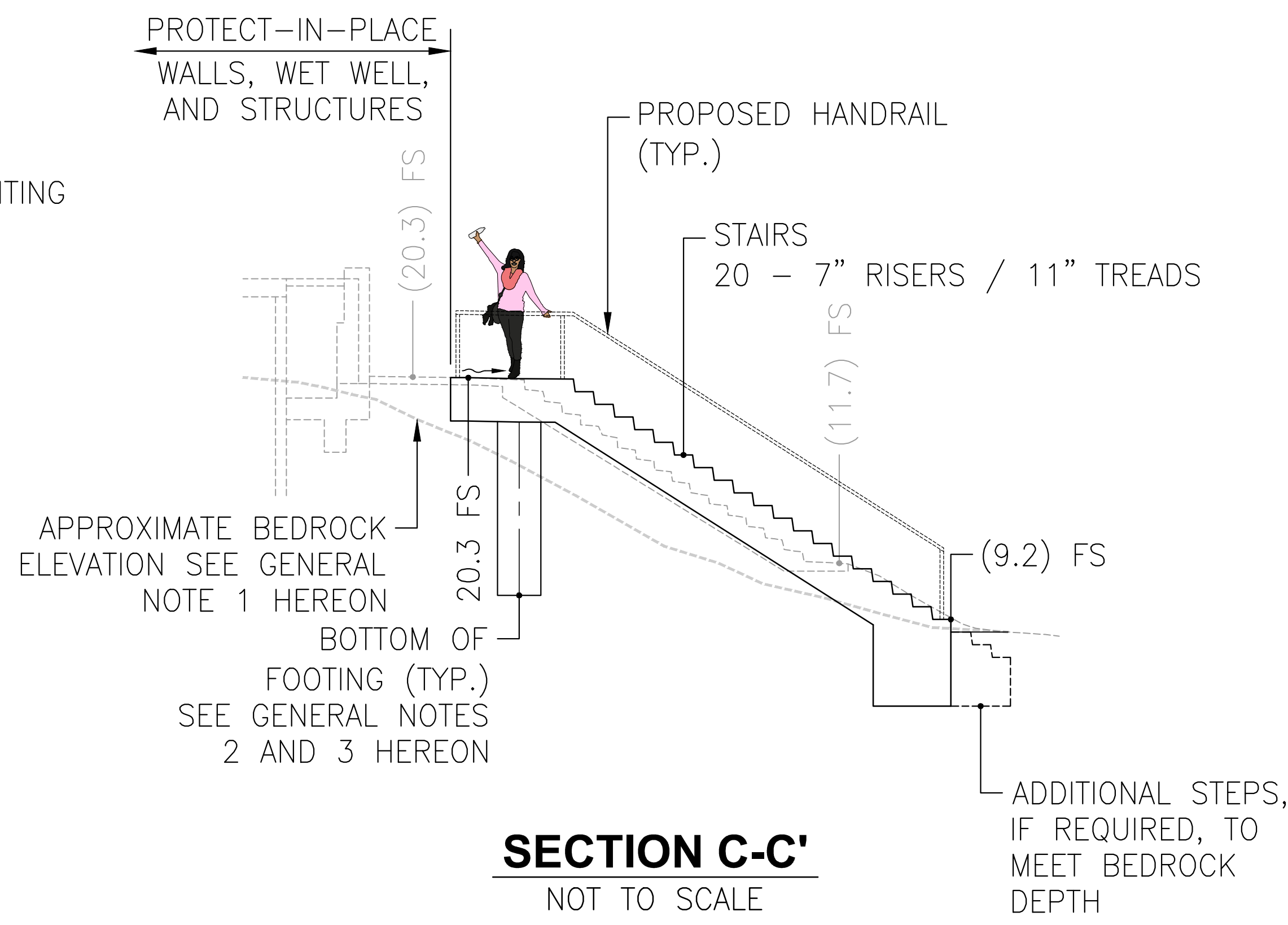
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CLEO STREET / OCEAN FRONT



- GENERAL NOTES:**
1. EXISTING BEDROCK DEPTH VARIES 5' TO 7' BELOW EXISTING GROUND. BEDROCK CUT AROUND EXISTING STORM DRAIN PIPE AND DRAINAGE STRUCTURES TO BE CONFIRMED PRIOR TO CONSTRUCTION AND ADJACENT PILE DEPTHS TO BE ADJUSTED ACCORDINGLY.
 2. C.I.D.H. PILE SHALL EXTEND 6'± INTO BEDROCK (SHALL BE CONFIRMED DURING FINAL DESIGN).
 3. C.I.D.H. PILE DIAMETERS VARY 24" TO 30" (SHALL BE CONFIRMED DURING FINAL DESIGN).



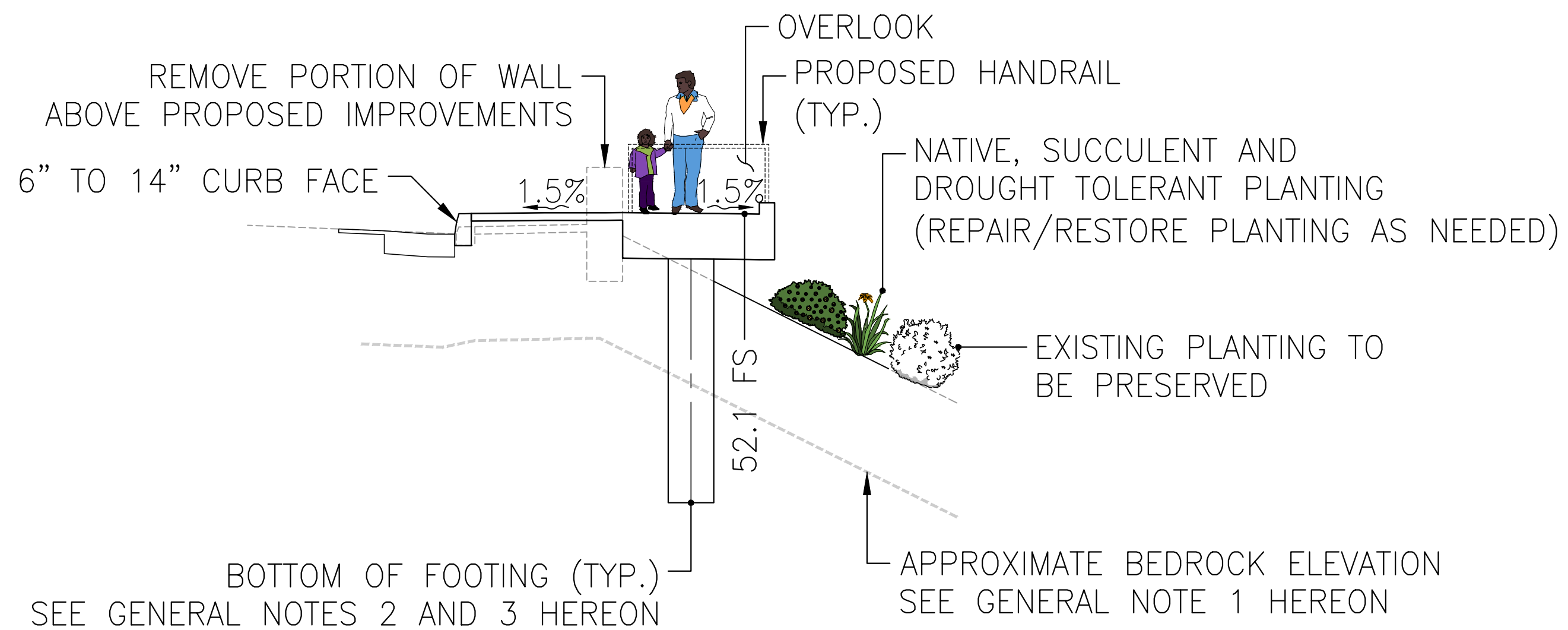
CLEO STREET SECTIONS
April 18, 2024

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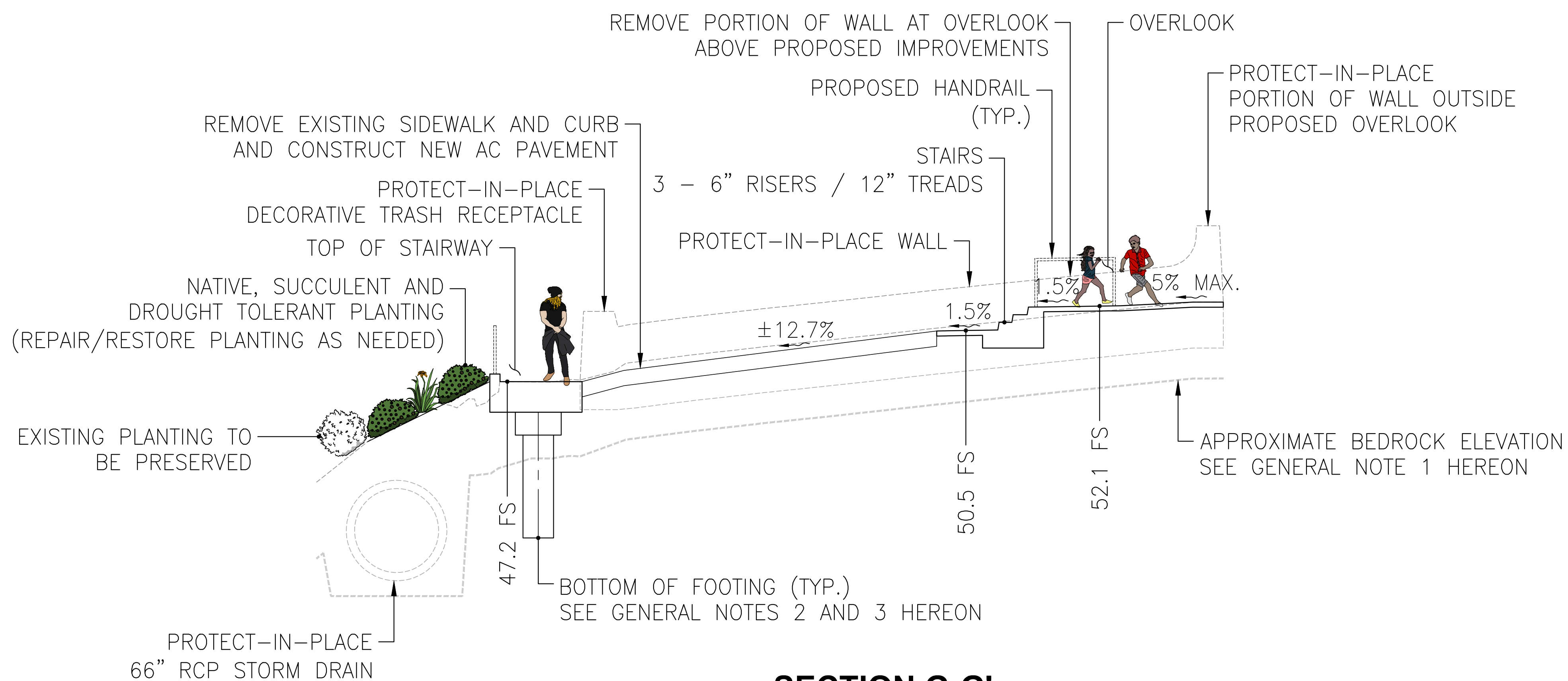
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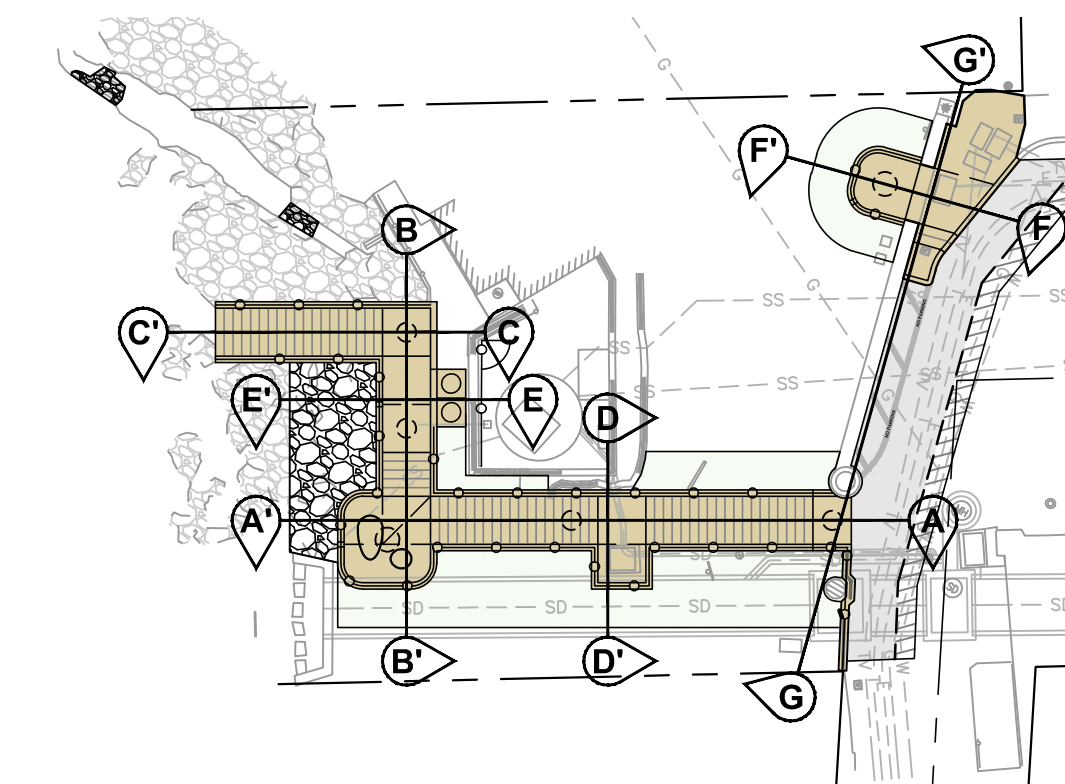
SECTION F-F'
NOT TO SCALE



SECTION G-G'
NOT TO SCALE

GENERAL NOTES:

1. EXISTING BEDROCK DEPTH VARIES 5' TO 7' BELOW EXISTING GROUND. BEDROCK CUT AROUND EXISTING STORM DRAIN PIPE AND DRAINAGE STRUCTURES TO BE CONFIRMED PRIOR TO CONSTRUCTION AND ADJACENT PILE DEPTHS TO BE ADJUSTED ACCORDINGLY.
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3. C.I.D.H. PILE DIAMETERS VARY 24" TO 30" (SHALL BE CONFIRMED DURING FINAL DESIGN).



KEY MAP

CLEO STREET
SECTIONS
April 18, 2024



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2 Project Description



Photo 1: View of existing Cleo Street beach access looking from top of stairs to beach.



Photo 2: View of existing Cleo Street beach access looking from beach to top of stairs.

Figure 6. Photo Log



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3 Impact Analysis

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that would require mitigation to reduce the impact from “Potentially Significant” to “Less than Significant” as indicated by the checklist on the following pages.

Aesthetics	Greenhouse Gases	Public Services
Agriculture and Forestry Resources	Hazards and Hazardous Materials	Recreation
Air Quality	Hydrology and Water Quality	Transportation
X Biological Resources	Land Use and Planning	X Tribal Cultural Resources
X Cultural Resources	Mineral Resources	Utilities and Service Systems
Energy	X Noise	Wildfires
X Geology and Soils	Population and Housing	Mandatory Findings of Significance

3.1 Evaluation of Environmental Impacts

This section presents the environmental checklist form found in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the Project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are Project-specific mitigation measures, if needed.

For the checklist, the following designations are used:

- **Potentially Significant Impact:** An impact that could be significant and for which mitigation has not been identified. If any potentially significant impacts are identified, an Environmental Impact Report (EIR) must be prepared. An IS/MND cannot be used if there are potentially significant impacts that cannot be mitigated.
- **Less Than Significant with Mitigation Incorporated:** This designation applies when applicable and feasible mitigation measures previously identified in prior applicable EIRs or in the General Plan EIR have reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact” and, pursuant to Section 21155.2 of the Public Resource Code (PRC), those measures are incorporated into the IS/MND.

This designation also applies when the incorporation of new Project-specific mitigation measures not previously identified in prior applicable EIRs or in the General Plan EIR have reduced an effect from a “Potentially Significant Impact” to a “Less Than Significant Impact”.

- **Less Than Significant Impact:** Any impact that would not be considered significant under CEQA, relative to existing standards.
- **No Impact:** The Project would not have any impact.



3.2 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

a) Would the project have a substantial adverse effect on a scenic vista? (Less Than Significant Impact)

The proposed Project is located within the City, at the end of Cleo Street on the ocean side of South Coast Highway. The Project includes replacement of existing stairs, a viewing deck, and landscaping associated with coastal access point improvements. The replaced coastal access point will provide controlled direction of areas of interest to enjoy scenic vista corridors of the Pacific Ocean and the City Beach. The proposed improvements will enhance accessibility and provide new railings for increased safety. The Project will also enhance landscaping at the access point.

The stairways are designed to follow the natural surface of the landform at the access point. The Project includes locations where viewsheds and scenic overlooks of the beach and the Pacific Ocean will be improved and made more accessible.

A review of the California Department of Transportation (Caltrans) State Scenic Highway Map indicates that South Coast Highway is considered “Eligible.” An eligible State highway becomes officially designated through a process in which the local governing body (City of Laguna Beach) applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives



3 Impact Analysis

notification that the highway has been officially designated a State Scenic Highway by the Caltrans Director. A review of the City's Landscape and Scenic Highways Element indicates that the City has not prepared or adopted a Corridor Protection Program for South Coast Highway and therefore, its status continues to remain as "Eligible." The City's General Plan Landscape and Scenic Highways Element identifies South Coast Highway as a scenic corridor.

The Project site is designated as a street right-of-way per the City's General Plan (Figure LU-1 of the General Plan). This designation allows for a range of public uses, which is consistent with the trails/stairways and vista points of the coastal access Project.

The Project site itself is not a designated scenic vista but does afford expansive views of the Pacific Ocean from adjacent residences and from limited portions of Cleo Street, due to elevation differences extending from South Coast Highway to its terminus (which has a "rise and fall" of elevation). For pedestrians and residents, views may be temporarily impeded during the construction period due to the presence of construction materials, fencing, and equipment at the terminus of and along Cleo Street. The extent to which pedestrians and/or residents would be affected would be greatly determined by where they are in relation to the street's elevation. For instance, if a person or residence is located at the terminus of Cleo Street, their views may be temporarily obstructed. However, if the pedestrians or residences are located higher up along the street, their views would only be partially affected during construction. For motorists, the views would continue to be only experienced momentarily and briefly while driving by Cleo Street, since the area is highly urbanized, and views are typically blocked by residential development and due to the elevational difference between South Coast Highway and the terminus of Cleo Street.

Once the proposed Project is completed (i.e., operational), pedestrian and residential views would be restored. The stairways would not be considered a new element of the beach environment since they currently exist and would continue to be a permanent feature. Their rehabilitation would not introduce a new element unfamiliar to the existing view experienced by residents or beachgoers. Similarly, view conditions for motorist would also not change since these would continue to be experienced momentarily and briefly while driving past Cleo Street along South Coast Highway and would be consistent with existing conditions.

As such, the proposed Project would not result in any long or short-term significant impacts to a scenic vista either during construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? (Less Than Significant Impact)

See response to Environmental Issue (a) above. In addition, the proposed Project will not substantially damage scenic resources, including, but not limited to trees or rock outcroppings. As previously noted, the proposed Project is designed to rehabilitate and replace an existing coastal access facility and will follow the existing natural slopes. Additionally, the proposed Project will have minimal impacts on views that are within an "eligible" but not currently designated state scenic highway. Construction equipment, fencing, and materials may be temporarily visible from South Coast Highway, for up to four months and may impede views for motorist, pedestrians, and residents. During operation, existing views would be maintained and enhanced as a result of the improved



viewing facilities. As such, the proposed Project would not result in significant impacts to a scenic resource related to construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (Less Than Significant Impact)

Construction activities (e.g., construction equipment, construction fencing, vehicles, supplies/materials, workers) will be visible to the existing surrounding uses (e.g., nearby residences and beachgoers and South Coast Highway) for up to four months during Project construction, and related visual impacts associated with Project construction would be short-term. The Project would not result in a visually intrusive sight to viewers, either during construction or operation, because existing views from passing motorists or pedestrians are fleeting and not expansive or obstructive. Similarly, existing residential views of Cleo Street are generally limited, due to the presence of intervening trees and landscaping and the existing access entrance retaining wall. In addition, the Project is intended to connect neighborhoods and the public to the City Beach through a public stairway and an observation deck located within an open space area. The Project would also be compatible with the applicable zoning designation and with the City's General Plan, since it would contain features (landscaping, materials) consistent with the Landscape and Scenic Highways Element. Therefore, the Project is considered visually compatible with the immediate area and will not substantially degrade the visual character or quality of the site and its surroundings, either during construction or operation. Furthermore, the Project would not conflict with applicable zoning or other regulations governing scenic quality. Therefore, impacts would be less than significant, and no mitigation measures are required.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (No Impact)

Construction activities would occur during daylight hours and would not require construction at night and/or associated nighttime lighting. During operation, the access points would utilize existing lighting locations and would not change the existing lighting locations, scheme or focus. Similarly, there are no current sources of glare (e.g., windows, reflective materials) on-site at the stairs. Since the site is already developed, there are no additional lighting or glare sources that would be created by the Project. Therefore, the Project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area, either during construction or operation. Therefore, no impacts would result, and no mitigation measures are required.



3 Impact Analysis

3.3 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production as defined by Government Code Section 51104(g)?				X
d) Result in loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or conversion of forest land to non-forest use?				X



a) Would the project convert Prime, Unique or Statewide Importance Farmland to non-agricultural use? (No Impact)

Based on review of the California Agricultural Land Evaluation criteria, the Project is not located in, nor is adjacent to, designated agricultural land and, therefore, would not convert prime, unique, or statewide importance farmland to non-agricultural use. Therefore, no impacts would result, and no mitigation measures are required.

b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract? (No Impact)

The City of Laguna Beach does not include areas zoned for agricultural use or land subject to a Williamson Act contract. Therefore, no impacts would result, and no mitigation measures are required.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? (No Impact)

Based on review of the City's General Plan elements and California Department of Forestry and Fire Protection criteria, the Project is not located in, nor is adjacent to, designated forest land, timberland or zoned for Timberland Production. Therefore, the proposed Project will not conflict with existing zoning, nor cause the rezoning of forest land, timberland, or Timberland Production. Therefore, no impacts would result, and no mitigation measures are required.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use? (No Impact)

While the City of Laguna Beach is in a hillside area adjacent to the Pacific Ocean, based on review of the Forestry and Fire Protection criteria, the Project area is not located in, nor is adjacent to, designated forest land. As such, the Project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impacts would result, and no mitigation measures are required.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? (No Impact)

See responses to Environmental Issues (a) through (d) above. Therefore, the proposed Project would not involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. Based upon the analysis in this section, no impacts would result, and no mitigation measures are required.



3 Impact Analysis

3.4 Air Quality

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

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				X

The analysis and conclusions contained in this section are derived from Appendix B (Air Quality and GHG Impact Analyses, Pearl Street Beach Access) of this IS/MND. The Air Quality and GHG Impact Analyses was prepared for a similar beach access project and represents the same intensity and scale of air quality emissions that would occur under the proposed Project.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan? (Less than Significant Impact)

The Project is limited to and consists of the reconstruction of beach access infrastructure at the Project site. The majority of Project associated emissions would be generated during construction from off-road equipment as well as fugitive dust from activities on unpaved surfaces/excavation. As shown in Table 1, Project construction emissions would be below the applicable South Coast Air Quality Management District (SCAQMD) mass emissions thresholds of significance. Consequently, construction emissions would not be expected to conflict with or obstruct implementation of the applicable air quality plan or result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated as non-attainment under an applicable federal or state ambient air quality standard.

Operational emissions would generally consist of exhaust from portable and handheld equipment and on-road vehicles emissions from infrequent maintenance activities. The accessibility and safety of beach access via the rehabilitated Cleo Street entrance will be enhanced, but the overall throughput of users is expected to remain approximately the same, largely because the location of the entrance will not change (will not be moved to an area of greater or lesser population). There is not expected to



be an increase in operational emissions compared to those that already occur associated with operation and maintenance of the existing beach access proposed for rehabilitation. As such, operation of the Project would not have the potential to conflict with or obstruct implementation of the applicable air quality plan.

Table 1. Unmitigated Project Construction Emissions in Comparison to SCAQMD Significance Criteria

Component	Peak Daily Emissions (pounds per day)						
	VOC	NO _x	SO _x	CO	PM ₁₀	PM _{2.5}	Lead (Pb)
Regional Thresholds Construction	75	100	150	550	150	55	3
Localized Thresholds Construction	n/a	92	n/a	647	4	3	n/a
Estimated Construction Emissions	1.1	10.4	0.0	8.3	1.6	1.1	n/a
Exceeds Regional Thresholds?	No	No	No	No	No	No	n/a
Exceeds Localized Thresholds?	No	No	No	No	No	No	n/a

Source: Air Quality and GHG Impact Analyses, Pearl Street Beach Access, Laguna Beach, California, September 2016, CalEEMod Version 2013.2.2 Construction Estimates

- b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (Less Than Significant Impact)**

The Project would not involve an increase in operational emissions. Since the proposed Project's emissions do not exceed SCAQMD thresholds, the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard. Therefore, potential unmitigated Project impacts are considered to be less than significant, and no mitigation measures are required.

- c) Would the project expose sensitive receptors to substantial pollutant concentrations? (Less Than Significant Impact)**

Sensitive receptors are defined as populations that are more susceptible to the effects of pollution than the population at large. Sensitive receptors are facilities that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutant. Land uses identified to be sensitive receptors by SCAQMD in the California Air Resources Board's (CARB) Air Quality Handbook include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.



3 Impact Analysis

The Project site is directly adjacent to sensitive receptors to the north, south, and east with single-family residences as close as approximately 30 feet to the Project site boundary. Projects that are below the SCAQMD localized significance thresholds (LSTs) would not be expected to expose sensitive receptors to substantial pollutant concentrations. As shown in Table 1, the Project's construction emissions would be below the applicable LSTs. Therefore, the Project emissions will not expose sensitive receptors to substantial pollutant concentrations. In addition, to better ensure the safety of nearby receptors, Project construction activities will be conducted such that the Project is in compliance with SCAQMD Rule 403 to reduce fugitive dust emissions. Among other requirements, SCAQMD Rule 403, Fugitive Dust, establishes Best Available Control Measures that are applicable to all construction activities, including watering exposed soils and using tarps to cover haul truck loads. Receptors are also at risk from potential asbestos exposure during building demolition or reconstruction. Asbestos-containing materials (ACMs) are not expected at the site, however in the event that ACMs are found then construction would be required to comply with SCAQMD Rule 1403. SCAQMD Rule 1403, Asbestos Emissions from Demolition/Renovation Activities, establishes protocols for handling ACMs, and compliance with this rule would ensure that adverse effects to nearby sensitive receptors would not occur. For these reasons, potential impacts are considered to be less than significant and no mitigation measures are required.

d) Would the project create objectionable odors affecting a substantial number of people? (No Impact)

The SCAQMD has identified land uses commonly subject to odor complaints. These land uses include agriculture (farming and livestock), wastewater treatment, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD, 1993). The Project involves minor and short-term conventional construction activities that do not involve any of the SCAQMD identified land uses subject to odor complaints or components with the potential to create objectionable odors affecting a substantial number of people. The construction, operation, and maintenance of the proposed Project would not involve the type of land uses or industrial operations typically associated with odor nuisance. There are no land uses typically associated with the generation of nuisance odors in the Project study area. Therefore, there would be no impact regarding other emissions, and no mitigation measures are required.



3.5 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X



3 Impact Analysis

Appendix C (Biological Resources Survey Results) of this IS/MND contains the results of the biological resources survey, which are summarized below.

- a) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service? (Less Than Significant Impact with Mitigation Incorporated)**

3.5.1 Special-Status Plant Species

No special-status plant species were observed during the March 2023 survey. Three special-status plant species—aphanisma (*Aphanisma blitoides*), Coulter's saltbush (*Atriplex coulteri*), and decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)—have a low potential to occur on the site due to suitable elevation and soils, and recent nearby recorded occurrences. The remaining special-status species that are known to occur in the area are not likely to occur on-site.

3.5.2 Special-Status Wildlife Species

No special-status wildlife species were observed during the March 2023 survey. The majority of special-status wildlife known to occur in the region were determined to have no potential for occurrence. The on-site surveys revealed that the habitats within or adjacent to the Project site do have a low potential to support foraging (nesting is not likely to occur) for special-status avian wildlife species such as western snowy plover (*Charadrius nivosus nivosus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), coastal California gnatcatcher (*Polioptila californica californica*) and California least tern (*Sternula antillarum browni*).

In general, direct impacts to special-status plants and terrestrial wildlife, should they occur, include ground-disturbing activities associated with construction of the proposed Project and increased human presence (i.e., crushing, trampling, trapping). Potential indirect impacts include increased noise levels from heavy equipment (wildlife only), increased human disturbance, exposure to fugitive dust, the spread of noxious weeds, and disruption of breeding or foraging activity due to routine maintenance activities (wildlife only). Weed abatement through herbicide application or mechanized tools could also impact special-status species. If the proposed Project construction were to occur during the avian nesting season (generally considered to be between February 15 through September 15; although some raptors species may nest as early as January), indirect impacts to nesting birds could occur; the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) does not allow for take of migratory birds. The MBTA makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. "Take" is defined as possession or destruction of migratory birds, their nests, or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Plant and wildlife species are dynamic, with plant species potentially germinating since the reconnaissance survey and wildlife establishing residence. To ensure comprehensive consideration, these factors must be assessed both before and during construction. If implementation of the proposed Project were to impact special-status species, these impacts would be considered significant. Therefore, Mitigation Measures BIO-1 through BIO-6 would require pre-construction wildlife surveys prior to ground



disturbance, relocation of wildlife found within proposed Project impact areas during pre-construction surveys and daily monitoring, a biological monitor during site disturbing activities, implementation of environmental awareness training to educate Project personnel regarding on-site plants and wildlife, implementation of site-wide Best Management Practices (BMP) (i.e., restriction on open trenches and guidelines for refueling near drainage features), nesting bird surveys and avoidance measures for active nests. These measures would be implemented to mitigate these potentially significant impacts. Implementation of these Mitigation Measures would ensure that potential impacts to special-status plant and wildlife species are reduced to a less than significant level.

3.5.3 Mitigation Measures

BIO-1 Pre-construction Plant Survey

Prior to initial ground disturbance for any areas subject to ground disturbance, the Project proponent shall conduct pre-construction surveys for special-status plant species in all areas subject to ground-disturbing activity, including, but not limited to, slope grading, new access roads, staging areas, and Project construction. The surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and California Native Plant Society (CNPS). All listed plant species found shall be marked and avoided. Any populations of special-status plants found during surveys will be fully described, mapped, and a CNPS Field Survey Form or written equivalent shall be prepared.

Prior to site grading, any populations of special-status plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of the buffer depends upon the proposed use of the immediately adjacent lands and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, physical and chemical characteristics of soils) that are identified by the qualified plant ecologist or botanist. The buffer for herbaceous and shrub species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the City of Laguna Beach. Highly visible flagging shall be placed along the buffer area and remain in good working order during the duration of any construction activities in the area.

Where impacts to listed plants cannot be avoided, the USFWS and/or CDFW shall be consulted for authorization, as appropriate. Additional mitigation measures to protect or restore listed plant species or their habitat, including but not limited to a salvage plan including seed collection and replanting, may be required by the USFWS or CDFW before impacts are authorized.

A plant deemed rare by the CNPS, but not federally or state-listed as endangered or threatened, receives a California Rare Plant Ranking (CRPR) ranging from presumed extinct (CRPR 1A) to limited distribution/watchlist (CRPR 4). If non-listed rare plants cannot be avoided, and Project-related impacts result in the loss of 10 percent or more of the local population (i.e., occurrences within 0.25 mile of the Project impact location), compensatory mitigation will be required.



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Compensation: Compensation will be required for all impacts that exceed the 10 percent threshold (e.g., impacts to 15 percent of a population will only require compensation for 5 percent, the percentage of impacts that exceed the 10 percent threshold). To compensate for permanent impacts to special-status plants (including areas located beneath the arrays), habitat (which may include preservation of areas within the undisturbed areas of the Project footprint, mitigation lands outside of the main Project site, or a combination of both) that is not already public land shall be preserved and managed in perpetuity at a 1:1 mitigation ratio (one acre preserved for each acre impacted). Compensation for temporary impacts shall include land acquisition and/or preservation at a 0.5:1 ratio. The preserved habitat for a significantly impacted plant species shall be of equal or greater habitat quality to the impacted areas in terms of soil features, extent of disturbance, and vegetation structure, and will contain verified extant populations, of the same size or greater, of the special-status plants that are impacted.

Prior to the disturbance of habitat for or take of special-status plants the City of Laguna Beach must present documentation of a recorded conservation easement(s) for all compensation/mitigation lands to the United States Army Corps of Engineers (USACE) and CDFW as applicable. Compensation lands shall be located within the general vicinity of the City of Laguna Beach. An open space easement will be recorded on all property associated with the compensation/mitigation lands to protect the existing plant and wildlife resources in perpetuity. An open space easement can be held by CDFW or an approved land management entity and shall be recorded immediately upon the dedication or acquisition of the land.

BIO-2 Pre-Construction Wildlife Survey

Prior to ground disturbance or vegetation clearing within the Project site, a qualified biologist shall conduct surveys for wildlife (no more than 14 days prior to site disturbing activities) where suitable habitat is present and directly impacted by construction activities. Wildlife found within the Project site or in areas potentially affected by the Project will be relocated to the nearest suitable habitat that will not be affected by the Project prior to the start of construction. Special-status species found within a Project impact area shall be relocated by an authorized biologist to suitable habitat outside the impact area.

BIO-3 Biological Monitoring

A qualified biological monitor, with expertise in the species known to occur or with the potential to occur on the Project site, shall be retained to monitor construction activities. The qualified biologist shall be present during initial ground disturbance for each phase of construction. Once initial ground disturbance is complete, monitoring will occur periodically during all construction activities. The qualified biologist(s) shall be present during all ground-disturbing activities immediately adjacent to, or within habitat that supports populations of listed or special-status species.

If required, during pre-construction surveys and/or required monitoring efforts, the qualified biologist will relocate common and special-status species that enter the Project site; some special-status species may require specific permits prior to handling and/or have established protocols for relocation. Records of all detection, capture and release shall be reported to CDFW.



BIO-4 Environmental Awareness Training

All Project personnel must attend an environmental awareness and compliance training program prior to working on the Project site. The training program shall present the environmental regulations and applicable permit conditions that the Project team shall comply with. The training program shall include applicable mitigation measures established for the Project to minimize impacts to water quality and avoid sensitive resources, habitats, and species. Dated sign-in sheets for attendees at these meetings shall be maintained and submitted to the City of Laguna Beach.

BIO-5 Implement Best Management Practices (BMP)

Grading plans for the Project shall indicate that the Project shall implement the following BMPs:

- Restrict non-essential equipment to the existing roadways and/or ruderal areas to avoid disturbance to native vegetation.
- All excavation, steep-walled holes, or trenches more than six inches in depth will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth dirt fill or wooden planks. Trenches will also be inspected for entrapped wildlife each morning prior to onset of construction activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped wildlife. Any wildlife discovered will be allowed to escape before construction activities are allowed to resume or removed from the trench or hole by a qualified biologist holding the appropriate permits (if required).
- Minimize mechanical disturbance of soils to reduce impact of habitat manipulation on small mammals, reptiles, and amphibians.
- Removal/disturbance of vegetation shall be minimized to the greatest extent feasible.
- Install and maintain appropriate erosion/sediment control measures, as needed, throughout the duration of work activities.
- Vehicles shall not be driven, or equipment operated, in water covered/wetted portions any potentially jurisdictional feature, except as otherwise provided for in the permits/agreements from the CDFW, USACE, California Coastal Commission, and/or Regional Water Quality Control Board (RWQCB).
- No vehicles or equipment shall be refueled within 100 feet of an ephemeral drainage or wetland unless a bermed and lined refueling area is constructed. Spill kits shall be maintained on-site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks of materials.



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BIO-6 Nesting Bird Surveys and Avoidance Measures

Prior to initial site disturbance/issuance of grading permits, seasonally timed presence/absence surveys for nesting birds shall be conducted by a qualified biologist. If construction activities carry over into a second nesting season(s) the surveys will need to be completed annually until the Project is complete. A minimum of three survey events, three days apart shall be conducted (with the last survey no more than three days prior to the start of site disturbance), if construction is scheduled to begin during avian nesting season (February 15 through September 15); surveys for raptors shall be conducted from January 1 to August 15. Surveys shall be conducted within 500 feet of all Project activities.

If special-status species are observed, consultation with USFWS and/or CDFW is required. If breeding birds with active nests are found prior to or during construction, a qualified biological monitor shall establish a 300-foot buffer around the nest and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. The prescribed buffers may be adjusted by the qualified biologist based on existing conditions around the nest, planned construction activities, tolerance of the species, and other pertinent factors. The qualified biologist shall conduct regular monitoring of the nest to determine success/failure and to ensure that Project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. If construction occurs outside of avian nesting season, only a single presence/absence survey will be required.

b) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)

Special-status natural communities are defined by CDFW (2009) as, "...communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank; however, only those that are of special concern (S1-S3 rank) are generally evaluated under CEQA. Based on this ranking, none of the vegetation communities in the Project site are sensitive. No impacts to habitat areas identified as an Environmentally Sensitive Habitat Area (ESHA) were observed in or near the Project site. Table 2 provides a breakout of the potential impacts by vegetation and land cover types.

Table 2. Vegetation and Land Cover Types and Impact Acreages

Vegetation Community/Land Cover Type	Permanent Project Impacts (acres)
Beach	0.026
Landscaped Ornamental	0.018
Disturbed/Developed	0.036
Total Acres Impacted	0.080

Construction of the proposed Project would remove vegetation, alter soil conditions, and have the potential to result in the loss of native seed banks within portions of the Biological Survey Area (BSA). Construction activities could also result in the spread of noxious weeds within the Project site and adjacent habitats. During operation and maintenance of the Project, impacts would occur during routine maintenance activities and could include trampling or crushing of native vegetation by foot traffic, alterations in topography and hydrology, increased erosion and sedimentation, and the introduction of non-native, invasive plants due to increased human presence on foot or equipment. With Project-related impacts only occurring to unvegetated, disturbed/developed, or non-native land



cover types, impacts to riparian and/or other sensitive communities are not expected to occur, and no mitigation measures are required.

- c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (No Impact)**

The March 2023 survey identified the Pacific Ocean as the sole potentially jurisdictional aquatic feature. The proposed Project, situated above the mean high tide line, is unlikely to impact federal waters. However, minor soil disturbance from construction activities poses a risk of sediment transport into receiving waters like the Pacific Ocean, carrying pollutants such as metals and fuels. To address this, the Project will implement BMPs during construction, detailed in the Hydrology section, aiming to prevent pollutants from reaching stormwater and ensure erosion products remain on-site. Therefore, no impacts would result and no mitigation measures are required.

- d) 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? (Less Than Significant Impact)**

Wildlife movement corridors are defined on both a regional and on a local scale. Regionally, the proposed Project does not fall within a movement corridor. On a local basis, the beach and ocean allow for wildlife movement. Migratory birds may use the Project site and vicinity for breeding, nesting, and foraging, or as transient rest sites during migration flights. Because the Project is small and of a short duration, impacts to 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 site would be minor and would be less than significant. Therefore, no mitigation measures are required.

- e) Would the project conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)**

The City's General Plan/Open Space-Conservation Element focuses on preservation of natural resources, managed production of resources, outdoor recreation, public health and safety, and the conservation, development, and utilization of natural resources. The boundaries of this planning area correlate to the boundaries of the Laguna Canyon watershed. The General Plan describes robust vegetation and wildlife in the City's open space and undeveloped areas, including threatened or endangered species that are known to occur in the City.

However, the General Plan targets "High Value" and "Very High Value" areas for protection and areas bordering those areas for special study of potential impacts from development on the high value areas. The Project site is in a completely developed area that includes existing public coastal access facilities that are proposed for renovation. The Project site has been previously developed in conjunction with City's efforts to create access to the City Beach and the Pacific Ocean. The Project site is biologically simplified and is of low faunal carrying capacity. The Project site at present does not contain any protected species, nor is it near high or very high value areas depicted in the City's General Plan.



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The implementation of the proposed Project (beach access rehabilitation) will not conflict with any local policies or ordinance protecting said resources (e.g., trees). No protected trees were observed at the site. Therefore, the proposed Project will not conflict with any policies or ordinance pertaining to biological resources. No impacts would result, and no mitigation measures are required.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (No Impacts)

The California Marine Life Protection Act was passed in 1999 by the CDFW and the California State Parks to create a statewide network of Marine Protected Areas (MPA). The MPAs were created to protect California's marine life and habitats, marine ecosystems, and marine natural heritage and to improve educational, recreational, and study opportunities. The Project area falls within the Laguna Beach State Marine Reserve (SMR) boundary. According to the CDFW, within a SMR it is unlawful to injure, damage, take, or possess any geological, cultural, or living marine resource unless there is a specific scientific collecting permit issued by CDFW. During construction activities, it is anticipated that aquatic species may occur in the adjacent nearshore vicinity of the proposed Project, but outside of the Project impact area, and would therefore not be affected by construction activities. No adverse effects are anticipated from construction activities that will impact populations of the protected species within Laguna Beach SMR. Therefore, no impacts would result, and no mitigation measures are required.

While the Project occurs within the boundaries of the County of Orange Central and Coastal Subregion Natural Community Conservation Plan (NCCP), as well as the Orange County Transportation Authority NCCP/HCP, it does not conflict with any of either of the plan's requirements. The primary objective of the County of Orange Central and Coastal Subregion NCCP is to prevent the take (as defined by California Endangered Species Act (CESA) and Federal Endangered Species Act (FESA)) of species outlined in the plan. The coastal California gnatcatcher is the only NCCP-protected species with the potential to occur on-site. As the Project does not involve any take, it is in alignment with the NCCP, posing no conflicts. Because the Project is not a transportation project, there are no conflicts with the Orange County Transportation Authority NCCP/HCPs requirements. Therefore, this proposed Project will not conflict with the provisions of an adopted Habitat Conservation Plan, NCCP, or other approved local, regional, or state habitat conservation plan. Therefore, no impacts would result, and no mitigation measures are required.



3.6 Cultural Resources

Would the project	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

This section addresses potential impacts to cultural resources, both historical and archaeological, that could result from the proposed Project. A memorandum was prepared by Stantec Consulting Services Inc. (Stantec) in April 2023 that analyzes whether the proposed Project would impact historical resources as defined by CEQA. The following analysis is based on information provided in this memorandum, which is included in Appendix D (Cultural Resources Memorandum) of this IS/MND.

To prepare this memorandum, Stantec conducted a cultural resources field survey of the Project site and immediate vicinity, requested a records search from the South Central Coastal Information Center (SCCIC), consulted the California Built Environment Resource Directory (BERD), as well as reviewed the Laguna Beach Historic Register. Stantec also conducted research into the history of the beach access stair on the Project site and reviewed ordinances, statutes, regulations, bulletins, and technical materials relating to national, state, and local historic preservation designations to evaluate the significance and integrity of the Cleo Street beach access stair as a potential historical resource.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? (Less Than Significant Impact)

The proposed Project would demolish the existing Cleo Street beach access stair located on the Project site. This structure is not currently listed under national, state, or local landmark or historic district programs and is not included as significant in any historic resource surveys or the area. The existing stair was constructed sometime between 1955 and 1963. As the structure is over 50 years of age, Stantec prepared a brief evaluation of its eligibility for listing in the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), and City of Laguna Beach Historic Register.

After careful inspection, investigation, and evaluation, Stantec concluded that the existing beach access stair is ineligible for listing due to a lack of significance. Research did not reveal any associations with persons or events of historic importance. It does not embody distinctive characteristics of a type, period, or method of construction, represent the work of a master, or possess high artistic value. As a beach access stair from the postwar period, it has limited potential to yield important information about such topics as construction techniques or human activity. As a



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result, the Cleo Street beach access stair is recommended not eligible for the NRHP, CRHR, or City of Laguna Beach Historic Register under any criteria (see Appendix D, Cultural Resources Memorandum for the full evaluation).

Stantec established a study area (Study Area) to account for potential impacts on historical resources in the vicinity. The Study Area includes the Project site and parcels within a 100-foot radius. Stantec also reviewed existing information to determine if there are any listed or previously surveyed historical resources within the Study Area. There are no historical resources in the Study Area.

A qualified archaeologist conducted a field survey of the Project site on March 20, 2023. No archaeological historical resources were identified.

The threshold for determining significant impacts on historical resources in the State CEQA Guidelines is whether the proposed Project would cause a substantial adverse change, which is defined as demolition, destruction, relocation, or alteration of the resource or its immediate vicinity such that the historical resource is materially impaired (Title 14 CCR Section 15064.5[b][1]). As the existing Cleo Street beach access stair on the Project site that would be removed does not meet the definition of a historical resource according to CEQA, nor are there archaeological historical resources on the Project site. The Project would have no impacts on either archaeological or built environment historical resources, and no mitigation measures are required.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? (Less Than Significant Impact with Mitigation Incorporated)

An archival record search, literature review, field survey, and Native American consultation were performed as part of the cultural resources inventory for the Project. No archaeological resources were identified within the Project area as a result of the archival research, literature review, field survey, and Native American consultation. Although no archaeological resources were identified, some Tribes have identified the Project area as sensitive for tribal cultural resources. Please see section 3.18 for a detailed summary of tribal consultation completed for the Project. The Project site is already developed with coastal access facilities such as a stairway. The Project proposes to rehabilitate and renovate an existing beach stairway leading to the City Beach and the Pacific Ocean. The proposed Project is therefore not anticipated to have an impact on any known or potential archaeological resources.

However, subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered unique archaeological resources. Consistent with the City's General Plan, a mitigation measure is presented below to reduce potential impacts to cultural resources in the unlikely event said resources are discovered or disturbed during minor grading or construction activities associated with implementation of the Project. Therefore, Mitigation Measure CUL-1 is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface unique archaeological resources. With the implementation of Mitigation Measure CUL-1, potential impacts would be reduced to a less than significant level. The mitigation measures presented below have been included to ensure that any potential significant impacts to cultural resources can be avoided or reduced to a less than significant level.



3.6.1 Mitigation Measures

CUL-1 Cultural Materials Discovered during Construction

If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist approved by the City shall be retained by the contract to evaluate the finds, evaluate the item for its significance and record the item on the appropriate State Department of Parks and Recreation 523 series forms, and develop and carry out a program of mitigation as appropriate. The archaeologist and the Native American Monitor shall determine whether the resource requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the resource is determined to be eligible for listing on the California Register of Historical Resources as a unique archaeological resource as defined in PRC Section 15064.5, the archaeologist shall develop a plan for the treatment of the resource. The plan shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, submittal of cultural material to an appropriate repository, or other appropriate measures outlined in Public Resources Code Section 21083.2. A final report shall be submitted to the SCCIC.

c) Would the project disturb any human remains, including those interred outside formal cemeteries? (Less Than Significant Impact)

There are no known human remains within the Project area, and there are no indications that the Project location has been used for burial purposes in the past. Therefore, it is unlikely that human remains would be encountered during construction. However, although ground disturbance and subsurface construction activities associated with the proposed Project could potentially disturb previously undiscovered human burial sites, compliance with Section 7050.5 of the California Health and Safety Code and PRC 5097.98 would ensure that impacts would remain less than significant.



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3.7 Energy

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (Less Than Significant)

Energy in the form of electricity and transportation fuel would be expended to construct the proposed Project. However, the amount of consumption would be minor in comparison to the number of available resources. Both the region and state are replete with these resources. In addition, modern construction equipment has been designed to be more efficient, due to energy reduction requirements by state and federal regulations. Moreover, equipment would not be permitted to remain idling while not in use, which would further reduce the consumption of energy resources. During operation, energy consumption would be limited to beach access lights and would employ light emitting diodes (LED), which have very low electricity requirements and would be more efficient than the ones currently being used. Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (No Impact)

The City does not have an adopted Energy Plan; however, local jurisdictions, including the City, are actively seeking to eliminate energy waste, improve the efficiency with which energy is used, encourage the use of renewable energy, such as the sun and wind, and increase awareness of energy issues in the City. These measures serve as the basis of a road map for integrating comprehensive alternative strategies into the community in ways that make economic sense and help the City in adapting to the changing climate. They also assist to reduce energy use related to buildings, reduced vehicle emissions, and lighting maintained and operated by the City and Southern California Edison. As the Project consists of the rehabilitation of public access stairs to the beach, there are no characteristics of the Project that would result in a conflict or obstruction with a state or local plan related to renewable energy or energy efficiency. Therefore, no impacts would result, and no mitigation measures are required.



3.8 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?			X	
ii. Strong seismic ground shaking?			X	
iii. Seismic-related ground failure, including liquefaction?			X	
iv. Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		



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a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. The rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Less Than Significant Impact)

The City, as well as most of Southern California, is in a region of historical seismic activity. No known active fault systems are located within the limits of the City or the Project site. Therefore, no part of the City has been delineated on the Alquist-Priolo Earthquake Fault Zone map. However, the City is in a region with several active faults. The most significant faults potentially affecting the City on a regional basis are the Newport-Inglewood Fault, the Whittier-Elsinore Fault, and the San Jacinto Fault. There are also distant faults that could affect the City by generating a powerful shock, such as the San Andreas Fault and the San Jacinto Fault, two great faults that have historically shown activity.

The Newport-Inglewood Fault runs north-south, approximately three miles west of the City. Therefore, based on the foregoing analysis, the proposed Project will not result in any significant impacts in relation to a rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, and no mitigation measures are required.

ii. Strong seismic ground shaking? (Less Than Significant Impact)

There are active or potentially active fault systems that can affect the City, including the Project site. The most significant known active faults include the Newport-Inglewood Fault and the Whittier-Elsinore Fault. The closest approach of an active fault to the Project site is the Newport-Inglewood fault, which is located approximately three miles to the west of the City. The potential for damage resulting from seismic-related events exists within the City, as it does throughout Southern California. Seismic hazards include ground shaking, ground failure, ground displacement, tsunamis, and seiches. The site is expected to be subject to moderate to severe ground shaking from a regional seismic event within the Project life of the proposed beach access stairs and viewing deck. The Newport-Inglewood Fault Zone and the Whittier-Elsinore Fault Zone have the greatest potential for causing earthquake damage related to ground shaking at the Project site. However, the proposed Project includes no habitable structures that would be impacted by a seismic event. Therefore, impacts would be less than significant, and no mitigation measures are required.

iii. Seismic-related ground failure, including liquefaction? (Less Than Significant Impact)

According to the Geologic Hazard Zones Map in the City General Plan, Safety Element, the site is not located within a potential liquefaction zone. The proposed Project entails the rehabilitation of beach access amenities, replacing existing non-habitable structures as part of the Project. Therefore, all potential impacts relative to this topic are considered less than significant, and no mitigation measures are required.



iv. Landslides? (Less Than Significant Impact)

According to the Geologic Hazard Zones Map of the City General Plan, Safety Element, the Project site is not located within a potential landslide zone. The proposed Project entails the rehabilitation of beach access amenities, replacing existing non-habitable structures as part of the Project. Therefore, all potential impacts relative to this topic are considered less than significant, and no mitigation measures are required.

b) Would the project result in substantial soil erosion or the loss of topsoil? (Less Than Significant)

The proposed Project would modify, but largely maintain, the natural contours and slopes of the property to replace the public beach access point. Construction activities would not result in substantial soil erosion or loss of topsoil, nor would this be expected during operation. The replacement stairway and deck would be constructed generally on the site of the existing beach access amenities. In addition, the proposed Project would be required to adhere to the City's Grading Manual, which includes measures to address and control erosion and siltation. Therefore, impacts would be less than significant, and no mitigation measures are required.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? (Less Than Significant Impact)

According to the Geologic Hazard Zones Map of the City General Plan, Safety Element, the Project site is not located within or subject to an off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, impacts would be less than significant, and no mitigation measures are required.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (Less Than Significant Impact)

The Project proposes replacement of existing beach access amenities and includes no habitable structures. In addition, an analysis of the on-site soils indicates they are not considered expansive, as defined in Table 18-1-B of the Uniform Building Code (1994). Therefore, no significant impacts relative to this topic are anticipated due to Project implementation, and no mitigation measures are required.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (No Impact)

The proposed Project involves replacement of existing public beach access facilities; as such, the Project does not involve issues pertaining to soils incapable of supporting septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur, and no mitigation measures are required.



f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less than Significant with Mitigation)

A Paleontological Resource Assessment was prepared for the proposed Project and is contained within Appendix E (Paleontological Resource Assessment) of this IS/MND. The results of this assessment indicate that two geologic units are present in the Project area: very young marine deposits, which are assessed as having low paleontological potential; and the Topanga Group, which is assessed as having high paleontological potential. As the proposed Project will require some ground disturbance, impacts to potential paleontological resources is considered potentially significant. However, with the implementation of the following mitigation measures, these impacts would be reduced to less than significant levels:

3.8.1 Mitigation Measures

GEO-1 Paleontological Monitoring

A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the final Project plans that provides for paleontological monitoring of earthwork and ground-disturbing activities into undisturbed geologic units with high paleontological potential, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include provisions for a Worker's Environmental Awareness Program (WEAP) training that communicates requirements to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance, procedures for the inadvertent discovery of paleontological resources during construction, and final reporting, to be submitted to the lead agency. Fulltime paleontological monitoring should be conducted for all ground disturbance into previously undisturbed sediments in areas mapped as the Topanga Group and once excavations reach 5 feet in depth in areas mapped as very young marine deposits. The Project Paleontologist may alter the frequency of monitoring based on subsurface conditions.

GEO-2 WEAP Training

The Project Paleontologist should develop a WEAP training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.

GEO-3 Unanticipated Discoveries

In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The designated Project Paleontologist shall assess the find. Should the Project Paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data, the final monitoring report, and curation fees.



3.9 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X	

The analysis and conclusions contained in this section are derived from Appendix B (Air Quality and GHG Study) of this IS/MND. The Air Quality and GHG Impact Analyses was prepared for a similar beach access project, and represents the same intensity and scale of greenhouse gas emissions that would occur under the Project.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Less Than Significant Impact)

The Project is limited to and consists of rehabilitating the existing beach access infrastructure located at the Project site. The Project would generate greenhouse gas (GHG) emissions during construction from off-road equipment and on-road vehicle exhaust from worker vehicles and materials delivery. There would be no increase in operational emissions. As such, operational emissions are not considered to result in additional potential impacts to climate change; Therefore, no mitigation measures are required.

Table 3, presents a summary of the estimated total GHG emissions that would likely result from Project implementation.

Table 3. Total Estimated Project GHG Emissions

Project Phase	CO ₂ e
Construction Emissions (lbs/day)	1,708.8
Construction Emissions (Total Metric Tons)	65.5
Construction Emissions (Total Metric Tons; amortized over 30 years)	2.2
Operation Emissions (annual)	No increase
Interim SCAQMD Threshold (Total Metric Tons)	3,000
Project Emissions Exceed SCAQMD Threshold?	No

Source: Air Quality and GHG Impact Analyses, Pearl Street Beach Access, Laguna Beach, California, September 2016, CalEEMod Version 2013.2.2 Construction Estimates



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As shown in Table 3, construction of the proposed Project would emit an estimated 65.5 metric tons (MT) of carbon dioxide equivalent (CO₂e). When the emissions are amortized over 30 years, in accordance with SCAQMD guidance, the 30-year annualized value is 2.2 MT of CO₂e per year. The 2.2 metric tons addition of CO₂e emissions is less than the 3,000 MT CO₂e significance threshold. As such, the proposed Project would not generate GHG emissions, either directly or indirectly, that would have a substantial adverse effect on the environment. Therefore, potential impacts would be less than significant, and no mitigation measures are required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Less Than Significant Impact)

The State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006, which was signed on September 27, 2006, to further the goals of Executive Order (EO) S-3-05 (Health and Safety Code, S38500 et seq.). AB 32 requires CARB to adopt Statewide GHG emissions limits to achieve Statewide GHG emissions levels at the same levels they were atmospherically in 1990 by the year 2020. A longer-range goal requires an 80 percent reduction in GHG emissions from 1990 levels by 2050. CARB adopted the 2020 statewide target and mandatory reporting requirements in December 2007 and the Scoping Plan in December 2008. Senate Bill (SB) 32, signed on September 8, 2016, expands on the mandate of AB 32 requiring CARB to ensure that state GHG emissions are reduced to 40 percent below the 1990 emission level by year 2030. Section 38566 is added to the current Health and Safety Code, which states “the State board shall ensure that Statewide GHG emissions are reduced to at least 40 percent below the Statewide GHG emissions limit no later than December 31, 2030.” CARB prepared the 2017 Final Scoping Plan to prepare a blueprint for the state to meet SB 32’s goals (CARB 2017). Finally, in 2022, the state passed AB 1279 which requires the state to reach net zero GHG emissions no later than 2045. CARB approved the 2022 Scoping Plan in December 2022 which built upon the 2008 and 2017 Scoping Plans in order to meet California’s SB 32 and AB 1279 GHG reduction targets.

The Project does not include stationary sources of GHG emissions and is not subject to compliance with AB 32’s cap-and-trade program. The proposed Project would not conflict with any measures within CARB’s 2017 or 2022 Scoping Plans. The City has enacted a Climate Protection Action Plan (CPAP) to reduce overall City emissions by 7 percent below 1990 levels, and is currently working on preparing an updated Climate Action and Adaptation Plan. The City’s plan is specific to the reduction of GHG associated with: buildings, transportation and land use, government operations, commercial operations, and water management. Specific reduction measures for land use encourage the use of drought-tolerant plant materials and low water irrigation techniques as well as transformation of public land into areas with shade trees, bike racks, and accommodations for pedestrians. These measures have been proposed for the Project. The Project’s use of fuels during construction would be consistent with existing regulations related to low carbon fuel standards achieved through regulations placed on the fuel manufacturing and supply industry.

Considering the above, as well as that the Project’s GHG emissions would be far below SCAQMD’s thresholds of significance, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, impacts are considered to be less than significant, and no mitigation measures are required.



3.10 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use compatibility plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X



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The proposed Project would not result in any significant impacts to hazards and hazardous materials. The Project site is currently developed with coastal access stairs and a viewing deck, and the proposed Project will rehabilitate and/or replace those structures. Construction activities are the primary sources of hazardous materials during the Project's construction phase.

The subject Project site is not on a list of hazardous materials sites compiled pursuant to California Government Code Sections 65962.5. Based on a review of the State of California Water Resource Control Board's (SWRCB's) GeoTracker online environmental database; however, there is one site with an open case status, with eligibility for closure, within 1,000 feet of the proposed Project. This site has an open case status and is considered to be a less than significant risk due to its eligibility for closure status. Additionally, there are two other sites within 1,000 feet of the proposed Project that do have a closed status and are not considered to represent an environmental risk related to construction and operation of the Project. A summary of these listings and their location relative to the proposed Project is summarized below:

- Chevron #9-1966, 604 South Coast Highway, Laguna Beach, California 92651 (Approximately 890 feet north-northeast of the Project)

This site was subject to an unauthorized release from a leaking underground storage tank in 1985 that was subject to corrective action (soil vapor extraction) under the regulatory oversight of the Orange County Health Care Agency. The status of the site is listed as case open-eligible for closure, as of October 5, 2021. Based on the status and distance from the proposed Project, this site does not represent a risk for the proposed Project.

- Jiffy Gas Station, 890 South Coast Highway, Laguna Beach, California 92651 (Approximately 740 feet south-southeast of the Project)

This site was subject to an unauthorized release from a leaking underground storage tank in 1988 that was subject to corrective action (free product removal, soil vapor extraction, pump and treat groundwater, and in-situ chemical treatment) under the regulatory oversight of the State Water Resources Control Board. The status of the site is listed as case closed, as of July 3, 2012. Based on the status and distance from the proposed Project, this site represents a less than significant impact risk for the proposed Project.

- Chevron, 590 South Coast Highway, Laguna Beach, California 92651 (Approximately 980 feet north-northwest of the Project)

This site was subject to an unauthorized release from a leaking underground storage tank in 1985 that was subject to corrective action (soil vapor extraction and soil excavation) under the regulatory oversight of the Orange County Health Care Agency. The status of the site is listed as case closed, as of June 30, 2015. Based on the status and distance from the proposed Project, this site represents a less than significant impact risk for the proposed Project.

a) Would the project create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials? (Less Than Significant Impact)

The Project proposes to rehabilitate a beach access facility and construct a new permanent lookout at Cleo Street, near South Coast Highway. The proposed Project does not include the routine transport, use, or disposal of hazardous materials that could create a significant hazard to the public or the



environment. The proposed Project involves the construction of a beach access stairway and a viewing deck on the Project site. The proposed Project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials. Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Less Than Significant Impact)

The proposed Project will not be a generator of hazardous materials. No significant hazardous materials would be stored or handled on-site associated with the operational characteristics of the proposed Project. However, construction equipment will be operating on the Project site, and temporary storage of hazardous materials (such as fuels, lubricants, and cleaning solutions) on the site could occur. Project construction would include short-term use of construction equipment that will produce emissions. Additionally, in relation to construction activities, the proper use and maintenance of equipment, along with the use of BMPs, greatly reduces the potential risk of spills and releases that can result in impacts to soil and/or groundwater. Therefore, adherence to standard and required ordinances and laws would reduce impacts to less than significant levels, and no mitigation measures are required.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Less Than Significant Impact)

There is a pre-school within one-quarter mile of the site to the west. There will be no hazardous materials stored on-site and we do not predict wind direction to be a factor during the duration of construction to the Project area. The proposed beach access stairway and viewing deck will not emit hazardous emissions or involve hazardous or acutely hazardous materials, substances, or waste during construction or post-construction. The annual wind direction is statically south with some variation to the south-southwest, whereas the school is west-northwest of the site. Therefore, potential impacts to schools related to hazardous emissions or hazardous or acutely hazardous materials would be less than significant, and no mitigation measures are required. Should air pollution become an issue during the site, mitigation measures such as silt screen and fencing, as well as dust control with water misting and spray will be used to prevent any potential air contamination.

d) Would the project be located on a site which is included on a list of hazardous materials sites which complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (No Impact)

The location of the site is not included on a list of hazardous materials sites compiled pursuant to California Government Code Sections 65962.5. As mentioned above, there are one open case site close to the proposed Project that may have little to no impact on the site due to its eligibility to close status. However, the Project itself will not result in any impacts relative to hazardous materials sites. Therefore, there would be no impact, and no mitigation measures are required.



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- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project area.**

(No Impact)

The proposed Project is not located within an airport land use plan, nor within two miles of a public or public use airport. Therefore, no impacts related to a safety hazard or excess noise for people residing or working in the area would result. Therefore, no impacts would result, and no mitigation measures are required.

- f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Impact)**

The Project proposes to rehabilitate a beach access facility and construct a new permanent lookout at Cleo Street, near South Coast Highway. There is nothing associated with the proposed Project (construction or operation) that would impede implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. The proposed Project will not result in any impacts to an adopted emergency response plan or an emergency evacuation plan. Therefore, no impacts would result, and no mitigation measures are required.

- g) Would the project Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (No Impact)**

The proposed Project is not located in a developed area that is identified as a Very High Fire Hazard Severity Zone. It is not adjacent to wildlands, such as some of the City neighborhoods adjacent to the Laguna Greenbelt wildland areas. The proposed Project includes no habitable structures that would require Uniform Fire Code standards. The proposed Project includes rehabilitation of a beach public access point that involves a stairway and a viewing deck leading to the City Beach. The proposed Project does not propose any features that would impair implementation of or physically interfere with emergency response or evacuation. Therefore, the proposed Project would not result in an impact associated with wildland fires, and no mitigation measures are required.



3.11 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would			X	
i. result in substantial erosion or siltation on- or off-site;			X	
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv. impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	



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a) Would the project violate any water quality standards or waste discharge requirements? (Less Than Significant Impact)

The Cleo Street site is developed and will continue to remain so when the beach access facilities renovation Project is completed. Portions of the City (including the Project site) are located in the Laguna Coastal Streams Watershed. The Project area is under the jurisdiction of the RWQCB, San Diego Region, for issues related to water quality. The San Diego Region includes cities and municipalities in a portion of south Orange County (including the City), Riverside County and San Diego County. Each of the nine Regional Boards within California is required to adopt a Water Quality Control Plan, or Basin Plan. Each Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; (3) describes implementation programs to meet the objectives and protect the beneficial uses of all waters in the region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

There is a Drainage Area Management Plan (DAMP) which is implemented by the cities (including Laguna Beach), County of Orange, and Orange County Flood Control District. The DAMP was prepared in compliance with specific requirements of the National Pollutant Discharge Elimination System (NPDES) storm water program. The DAMP includes a wide range of BMPs and control techniques to further reduce the number of pollutants entering the storm drain system.

The City prepared the Laguna Coastal Streams Watershed Workplan, which is updated each year. Previous water quality studies prepared by "Heal the Beach" and the County of Orange have found that the water quality in the Pacific Ocean along the Laguna Coastal Streams Watershed consistently ranks among the cleanest in Southern California, with regard to meeting ocean plan objectives.

Construction activity includes any work associated with minor grading and construction of the Project site. This includes demolishing and removing some of the existing stairway and viewing deck from the existing coastal access location covered by the Project. Due to the minor soil disturbance associated with construction activity, there is a potential for some sediment to be transported from the construction site into receiving waters, such as the Pacific Ocean. Other potential pollutants include metals and fuels from vehicles and heavy equipment.

In accordance with NPDES regulations, the State of California requires that any construction activity disturbing one acre or more of soil comply with the State General Construction Activity Storm Water Permit (Water Quality Order 99-08-DWQ). However, the total Cleo Street beach access facility renovation Project will disturb less than one acre of soil.

Nevertheless, the Project will be conditioned to implement BMPs during construction activities. The purpose of implementing BMPs is to prevent all construction pollutants from contacting storm water and to keep all erosion products from moving off-site into receiving waters.

Certain discharges of non-storm water, such as irrigation, pipe flushing and testing, are permitted, as long as they do not cause or contribute to a violation of any water quality standard; violate any provision of the General Permit; or require a non-storm water permit (such as those issued by the San Diego RWQCB). Typical construction BMPs required by the NPDES permit and the pollutants



they target are shown in Table 4. Due to the type of Project proposed and its characteristics (beach access facility rehabilitation), not all of the typical construction BMPs identified in Table 4 are applicable to the Project (e.g., storm drain inlets).

Pollutants associated with the Project could include sediments (soil disturbance), nutrients (fertilizers, eroded soils), metals (vehicles), oil, and grease (vehicles).

Because the proposed Project would be required to adhere to standard measures to protect water quality, impacts would be less than significant, and no mitigation measures are required.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (Less Than Significant Impact)

The Project site is located on developed land, and the subject property will remain developed after implementation of the Project. The overall amounts of impervious surfaces, both existing and proposed, would largely remain the same and would not change substantially, such that a considerably measurable difference would occur. The proposed Project will not impact groundwater supplies or interfere with groundwater recharge. Therefore, the proposed Project would result in less than significant impacts to groundwater, and no mitigation measures are required.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would (Less Than Significant Impact):

i. result in substantial erosion or siltation on- or off-site?

The proposed Project will not result in a significant change to the drainage pattern of the Project site. The existing contours would largely remain the same, and the overall amount of impervious surfaces would be about the same in area. The proposed Project would not involve the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on-site or off-site. The beach access rehabilitation Project is planned to follow the natural contours and slopes of the property. Therefore, the proposed Project would result in less than significant impacts related to erosion or siltation on-site or off-site, and no mitigation measures are required.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Miscellaneous street and storm drain improvements, including curb and gutter, storm drain inlets, and piping, are proposed. These improvements would be adequately sized to capture and convey the projected stormflows and would not result in flooding either on- or off-site. The proposed Project will not alter the course of a stream or a river. Therefore, the proposed Project would result in less than significant impacts, and no mitigation measures are required.



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Table 4. Typical Construction Best Management Practices

Construction BMPs for Incorporation, where Applicable, into the Storm Water Pollution Prevention Plan (SWPPP)	Sediment	Nutrients	Pathogens	Pesticides	Metals	Other
Soil and slope stabilization utilizing the appropriate combination of natural and synthetic mattings, geotextiles, mulches, and temporary and permanent seeding.	X	X			X	
Temporary desilting basins constructed where necessary and consisting of ponds with outflow pipes designed to retain or detain runoff sufficiently to allow sediment to settle.	X	X			X	
Storm drain inlet protection utilizing an appropriate combination of barrier devices such as sandbags, straw rolls, hay bales, fiber rolls, gravel, silt fencing, screens, and temporary drain signs (raising awareness and limiting construction wastes from entering the storm drain system).	X	X			X	Trash
Energy dissipation devices installed where necessary and consisting of physical devices such as rock, riprap, and concrete rubble intended to prevent scour of downstream areas.	X	X			X	
On-site dust control and street sweeping employed when and where necessary, paying close attention to paved areas and areas susceptible to wind erosion (such as soil stockpiles).	X	X			X	Trash
Stabilized construction entrance consisting of pads of aggregate and located where traffic enters public rights-of-way; when and where necessary, wash racks or tire rinsing may be employed (tire rinse waters being directed through on-site sediment control devices).	X				X	



Construction BMPs for Incorporation, where Applicable, into the Storm Water Pollution Prevention Plan (SWPPP)	Sediment	Nutrients	Pathogens	Pesticides	Metals	Other
Diversion structures consisting of devices such as silt fencing, temporary or permanent channels, V ditches, earthen dikes, downdrains, straw bales, and sandbag check dams should be utilized where necessary to divert storm water flows from disturbed areas.	X				X	Trash
Adherence to Groundwater Extraction Permit by conducting required testing, monitoring, and discharge provisions for activities, including dewatering and foundation dewatering.	X				X	
Construction housekeeping practices consisting of practices such as barricading catch basins and manholes during paving activities; utilizing plastic sheeting, secondary containment, or bermed areas for construction materials when necessary; removing construction debris in a timely fashion; designating and lining concrete washout areas; and berming or locating sanitary facilities away from paved areas.	X		X		X	Trash
Fertilizer, pesticide, and soil amendment management , including not over applying such materials.		X		X		

Source: California Storm Water BMP Handbooks (2003)



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iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Refer to responses a and c(ii), above. Therefore, Project impacts associated with runoff would be less than significant, and no mitigation measures are required.

iv. impede or redirect flood flows?

Refer to responses a and c(ii), above. Therefore, Project impacts associated with impeding or redirecting flood flows would be less than significant, and no mitigation measures are required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (Less Than Significant Impact)

Because the site is located near the Pacific Ocean on the coastal bluffs, it is anticipated that the Project site could potentially experience impacts associated with inundation by tsunami. It is most likely that a tsunami run-up would reach only part way up the stairway leading to the beach, resulting in a limited hazard threat. The Project itself does not expose people or structures to a significant risk involving flooding, or flooding, as a result of the failure of a levee or dam since it is a restoration of beach access facilities that already exist. Additionally, the City has emergency procedures in the event of a major event (e.g., flooding, earthquake, evacuation plans). Therefore, impacts associated with inundation by seiche, tsunami, or mudflow would be less than significant, and no mitigation measures are required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Less Than Significant Impact)

The proposed Project will be required to comply with all existing requirements regarding water quality. In addition, as noted in response b, above, the proposed Project would result in less than significant impacts related to groundwater recharge. Therefore, impacts related to obstructing the implementation of a Water Quality Control Plan or Groundwater Management Plan would be less than significant, and no mitigation measures are required.



3.12 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

a) Would the project physically divide an established community? (No Impact)

The Project site is currently developed. The Project provides rehabilitation and replacement of a beach public access facility at Cleo Street along the beach. The proposed Project will not physically divide an established community, because the pedestrian access currently exists and is designed to provide public access to the coastal areas. Therefore, no impacts relative to this topic are anticipated, and no mitigation measures are required.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (Less Than Significant Impact)

The access point is located within the public street right-of-way that terminates at the City Beach at Cleo Street. Therefore, there is no General Plan land use designation for the site. The proposed Project will provide connections between neighborhoods and transportation facilities, to the City Beach and the Pacific Ocean. The proposed Project is consistent with the City’s General Plan Open Space/Conservation Element, which call for retaining and improving existing public beach access facilities in the City.¹ The proposed Project is also compatible with surrounding land uses. A consistency analysis is presented below in Table 5.

¹ City of Laguna Beach, Open Space/Conservation Element, Policy 3-A, page 21.



Table 5. Land Use Element and Coastal Land Use Plan Consistency Analysis

Policy	Consistency Determination
<p>Land Use Element (LUE) Policy 7.3: Design and site new development to protect natural and environmentally sensitive resources, such as areas of unique scenic quality, public views, and visual compatibility with surrounding uses and to minimize natural landform alterations.</p>	<p>Consistent – The proposed Project would represent a continuation of the existing uses but would provide enhanced and safer access to the beach for beachgoers. As noted in Section 3.2 (Aesthetics), the analysis determined that the proposed Project would not result in any long or short-term significant impacts to a scenic vista, scenic resource, degrade the existing visual character or quality of public views of the site and its surroundings, or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area either during construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.</p>
<p>LUE Action 7.3.2: Review all applications for new development to determine potential threats from coastal and other hazards.</p>	<p>Consistent – The proposed Project would be subject to all discretionary requirements for this type of project. In addition, as noted in Section 3.8 (Geology and Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City and therefore, impacts would be less than significant, and no mitigation measures are required.</p>
<p>LUE Action 7.3.3: Design and site new development to avoid hazardous areas and minimize risks to life and property from coastal and other hazards.</p>	<p>Consistent – The proposed Project represents a continuation of the existing uses. In addition, as noted in Section 3.8 (Geology and Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City and therefore, impacts would be less than significant, and no mitigation measures are required.</p>



Policy	Consistency Determination
<p>LUE Action 7.3.4: Require new development to assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.</p>	<p>Consistent – The proposed Project represents a continuation of the existing uses. In addition, as noted in Section 3.8 (Geology and Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City. In addition, the bluff was substantially altered during initial construction of the access stairs and the installation of the rehabilitated stairs would not substantially or significantly alter the existing condition. Therefore, impacts would be less than significant, and no mitigation measures are required.</p>
<p>LUE Action 7.3.9: Ensure that new development, major remodels, and additions to existing structures on oceanfront and oceanfront bluff sites do not rely on existing or future bluff/shoreline protection devices to establish geologic stability or protection from coastal hazards. A condition of the permit for all such new development on bluff property shall expressly require waiver of any such rights to a new bluff/shoreline protection device in the future and recording of said waiver on the title of the property as a deed restriction.</p>	<p>Consistent – The proposed Project includes the rehabilitation of an existing structure. The proposed Project is not expected to experience significant coastal bluff retreat and the proposed structure would be constructed consistent with the required building codes and consider such factors as coastal erosion (e.g., wind, wave, tide) in their design and construction. As noted in Section 3.8 (Geology and Soils) impacts would be less than significant, and no mitigation measures are required. In addition, if required, the proposed Project would be subject to all relevant permit requirements on the title of the property.</p>
<p>LUE Action 7.3.11: Require all Coastal Development Permit applications for new development on an oceanfront or on an oceanfront bluff property subject to wave action to assess the potential for flooding or damage from waves, storm surge, or seiches, through a wave uprush and impact report prepared by a licensed civil engineer with expertise in coastal processes. The conditions that shall be considered in a wave uprush study are: a seasonally eroded beach combined with long-term (75 years) erosion; high tide conditions, combined with long-term (75 year) projections for sea level rise; storm waves from a 100-year event or a storm that compares to the 1982/83 El Niño event.</p>	<p>Consistent – The proposed Project would require a Coastal Development Permit and as such would be subject to all required reviews and clearances. The proposed Project represents a continuation of the existing uses. The design of the beach access facilities have considered and would be subject to construction techniques in the building code that consider coastal erosion (e.g., wind, waves, tide) and have been designed to address these in order to minimize damage and maximize their longevity and safety.</p>
<p>LUE Action 7.3.12: Site and design new structures to avoid the need for shoreline and/or oceanfront bluff protective devices during the economic life of the structure (75 years).</p>	<p>Consistent – The proposed Project has been designed to consider coastal erosion and is not dependent on the need for shoreline and/or oceanfront bluff protective devices.</p>



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Policy	Consistency Determination
<p>LUE Action 7.3.18: Site and design new oceanfront and oceanfront bluff development and bluff/shoreline protective devices where that siting/design takes into account predicted future changes in sea level. In particular, an acceleration of the historic rate of sea level rise shall be considered and based upon up-to-date scientific papers and studies, agency guidance (such as the 2010 Sea Level Guidance from the California Ocean Protection Council), and reports by national and international groups such as the National Research Council and the Intergovernmental Panel on Climate Change. Consistent with all provisions of the Local Coastal Program (LCP), new structures shall be set back a sufficient distance landward to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected economic life of the structure.</p>	<p>Consistent – The proposed Project has been designed to consider coastal erosion and is not dependent on the need for shoreline and/or oceanfront bluff protective devices and has considered the future impact of sea level change.</p>
<p>LUE Policy 7.4: Ensure that development, including subdivisions, new building sites and remodels with building additions, is evaluated to ascertain potential negative impacts on natural resources. Proposed development shall emphasize impact avoidance over impact mitigation. Any mitigation required due to an unavoidable negative impact should be located on-site, where feasible. Any off-site mitigation should be located within the City’s boundaries close to the Project, where feasible.</p>	<p>Consistent – As noted in Section 3.5 (Biological Resources), no special-status plant species were observed during the March 2022 survey. The majority of special-status plants or animals known to occur in the region were determined to either have a low potential for occurrence or were not likely to occur at all. Further, impacts to vegetation and land uses were minor (0.08 acre). As such, it was determined the proposed Project would result in less than significant impacts with the incorporation of mitigation measures.</p>
<p>Open Space and Conservation Element (OSC) Policy 1E: Prohibit the construction of buildings and other man-made structures on the sandy portion of the beach unless necessary for public health and safety.</p>	<p>Consistent – The proposed Project would rehabilitate the existing beach access which consists of viewing platforms and stairs. The stairs in their current condition are unsafe and do not reach the sand, and therefore, create a safety hazard and do not allow for a safe transition between the stair height and level of the sand. The proposed Project is, therefore, a necessary public health and safety component of the City’s overall beach access program.</p>
<p>OSC Policy 1.5H: Construction and grading activities on the beach shall be staged and phased to minimize interference with public use.</p>	<p>Consistent – Because the cliff face provides the only access point to the beach, construction activities would prohibit public use of this area during the construction period (up to 4 months) while the existing facilities are demolished and rebuilt.</p>



Policy	Consistency Determination
<p>OSC Policy 4G: Ensure that all development minimizes erosion, sedimentation, and other pollutants in runoff from construction-related activities to the maximum extent practicable. Ensure that development minimizes land disturbance activities during construction (e.g., clearing, grading and cut-and-fill), especially in erosive areas (including steep slopes, unstable areas, and erosive soils), to minimize the impacts on water quality.</p>	<p>Consistent – As noted in Section 3.11 (Hydrology and Water Quality) impacts related to erosion would be addressed through standard permit requirements and therefore, less than significant impacts would result, and no mitigation measures are required.</p>
<p>OSC Policy 7A: Preserve to the maximum extent feasible the quality of public views from the hillsides and along the City’s shoreline.</p>	<p>Consistent – As noted in Section 3.2 (Aesthetics) temporary and permanent impacts associated with the proposed Project would result but would be less than significant. The existing views from the bluff area and beach would be preserved with the construction of the Project and would not substantially change or introduce new elements that are not already present.</p>
<p>OSC Policy 7K: Preserve as much as possible the natural character of the landscape (including coastal bluffs, hillsides and ridgelines) by requiring proposed development plans to preserve and enhance scenic and conservation values to the maximum extent possible, to minimize impacts on soil mantle, vegetation cover, water resources, physiographic features, erosion problems, and require recontouring and replanting where the natural landscape has been disturbed.</p>	<p>Consistent – The proposed Project represents a rehabilitation of the existing structure located on the bluff and at its base and would not introduce new or unfamiliar elements to this portion of the bluff or beach. As noted in Section 3.2 (Aesthetics) and Section 2.0 (Project Description) the plant material would be compatible with the bluff and beach environment and would not create erosion problems or replanting of natural landscape or its associated disturbance.</p>
<p>OSC Policy 10A: Require that plan review procedures recognize and avoid geologically unstable areas, flood-prone lands, and slopes subject to erosion and slippage.</p>	<p>Consistent – The proposed Project represents a continuation of the existing uses. In addition, as noted in Section 3.8 (Geology and Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City. In addition, the bluff was substantially altered during initial construction of the access stairs and the installation of the rehabilitated stairs would not substantially or significantly alter the existing conditions. Therefore, impacts would be less than significant, and no mitigation measures are required.</p>



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Policy	Consistency Determination
<p>Section 30212.5: Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise of overcrowding or overuse by the public of any single area.</p>	<p>Consistent – The proposed Project would improve and enhance existing coastal access at the Cleo Street beach access point. During the construction period, the public would not be able to access the Cleo Street beach access point. Beachgoers would be required to access alternative locations (e.g., Sleepy Hollow, St. Ann’s Beach).</p>
<p>Section 30240(A): Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.</p>	<p>Consistent – As noted in Section 3.5 (Biological Resources) no special-status plant species were observed during the March 2023 survey. Most of the special-status plants known to occur in the region were determined to either have a low potential for occurrence or were not likely to occur at all. No special-status wildlife species were observed during the March 2023 survey. The majority of special-status wildlife known to occur in the region were determined to have no potential for occurrence. The landscaping palette includes the use of native plants (see Figure 4) which would contribute to enhancement of native species and habitats.</p>
<p>Section 30244: Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.</p>	<p>Consistent – An archival record search and literature review and Native American consultation were performed as part of the cultural resources inventory for the Project. No archaeological resources were identified within the Project area. The Project site is already developed with coastal access facilities such as a stairway. A Paleontological Resource Assessment was prepared for the proposed Project and is contained within Appendix E of this IS/MND. The results of this assessment indicate that one geologic unit is present in the Project area: Topanga Group which is assessed as having high paleontological potential. As the proposed Project will require some soil disturbance, impacts to potential paleontological resources is considered potentially significant. However, with the implementation of the following mitigation measures, these impacts would be reduced to less than significant levels with the implementation of Mitigation Measures GEO-1, GEO-2, and GEO-3.</p>



Policy	Consistency Determination
<p>Section 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas...shall be subordinate to the character of its setting.</p>	<p>Consistent – The proposed Project entails the improvement and enhancement of existing coastal access facilities. As noted in Section 3.2 (Aesthetics), the Project includes locations where viewsheds and scenic overlooks of the beach and the Pacific Ocean will be improved and made more accessible. While the Project area is not a designated scenic vista, the proposed access and scenic vista viewpoints proposed at the Cleo Street location will allow both motorist and pedestrian users to continue to enjoy views of the Pacific Ocean and the City Beach. During the construction period, viewers would see the presence of materials, workers, and equipment.</p>
<p>Section 30210: In carrying out the requirement of Section 2 of Article XV of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.</p>	<p>Consistent – The proposed Project would provide improved and enhanced existing coastal access at the Cleo Street beach access point. Signage noting access points would be conspicuously posted and beachgoers would continue to have access.</p>
<p>Section 30211: Development shall not interfere with the public’s right of access to the sea where acquired through use, custom, or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.</p>	<p>Consistent – The proposed Project would provide improved and enhanced existing coastal access at the Cleo Street beach access point. Currently, the stairway stops short of the sand creating an unsafe condition. The proposed Project would remedy this condition and allow patrons to continue to access and use the dry sand and rocky coastal beach area to the first line of vegetation. It should be noted, however that access would be temporarily restricted during construction, which is expected to last about four months.</p>

The proposed Project would also be consistent with the City’s certified Local Coastal Program since the General Plan and Municipal Code are components of the Program. It is not anticipated that the proposed Project will result in any significant impacts due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts would be less than significant, and no mitigation measures are required.



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3.13 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (No Impact)

The site is currently developed with a public access stairway and a viewing deck that promotes public access to the City Beach and the Pacific Ocean. The Project site is not located within a known and/or designated mineral resources area. Therefore, no loss of availability of known mineral resources would result, and no mitigation measures are required.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? (No Impact)

The City’s General Plan does not delineate any locally important mineral resource in the Project area. Therefore, the proposed Project will not result in any significant impacts to a locally important mineral resource. Therefore, no impacts would result, and no mitigation measures are required.



3.14 Noise

Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?		X		
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels?				X

The analysis and conclusions in this section are based upon information contained in Appendix F (Noise Impact Supplemental Information) of this IS/MND.

- a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less Than Significant with Mitigation Incorporated)**

3.14.1 Short-Term Construction Noise

Temporary construction noise impacts vary because the noise generated from construction equipment ranges widely as a function of the equipment used and its activity level. Because of issues with terrain, access, and slope, there is a minimal quantity of heavy construction equipment anticipated for the proposed Project activities.

To approximate noise levels resulting from the short-term construction of the Project, the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) was used. The RCNM is used as the FHWA’s national standard for predicting noise generated from construction. The RCNM analysis includes the calculation of noise levels at a defined distance for a variety of construction



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equipment. The spreadsheet inputs include acoustical use factors and distance to receptors and calculates the expected L_{max}^2 and Leq^3 values at a selected receptor.

The Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual offers guidelines for the limits of construction noise in Section 7 “Noise and Vibration During Construction”. Section 7 in the manual states “While it is not the purpose of this manual to specify standardized criteria for construction noise impact, the following guidelines can be considered reasonable criteria for assessment. If these criteria are exceeded, there may be adverse community reaction.” Table 7-3 in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual lists a criterion of 80 dB(A) Leq for construction noise received at residential properties during daytime hours.

Table 7-3 Detailed Analysis Construction Noise Criteria

Land Use	$L_{eq,equip(8hr)}$, dBA Day	$L_{eq,equip(8hr)}$, dBA Night	$L_{dn,equip(30day)}$, dBA 30-day Average
Residential	80	70	75
Commercial	85	85	80*
Industrial	90	90	85*

* Use a 24-hour $L_{eq(24h)}$ instead of $L_{dn,equip(30day)}$

The noisiest construction activities for the proposed improvements would be the removal of some hardscape elements, such as retaining walls and paving. This task typically requires jackhammers and debris loaders. If three pieces of demolition equipment (a jackhammer, backhoe, and air compressor) were to operate within 30 feet of a residence, the RCNM model predicts that the total noise level could be as high as 87.5 dB(A) Leq^4 for the combined noise signature of the equipment, which exceeds the FTA daytime construction noise criterion.

It is unlikely that three pieces of large equipment could operate simultaneously at the same exact distance adjacent to an individual residence (defined as sensitive receptors for the purposes of noise analysis) for a period of time. Therefore, this scenario is representative of maximal noise. Noise generated by a point source such as construction equipment, decreased with greater distance between the source and receptor. Sound attenuates based on geometry at a rate of 6 dB per doubling of distance. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a slightly greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.

² The L_{max} , or Maximum Sound Level, descriptor is the highest sound level measured during a single noise event (such as a vehicle pass by), in which the sound level changes value as time goes on. The maximum sound level is important in judging the interference caused by a noise event with common activities. Source: [fhwahep17053.pdf \(dot.gov\)](#), accessed March 2023.

³ Leq , or Time-Equivalent Sound Level is a measure of sound energy. Source: [fhwahep17053.pdf \(dot.gov\)](#), accessed July 2021.

⁴ dB(A) Leq means the time-weighted average of the level of sound in decibels on scale A which is relatable to human hearing. Source: [S1 Caltrans Technical-Noise-Supplement-2013 \(modestogov.com\)](#). Accessed March 2023.



The jackhammer represents the dominant noise source for this Project and adds 10 dB(A) to the noise signature over an air compressor and backhoe. Jackhammers are only used to demolish existing masonry which is a short-term activity. Without the jackhammer, expected noise levels would be reduced to approximately 81.1 dB(A). Because each piece of equipment will only spend a short duration in proximity to any single residence, equipment noise nuisance would be sporadic. Additionally, again, construction noise is generally stationary and would, therefore, attenuate by 6 dB for every doubling of distance from any receptor. Therefore, noise levels at a single receptor are greatly reduced, as work progresses away from any individual residence.

Although noise levels from construction could create a perceived nuisance, increases in noise levels from construction activity would be temporary. All construction activities at the site would also be limited by conditions on construction permits requiring compliance with the City's Noise Ordinance. Allowable hours of construction are between the hours of 7:30 a.m. and 6:00 p.m., Monday through Friday. No work is permitted on Saturdays, Sundays, and federal holidays. In addition, to ensure that no potential significant noise impacts result due to the construction of the proposed Project (and consistent with City requirements), implementation of Mitigation Measure NOI-1 would reduce noise levels to a less than significant level.

3.14.2 Mitigation Measures

NOI-1 Construction Activity

During construction activities, the following construction practices shall be followed. These construction practices are listed as construction noise control measures in the FTA Transit Noise and Vibration Impact Assessment Manual:

- a) Stockpiling and staging activities should be located as far as practicable from dwellings.
- b) All mobile equipment shall have properly operating and maintained mufflers.
- c) As a condition of approval, non-emergency construction activities adjacent to existing noise-sensitive uses shall be limited to daylight hours between the hours of 7:30 a.m. and 6:00 p.m. Monday through Friday. No work is permitted on Saturdays, Sundays, and federal holidays.
- d) Construct temporary enclosures around exceptionally noisy activities. For example, air compressors can be enclosed and shields can be used around pavement breakers such as jackhammers.
- e) Notify adjacent homes near any hardscape demolition activities as to time and place to allow residents to adjust their schedule to avoid noise disruption.

3.14.3 Long-Term Noise Impacts

Improved beach access is not expected to create any measurable increase in beach visitors. A few more visitors may partake of enhanced overlooks or seating than current users, and a few more persons with disabilities may visit the access points that are currently not accessible. No new vehicle traffic is expected at the various beach access points. Therefore, no measurable noise impact will result from Project implementation. Any impact potential will derive exclusively from construction activities.



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Therefore, based on the above analysis and with incorporation of the required mitigation measure, it is not anticipated that the proposed Project would result in any significant impacts related to noise.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (Less Than Significant Impact with Mitigation Incorporated)

See response to Section 3.14.1 above and the recommended mitigation measure.

The Project will include site demolition/preparation and construction activities. Typical background vibration levels in residential areas are usually 50 VdB or lower, which is below the threshold of human perception. Perceptible vibration levels inside residences are typically attributed to the operation of heating and air conditioning systems, door slams, or street traffic. Construction activities and street traffic are some of the most common external sources of vibration that can be perceptible inside residences.

Construction activities generate groundborne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of groundborne vibration can include experiences such as discernible movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Vibration-related problems generally occur due to resonances in the structural components of a building because structures amplify groundborne vibration. Within the “soft” sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Groundborne vibration is almost never annoying to people who are outdoors.⁵

Groundborne vibrations from construction activities rarely reach levels that can damage structures. Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

Vibration is commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

- 65 VdB: threshold of human perception
- 72 VdB: annoyance due to frequent events
- 80 VdB: annoyance due to infrequent events
- 94-98 VdB: minor cosmetic damage

To determine potential impacts of the Project’s construction activities, estimates of vibration levels induced by the construction equipment anticipated for Project use at various distances are presented in Table 6.

⁵ Federal Transit Administration Transit Noise and Vibration Assessment, Section 7, Noise and Vibration During Construction, 2018. [transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf \(dot.gov\)](https://www.fta.dot.gov/sites/default/files/2018-03/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). Accessed March 2023.



Table 6. Vibration Level Estimates in Vibration Decibels (VdB)

Equipment	Approximate Vibration Levels at 25 feet	Approximate Vibration Levels at 50 feet	Approximate Vibration Levels at 100 feet
Jackhammer	79	73	67
Small bulldozer	58	52	46

Source: FTA Transit Noise and Vibration Assessment, Section 7, Noise and Vibration during Construction, 2018

The on-site construction equipment that will create the maximum potential vibration is a jackhammer. The stated vibration source level in the FTA Handbook for such equipment is 79 VdB at 25 feet from the source and decays to 67 VdB by 100 feet. At 30 feet from possibly adjacent homes, residents might be able to marginally feel a faint tremble, but vibration levels are still below the damage threshold.

Therefore, construction activities are typical for the type of development proposed (beach access stairway), and as such, nearby uses (e.g., existing residences) will not experience excessive groundborne vibration or groundborne noise levels. Therefore, impacts would be less than significant with incorporation of Mitigation Measure NOI-1.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels? (No Impact)**

The Project site is not within an airport land use plan and is not within two miles of a public airport. In addition, the proposed Project site is not within the vicinity of a private airstrip. Therefore, no impact would result, and no mitigation measures are required.



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3.15 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (No Impact)

The proposed Project consists of renovation of public beach access amenities within the existing street right-of-way. The Project site is in an area surrounded by urban development where infrastructure exists. No significant new infrastructure will be required for the proposed Project. The Project will not induce substantial population growth in the area, either directly or indirectly, beyond that already contemplated per the City’s General Plan, and county and state population/housing projections. Therefore, no impact would result, and no mitigation measures are required.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (No Impact)

The proposed Project does not involve elimination of any existing housing. The Project site is developed with existing beach access facilities and, the proposed Project will not displace any existing housing. Therefore, no impacts would result, and no mitigation measures are required.



3.16 Public Services

Would this project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i. Fire protection?			X	
ii. Police protection?			X	
iii. Schools?				X
iv. Parks?				X
v. Other public facilities?				X

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?**

Public services are already being provided to the City and to the Project site. It is not anticipated that the proposed Project would result in substantial adverse impacts to public services, because it is already being serviced by public services and would not result in an increase of beach visitors.

i. Fire protection? (Less Than Significant Impact)

The Laguna Beach Fire Department provides fire protection and emergency response services for the City. Response times to the site are dependent on various factors. Response time is generally five minutes or less.⁶ Emergency calls receive the quickest response times with alarm calls and non-emergency calls having longer response times respectively. The availability of personnel and extenuating circumstances may further affect response times. The closest Laguna Beach fire station (Fire Station 1) to the site (approximately 0.5 mile) is located at 501 Forest Avenue, in the downtown village next to city hall. The proposed Project will renovate the public coastal access point that will connect with existing recreational areas and facilities that are already served by the Laguna Beach Fire Department. Due to the Project characteristics and considering that the Project is replacing and

⁶ Source: Pearl Street Beach Access Rehabilitation Project (SCH No. 2017011040), 2017.



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enhancing existing beach access, it is not anticipated that there would be any resulting significant impacts relative to fire protection services and/or facilities, and no mitigation measures are required.

ii. Police protection? Less Than Significant Impact)

Law enforcement services are provided by the Laguna Beach Police Department, located at 505 Forest Avenue or approximately 0.6 mile from the Project site. The site is already developed with a beach access stairway and a viewing deck, and therefore, demand for police protection is not anticipated to be significantly affected as a result of the proposed Project. The proposed Project is consistent with the City's General Plan and will not substantially increase demand for police services beyond what is currently provided for the existing Project site. Therefore, less than significant impacts are anticipated, and no mitigation measures are required.

iii. Schools? (No Impact)

The Project site is located in the Laguna Beach Unified School District (LBUSD). Due to the Project characteristics (renovation of existing beach access amenities at Cleo Street), the Project will not result in any increased generation of students that could impact enrollment at LBUSD schools. Therefore, the proposed Project would not result in any significant impacts to schools, and no mitigation measures are required.

iv. Parks (No Impact)

The City's General Plan Open Space/Conservation Element policies identify that retaining and improving existing public beach access in the City is a priority.⁷ The Project will facilitate public access to beach and coastal resources by renovating an existing stairway and a viewing deck. The Project would enhance access to the beach, which is public recreational facility. Due to the nature of the proposed use (beach access), the Project is not anticipated to result in any significant impacts to existing neighborhood and regional parks and recreational facilities, and no mitigation measures are required.

v. Other public facilities? (No Impact)

The Project site is already developed with coastal access amenities. The proposed Project will provide renovated beach access facilities at Cleo Street near South Coast Highway. Project development would not result in any significant impact to public facilities. Public facilities already occur adjacent to the Project area, such as existing City beaches, recreational areas, public transportation, utilities, and public services. Therefore, no significant impacts relative to other public facilities would result, and no mitigation measures are required.

⁷ City of Laguna Beach, Open Space/Conservation Element, Policy 3-A, page 21.



3.17 Recreation

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Less Than Significant)

The Project itself will not generate residents (or increase the population), and therefore, create a resulting demand for parks and recreational facilities. The Project proposes the rehabilitation of an existing beach access stairway and a viewing deck that ties together existing recreational areas and facilities. It should be noted that access to the beach via the current stairways would not be available for the duration of the construction period. It is anticipated current patrons of Cleo Street Beach would seek access to other adjacent beaches (e.g., Sleepy Hollow, St. Ann’s Beach) during the construction period. There are a number of City beaches located within close proximity to the proposed Project that could accommodate this additional demand. It should be noted that this additional demand on adjacent beaches would be largely limited to the summer season (Memorial Day through Labor Day). Moreover, provided construction is completed prior to this period, no additional demand on adjacent beaches would occur. The proposed Project would not result in any potential significant increases in demand for the use of existing recreation facilities. Therefore, less than significant impacts would result, and no mitigation measures are required.

b) Does the project include recreational facilities or require the construction of or expansion of recreational facilities which might have an adverse physical effect on the environment? (No Impact)

The proposed Project involves the rehabilitation of an existing beach access stairway and a viewing deck. It does not include the construction or expansion of recreational facilities and would not result in use by visitors or residents that would result in adverse physical effects on the environment. The proposed Project would provide a beneficial impact on recreational facilities by enabling continuing opportunities to access and enjoyment of the recreational areas of the City that currently exist, including the beach and Pacific Ocean. It should be noted that access to the beach via the current stairways would not be available for the duration of the construction period. However, the majority of the demand for beach access is limited to the summer season (Memorial Day through Labor Day).



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Moreover, provided construction is completed prior to this period, no additional demand on adjacent beaches would occur. Therefore, the proposed Project would result in no impacts, and no mitigation measures are required.



3.18 Transportation

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			X	
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				X
c) Substantially increase hazards to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?			X	

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? (Less Than Significant Impact)

The proposed Project will renovate an existing beach access facility that connects the public with the City Beach and the Pacific Ocean. The coastal access stairway and the viewing deck will be directly accessible from the adjacent residential neighborhoods and visitor-serving commercial uses located along South Coast Highway. Parking areas already exist in proximity to the stairway and viewing deck, and no additional parking would be provided by the Project. The proposed Project is consistent with City and coastal policies regarding beach access; therefore, no significant impacts regarding conflicts with existing policies are anticipated with implementation of the proposed Project.

The proposed Project will result in minor short-term construction-related traffic in association with construction workers, delivery of construction equipment, and minor earthwork/grading site preparation activities. Given the proximity of the Project site to South Coast Highway, as a condition of approval, a Traffic Management Plan to reduce potential short-term construction-related impacts, will be required by the City as part of Project approval. Therefore, a less than significant impact would result, and no mitigation measures are required.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? (No Impact)

As the Project is a pedestrian and safety project, per CEQA Guidelines Section 15064.3 subdivision (b)(2), projects that do not increase vehicle miles traveled (VMT) should be presumed to cause a less than significant transportation impact. Guidance provided by the Governor’s Office of Planning and



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Research (OPR) states that transportation projects should be analyzed on the basis of VMT increases from induced travel, but that “rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets,” including “assets that serve bicycle and pedestrian facilities,” which do not add additional motor vehicle capacity, generally should not require an induced travel analysis.⁸ The OPR guidance further states that “active transportation projects generally reduce VMT and therefore are presumed to cause a less than significant impact on transportation.” Since the Project consists of replacement and improvements to an existing pedestrian asset, and is not expected to induce additional vehicle trips, it is presumed the Project would have no impact relative to CEQA Guidelines Section 15064.3 subdivision (b), and no mitigation measures are required.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (No Impact)

The proposed Project consists of a replacement of an existing pedestrian facility. The proposed Project will be constructed in accordance with all applicable design guidelines and City codes; therefore, the proposed Project will not substantially increase hazards due to a geometric design feature. The proposed Project does not propose any modification to existing driveways or roadways other than what is related to the pedestrian facility. The Project, as proposed, would not result in any impacts relative to design features or incompatible uses, and no mitigation measures are required.

d) Would the project result in inadequate emergency access? (Less Than Significant Impact)

The proposed Project does not result in any type of development or action that would result in inadequate emergency access. The proposed renovation of access facilities at Cleo Street will facilitate access to the beach and the Pacific Ocean. South Coast Highway is a designated evacuation route, but the proposed Project would not impact the street’s use as an emergency evacuation route. Therefore, the proposed Project would result in less than significant impacts to emergency access, and no mitigation measures are required.

⁸ Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor’s Office of Planning and Research, State of California, December 2018.



3.19 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:		X		
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or		X		
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision I of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision(c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

AB 52, which became law on January 1, 2015, provides for consultation with California Native American Tribes during the CEQA environmental review process, and equates significant impacts to “tribal cultural resources” with significant environmental impacts.

The purpose of consultation is to inform the lead agency in its identification and determination of the significance of tribal cultural resources. If a project is determined to result in a significant impact on an identified tribal cultural resource, the consultation process must occur and conclude prior to adoption of a Negative Declaration or MND, or certification of an Environmental Impact Report (PRC Sections 21080.3.1, 21080.3.2, 21082.3).

The Native American Heritage Commission (NAHC) in West Sacramento was contacted to review its Sacred Lands File to identify registered, Native American sacred sites in or near the Project site. On February 17, 2023, Andrew Green, NAHC Cultural Resources Analyst, stated in a letter “The results were positive. Please contact the Juaneño Band of Mission Indians Acjachemen Nation – Belardes.” The



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NAHC also provided a list of local tribal contacts. The results of the City's consultation with Tribes for this Project is summarized below.

- **Gabrieleño Band of Mission Indians—Kizh Nation**

- March 22, 2023—Consultation requested with the City.
- March 22, 2023 – City proposed meetings in March and April.
- March 29, 2023 – Tribe sent meeting availabilities for June.
- March 29, 2023 – City provides availability in June.
- April 13, 2023 – Tribe sets meeting for June 13.
- June 13, 2023 – Teleconference between Tribe and the City held. Tribe provided additional information on cultural resources and ethnographic information for area.
- June 23, 2023 – Tribe provided input on Tribal Cultural Resources mitigation measure.
- September 5, 2023 – City sent back Tribal Cultural Resources mitigation measure to Tribe.
- September 21, 2023 – City acknowledged receipt of Tribe's email and information provided.
- October 12, 2023 – City re-confirmed email and information from the Tribe and noted that a revised Concept Plan would be provided shortly.
- March 7, 2024 – City sent revised Concept Plan and updated Tribal Cultural mitigation measures to Tribe via email.

- **Gabrieliño Tongva Indians of California Tribal Council**

- April 4, 2023 – Tribe acknowledged receipt of consultation and requested to review cultural resources report.
- April 12, 2023 – City provided the Tribe with a copy of the cultural resources report, as requested.
- April 13, 2023 – Tribe noted that the cultural resources report did not include a history of first peoples and that the area was culturally sensitive and that no mitigation measure was included in the report in the event that human remains are discovered. The City responded to the Tribes' comments.
- April 14, 2023 – The Tribe provided a mitigation measure (not attached to email) and indicated that they can provided Native American monitoring.
- April 19, 2023 – The City indicated that historical information about pre-European settlement by the Gabrieliño Tongva had been included in the cultural resources report.



- April 20, 2023 – The Tribe acknowledged receipt of the City’s email.
- February 13, 2024 – City sent revised Concept Plan to Tribe via email and requested for Tribe’s mitigation measures.
- February 14, 2024 – Tribe acknowledged City update email.
- February 21, 2024 – Tribe provided City with Tribe’s mitigation plan.
- February 22, 2024 – City updated Tribe on anticipated Project schedule.
- March 7, 2024 – City sent revised Concept Plan and updated Tribal Cultural mitigation measures to Tribe via email.

- **Juaneño Band of Mission Indians, Acjachemen Nation-Belardes**

- May 3, 2023 – Tribe acknowledged receipt of letter regarding consultation and wished to consult, indicated that the area was sensitive to the Tribe and wished to review the IS/MND, once available, and recommended monitoring by a representative of the Tribe.
- May 8, 2023 – The City provided the Tribe with a copy of the cultural resources report, informed the Tribe that monitoring would be occurring and that the IS/MND would be available shortly.
- May 15, 2023 – The Tribe provided its mitigation monitoring information for City review.
- May 16, 2023 – The City responded to the Tribes email and indicated a link to the cultural resources would be provided and if the Concept Plan was updated, a copy of that too would be provided.
- March 7, 2024 – City sent revised Concept Plan and updated Tribal Cultural mitigation measures to Tribe via email.

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

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or (Less than Significant with Mitigation Incorporated)

A review of the California Historical Resources Information System database did not identify recorded tribal cultural resources. However, the NAHC noted that the records search was considered “positive” for Native American and tribal cultural resources. Note that the locations or nature of tribal cultural resources were not identified by either the NAHC or consulting Tribes, as identified below.



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As part of its AB 52 consultation requirements, on March 20, 2023, the City sent out letters via certified mail to tribal representatives identified by the NAHC making them aware of the proposed Project. The City provided Tribes 30 days in which to request consultation on the Project's potential impacts to tribal cultural resources. The following Tribes were contacted:

- Gabrieleño Band of Mission Indians–Kizh Nation
- Gabrieleño/Tongva San Gabriel Band of Mission Indians
- Gabrieliño /Tongva Nation
- Gabrieliño Tongva Indians of California Tribal Council
- Gabrieliño Tongva Tribe
- Juaneño Band of Mission Indians
- Juaneño Band of Mission Indians Acjachemen Nation – Belardes
- Juaneño Band of Mission Indians Acjachemen Nation 84A
- La Jolla Band of Luiseno Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseno Indians
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians

Of the Tribes contacted by the City, one Tribe (Gabrieleño Band of Mission Indians–Kizh Nation) has requested consultation. The Kizh Nation consider the Project area sensitive for tribal cultural resources and requested that a Kizh Nation monitor be present during ground disturbance.

Additionally, both the Gabrieliño Tongva Indians of California Tribal Council and Juaneño Band of Mission Indians, Acjachemen Nation-Belardes contacted the City via email, noted that the area is culturally sensitive and that tribal monitoring should be implemented.

Due to the sensitivity of the Project area to local Tribes, as identified during AB 52 consultation and outreach, there is a potential to encounter tribal cultural resources during construction. Therefore, impacts are considered potentially significant without mitigation. However, with the implementation of the mitigation measures noted below, impacts would be less than significant with mitigation.

3.19.1 Mitigation Measures

TCR-1: Native American Monitoring by the Gabrieleño Band of Mission Indians–Kizh Nation Prior to Commencement of Ground-Disturbing Activities

- a) The Project applicant/lead agency shall retain a Native American Monitor from the Gabrieleño Band of Mission Indians–Kizh Nation. The monitor shall be retained prior to the commencement of any “ground-disturbing activity” for the subject Project at all Project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the Project, such as public improvement work). “Ground-disturbing activity” shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.
- b) A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.



- c) The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or “TCR”), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the Project applicant/lead agency upon written request to the Tribe.
- d) On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the Project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the Project site or in connection with the Project are complete; or (2) a determination and written notification by the Kizh to the Project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the Project site possesses the potential to impact Kizh TCRs.

TCR-2: Consultation with the Gabrieleño Band of Mission Indians–Kizh Nation in the Event of Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

- a) Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by Native American Monitor from the Gabrieleño Band of Mission Indians – Kizh Nation and other consulting Tribes. A mitigation plan shall be prepared and implemented to coordinate recovery and retention of all discovered TCRs in accordance with State guidelines and in consultation with Gabrieleño Band of Mission Indians – Kizh Nation and other consulting Tribes, in the form and/or manner they deem appropriate, including for educational, cultural and/or historic purposes.

TCR-3: Tribal Cultural Resources Monitoring–Gabrieliño Tongva Indians of California Tribal Council

A qualified and certified indigenous tribal member of Gabrieliño Tongva Indians of California (GTIOC) and direct lineal descendant of the Project site to provide the professional Native American Monitoring required for only the ground-disturbing activity on the site. Ground disturbances including but not limited to the removal of asphalt/cement/slurry, trenching, boring, excavation, auguring, grubbing, tree removal, grading and drilling will be monitored. The tribal monitor will only be required on-site when these ground-disturbing activities occur.

The GTIOC monitor will be responsible for observing all mechanical and hand labor excavations to include paddle scrapers, blade machines, front-end loaders, backhoe, boring and drill operations as well as hydraulic and electric chisels. Associated work using tools such as picks and other non-electric or gasoline tools that are not regarded as mechanical will be monitored for their soil disturbances.

Soils that are removed from the work site are considered culturally sensitive and are subject to inspection. These soils whether placed in a dump truck or spots piles are to be inspected. The monitor will temporarily hold excavations until a determination is made on the sensitivity of the of the soil. If the soils are sensitive, an archaeological monitor will verify the find and notify site supervisor.



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If any archaeological or paleontological, or cultural deposits, are discovered, including but not limited grave related artifacts, artifacts of traditional cultural, religious, or spiritual sites, or any other artifacts relating to the use or habitation sites, all construction shall cease within at least 50 feet of the discovery and held until the proper authorities are contacted.

The GTIOC monitor may make recommendations during the course of the Project when a cultural area has been impacted. The GTIOC monitor will be authorized to halt or redirect excavation activities to another area as an assessment is made. The GTIOC monitor will work together to ensure that the area is warranted as being culturally sensitive before a determination is made. Avoidance and directing an alternative route from this culturally sensitive area is highly recommended.

TCR-4: Inadvertent Discovery of Tribal Cultural Resource—Gabrieliño Tongva Indians of California Tribal Council

Provided TCRs are inadvertently discovered during construction, these activities shall cease, and a 50-foot radius buffer shall be established. A GTIOC Tribal Council tribal monitor/consultant and other consulting Tribes shall then be permitted to evaluate and assess these resources, to the extent necessary. Pending their assessment, and if deemed required by these Tribes, a mitigation plan shall be developed to address their recovery and retention. The mitigation plan shall be developed in accordance with State guidelines and in consultation with the GTIOC Tribal Council tribal monitor/consultant and other consulting Tribes. The inadvertently discovered TCRs shall be allowed to be used for historic, educational, cultural resources purposes, or as the GTIOC Tribal Council tribal monitor/consultant and other consulting Tribes deem suitable and/or appropriate.

TCR-5: Juaneño Band of Mission Indians, Acjachemen Nation-Belardes

The City shall retain and compensate for the services of a Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant. The monitor/consultant shall only be present on-site during the construction phases that involve ground-disturbing activities. The tribal monitor/consultant shall complete daily monitoring logs that shall provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Project excavation activities are completed, or when the tribal representatives and monitor have indicated that the site has a low potential for affecting tribal cultural resources.

TCR-6: Inadvertent Discovery of Tribal Cultural Resource—Juaneño Band of Mission Indians, Acjachemen Nation-Belardes

Provided TCRs are inadvertently discovered during construction, these activities shall cease, and a 50-foot radius buffer shall be established. A Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant and other consulting Tribes shall then be permitted to evaluate and assess these resources, to the extent necessary. Pending their assessment, and if deemed required by these Tribes, a mitigation plan shall be developed to address their recovery and retention. The mitigation plan shall be developed in accordance with State guidelines and in consultation with the Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant and other consulting Tribes. The inadvertently discovered TCRs shall be allowed to be used for historic, educational, cultural resources purposes, or as the Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant and other consulting Tribes deem suitable and/or appropriate.



- ii. **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (Less than Significant with Mitigation Incorporated)**

See response to Environmental Issue (a) above and Mitigation Measures TCR-1 through TCR-6. As discussed above, there would be a less than significant impact with the implementation of mitigation in this regard. Tribal monitoring would ensure that, should a tribal cultural resource be identified during construction, it would be treated in accordance with the wishes of the tribal community.



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3.20 Utility and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				X
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (No Impact)

The proposed Project entails improved beach access and does not include the construction or residential or commercial uses, thereby requiring the construction or expansion of water, wastewater treatment, electric power, natural gas or communication facilities to serve these uses. Therefore, no impacts would result, and no mitigation measures are required.



b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? (Less than Significant Impact)

The proposed Project entails improved beach access and does not include the construction or residential or commercial uses, thereby requiring substantial water supplies. Landscaping would be reinstalled but would not utilize large quantities of water since much of this would either utilize a City-approved drought-tolerant plants palette, combined with a low-flow drip and/or spray irrigation system. The proposed landscaping would be comprised of drought-tolerant species, thereby reducing the amount of water required, compared to existing conditions. Therefore, impacts would be less than significant impact, and no mitigation measures are required.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (No Impact)

The proposed Project entails improved beach access and does not include the construction or residential or commercial uses, and as such, would not generate wastewater. Therefore, no impact would occur, and no mitigation measures are required.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Less than Significant Impact)

During construction, the proposed Project would generate solid waste associated with removal of the stairs, viewing platform, dirt, and landscaping modifications. There are also additional construction-related materials that would generate solid waste. The amount of waste generated during construction would be minor and would not be beyond the capacity of local landfills. In addition, the proposed Project would be required to adhere to local and state construction-related debris recycling and waste diversion and disposal requirements as part of permit approvals. These requirements would assist in reducing the amount of construction-related solid waste being transported to area landfills. Therefore, impacts would be less than significant impact, and no mitigation measures are required.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (No Impact)

See response to Environmental Issue (d) above. The Project would comply with all federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, no impact would result, and no mitigation measures are required.



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3.21 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones,

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

a) Substantially impair an adopted emergency response plan or emergency evacuation plan? (Less Than Significant Impact)

A review of the City’s General Plan Safety Element indicates the entire City is designated as being in a Very High Fire Hazard Severity Zone.⁹ A review of the City of Laguna Beach General Plan’s Safety Element indicates the City has considered emergency access issues throughout its jurisdiction and has developed programs and mechanisms to address this (e.g., access planning, upgrading roadway deficiencies, no parking zones, public access easements).¹⁰ The Project site is not identified as a designated evacuation route and is not located along an impaired access road. The proposed Project includes the rehabilitation of an existing beach access and viewing deck and would include short-term construction activities, including construction equipment. However, the proposed Project would be required to adhere to traffic safety requirements, including a Traffic Management Plan, provided one is required by the City. Based upon the analysis above, the proposed Project would result in a less than significant impact, and no mitigation measures are required.

⁹ City of Laguna Beach General Plan, Safety Element, pages 47-48.

¹⁰ City of Laguna Beach General Plan, Safety Element, pages 8-9.



b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (Less Than Significant Impact)

As the entire City is designated as being in a Very High Fire Hazard Severity Zone, the City has adopted special building requirements in its hazardous fire area (wildland/urban interface zone) that exceed the Uniform Building Code requirements, implemented a fuel management program for vegetation and brush, and restricted the use of certain plant species (e.g., pine, cypress, cedar, junipers, acacia, bougainvillea, eucalyptus). Combined, these measures have assisted the City in reducing the potential for impacts due to wildfire. The proposed Project is located within an urbanized environment and does not contain highly flammable fuels and is not part of the wildlands/urban interface zone. Construction equipment would be normally equipped with spark arrestors and other safety features to reduce the potential for fire. Therefore, the proposed Project would not be expected to result in conditions that would exacerbate wildfire risk or expose Project occupants to these risks or to pollutant concentrations or the spread of wildfire. As such, impacts would be less than significant, and no mitigation measures are required.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? (No Impact)

The proposed Project includes the rehabilitation of an existing beach access and viewing deck. It does not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As noted in responses a) and b) above, the proposed Project would include short-term construction activities only, including the use of construction equipment and which would normally be equipped with safety features to reduce the potential for sparks and resulting fire. In addition, the Project site is not located within an wildlands/urban interface zone which contains high levels of fuel or brush. Therefore, no impacts would occur, and no mitigation measures are required.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (Less Than Significant Impact)

Although the entire City of Laguna Beach is considered a Very High Fire Hazard Severity Zone, the proposed Project is situated within an urbanized portion of the City and is not located within an wildlands/urban interface area; therefore, the risk of wildfire originating from this area is considered low. Although the Project site is flat, it does include slope areas associated with the bluff face, where the existing viewing platform and the associated access stairs are proposed to be rehabilitated. Because the Project site is downslope from the wildlands/urban interface zone where a potential wildfire could originate, the proposed Project in and of itself, would not generate significant risks including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Moreover, pending a post-fire event in the vicinity of the proposed Project, the City would take appropriate measures to properly assess and evaluate the Project site to ensure the viewing platform and associated beach access stairs were safe to access and use. Therefore, impacts would be less than significant, and no mitigation measures are required.



3.22 Mandatory Findings of Significance

Does the project have:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) The potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Impacts that are individually limited, but cumulatively considerable? ("Cumulatively "considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number, or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (Less than Significant with Mitigation Incorporated)

The analysis contained within Section 3.5 (Biological Resources) indicates that the Project site assessment revealed that the majority of special-status wildlife known to occur in the general region had a “low” potential of occurrence within the BSA, due to the developed nature of habitats within the BSA. Similarly, due to the developed nature of the BSA, special-status plant or wildlife species were determined to have a low potential for occurrence or were not likely at all to occur. During construction, if these activities occur during the avian nesting season, the proposed Project could be in conflict with the MBTA. The analysis also determined no riparian habitat or other sensitive communities are present within the BSA. Because construction activities would remove vegetation (non-native/ornamental) these activities could result in the spread of noxious weeds within the Project



site and adjacent areas. Further, the analysis determined that with the implementation of mitigation measures BIO-1 through BIO-6, impacts would be less than significant.

As noted in Section 3.6 (Cultural Resources), the analysis determined no built environment historical resources would be affected, including the beach access stairs. Moreover, the records searches conducted at the SCCIC, literature review, and field survey, determined there are no archaeological resources determined for the area and therefore, no impacts to potential archaeological resources would result with proposed Project implementation. However, subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered unique archaeological resources and therefore, a mitigation measure was recommended to reduce impacts to less than significant levels. With the implementation of Mitigation Measure CUL-1, impacts would be less than significant.

As part of its AB 52 consultation requirements, on March 20, 2023, the City sent letters to 16 tribal representatives making them aware of the proposed. Of the Tribes contacted by the City, one Tribe (Gabrieleño Band of Mission Indians–Kizh Nation) has requested consultation. The Kizh Nation consider the Project area sensitive for tribal cultural resources and requested that a Kizh Nation monitor be present during ground disturbance. Additionally, both the GTIOC Tribal Council and Juaneño Band of Mission Indians, Acjachemen Nation-Belardes contacted the City and noted that the area is culturally sensitive and that tribal monitoring should be implemented. Therefore, impacts are considered potentially significant without mitigation. However, with the implementation of the mitigation measures TCR-1 through TCR-6, impacts would be less than significant with mitigation.

As noted in Section 3.7 (Geology and Soils), a Paleontological Resource Assessment was prepared for the proposed Project and is contained within Appendix E (Paleontological Resource Assessment) of this IS/MND. The results of this assessment indicate that two geologic units are present in the Project area: very young marine deposits, which are assessed as having low paleontological potential; and the Topanga Group, which is assessed as having high paleontological potential. As the proposed Project will require some ground disturbance, impacts to potential paleontological resources is considered potentially significant. However, with the implementation of mitigation measures GEO-1, GEO-2, and GEO-3, these impacts would be reduced to less than significant levels.

b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals? (Less Than Significant Impact)

The proposed Project would not increase environmental impacts after mitigation measures are incorporated, the incremental contribution to cumulative impacts would be anticipated as less than significant. The proposed Project is part of a Citywide beach access rehabilitation program that includes some 29 beach access points. As noted in the analysis contained in the IS/MND, the proposed Project is not anticipated to substantially increase the number of beach patrons to the detriment of the environment, but instead would largely remain the same, based upon existing conditions. Therefore, the proposed Project would result in less than significant impacts and no mitigation measures are required beyond those already identified in the IS/MND.



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c) Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Less Than Significant Impact)

As discussed in Sections 3.2 through 3.21 of this IS, no environmental effects were identified as having any potentially significant impacts after mitigation measures were incorporated. As such, no environmental factors or effects were found to cause a substantial adverse effect on human beings, either directly or indirectly. Therefore, impacts would be less than significant, and no mitigation measures are required beyond those already identified in the IS/MND.



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5 References

The following references were used in part in whole to prepare this IS/MND.

1. City of Laguna Beach Initial Study and Mitigated Negative Declaration Pearl Street Beach Access Rehabilitation Project, dated October 2016.
2. Assembly Bill AB 32 Global Warming Solutions Act of 2006.
3. Air Quality and GHG Impact Analysis: Pearl Street Beach Access, by Giroux and Associates, dated September 15, 2016.
4. Cultural Resources Assessment for Proposed Replacement of Beach Access Stairs at Pearl Street, City of Laguna Beach, by Archaeological Resource Management Corporation, dated July 28, 2016.
5. Noise Impact Analysis: Pearl Street Beach Access, by Giroux and Associates, dated September 15, 2016.
6. California Environmental Quality Act as amended January 1, 2021. Sections 21000–21178 of the Public Resources Code, State of California.
7. City of Laguna Beach General Plan.
8. City of Laguna Beach Zoning Code Map.
9. Guidelines for California Environmental Quality Act as amended January 1, 2023. Section 15000.
10. City of Laguna Beach General Plan, Open Space Conservation Element, updated 2006 and amended November 13, 2018.
11. City of Laguna Beach General Plan, Safety Element, adopted June 6, 1995.
12. City of Laguna Beach General Plan, Scenic Highways Element, adopted April 2, 1975.
13. City of Laguna Beach General Plan, Land Use Element, adopted February 7, 2012.
14. City of Laguna Beach General Plan, Noise Element, adopted March 15, 2005.
15. Drainage Area Management Plan (DAMP), adopted by County of Orange July 1, 2003.
16. GeoTracker.
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18. City of Laguna Beach, Water Quality Division Website.
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APPENDIX A

Mitigation Monitoring and Reporting Program





Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
Biological Resources			
<p>The analysis contained within Section 3.5 (Biological Resources) indicates that the Project site assessment revealed that the majority of special-status wildlife known to occur in the general region had a “low” potential of occurrence within the Biological Survey Area (BSA), due to the developed nature of habitats within the BSA. Similarly, due to the developed nature of the BSA, special-status plant or wildlife species were determined to have a low potential for occurrence or were not likely at all to occur. During construction, if these activities occur during the avian nesting season, the proposed Project could be in conflict with the Migratory Bird Treaty Act (MBTA). The analysis also determined no riparian habitat or other sensitive communities are present within the BSA. Because construction activities would remove vegetation (non-native/ornamental) these activities could result in the spread of noxious weeds within the Project site and adjacent areas. Further, the analysis determined that with the implementation of mitigation measures BIO-1 through BIO-6, impacts would be less than significant.</p>	<p>BIO-1 Pre-construction Plant Survey</p> <p>Prior to initial ground disturbance for any areas subject to ground disturbance, the Project proponent shall conduct pre-construction surveys for special-status plant species in all areas subject to ground-disturbing activity, including, but not limited to, slope grading, new access roads, staging areas, and Project construction. The surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and California Native Plant Society (CNPS). All listed plant species found shall be marked and avoided. Any populations of special-status plants found during surveys will be fully described, mapped, and a CNPS Field Survey Form or written equivalent shall be prepared.</p> <p>Prior to site grading, any populations of special-status plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of the buffer depends upon the proposed use of the immediately adjacent lands and includes consideration of the plant’s ecological requirements (e.g., sunlight, moisture, shade tolerance, physical and chemical characteristics of soils) that are identified by the qualified plant ecologist or botanist. The buffer for herbaceous and shrub species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the City of Laguna Beach. Highly visible flagging shall be placed along the buffer area and remain in good working order during the duration of any construction activities in the area.</p> <p>Where impacts to listed plants cannot be avoided, the USFWS and/or CDFW shall be consulted for authorization, as appropriate. Additional mitigation measures to protect or restore listed plant species or their habitat, including but not limited to a salvage plan including seed collection and replanting, may be required by the USFWS or CDFW before impacts are authorized.</p> <p>A plant deemed rare by the CNPS, but not federally or state-listed as endangered or threatened, receives a California Rare Plant Ranking (CRPR) ranging from presumed extinct (CRPR 1A) to limited distribution/watchlist (CRPR 4). If non-listed rare plants cannot be avoided, and Project-related impacts result in the loss of 10 percent or more of the local population (i.e., occurrences within 0.25 mile of the Project impact location), compensatory mitigation will be required.</p> <p>Compensation: Compensation will be required for all impacts that exceed the 10 percent threshold (e.g., impacts to 15 percent of a population will only require compensation for 5 percent, the percentage of impacts that exceed the 10 percent threshold). To compensate for permanent impacts to special-status plants (including areas located beneath the arrays), habitat (which may include preservation of areas within the undisturbed areas of the Project footprint, mitigation lands outside of the main Project site, or a combination of both) that is not already public land shall be preserved and managed in perpetuity at a 1:1 mitigation ratio (one acre preserved for each acre impacted).</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to earthmoving activities or construction and then during initial ground disturbing activities.</p>



Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	<p>Compensation for temporary impacts shall include land acquisition and/or preservation at a 0.5:1 ratio. The preserved habitat for a significantly impacted plant species shall be of equal or greater habitat quality to the impacted areas in terms of soil features, extent of disturbance, and vegetation structure, and will contain verified extant populations, of the same size or greater, of the special-status plants that are impacted.</p> <p>Prior to the disturbance of habitat for or take of special-status plants the City of Laguna Beach must present documentation of a recorded conservation easement(s) for all compensation/mitigation lands to the United States Army Corps of Engineers (USACE) and CDFW as applicable. Compensation lands shall be located within the general vicinity of the City of Laguna Beach. An open space easement will be recorded on all property associated with the compensation/mitigation lands to protect the existing plant and wildlife resources in perpetuity. An open space easement can be held by CDFW or an approved land management entity and shall be recorded immediately upon the dedication or acquisition of the land.</p>		
	<p>BIO-2 Pre-Construction Wildlife Survey</p> <p>Prior to ground disturbance or vegetation clearing within the Project site, a qualified biologist shall conduct surveys for wildlife (no more than 14 days prior to site disturbing activities) where suitable habitat is present and directly impacted by construction activities. Wildlife found within the Project site or in areas potentially affected by the Project will be relocated to the nearest suitable habitat that will not be affected by the Project prior to the start of construction. Special-status species found within a Project impact area shall be relocated by an authorized biologist to suitable habitat outside the impact area.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to earthmoving activities or construction and then during initial ground disturbing activities.</p>
	<p>BIO-3 Biological Monitoring</p> <p>A qualified biological monitor, with expertise in the species known to occur or with the potential to occur on the Project site, shall be retained to monitor construction activities. The qualified biologist shall be present during initial ground disturbance for each phase of construction. Once initial ground disturbance is complete, monitoring will occur periodically during all construction activities. The qualified biologist(s) shall be present during all ground-disturbing activities immediately adjacent to, or within habitat that supports populations of listed or special-status species.</p> <p>If required, during pre-construction surveys and/or required monitoring efforts, the qualified biologist will relocate common and special-status species that enter the Project site; some special-status species may require specific permits prior to handling and/or have established protocols for relocation. Records of all detection, capture and release shall be reported to CDFW.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to and during construction.</p>



Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	<p>BIO-4 Environmental Awareness Training</p> <p>All Project personnel must attend an environmental awareness and compliance training program prior to working on the Project site. The training program shall present the environmental regulations and applicable permit conditions that the Project team shall comply with. The training program shall include applicable mitigation measures established for the Project to minimize impacts to water quality and avoid sensitive resources, habitats, and species. Dated sign-in sheets for attendees at these meetings shall be maintained and submitted to the City of Laguna Beach.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Initial training prior to construction and administered as needed, provided new contractor/staff access the work site area.</p>
	<p>BIO-5 Implement Best Management Practices (BMP)</p> <p>Grading plans for the Project shall indicate that the Project shall implement the following BMPs:</p> <ul style="list-style-type: none"> • Restrict non-essential equipment to the existing roadways and/or ruderal areas to avoid disturbance to native vegetation. • All excavation, steep-walled holes, or trenches more than six inches in depth will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth dirt fill or wooden planks. Trenches will also be inspected for entrapped wildlife each morning prior to onset of construction activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped wildlife. Any wildlife discovered will be allowed to escape before construction activities are allowed to resume or removed from the trench or hole by a qualified biologist holding the appropriate permits (if required). • Minimize mechanical disturbance of soils to reduce impact of habitat manipulation on small mammals, reptiles, and amphibians. • Removal/disturbance of vegetation shall be minimized to the greatest extent feasible. • Install and maintain appropriate erosion/sediment control measures, as needed, throughout the duration of work activities. • Vehicles shall not be driven, or equipment operated, in water covered/wetted portions any potentially jurisdictional feature, except as otherwise provided for in the permits/agreements from the CDFW, USACE, California Coastal Commission, and/or Regional Water Quality Control Board (RWQCB). • No vehicles or equipment shall be refueled within 100 feet of an ephemeral drainage or wetland unless a bermed and lined refueling area is constructed. Spill kits shall be maintained on-site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks of materials. 	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>During construction.</p>



Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	<p>BIO-6 Nesting Bird Surveys and Avoidance Measures</p> <p>Prior to initial site disturbance/issuance of grading permits, seasonally timed presence/absence surveys for nesting birds shall be conducted by a qualified biologist. If construction activities carry over into a second nesting season(s) the surveys will need to be completed annually until the Project is complete. A minimum of three survey events, three days apart shall be conducted (with the last survey no more than three days prior to the start of site disturbance), if construction is scheduled to begin during avian nesting season (February 15 through September 15); surveys for raptors shall be conducted from January 1 to August 15. Surveys shall be conducted within 500 feet of all Project activities.</p> <p>If special-status species are observed, consultation with USFWS and/or CDFW is required. If breeding birds with active nests are found prior to or during construction, a qualified biological monitor shall establish a 300-foot buffer around the nest and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. The prescribed buffers may be adjusted by the qualified biologist based on existing conditions around the nest, planned construction activities, tolerance of the species, and other pertinent factors. The qualified biologist shall conduct regular monitoring of the nest to determine success/failure and to ensure that Project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. If construction occurs outside of avian nesting season, only a single presence/absence survey will be required.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to earthmoving activities or construction.</p>
Cultural Resources			
<p>As noted in Section 3.6 (Cultural Resources), the analysis determined no built environment historical resources would be affected, including the beach access stairs. Moreover, the records searches conducted at the South Central Coastal Information Center (SCCIC), literature review, and field survey, determined there are no archaeological resources determined for the area and therefore, no impacts to potential archaeological resources would result with proposed Project implementation. However, subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered unique archaeological resources and therefore, a mitigation measure was recommended to reduce impacts to less than significant levels. With the implementation of Mitigation Measure CUL-1, impacts would be less than significant.</p>	<p>CUL-1 Cultural Materials Discovered during Construction</p> <p>If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist approved by the City shall be retained by the contract to evaluate the finds, evaluate the item for its significance and record the item on the appropriate State Department of Parks and Recreation 523 series forms, and develop and carry out a program of mitigation as appropriate. The archaeologist and the Native American Monitor shall determine whether the resource requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the resource is determined to be eligible for listing on the California Register of Historical Resources as a unique archaeological resource as defined in PRC Section 15064.5, the archaeologist shall develop a plan for the treatment of the resource. The plan shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, submittal of cultural material to an appropriate repository, or other appropriate measures outlined in Public Resources Code Section 21083.2. A final report shall be submitted to the SCCIC.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>During construction and grading activities.</p>



Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
Geology & Soils			
<p>As noted in Section 3.7 (Geology and Soils), a Paleontological Resource Assessment was prepared for the proposed Project and is contained within Appendix E (Paleontological Resource Assessment) of this IS/MND. The results of this assessment indicate that two geologic units are present in the Project area: very young marine deposits, which are assessed as having low paleontological potential; and the Topanga Group, which is assessed as having high paleontological potential. As the proposed Project will require some ground disturbance, impacts to potential paleontological resources is considered potentially significant. However, with the implementation of mitigation measures GEO-1, GEO-2, and GEO-3, these impacts would be reduced to less than significant levels.</p>	<p>GEO-1 Paleontological Monitoring</p> <p>A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the final Project plans that provides for paleontological monitoring of earthwork and ground-disturbing activities into undisturbed geologic units with high paleontological potential, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include provisions for a Worker’s Environmental Awareness Program (WEAP) training that communicates requirements to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance, procedures for the inadvertent discovery of paleontological resources during construction, and final reporting, to be submitted to the lead agency. Fulltime paleontological monitoring should be conducted for all ground disturbance into previously undisturbed sediments in areas mapped as the Topanga Group and once excavations reach 5 feet in depth in areas mapped as very young marine deposits. The Project Paleontologist may alter the frequency of monitoring based on subsurface conditions.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to and during construction and grading and soil removal.</p>
	<p>GEO-2 WEAP Training</p> <p>The Project Paleontologist should develop a WEAP training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to construction and grading and soil removal.</p>
	<p>GEO-3 Unanticipated Discoveries</p> <p>In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The designated Project Paleontologist shall assess the find. Should the Project Paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data, the final monitoring report, and curation fees.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>During construction and grading and soil removal.</p>
Noise			
<p>As noted in Section 3.14 (Noise), during brief periods of jackhammering, a perceived temporary nuisance could be created at an adjacent residence, even with closed windows. Although noise levels from construction could create a perceived nuisance, increases in noise levels from construction activity would be temporary. All construction activities at the site would also be limited by conditions on construction permits requiring compliance with the City’s Noise Ordinance. Allowable hours of construction are between the hours of 7:30 a.m. and 6:00 p.m., Monday through Friday. No work is permitted on Saturdays, Sundays, and Federal Holidays. In addition, to ensure that no potential significant noise impacts result due to the construction of the proposed Project (and consistent with City</p>	<p>NOI-1 Construction Activity</p> <ul style="list-style-type: none"> • During construction activities, the following construction practices shall be followed. These construction practices are listed as construction noise control measures in the FTA Transit Noise and Vibration Impact Assessment Manual: <ul style="list-style-type: none"> a) Stockpiling and staging activities should be located as far as practicable from dwellings. b) All mobile equipment shall have properly operating and maintained mufflers. 	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>During construction activities</p>



Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
<p>requirements) a construction period noise mitigation measure (NOI-1) is recommended to reduce impacts to a less than significant level.</p>	<ul style="list-style-type: none"> c) As a condition of approval, non-emergency construction activities adjacent to existing noise-sensitive uses shall be limited to daylight hours between the hours of 7:30 a.m. and 6:00 p.m. Monday through Friday. No work is permitted on Saturdays, Sundays, and federal holidays. d) Construct temporary enclosures around exceptionally noisy activities. For example, air compressors can be enclosed and shields can be used around pavement breakers such as jackhammers. e) Notify adjacent homes near any hardscape demolition activities as to time and place to allow residents to adjust their schedule to avoid noise disruption. 		
Tribal Cultural Resources			
<p>As part of its AB 52 consultation requirements, on March 20, 2023, the City sent letters to 16 tribal representatives making them aware of the proposed. Of the Tribes contacted by the City, one Tribe (Gabrieleño Band of Mission Indians–Kizh Nation) has requested consultation. The Kizh Nation consider the Project area sensitive for tribal cultural resources and requested that a Kizh Nation monitor be present during ground disturbance. Additionally, both the Gabrieliño Tongva Indians of California Tribal Council and Juaneño Band of Mission Indians, Acjachemen Nation-Belardes contacted the City and noted that the area is culturally sensitive and that tribal monitoring should be implemented. Therefore, impacts are considered potentially significant without mitigation. However, with the implementation of the mitigation measures TCR-1 through TCR-6, impacts would be less than significant with mitigation.</p>	<p><i>TCR-1: Native American Monitoring by the Gabrieleño Band of Mission Indians–Kizh Nation Prior to Commencement of Ground-Disturbing Activities</i></p> <ul style="list-style-type: none"> a) The Project applicant/lead agency shall retain a Native American Monitor from the Gabrieleño Band of Mission Indians–Kizh Nation. The monitor shall be retained prior to the commencement of any “ground-disturbing activity” for the subject Project at all Project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the Project, such as public improvement work). “Ground-disturbing activity” shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. b) A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity. c) The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground–disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or “TCR”), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the Project applicant/lead agency upon written request to the Tribe. 	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to and during construction and grading and soil removal.</p>



Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	<p>d) On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the Project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the Project site or in connection with the Project are complete; or (2) a determination and written notification by the Kizh to the Project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the Project site possesses the potential to impact Kizh TCRs.</p>		
	<p>TCR-2: Consultation with the Gabrieleño Band of Mission Indians–Kizh Nation in the Event of Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)</p> <p>a) Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by Native American Monitor from the Gabrieleño Band of Mission Indians – Kizh Nation and other consulting Tribes. A mitigation plan shall be prepared and implemented to coordinate recovery and retention of all discovered TCRs in accordance with State guidelines and in consultation with Gabrieleño Band of Mission Indians – Kizh Nation and other consulting Tribes, in the form and/or manner they deem appropriate, including for educational, cultural and/or historic purposes.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>During construction and grading and soil removal.</p>
	<p>TCR-3: Tribal Cultural Resources Monitoring–Gabrieliño Tongva Indians of California Tribal Council</p> <p>A qualified and certified indigenous tribal member of Gabrieliño Tongva Indians of California (GTIOC) and direct lineal descendant of the Project site to provide the professional Native American Monitoring required for only the ground-disturbing activity on the site. Ground disturbances including but not limited to the removal of asphalt/cement/slurry, trenching, boring, excavation, auguring, grubbing, tree removal, grading and drilling will be monitored. The tribal monitor will only be required on-site when these ground-disturbing activities occur.</p> <p>The GTIOC monitor will be responsible for observing all mechanical and hand labor excavations to include paddle scrapers, blade machines, front-end loaders, backhoe, boring and drill operations as well as hydraulic and electric chisels. Associated work using tools such as picks and other non-electric or gasoline tools that are not regarded as mechanical will be monitored for their soil disturbances.</p> <p>Soils that are removed from the work site are considered culturally sensitive and are subject to inspection. These soils whether placed in a dump truck or spots piles are to be inspected. The monitor will temporarily hold excavations until a determination is made on the sensitivity of the of the soil. If the soils are sensitive, an archaeological monitor will verify the find and notify site supervisor.</p> <p>If any archaeological or paleontological, or cultural deposits, are discovered, including but not limited grave related artifacts, artifacts of traditional cultural, religious, or spiritual sites, or any other artifacts relating to the use or habitation sites, all construction shall cease within at least 50 feet of the discovery and held until the proper authorities are contacted.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to and during construction and grading and soil removal.</p>



Impacts	Mitigation Measure	Responsible/ Monitoring Party	Monitoring Action or Implementation Stage
	<p>The GTIOC monitor may make recommendations during the course of the Project when a cultural area has been impacted. The GTIOC monitor will be authorized to halt or redirect excavation activities to another area as an assessment is made. The GTIOC monitor will work together to ensure that the area is warranted as being culturally sensitive before a determination is made. Avoidance and directing an alternative route from this culturally sensitive area is highly recommended</p>		
	<p>TCR-4: Inadvertent Discovery of Tribal Cultural Resource—Gabrieliño Tongva Indians of California Tribal Council</p> <p>Provided TCRs are inadvertently discovered during construction, these activities shall cease, and a 50-foot radius buffer shall be established. A GTIOC Tribal Council tribal monitor/consultant and other consulting Tribes shall then be permitted to evaluate and assess these resources, to the extent necessary. Pending their assessment, and if deemed required by these Tribes, a mitigation plan shall be developed to address their recovery and retention. The mitigation plan shall be developed in accordance with State guidelines and in consultation with the GTIOC Tribal Council tribal monitor/consultant and other consulting Tribes. The inadvertently discovered TCRs shall be allowed to be used for historic, educational, cultural resources purposes, or as the GTIOC Tribal Council tribal monitor/consultant and other consulting Tribes deem suitable and/or appropriate.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>During construction and grading and soil removal.</p>
	<p>TCR-5: Juaneño Band of Mission Indians, Acjachemen Nation-Belardes</p> <p>The City shall retain and compensate for the services of a Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant. The monitor/consultant shall only be present on-site during the construction phases that involve ground-disturbing activities. The tribal monitor/consultant shall complete daily monitoring logs that shall provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Project excavation activities are completed, or when the tribal representatives and monitor have indicated that the site has a low potential for affecting tribal cultural resources.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>Prior to construction and grading and soil removal.</p>
	<p>TCR-6: Inadvertent Discovery of Tribal Cultural Resource—Juaneño Band of Mission Indians, Acjachemen Nation-Belardes</p> <p>Provided TCRs are inadvertently discovered during construction, these activities shall cease, and a 50-foot radius buffer shall be established. A Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant and other consulting Tribes shall then be permitted to evaluate and assess these resources, to the extent necessary. Pending their assessment, and if deemed required by these Tribes, a mitigation plan shall be developed to address their recovery and retention. The mitigation plan shall be developed in accordance with State guidelines and in consultation with the Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant and other consulting Tribes. The inadvertently discovered TCRs shall be allowed to be used for historic, educational, cultural resources purposes, or as the Juaneño Band of Mission Indians, Acjachemen Nation-Belardes tribal monitor/consultant and other consulting Tribes deem suitable and/or appropriate.</p>	<p>City of Laguna Beach Public Works Department Engineering Division</p>	<p>During construction and grading and soil removal.</p>



APPENDIX B

Air Quality and Greenhouse Gas Study







**AIR QUALITY AND GREENHOUSE GAS
STUDY**

Cleo Street Beach Access Rehabilitation
Project

March 23, 2023

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Air Quality and Greenhouse Gas Study

Revision	Description	Author	Date	Quality Check	Date	Independent Review	Date



Air Quality and Greenhouse Gas Study

The conclusions in the Report titled Air Quality and Greenhouse Gas Study are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from City of Laguna Beach (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

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Air Quality and Greenhouse Gas Study

LIST OF APPENDICES

Appendix A: Pearl Street Rehabilitation IS/MND Air Quality and Greenhouse Gas Files



Acronyms / Abbreviations

$\mu\text{g}/\text{m}^3$	Micrograms Per Cubic Meter
AB	Assembly Bill
ACBMs	Asbestos-Containing Building Materials
ACM	Asbestos Containing Material
ATCMs	Airborne Toxic Control Measures
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CH ₄	Methane
City	City of Laguna Beach
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
CPAP	Climate Protection Action Plan
DPM	Diesel Particulate Matter
EO	Executive Order
GHG	Greenhouse Gases
GWP	Global Warming Potential
H&A	Hodge & Associates
HAP	Hazardous Air Pollutants
HFC	Hydrofluorocarbons
H ₂ S	Hydrogen Sulfide
IS/MND	Initial Study / Mitigated Negative Declaration
LST	Localized Significance Threshold
mg/m ³	Milligrams Per Cubic Meter
MMT	Million Metric Tons
MMTCO _{2e}	Million Metric Tons of Carbon Dioxide Equivalents
MTCO _{2e}	Metric Tons of Carbon Dioxide Equivalents
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NF ₃	Nitrogen Trifluoride
N ₂ O	Nitrous Oxide
NO _x	Oxides of Nitrogen
NO ₂	Nitrogen Dioxide
O ₃	Ozone
Pb	Lead
PFCs	Perfluorocarbons
PM	Particulate Matter
PM _{2.5}	Fine particulate matter; particulate matter 2.5 microns or smaller
PM ₁₀	Particulate matter; particulate matter 10 microns or smaller
ppb	parts per billion
ppm	parts per million



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ROG	Reactive Organic Gases
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF ₆	Sulfur Hexafluoride
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxides
TAC	Toxic Air Contaminants
USEPA	United States Environmental Protection Agency
USGS	United States Geologic Survey
VOC	Volatile Organic Compounds



1 Introduction

1.1 Project Overview

The Cleo Street Beach Access Project (Project) in the City of Laguna Beach (City) intends to rehabilitate existing beach access infrastructure located at the intersection of Cleo Street and Ocean Front, near the South Coast Highway. Beach access is on a steep slope between the beach and roadway and currently includes retaining walls, terraced landings, and concrete steps. The Project will remove and replace the ramps, stairs, walls, and railings and will include landscaping and irrigation.

1.2 Project Description

As of October 2016 there were 29 beach access stairways in the City (Hodge & Associates [H&A], 2016). A similar rehabilitation project was previously completed by H&A at Pearl Street, located approximately 0.25 miles from the Project site. The Pearl Street rehabilitation project consisted of the replacement of existing stairs, piers, and paving and including the installation of new overlooks, bike racks, and landscaping. In 2016, the City had prepared and circulated an Initial Study / Mitigated Negative Declaration (IS/MND) completed by H&A for the Pearl Street Beach Access Rehabilitation. A comparison of the Pearl and Cleo Street Beach Access Rehabilitation Projects is provided as **Table 1** below.

Table 1: Comparison of Pearl Street and Cleo Street Beach Access Rehabilitation

Rehabilitation	Pearl Street Beach Access	Cleo Street Beach Access
Replacement of Paving	X	X
Retaining Wall Replacement	X	X
Replacement of ~60 stairs	X	X
Replacement of Piers	X	X
Installation of Guard Rails	X	X
New Landscaping	X	X
New Overlooks	X	X
New Trash Receptacle	X	X
New Bike Racks	X	O
Duration of Construction	Four Months	Four Months
Total Area to be Disturbed	<1 Acre	<1 Acre

Based on the similarity and proximity of the Pearl Street Beach Access Rehabilitation project to the Project, it is reasonable to assume that criteria air pollutant and greenhouse gas emissions would be comparable during construction of the two projects. In addition, because the California Environmental Quality Act (CEQA) encourages the use of existing CEQA documentation where relevant, Stantec has utilized construction assumptions and emissions estimates presented in the IS/MND of the Pearl Street Beach Access Rehabilitation project for this *Air Quality and Greenhouse Gas Study*. Construction and grading activities are expected to take approximately four months and utilize the equipment shown below in **Table 2**.



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Table 2: Proposed Construction Equipment and Quantity

Equipment	Quantity
Drill Rig	1
Air Compressor	1
Loader/Backhoe	1



2 Air Quality

2.1 Environmental Setting

The Project is located within Orange County and the South Coast Air Basin (SCAB). Regulatory oversight authority regarding air quality rests at the local, state, and federal levels with the South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB), and U.S. Environmental Protection Agency (USEPA), respectively. The SCAB covers approximately 12,000 square miles, consisting of Orange County and the urbanized areas of San Bernardino, Riverside, and Los Angeles Counties. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. The SCAB is classified as a dry-hot desert climate (SCAQMD 1993).

2.1.1 CRITERIA AIR POLLUTANTS

Criteria air pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (measured both in units of smaller than 2.5 microns in diameter [$PM_{2.5}$] and in units of particulate matter smaller than 10 microns in diameter [PM_{10}]), and lead (Pb).

Ozone. Most ground-level O_3 is formed as a result of complex photochemical reactions in the atmosphere between reactive organic gases (ROG) (also known as volatile organic compounds [VOCs]), NO_x , and oxygen. ROGs and NO_x are considered precursors to the formation of ozone, a highly reactive gas that can damage lung tissue and affect respiratory function. While ozone in the lower atmosphere is considered a damaging air pollutant, ozone in the upper atmosphere is beneficial, as it protects the Earth from harmful ultraviolet radiation. However, atmospheric processes preclude ground-level ozone from reaching the upper atmosphere (USEPA 2022c).

Carbon Monoxide. CO is a colorless, odorless, poisonous gas produced by the incomplete combustion of fossil fuels. Elevated levels of CO can result in harmful health effects, especially for the young and elderly, and can also contribute to global climate change.

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas primarily produced as a result of the burning of fossil fuels. NO_2 can also lead to the formation of ozone in the lower atmosphere. NO_2 can cause respiratory ailments, especially in the young and elderly, and can lead to degradations in the health of aquatic and terrestrial ecosystems.

Sulfur Dioxide. SO_2 is primarily emitted from the combustion of coal and oil by steel mills, pulp and paper mills, and non-ferrous smelters. High concentrations of SO_2 can aggravate existing respiratory and



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cardiovascular diseases in asthmatics and others who suffer from emphysema or bronchitis. SO₂ also contributes to acid rain, which in turn, can lead to the acidification of lakes and streams.

Particulate Matter. Airborne PM is not a single pollutant, but rather is a mixture of many chemical species. PM is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings. Particles vary widely in size, shape, and chemical composition, and may contain inorganic ions, metallic compounds, elemental carbon, organic compounds, and compounds from the earth's crust. Particles are defined by their diameter for air quality regulatory purposes. Those with a diameter of 10 microns or less (PM₁₀) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter (PM_{2.5}). Therefore, PM_{2.5} comprises a portion of PM₁₀. Emissions from combustion of gasoline, oil, diesel fuel or wood produce much of the PM_{2.5} pollution found in outdoor air, as well as significant proportion of PM₁₀. PM₁₀ also includes dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, wind-blown dust from open lands, pollen, and fragments of bacteria (USEPA 2022d).

PM may be either directly emitted from sources (primarily particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO₂, NO_x, and certain organic compounds.

Lead. Sources of lead (Pb) include pipes, fuel, and paint, although the use of Pb in these materials has declined dramatically in recent years. Historically, a main source of Pb was automobile emissions. Pb can be inhaled directly or ingested by consuming Pb-contaminated food, water, or dust. Fetuses and children are most susceptible to Pb poisoning, which can result in heart disease and nervous system damage. Through regulations the United States Environmental Protection Agency (USEPA) has gradually reduced the Pb content of gasoline. This program has essentially eliminated violations of the Pb standard in urban areas except those areas with Pb point sources.

2.1.2 ATTAINMENT STATUS

The USEPA and CARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Attainment status is based on the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Each standard has a different definition, or “form” of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual standard for PM_{2.5} is met if the 3-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

The Clean Air Act (CAA) identifies two types of NAAQS. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased



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visibility and damage to animals, crops, vegetation, and buildings. The CAAQS are equal to or more stringent than the NAAQS and include pollutants for which national standards do not exist. Table 3 presents the applicable NAAQS and CAAQS for the Project area.

Table 1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Ozone	1 hour	0.09 ppm (180 µg/m ³)	—	Same as primary standard
	8 hour	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	
Respirable particulate matter	24 hour	50 µg/m ³	150 µg/m ³	Same as primary standard
	Annual arithmetic mean	20 µg/m ³	—	
Fine particulate matter	24 hour	—	35 µg/m ³	Same as primary standard
	Annual arithmetic mean	12 µg/m ³	12 µg/m ³	
Carbon monoxide	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	—
	8 hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	—
	8 hour (Lake Tahoe)	6 ppm (7 mg/m ³)	—	—
Nitrogen dioxide	1 hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	—
	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as primary standard
Sulfur dioxide	1 hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	—
	3 hour	—	—	0.5 ppm (1,300 µg/m ³)
	24 hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas)	—
	Annual arithmetic mean	—	0.030 ppm (for certain areas)	—
Lead	30-day average	1.5 µg/m ³	—	—
	Calendar quarter	—	1.5 µg/m ³	Same as Primary Standard
	Rolling 3-month average	—	0.15 µg/m ³	
Visibility-reducing particles	8 hour	See Footnote 1	No National Standards	
Sulfates	24 hour	25 µg/m ³		
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)		
Vinyl chloride	24 hour	0.01 ppm (26 µg/m ³)		

Notes:

¹ In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

µg/m³ = micrograms per cubic meter; ppb = parts per billion

mg/m³ = milligrams per cubic meter; ppm = parts per million

Source: CARB 2016a



Attainment Status

Table 4 presents the federal and state attainment status for the Project area which is in the SCAB. The Project is in an area designated non-attainment for both the federal and state standards for O₃ and PM_{2.5}, the state standard for PM₁₀, and the federal standard for lead.

Table 2: Attainment Status of Orange County within South Coast Air Basin

Pollutant	Federal Designation	State Designation
Ozone (O ₃)	Non-Attainment (Extreme)	Non-Attainment
Particulate Matter (PM ₁₀)	Attainment/Maintenance	Non-Attainment
Particulate Matter (PM _{2.5})	Non-Attainment (Serious)	Non-Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	Non-Attainment	Attainment
Hydrogen Sulfide (H ₂ S)	*	Attainment
Sulfates	*	Attainment
Visibility Reducing Particles	*	Attainment

Source: SCAQMD, 2018.
Notes: (*) = Not Applicable/ No Federal Standards.

Ambient Air Quality

Local air quality can be evaluated by reviewing relevant air pollution concentrations near the Project. Table 5 summarizes published monitoring data from the Mission Viejo – 26081 Via Pera Monitoring Station at 26081 Via Pera, Mission Viejo within the County for the years 2019 to 2021. The Mission Viejo – 26081 Via Pera Monitoring Station is located approximately nine miles from the Project area and monitors ambient ozone, PM₁₀, and PM_{2.5}.



Table 3: Mission Viejo – Pera Monitoring Station

Air Pollutant	Averaging Time	Item	2019	2020	2021
Ozone	1 Hour	Max 1 Hour (ppm)	0.106	0.171	0.125
		Days > State Standard (0.09 ppm)	3	20	2
	8 Hour	Max 8 Hour (ppm)	0.087	0.122	0.081
		Days > State Standard (0.070 ppm)	11	34	8
		Days > National Standard (0.070 ppm)	11	32	8
		Days > National Standard (0.075 ppm)	7	25	4
PM ₁₀	24-Hour	Max 24-Hour Averages (µg/m ³)	45.1	56.2	35.2
		Annual Average (µg/m ³)	17.1	18.3	16.2
		Days > National 24-Hr Standard	0	0	0
		Days > State 24-Hr Standard	0	2	0
PM _{2.5}	24-Hour	Max 24-Hour Averages (µg/m ³)	20.8	47.6	32.6
		Annual Average (µg/m ³)	7.1	10.3	9.3
		Days > National 24-Hr Standard	0	6	0
Source: California Air Resources Board, 2023. µg/m ³ = micrograms per cubic meter pm = parts per million					

2.1.3 ODORS

Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestation of a person’s reaction to foul odors can range from the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant



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reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

2.1.4 TOXIC AIR CONTAMINANTS

Toxic Air Contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered “criteria pollutants” under either the CAA or the California Clean Air Act (CCAA) and are thus not subject to NAAQS or CAAQS. Instead, the EPA and the CARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (BACT) to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects.

Diesel Particulate Matter

Diesel Particulate Matter (DPM) was identified as a TAC by the CARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 42% of the statewide total, with an additional 55% attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3% of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (CARB 2016b).

DPM is typically composed of carbon particles (“soot”, also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and NO_x. NO_x emissions from diesel engines are important because they can undergo chemical reactions in the atmosphere leading to formation of PM_{2.5} and ozone.



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In California, diesel exhaust particles have been identified as a carcinogen accounting for an estimated 70% of the total known cancer risks in California. DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over an estimated 70-year lifetime. Non-cancer health effects associated with exposure to DPM include premature death, exacerbated chronic heart and lung disease, including asthma, and decreased lung function in children. Short-term exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks (CARB 2016b).

Individuals most vulnerable to non-cancer health effects of DPM are children whose lungs are still developing and the elderly who often have chronic health problems. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to DPM (CARB 2016b). In addition to its health effects, DPM significantly contributes to haze and reduced visibility.

2.1.5 SENSITIVE RECEPTORS

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. For the purposes of CEQA, the SCAQMD considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The Project site is located within 40 feet from existing sensitive receptors (residences) that could be exposed to diesel emission exhaust during construction.

2.2 Regulatory Setting

Air quality within the project area is regulated by several jurisdictions including the USEPA, CARB, and the SCAQMD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, both state and local regulations may be more stringent.

2.2.1 FEDERAL

U.S. Environmental Protection Agency

At the federal level, the USEPA has been charged with implementing national air quality programs. The USEPA's air quality mandates are drawn primarily from the CAA, which was signed into law in 1970. Congress substantially amended the CAA in 1977 and again in 1990.



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Federal Clean Air Act

The CAA required the USEPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized above in Table 1.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the CAA of 1970, the USEPA established the NESHAPs. These are technology-based source-specific regulations that limit allowable emissions of HAPs. Among these sources include asbestos-containing building materials (ACBMs). NESHAPs include requirements pertaining to the inspection, notification, handling, and disposal of ACBMs associated with the demolition and renovation of structures.

2.2.2 STATE

California Air Resources Board

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts), establishing CAAQS, which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used. The CAAQS are summarized above in Table 1.

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for O₃, CO, SO₂, and NO₂ by the earliest practical date. The CCAA specifies that districts focus attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5% annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC.



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Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

Assembly Bill 617

In response to AB 617 (C. Garcia, Chapter 136, Statutes of 2017), the CARB established the Community Air Protection Program. The Community Air Protection Program includes community air monitoring and community emissions reduction program's focus is to reduce exposure in communities most impacted by air pollution. The Legislature has appropriated funding to support early actions to address localized air pollution through targeted incentive funding to deploy cleaner technologies in these communities, as well as grants to support community participation in the AB 617 process. AB 617 also includes new requirements for accelerated retrofit of pollution controls on industrial sources, increased penalty fees, and greater transparency and availability of air quality and emissions data, which will help advance air pollution control efforts throughout the State.

Naturally-Occurring Asbestos Regulations

CARB has adopted two Airborne Toxic Control Measures (ATCMs) which regulates the control of Naturally Occurring Asbestos associated with construction, surfacing, grading, mining, and quarrying activities. The SCAQMD is responsible for enforcing Asbestos ATCMs. There are no known likely areas of NOA in the Project area (United States Geologic Survey [USGS] 2011).

2.2.3 REGIONAL

South Coast Air Quality Management District

The SCAQMD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and the air quality conditions are maintained in the SCAB. Responsibilities of SCAQMD include, but not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the CAA and the CCAA.

SCAQMD 2022 Air Quality Management Plan

SCAB is designated as non-attainment for both federal and state standards for O₃ and PM_{2.5}, the state standard for PM₁₀, and the federal standard for lead. Because the SCAB currently exceeds these state and federal ambient air quality standards, the SCAQMD is required to implement strategies to reduce pollutant levels to recognized acceptable standards. The most recent air plan is the 2022 Air Quality Management Plan (AQMP), created in conjunction with the Southern California Association of Governments (SCAG), CARB, and USEPA to meet federal ozone and PM_{2.5} standards.



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The 2022 AQMP accounts for project population growth, predicted future emissions in energy and transportation demand, and determined control strategies for the eventual achievement of NAAQS attainment designations. These control strategies are either organized into the SCAQMD rules and regulations, or otherwise set forth as formal SCAQMD recommendations to other agencies. The 2022 AQMP includes policies that are consistent with the SCAQMD and specify review according to the recommendations of SCAQMD guidelines. Other policies are aimed at reducing transportation emissions and emissions from major stationary sources (SCAQMD 2022).

SCAQMD Rules and Regulations

The SCAQMD rules are regulations that may apply to the project include but are not limited to the following:

- **Rule 401: Visible Emissions.** This rule prohibits discharges of visible air contaminants from any single source.
- **Rule 402: Nuisance.** This rule prohibits the discharge from any source such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public.
- **Rule 403: Fugitive Dust.** The purpose of this rule is to reduce the amount of particulate matter in the ambient air as a result of anthropogenic fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions.
- **Rule 1403: Asbestos Emissions from Demolition/Renovation Activities.** The rule specifies the work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos containing materials (ACM).



3 Greenhouse Gas

3.1 Environmental Setting

To fully understand global climate change, it is important to recognize the naturally occurring “greenhouse effect” and to define the GHGs that contribute to this phenomenon. Various gases in the earth’s atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space and a portion of the radiation is absorbed by the earth’s surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

3.1.1 GREENHOUSE GASES

Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃) and sulfur hexafluoride (SF₆). Primary GHGs attributed to global climate change, are discussed in the following subsections.

Carbon Dioxide. CO₂ is a colorless, odorless gas. CO₂ is emitted in a number of ways, both naturally and through human activities. The largest source of CO₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO₂ emissions. The atmospheric lifetime of CO₂ is variable because it is so readily exchanged in the atmosphere (USEPA 2022a).

Methane. CH₄ is a colorless, odorless gas that is not flammable under most circumstances. CH₄ is the major component of natural gas, about 87% by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH₄ is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH₄ is about 12 years (USEPA 2022a).

Nitrous Oxide. N₂O is a clear, colorless gas with a slightly sweet odor. N₂O is produced by both natural and human-related sources. Primary human-related sources of N₂O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N₂O is also produced naturally from a wide variety of biological



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sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (USEPA 2022a).

Hydrofluorocarbons. HFCs are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (USEPA 2022a).

Perfluorocarbons. PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane, perfluoroethane, perfluoropropane, perfluorobutane, perfluorocyclobutane, perfluoropentane, and perfluorohexane (C_6F_{14}). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases perfluoromethane and perfluoroethane as byproducts. The estimated atmospheric lifetimes for perfluoromethane and perfluoroethane are 50,000 and 10,000 years, respectively (USEPA 2022a).

Nitrogen Trifluoride. NF_3 is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. NF_3 is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. In 2009, NF_3 was listed by California as a potential GHG to be listed and regulated under AB 32 (Section 38505 Health and Safety Code).

Sulfur Hexafluoride. SF_6 is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80% of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (USEPA 2022b).

Black Carbon. Black carbon is the most strongly light-absorbing component of PM emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands). California has been an international leader in reducing emissions of black carbon, including programs that target reducing PM from diesel engines and burning activities (CARB 2023).



3.1.2 GLOBAL WARMING POTENTIAL

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential (GWP).

Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse gas effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted. Based on a 100-year time horizon, CH₄ traps over 25 times more heat per molecule than CO₂ were being emitted, and N₂O absorbs approximately 298 times more heat per molecules than CO₂. Additional GHGs with high GWP include NF₃, SF₆, PFCs, and black carbon.

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. World-wide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions.

In 2020, GHG emissions within California totaled 369.2 million metric tons (MMT) of CO₂e. Within California, the transportation sector is the largest contributor, accounting for approximately 38% of the total statewide GHG emissions. Emissions associated with industrial uses are the second largest contributor, totaling roughly 23%. Electricity generation (including in-state and imports) totaled roughly 16% (CARB 2022a).

3.1.3 EFFECTS OF GLOBAL CLIMATE CHANGE

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snowpack is a principal supply of water for the state, providing roughly 50% of state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the state's energy resources. An early exhaustion of the Sierra snowpack may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity.



As a result, resultant changes in climate will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.

3.2 Regulatory Setting

3.2.1 STATE

Assembly Bill 32

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. CARB was established as the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

CARB approved the 1990 GHG emissions level of 427 MMTCO₂e on December 6, 2007. California met AB 32 goals in July 2018.

CARB 2008 Scoping Plan

The Scoping Plan contains measures designed to reduce the state's emissions to 1990 levels by the year 2020 to comply with AB 32. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors (CARB 2008).

Senate Bill 32

Senate Bill (SB) 32 was signed into law on September 8, 2016. SB 32 gives CARB the statutory responsibility to include the 2030 target previously contained in Executive Order (EO) B-30-15 in the 2017 Scoping Plan Update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030."



2017 Climate Change Scoping Plan Update

The 2017 Climate Change Scoping Plan Update was adopted on December 14, 2017 amending the 2008 Scoping Plan and addresses the SB 32 targets. Major elements of the Scoping Plan include achieving the goals in SB 350, increasing the stringency of the low carbon fuel standard, implementing a mobile source strategy to increase the amount of electric cars on the roadway, improve freight system efficiency through a Sustainable Freight Action Plan, increase stringency of 2035 targets laid out in SB 375, create a post 2020 cap and trade plan, reduction GHG emissions in the refinery sector, and develop an Integrated Natural Working Lands Action Plan to secure California's land base as a net carbon sink (CARB 2017).

Assembly Bill 1279

AB 1279 codified into law EO B-55-15 in September 2022. AB 127 requires the state to both achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions therefore, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85% below the 1990 levels.

2022 Scoping Plan for Achieving Carbon Neutrality

CARB prepared the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) in May 2022 to assess progress towards SB 32's 2030 target while laying out a path to achieving carbon neutrality by 2045 as identified in EO B-55-18. The 2022 Scoping Plan builds upon the successful framework of the previous scoping plan while identifying new, technologically feasible, and cost-effective solutions. The Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022b).

Senate Bill 375: The Sustainable Communities and Climate Protection Act of 2008

SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits more than 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

3.2.2 LOCAL

City of Laguna Beach Climate Protection Action Plan

The Laguna Beach City Climate Protection Action Plan (CPAP) was adopted in 2009 with the goal to reduce manmade GHG emissions 7% below 1990 levels no later than 2012. The CPAP includes an array



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of measures to reduce city-wide GHG emissions in the following sectors: buildings, transportation and land use, government operations, commercial operations, water management, and public outreach.



4 Methodologies and Thresholds

4.1 Methodology

As previously discussed, the proposed Project is similar in scope and scale to the Pearl Street Beach Access Rehabilitation project. Correspondingly, construction assumptions and emissions estimates presented in the Pearl Street Beach Access Rehabilitation project IS/MND were utilized for this Air Quality and Greenhouse Gas Study of the Cleo Street Beach Access Rehabilitation Project. Pearl Street Beach Access Rehabilitation construction emissions were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planning, and environmental professionals to quantify potential criteria air pollutant emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations including vehicle use, off-road equipment, fugitive dust, off-gas from asphalt and landscaping maintenance. Default data (i.e., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The Pearl Street Beach Access Rehabilitation IS/MND CalEEMod modeling results, including assumptions and defaults used by H&A, are provided in Attachment A.

4.2 Thresholds

4.2.1 AIR QUALITY

The SCAQMD has adopted regional and Localized Significance Thresholds (LSTs) to determine the significance of a project's potential air quality impacts. Separate thresholds of significance have been adopted for the construction and operation phases of projects. The LSTs were developed by the SCAQMD to assist lead agencies in analyzing localized air quality impacts from projects. LSTs look-up tables for one-, two-, and five-acre proposed projects emitting CO, nitrogen oxides (NO_x), PM_{2.5} or PM₁₀ were prepared for easy reference according to source receptor area. The LSTs methodology and associated mass rates are not applicable to mobile sources travelling over the roadways. It should be noted that SCAQMD does not mandate LSTs for new construction projects; more importantly, LSTs are a voluntary approach to be implemented at the discretion of local agencies (SCAQMD 2008a).

Table 6 below, presents the regional and voluntary LSTs applied to the Project and used for purposes of this analysis. These LSTs are based on a one-acre site with a 25-meter receptor distance in the Central Orange County Coastal area. The closest sensitive receptor is approximately 40 feet from the Project site.



Table 1: SCAQMD Air Quality Significance Thresholds (Mass Daily Thresholds)

Regional Thresholds (lbs/day)	VOC	NO_x	SO_x	CO	PM₁₀	PM_{2.5}	Lead (Pb)
Construction	75	100	150	550	150	55	3
Operation	55	55	150	550	150	55	3
Localized Thresholds (lbs/day)¹	VOC	NO_x	SO_x	CO	PM₁₀	PM_{2.5}	Lead (Pb)
Construction	N/A	92	N/A	647	4	3	N/A
Operation	N/A	92	N/A	647	1	1	N/A
SOURCE: SCAQMD Air Quality Significance (Mass Daily) Regional Thresholds, 1993; SCAQMD Mass Rate LST Lookup Tables, Appendix C, 2008 Notes: 1. Localized significance thresholds are from the SCAQMD lookup tables for Source Area 20 (Central Orange County Coastal) assuming a one-acre project site and a distance to the nearest sensitive receptor of 25 meters. 2. N/A = not applicable							

4.2.2 GREENHOUSE GAS

After the adoption of AB 32, the SCAQMD established a GHG working group made up at state and local agencies, CARB, municipal planning department, the Office of Planning and Research, and other state agencies. In 2008, the SCAQMD working group recommended a residential/commercial GHG significance threshold of 3,000 MT CO₂e/year based on the relative GHG emissions contribution between residential/commercial sectors and stationary source (industrial) sectors (SCAQMD 2008b). Additionally, the SCAQMD working group recommended that instead of an individual construction GHG threshold that construction emissions be amortized over the life of the project (30-years) and evaluated with a Project’s annual, operational GHG emissions.



5 Evaluation of Environmental Impacts

This document evaluates the potential air quality and greenhouse gas emissions impacts related to the Project.

5.1 Air Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5.1.1 IMPACT ANALYSIS

a. *Conflict with or obstruct implementation of the applicable air quality plan?*

Less than Significant Impact. The Project is limited to and consists of the reconstruction of beach access infrastructure at the Project site. The majority of Project associated emissions would be generated during construction from off-road equipment as well as fugitive dust from activities on unpaved surfaces/excavation. As shown in Table 7, Project construction emissions are below the applicable SCAQMD mass emissions thresholds of significance. Consequently, construction emissions would not be expected to conflict with or obstruct implementation of the applicable air quality plan or result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated as non-attainment under an applicable federal or state ambient air quality standard.

Operation phase emissions would generally consist of exhaust from portable and handheld equipment and on-road vehicles emissions from infrequent maintenance activities. The accessibility and safety of beach access via the rehabilitated Cleo Street entrance will be enhanced, but the overall throughput of users is expected to remain approximately the same -largely because the location of the entrance will not change (will not be moved to an area of greater or lesser population).



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There is not expected to be an increase in operation phase emissions compared to those that already occur associated with operation and maintenance of the existing beach access proposed for rehabilitation. As such, operation of the Project would not have the potential to conflict with or obstruct implementation of the applicable air quality plan.

- b. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Less than Significant Impact. In accordance with SCAQMD methodology, projects that do not exceed, or can be mitigated to less than the daily threshold values do not add significantly to a cumulative impact.

Construction activities associated with the Project would include site preparation, demolition, reconstruction, paving and architectural coatings. Estimated, unmitigated Project construction emissions are based on the results of the Pearl Street Beach Access Rehabilitation IS/MND and are summarized below in Table 7. Detailed emission estimates and assumptions are provided in Appendix A. The Project does not include a source of lead emissions. As shown in Table 7, Project construction emissions would be below SCAQMD thresholds.

Table 1: Unmitigated Project Construction Emissions in Comparison to SCAQMD Significance Criteria

Component	VOC	NOX	SOX	CO	PM10	PM2.5	Lead (Pb)
Regional Thresholds Construction	75	100	150	550	150	55	3
Localized Thresholds Construction	n/a	92	n/a	647	4	3	n/a
Estimated Construction Emissions	1.1	10.4	0.0	8.3	1.6	1.1	n/a
Exceeds Regional Thresholds?	No	No	No	No	No	No	n/a
Exceeds Localized Thresholds?	No	No	No	No	No	No	n/a
SOURCE: Pearl Street Beach Access Rehabilitation Project IS/MND, Hodge & Associates, October 2016, CalEEMod Version 2013.2.2 Construction Estimates							

The Project would not involve an increase in operational phase emissions. Since the proposed Project's emissions do not exceed SCAQMD thresholds, the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard and potential unmitigated Project impacts are considered to be less than significant.

- c. *Expose sensitive receptors to substantial pollutant concentrations?*

Less than Significant Impact. Sensitive receptors are defined as populations that are more susceptible to the effects of pollution than the population at large. Sensitive receptors are facilities that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutant. Land uses identified to be sensitive receptors by SCAQMD in the CARB's Air Quality Handbook include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.



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The Project site is directly adjacent to sensitive receptors to the north, west, and east with single-family residences as close as approximately 30 feet to the Project site boundary. Projects that are below the SCAQMD LSTs would not be expected to expose sensitive receptors to substantial pollutant concentrations. As shown in Table 7, the Project's construction emissions would be below the applicable LSTs. Therefore, the projection that Project emissions will not expose sensitive receptors to substantial pollutant concentrations is considered valid. In addition, to better ensure the safety of nearby receptors, Project construction activities will be conducted such that the Project is in compliance with SCAQMD Rule 403 to reduce fugitive dust emissions. Receptors are also at risk from potential asbestos exposure during building demolition or reconstruction. ACMs are not expected at the site, however in the event that ACMs are found then construction would be required to comply with SCAMQD Rule 1403. For these reasons, potential impacts are considered to be less than significant.

- d. *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

No Impact. The SCAQMD has identified land uses commonly subject to odor complaints. These land uses include agriculture (farming and livestock), wastewater treatment, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD, 1993). The Project involves minor and short-term conventional construction activities that do not involve any of the SCAQMD identified land uses subject to odor complaints or components with the potential to create objectionable odors affecting a substantial number of people. The construction, operation, and maintenance of the proposed Project would not involve the type of land uses or industrial operations typically associated with odor nuisance. There are no land uses typically associated with the generation of nuisance odors in the Project study area. Therefore, there would be no impact regarding other emissions.



5.2 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5.2.1 IMPACT ANALYSIS

- a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less than Significant Impact. The Project is limited to and consists of rehabilitating the existing beach access infrastructure located at the Project site. The Project would generate GHG emissions during construction from off-road equipment and on-road vehicle exhaust from worker vehicles and materials delivery. There would be no increase in operation phase emissions. As such, operation phase emissions are not considered to result in additional potential impacts to climate change.

As discussed in Section 4.1, results from the Pearl Street Beach Access Rehabilitation ISMND are considered similar to the Project and have been used for the purposes of evaluating potential GHG impacts of the Project. Detailed GHG emissions estimates for the Pearl Street Beach Access Rehabilitation IS/MND are included in Appendix A. Table 8 below, presents a summary of the estimated total GHG emissions that would result from Project implementation.

Table 2: Project GHG Emissions

Project Phase	CO ₂ e
Construction Emissions (lbs/day) ¹	1,708.8
Construction Emissions (Total Metric Tons)	93
Construction Emissions (Total Metric Tons; amortized over 30 years)	3.1
Operation Emissions (annual)	No increase
Interim SCAQMD Threshold (Total Metric Tons)	3,000
Project Emissions Exceed SCAQMD Threshold?	No

¹ Based on 2016 Pearl Street Beach Access Rehabilitation IS/MND



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As shown in Table 8, construction of the Project would emit an estimated 93 metric tons (MT) of CO_{2e}. When the emissions are amortized over 30 years in accordance with SCAQMD guidance, the 30-year annualized value is 3.1 MT of CO_{2e} per year. The 3.1 metric tons addition of CO_{2e} emissions is less than the 3,000 MT CO_{2e} significance threshold and the Project would therefore not generate greenhouse gas emissions, either directly or indirectly, that would have a substantial adverse effect on the environment and potential impacts would be less than significant.

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. The State Legislature, enacted AB 32, the California Global Warming Solutions Act of 2006 which was signed on September 27, 2006, to further the goals of EO S-3-05 (Health and Safety Code, S38500 et seq.). AB 32 requires CARB to adopt statewide GHG emissions limits to achieve statewide GHG emissions levels at the same levels they were atmospherically in 1990 by the year 2020. A longer-range goal requires an 80% reduction in GHG emissions from 1990 levels by 2050. CARB adopted the 2020 statewide target and mandatory reporting requirements in December 2007 and the Scoping Plan in December 2008. SB 32, signed on September 8, 2016, expands on the mandate of AB 32 requiring CARB to ensure that state GHG emissions are reduced to 40 percent below the 1990 emission level by year 2030. Section 38566 is added to the current Health and Safety Code, which states “the State board shall ensure that Statewide greenhouse gas emissions are reduced to at least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030”. CARB prepared the 2017 Final Scoping Plan to prepare a blueprint for the state to meet SB 32’s goals (CARB 2017). Finally, in 2022, the state passed AB 1279 which requires the state to reach net zero GHG emissions no later than 2045. CARB approved the 2022 Scoping Plan in December 2022 which built upon the 2008 and 2017 Scoping Plans in order to meet California’s SB 32 and AB 1279 GHG reduction targets.

The Project does not include stationary sources of GHG emissions and is not subject to compliance with AB 32’s cap-and-trade program. The proposed Project would not conflict with any measures within CARB’s 2017 or 2022 Scoping Plans. The City has enacted a CPAP to reduce overall City emissions by 7% below 1990 levels. The City’s plan is specific to the reduction of GHG associated with: buildings, transportation and land use, government operations, commercial operations, and water management. Specific reduction measures for land use encourage the use of drought-tolerant plant materials and low water irrigation techniques as well as transformation of public land into areas with shade trees, bike racks, and accommodations for pedestrians. These measures have been proposed for the Project. The Project’s use of fuels during construction would be consistent with existing regulations related to low carbon fuel standards achieved through regulations placed on the fuel manufacturing and supply industry.

Considering the above, as well as that the Project’s GHG emissions would be far below SCAQMD’s thresholds of significance, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, impacts are considered to be less than significant.



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Project Number:

Appendix A: Pearl Street Rehabilitation IS/MND Air Quality and Greenhouse Gas Files



AIR QUALITY and GHG IMPACT ANALYSES
PEARL STREET BEACH ACCESS
LAGUNA BEACH, CALIFORNIA

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September 15, 2016

Project No.: P16-051 A

METEOROLOGY / CLIMATE

The climate of the South-Central Orange County Coast, as with all of Southern California, is dominated by the strength and position of the semi-permanent high-pressure center over the Pacific Ocean near Hawaii. It creates cool summers, mild winters, infrequent rainfall, cool daytime sea breezes, comfortable humidity levels and ample sunshine. Unfortunately, the same atmospheric processes that create the desirable living climate combine to restrict the ability of the atmosphere to disperse the air pollution generated by the large population attracted in part by the comfortable climate. Portions of the Los Angeles Basin therefore experience some of the worst air quality in the nation for certain pollutants.

Temperatures in Laguna Beach average 62°F annually. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby oceanic heat reservoir. In contrast to the steady temperature regime, rainfall is highly variable, and confined almost exclusively to the "rainy" period from early November to mid-April. Rainfall in the project area averages around 12 inches annually with January typically being the wettest month of the year.

Winds near the project site display several characteristic patterns. During the day, especially in summer, winds are from the west at 7-9 miles per hour. At night, especially in winter, the land becomes cooler than the ocean and an offshore wind of 3-5 miles per hour develops. After sunrise, the wind direction rotates through the southeast and south at 5-7 miles per hour until the west wind again becomes dominant in the early afternoon. One other important wind pattern occurs when a high pressure center forms over the western United States and creates strong, hot, dry, gusty, Santa Ana winds from the northeast and east across Orange County.

The net effect of the area wind pattern is that any locally generated air pollutant emissions will be carried from east to west at night and then reverse from west to east by day. Although the daytime wind-speeds are generally stronger and therefore better ventilate the project area, the offshore flow, once well-organized late in the evening and during the night, is also strong enough to minimize any significant localized air stagnation. The least ventilated period is typically during the morning and evening transition when winds become near calm until the new flow component becomes fully established.

In addition to winds that govern the horizontal rate and trajectory of any air pollutants, Southern California experiences several characteristic temperature inversions that control the vertical depth through which pollutants can be mixed. The daytime onshore flow of marine air is capped by a massive dome of warm air that acts like a giant lid over the basin. As the clean ocean air moves inland, pollutants are continually added from below without any dilution from above. As this layer slows down in inland valleys of the basin and undergoes photochemical transformations under abundant sunlight, it creates very unhealthy levels of smog (mainly ozone).

A second inversion forms at night as cool air pools in low elevations while the air aloft remains warm. Shallow radiation inversions are formed (especially in winter) that trap pollutants near intensive traffic sources such as freeways, shopping centers, etc., and form localized violations of clean air standards called "hot spots." Although inversions are found during all seasons of the

year, the regional capping inversion is far more prevalent in summer while the localized radiation inversions are strongest in winter. The strong seasonal split in inversion intensity thus contributes significantly to the completely different air quality climate found in summer in the project vicinity than in winter. Because traffic concentrations in the project area are only moderate, and because individual cars are becoming progressively "cleaner," air quality concerns in the project area are more centered on the regional, summertime intrusion of photochemical smog (ozone) rather than on any winter micro-scale stagnation conditions.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹⁰	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹⁰	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

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Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO₂) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO₂ standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 µg/m³ to 12 µg/m³ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2030.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO₂) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO₂) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO₂ is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality in the project area can be best inferred from ambient air quality measurements conducted by the SCAQMD at its Mission Viejo monitoring station at 26081 Via Pera. Monitoring at this station includes both regional pollutants such as dust and smog, as well as primary vehicular pollutants such as carbon monoxide. The nearest station monitoring for NO₂ is at the Anaheim station. Table 3 summarizes the last five years of published data from these monitoring stations. The following conclusions can be drawn from this data:

- a. Photochemical smog (ozone) levels occasionally exceed standards. The 8-hour state ozone standard has been exceeded on less than two percent of all days in the past five years near Mission Viejo while the 1-hour state standard has been violated an average of one percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago. For several years, the station at El Toro had the worst smog of any station in Orange County. In the last decade, however, Mission Viejo, and by inference all of South Orange County had some of the lowest smog readings on record.
- b. Measurements of carbon monoxide show very low baseline levels in comparison to the most stringent one- and eight-hour standards.
- c. Respirable dust (PM-10) levels very rarely exceed the state standard, while the less stringent federal PM-10 standard has never been violated since PM-10 measurements began at El Toro/ Mission Viejo.
- d. The federal fine particulate (PM-2.5) standard of 35 µg/m³ for 24-hours has not been exceeded during any measurement days in the last five years.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future. Historical monitoring data from San Juan Capistrano showed that air quality becomes incrementally better in moving south along I-5 through the Saddleback Valley. Baseline air quality in the project vicinity is likely even better than the mostly healthful levels shown in Table 3.

Table 3
Air Quality Monitoring Summary (2010-2014)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as fractions = samples exceeding standard/samples taken)

Pollutant/Standard	2010	2011	2012	2013	2014
Ozone					
1-Hour > 0.09 ppm (S)	2	0	2	2	4
8-Hour > 0.07 ppm (S)	2	5	6	5	10
8- Hour > 0.075 ppm (F)	2	2	1	2	5
Max. 1-Hour Conc. (ppm)	0.117	0.094	0.096	0.104	0.115
Max. 8-Hour Conc. (ppm)	0.082	0.083	0.078	0.082	0.088
Carbon Monoxide					
1-hour > 20. ppm (S)	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0
Max 8-hour Conc. (ppm)	0.9	1.0	0.8	1.3	0.7
Nitrogen Dioxide					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.073	0.074	0.059	0.082	0.084
Inhalable Particulates (PM-10)					
24-hour > 50 µg/m ³ (S)	0/58	0/61	0/60	1/61	0/60
24-hour > 150 µg/m ³ (F)	0/58	0/61	0/60	0/61	0/60
Max. 24-Hr. Conc. (µg/m ³)	34.	47.	37.	51.	41.
Ultra-Fine Particulates (PM-2.5)					
24-Hour > 35 µg/m ³ (F)	0/116	0/110	0/123	0/117	0/xx
Max. 24-Hr. Conc. (µg/m ³)	20.	33.	28.	28.	25.

xx= data not available

S=State, F= Federal

Source: South Coast Air Quality Management District, Mission Viejo Monitoring Station (Ozone, CO, PM-10 and PM-2.5), Anaheim Station (NO₂).

DATA: www.arb.ca.gov/adam/

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with “serious” or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NO_x) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NO_x and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air “blueprint” in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. The attainment date was anticipated to “slip” from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 requires control technologies that do not exist yet, the SCAQMD requested a voluntary “bump-up” from a “severe non-attainment” area to an “extreme non-attainment” designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on “black-box” measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from “severe-17” to “extreme.” This reclassification sets a later attainment deadline (2024), but also requires the air basin to adopt even more stringent emissions controls.

Table 4

South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2012^a	2015^b	2020^b	2025^b	2030
NOx	512	451	357	289	266
VOC	466	429	400	393	393
PM-10	154	155	161	165	170
PM-2.5	68	67	67	68	170

^a2012 Base Year.

^bWith current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, 2013 Almanac of CEPAM

In other air quality attainment plan reviews, EPA has disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA has stated that the current attainment plan relies on PM-2.5 control regulations that have not yet been approved or implemented. It is expected that a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the ARB submittal to EPA as part of the California State Implementation Plan (SIP) is expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the 2012 AQMP contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP is believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP must therefore be adopted in 2016. Planning for the 2016 AQMP is currently on-going. The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2037
Annual PM-2.5 (12 µg/m ³)	2025
8-hour ozone (80 ppb)	2024 (old standard)
8-hour ozone (75 ppb)	2032 (current standard)
1-hour ozone (120 ppb)	2032 (rescinded standard)
24-hour PM-2.5 (35 µg/m ³)	2019

The key challenge is that NO_x emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional NO_x control measures are adopted and implemented, attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing costal access improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan.
- b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
- c. Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- d. Exposes sensitive receptors to substantial pollutant concentrations.
- e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthy form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthy contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based

upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NO _x	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SO _x	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project could generate vehicle trips that cause a CO hot spot.

The SCAQMD CEQA Handbook also identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Except for the small diameter particulate matter ("PM-2.5") fraction of diesel exhaust generated by heavy construction equipment, there are no secondary impact indicators associated with residential project construction and subsequent occupancy.

For diesel particulate matter (DPM) exhaust emissions, adopted policies require the gradual conversion of delivery fleets to diesel alternatives, or the use of cleaner diesel engines whose emissions are demonstrated to be as low as those from alternative fuels. Similarly, off-road equipment used in construction activities is also becoming progressively cleaner every year. If phased project development occurs in the more distant future, DPM emissions from project construction equipment will be correspondingly less. Because health risks from toxic air contaminants (TAC's) are cumulative over an assumed 70-year lifespan, measurable off-site public health risk from diesel TAC exposure would occur for only a brief portion of a project lifetime, and only in dilute quantity.

SENSITIVE RECEPTORS

Air quality impacts are analyzed relative to those persons with the greatest sensitivity to air pollution exposure. Such persons are called "sensitive receptors." Sensitive population groups include young children, the elderly and the acutely and chronically ill (especially those with cardio-respiratory disease).

Residential areas are considered to be sensitive to air pollution exposure because they may be occupied for extended periods, and residents may be outdoors when exposure is highest. Schools are similarly considered to be sensitive receptors. The proposed project site is surrounded by residential uses on the inland sides. These uses are considered the closest sensitive receptors.

CONSTRUCTION ACTIVITY IMPACTS

Improved beach access is not expected to create any measurable increase in beach visitors. A few more visitors may partake of enhanced overlooks or seating than current users, and a few more persons with disabilities may visit the access points that are currently not accessible. No operational air quality impacts will result from project implementation. Any impact potential will derive exclusively from construction activities.

Dust is typically the primary concern during construction of new buildings. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not known with any reasonable certainty prior to project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative and conjectural.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming that all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on the proposed project site. As noted previously, emissions estimation for project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance are shown in the CalEEMod2013.2.2 computer model to be about 10 pounds per acre. This estimate presumes the use of reasonably available control measures (RACMs). The SCAQMD requires the use of best available control measures (BACMs) for fugitive dust from construction activities.

Current research in particulate-exposure health suggests that the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (called "PM-2.5") was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated to comprise 10-20 percent of PM-10.

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles are therefore more of a potential soiling nuisance as they settle out on parked cars, outdoor furniture or landscape foliage rather than any adverse health hazard.

CalEEMod was developed by the SCAQMD to provide a model by which to calculate construction emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The project proposes to restore and enhance coastal access facilities at Pearl Street. Although exhaust emissions will result from on and off-site equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. The CalEEMod2013.2.2 computer model was used to calculate emissions from the prototype construction equipment fleet and schedule identified by project engineering as indicated in Table 6.

Table 6

CalEEMod Construction Activity Equipment Fleet and Workdays

Grading and Construction 4 months	1 Drill Rig
	1 Air Compressor (for Jack Hammer)
	1 Loader/Backhoe

Utilizing the indicated equipment fleet shown in Tables 6 the following worst case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7

**Construction Activity Emissions
Maximum Daily Emissions (pounds/day)**

Maximal Construction Emissions	ROG	NOx	CO	SO₂	PM-10	PM-2.5	CO₂ (e)
2017	1.1	10.4	8.3	0.0	1.6	1.1	1,708.8
SCAQMD Thresholds	75	100	550	150	150	55	-

Source: CalEEMod.2013.2.2 output in appendix

Peak daily construction activity emissions are below their respective SCAQMD CEQA significance thresholds without the need for any additional mitigation.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board’s Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD’s Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LST screening tables are available various source-receptor distances. For this project the most stringent receptor distance of 25 meters was selected for analysis to represent impact on residences adjacent to the project sites.

LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this analysis the most stringent threshold for a 1 acre site was utilized. The following thresholds and emissions in Table 8 are determined (pounds per day).

Table 8

LST and Project Emissions (pounds/day)

LST 1.0 acres/25 meters	CO	NO₂	PM-10	PM-2.5
Central Coastal OC	647	92	4	3
Max On-Site Emissions 2017	8	10	2	1

CalEEMod Output in Appendix

LSTs for the nearest residential use were compared to the maximum daily construction activities. As seen above, all emissions are below the LST thresholds for construction.

CONSTRUCTION EMISSIONS MITIGATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, mitigation through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin and because of the proximity of existing homes. Recommended mitigation includes:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Prepare and implement a high wind dust control plan.
- Stabilize previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone.
- Cover all trucks hauling dirt, sand, or loose material.
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NO_x) are calculated to be below SCAQMD CEQA thresholds during construction. However, because of the non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Recommended combustion emissions control includes:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3-rated or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

“Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as “global warming.” These greenhouse gases contribute to an increase in the temperature of the earth’s atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California’s reputation as a “national and international leader on energy conservation and environmental stewardship.” It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

Greenhouse Gas Emissions Significance Thresholds

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year. In September 2010, the Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use types. This 3,000 MT/year recommendation has been used as a guideline for this analysis.

Construction Activity GHG Emissions

The build-out timetable is estimated by CalEEMod to be approximately four months. During project construction, the CalEEMod computer model predicts that the construction activities will generate the annual CO₂(e) emissions identified in Table 9. Because the SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime, the amortized annual total is also presented.

Table 9
Construction Emissions (Metric Tons CO₂(e))

Year 2017	65.5
Amoritized	2.2
Significance Threshold	3,000

*CalEEMod Output provided in appendix

GHG impacts from construction are considered less-than-significant.

APPENDIX

CALEEMOD2013.2.2 COMPUTER MODEL OUTPUT

- Daily Emissions (lbs per day)
- Annual Emissions (tons per year)

Pearl St Beach Access
South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.10	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Beach Access Improvement Project

Construction Phase - Modeled under grading, 85 days

Off-road Equipment - 2 loader/backhoes, 1 air compressor for jackhammer, 1 drill rig all 6 hrs per day

Trips and VMT - 20 worker trips (10 workers), 2 vendor trips per day

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	85.00
tblConstructionPhase	PhaseEndDate	4/28/2017	4/30/2017
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	4/30/2017	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	6.00	205	0.50
Grading	Air Compressors	1	6.00	78	0.48
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.0427	10.1696	6.9531	0.0142		0.6150	0.6150		0.5797	0.5797		1,428.819 1	1,428.819 1	0.3813		1,436.825 7
Total	1.0427	10.1696	6.9531	0.0142	0.7528	0.6150	1.3678	0.4138	0.5797	0.9934		1,428.819 1	1,428.819 1	0.3813		1,436.825 7

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0153	0.1582	0.1876	4.3000e-004	0.0125	2.5200e-003	0.0150	3.5600e-003	2.3100e-003	5.8800e-003		42.9334	42.9334	3.0000e-004		42.9398
Worker	0.0749	0.0940	1.1741	2.8300e-003	0.2236	1.8000e-003	0.2254	0.0593	1.6600e-003	0.0610		228.8115	228.8115	0.0113		229.0479
Total	0.0902	0.2522	1.3617	3.2600e-003	0.2361	4.3200e-003	0.2404	0.0629	3.9700e-003	0.0668		271.7449	271.7449	0.0116		271.9877

3.2 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	1.0427	4.5658	6.9531	0.0142		0.6150	0.6150		0.5797	0.5797	0.0000	1,428.819 1	1,428.819 1	0.3813		1,436.825 7
Total	1.0427	4.5658	6.9531	0.0142	0.3387	0.6150	0.9537	0.1862	0.5797	0.7659	0.0000	1,428.819 1	1,428.819 1	0.3813		1,436.825 7

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0153	0.1582	0.1876	4.3000e-004	0.0125	2.5200e-003	0.0150	3.5600e-003	2.3100e-003	5.8800e-003		42.9334	42.9334	3.0000e-004		42.9398
Worker	0.0749	0.0940	1.1741	2.8300e-003	0.2236	1.8000e-003	0.2254	0.0593	1.6600e-003	0.0610		228.8115	228.8115	0.0113		229.0479
Total	0.0902	0.2522	1.3617	3.2600e-003	0.2361	4.3200e-003	0.2404	0.0629	3.9700e-003	0.0668		271.7449	271.7449	0.0116		271.9877

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Pearl St Beach Access
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.10	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Beach Access Improvement Project

Construction Phase - Modeled under grading, 85 days

Off-road Equipment - 2 loader/backhoes, 1 air compressor for jackhammer, 1 drill rig all 6 hrs per day

Trips and VMT - 20 worker trips (10 workers), 2 vendor trips per day

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	85.00
tblConstructionPhase	PhaseEndDate	4/28/2017	4/30/2017
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	4/30/2017	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	6.00	205	0.50
Grading	Air Compressors	1	6.00	78	0.48
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0320	0.0000	0.0320	0.0176	0.0000	0.0176	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.4322	0.2955	6.0000e-004		0.0261	0.0261		0.0246	0.0246	0.0000	55.0886	55.0886	0.0147	0.0000	55.3973
Total	0.0443	0.4322	0.2955	6.0000e-004	0.0320	0.0261	0.0581	0.0176	0.0246	0.0422	0.0000	55.0886	55.0886	0.0147	0.0000	55.3973

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9000e-004	7.0200e-003	9.3900e-003	2.0000e-005	5.2000e-004	1.1000e-004	6.3000e-004	1.5000e-004	1.0000e-004	2.5000e-004	0.0000	1.6495	1.6495	1.0000e-005	0.0000	1.6497
Worker	3.0500e-003	4.5200e-003	0.0470	1.1000e-004	9.3300e-003	8.0000e-005	9.4000e-003	2.4800e-003	7.0000e-005	2.5500e-003	0.0000	8.4017	8.4017	4.3000e-004	0.0000	8.4108
Total	3.7400e-003	0.0115	0.0564	1.3000e-004	9.8500e-003	1.9000e-004	0.0100	2.6300e-003	1.7000e-004	2.8000e-003	0.0000	10.0512	10.0512	4.4000e-004	0.0000	10.0606

3.2 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0144	0.0000	0.0144	7.9100e-003	0.0000	7.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.1941	0.2955	6.0000e-004		0.0261	0.0261		0.0246	0.0246	0.0000	55.0886	55.0886	0.0147	0.0000	55.3973
Total	0.0443	0.1941	0.2955	6.0000e-004	0.0144	0.0261	0.0405	7.9100e-003	0.0246	0.0326	0.0000	55.0886	55.0886	0.0147	0.0000	55.3973

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9000e-004	7.0200e-003	9.3900e-003	2.0000e-005	5.2000e-004	1.1000e-004	6.3000e-004	1.5000e-004	1.0000e-004	2.5000e-004	0.0000	1.6495	1.6495	1.0000e-005	0.0000	1.6497
Worker	3.0500e-003	4.5200e-003	0.0470	1.1000e-004	9.3300e-003	8.0000e-005	9.4000e-003	2.4800e-003	7.0000e-005	2.5500e-003	0.0000	8.4017	8.4017	4.3000e-004	0.0000	8.4108
Total	3.7400e-003	0.0115	0.0564	1.3000e-004	9.8500e-003	1.9000e-004	0.0100	2.6300e-003	1.7000e-004	2.8000e-003	0.0000	10.0512	10.0512	4.4000e-004	0.0000	10.0606

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005	
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005	

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

APPENDIX C

Biological Resources Survey Results





To:	Jared Varonin	From:	Ashleigh Townsend
	Stantec		Stantec
Project/File:	2042652100	Date:	April 10, 2023

Reference: Cleo Street Beach Access Rehabilitation Project

To support the preparation of the Initial Study Mitigated Negative Declaration for the Cleo Street Beach Access Rehabilitation Project (Project) a baseline biological survey of the Project and adjacent areas was conducted on March 23, 2023. This memorandum summarizes the results of the survey and desktop review conducted in support of the proposed Project.

Mapping of plant communities followed the classification system described in the second edition of “A manual of California Vegetation” (Sawyer et al. 2009). Certain habitat occurs within the BSA that are not defined in the manual; therefore, land cover types assigned to these types of habitats are descriptive in nature. Species’ scientific and common names correspond to those described in the second edition of The Jepson Manual (Baldwin et al. 2012). No natural vegetation communities described by Sawyer et al. 2009 were present, but four land cover types were mapped within the proposed Project site and a 300-foot buffer (Biological Study Area or BSA); refer to Appendix A Figure 1.

Vegetation Communities

No natural vegetation communities occurred within the BSA. Most of the plant species present are either nonnative or a landscaped ornamental species. There are sporadic ruderal native species present but were not found in high enough densities/abundance to designate a specific vegetation community.

Land Cover Types

Landscaped Ornamental

This land cover type occurs wherever vegetation is present within the BSA. Vegetation of this landcover type is comprised of nonnative plant species used to landscape both public and private areas.

Beach

This land cover type occurs at the bottom of the existing beach access staircase and southwest of private residences within the BSA. It is comprised of rocky outcrops and open sand that is covered or exposed during tidal fluctuations.

Reference: Cleo Street Survey

Open Ocean

This land cover type covers much of the BSA and is defined by the open waters of the Pacific Ocean.

Disturbed/Developed

This land cover type is used to map portions of the BSA that are disturbed or developed and is defined by paved roads and residential areas.

Jurisdictional Waters and Wetlands

Based on the data collected in the field, other than the Pacific Ocean itself, there are no jurisdictional features within the BSA. There is an existing pump facility located between the street and beach levels adjacent to the stairs. There is an existing 60-inch storm drainpipe and headwall outlet structure southeast of the stairs. The storm drain system features a continuous deflection separation unit and low flow diversion to the sewer lift station. There is also an abandoned partially exposed sewer pipe near the bottom of the stairs at beach level. No portion of the Project area meets the three criteria for federal wetlands (dominance of hydrophytic vegetation, evidence of wetland hydrology, and hydric soils) and according to the National Hydrography Dataset, there are no major indicators that would determine any of above discussed resources to be jurisdictional.

According to the National Wetlands Inventory, the BSA includes and is adjacent to estuarine and marine wetlands categorized as M2USN (marine, intertidal, unconsolidated shore, and regularly flooded) and M2USP (marine, intertidal, unconsolidated shore, and irregularly flooded) (United States Fish and Wildlife Service, 2023).

Common Wildlife

Common wildlife directly observed during the March 23, 2023, survey event included six bird species and one mammal species. The bird species observed include brown pelican (*Pelecanus occidentalis*), California gull (*Larus californicus*), house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), American crow (*Corvus brachyrhynchos*), black phoebe (*Sayornis nigricans*) and Anna's hummingbird (*Calypte anna*). A cottontail rabbit (*Sylvilagus audubonii*) was the only mammal species observed.

Special Status Plants

The table in Attachment B presents a list of special-status plants, including federally and state listed species and CRPR 1-4 species that are known to occur within 10 miles of the BSA or within the USGS 7.5-minute quadrangles including and surrounding the BSA (Attachment A, Figures 2 and 3 provide a depiction of known species locations).

Reference: Cleo Street Survey

Record searches of the CNDDDB, the CNPS Online Inventory, and the Consortium of Critical Herbaria was performed for special-status plant taxa. Each of the taxa identified in the record searches was assessed for their potential to occur within the BSA based on the following criteria:

- **Present:** Taxa were observed within the BSA during recent botanical surveys or population has been acknowledged by CDFW, USFWS, or local experts.
- **High:** Both a documented recent record (within 10 years) exists of the taxa within the BSA, or immediate vicinity (approximately 5 miles) and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.
- **Moderate:** Both a documented recent record (within 10 years) exists of the taxa within the BSA, or the immediate vicinity (approximately 5 miles) and the environmental conditions associated with taxa presence are marginal or limited within the BSA, or the BSA is located within the known current distribution of the taxa and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.
- **Low:** A historical record (over 10 years) exists of the taxa within the BSA or general vicinity (approximately 10 miles), and the environmental conditions (including soil type) associated with taxa presence are marginal or limited within the BSA.
- **Not Likely to Occur:** The environmental conditions associated with taxa presence do not occur within the BSA.

Based on the results of the literature and database (see Attachment B), a total of 35 special-status plant species were found to historically occur within 10 miles of the Project area. These species were evaluated for their potential to occur in the proposed Project area based on considerations of local records, habitat conditions, and environmental requirements. After this evaluation, 3 special-status plant species were considered to have a low potential to occur at or near the proposed Project site. No special-status plant species were observed during the March 2023 survey.

Special Status Wildlife

Special-status taxa include those listed as threatened or endangered under the FESA or CESA, taxa proposed for such listing, Species of Special Concern, and other taxa that have been identified by USFWS, CDFW, or local jurisdictions as unique or rare and that have the potential to occur within the BSA.

The CNDDDB was queried for occurrences of special-status wildlife taxa within the USGS topographical quadrangles in which the BSA occurs and the eight surrounding quadrangles. The table in Attachment C summarizes the special-status wildlife taxa known to occur regionally and their potential for occurrence in the BSA (Attachment A, Figures 2 and 4 provide a depiction of previously reported species locations). Each of the taxa identified in the database reviews/searches were assessed for its potential to occur within the BSA based on the following criteria:

Reference: Cleo Street Survey

- **Present:** Taxa (or sign) were observed in the BSA or in the same watershed (aquatic taxa only) during the most recent surveys, or a population has been acknowledged by CDFW, USFWS, or local experts.
- **High:** Habitat (including soils) for the taxa occurs onsite, and a known occurrence occurs within the BSA or adjacent areas (within 5 miles of the BSA) within the past 20 years; however, these taxa were not detected during the most recent surveys.
- **Moderate:** Habitat (including soils) for the taxa occurs onsite, and a known regional record occurs within the database search, but not within 5 miles of the BSA or within the past 20 years; or a known occurrence occurs within 5 miles of the BSA and within the past 20 years and marginal or limited amounts of habitat occurs onsite; or the taxa's range includes the geographic area and suitable habitat exists.
- **Low:** Limited habitat for the taxa occurs within the BSA and no known occurrences were found within the database search and the taxa's range includes the geographic area.
- **Not Likely to Occur:** The environmental conditions associated with taxa presence do not occur within the BSA.

Based on the results of the literature and database review (see Attachment C), a total of 51 special-status wildlife species were found to historically occur within 10 miles of the BSA. These species were evaluated for their potential to occur in the proposed Project area based on considerations of local records, habitat conditions, and environmental requirements. After this review, 4 special-status avian wildlife species were considered to have some potential to occur at or near the proposed Project site in a foraging capacity only; nesting habitat for special-status species is not present. No special-status wildlife species or their sign were observed during the March 23, 2023, survey.

Sensitive Natural Communities

Sensitive natural communities are defined by CDFW (2018) as “communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects.” All vegetation within the state is ranked with an “S” rank; however, only those that are of special concern (S1-S3 rank) are evaluated under CEQA.

The Laguna Beach General Plan Land Use Element (2022) defines environmental sensitive habitat areas (ESHA) as the following:

“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.”

ESHAs are areas 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. None of the vegetation communities or land cover types described above and observed in the BSA are considered sensitive natural communities or ESHAs.

Reference: Cleo Street Survey

Designated Critical Habitat

Federally Designated Critical Habitat (DCH) is a term defined and used in FESA as specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be needed for its recovery.

There is no DCH mapped within the BSA. The nearest mapped DCH for wildlife species is approximately 2.4 miles southeast for tidewater goby (*Eucyclogobius newberryi*) and coastal California gnatcatcher (*Polioptila californica californica*); suitable habitat for these species is not present in the BSA. DCH for one plant species, thread-leaved brodia (*Brodiaea filifolia*), occurs approximately 2.6 miles northeast; suitable habitat and substrate are not present within the BSA.

Thanks,

STANTEC CONSULTING SERVICES INC.

Ashleigh Townsend

Ashleigh Townsend

Project Biologist

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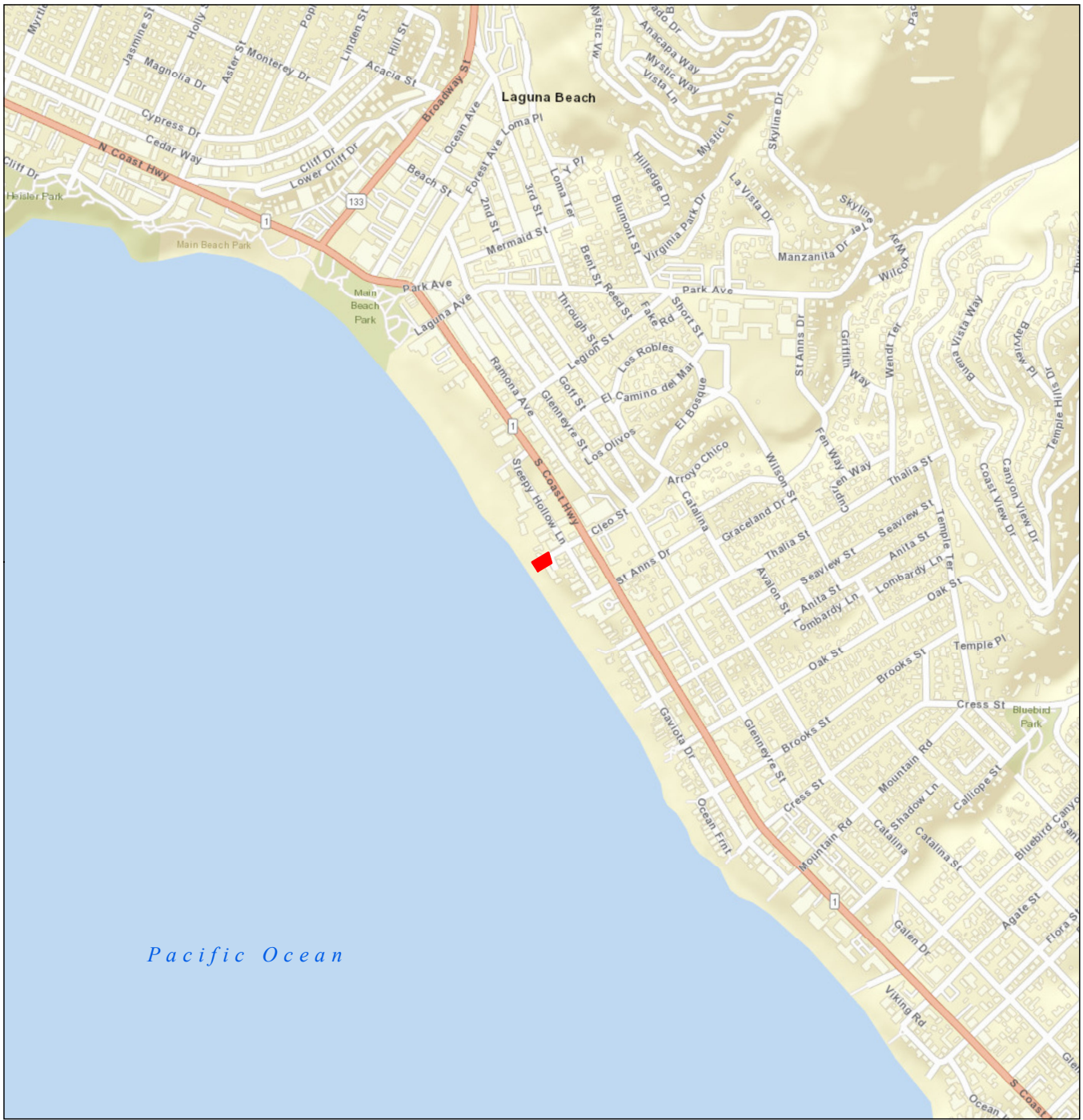
Attachments

Attachment A. Figures

Attachment B. Special-Status Plant Species Evaluated for Potential Occurrence Within the BSA

Attachment C. Special-Status Wildlife Species Evaluated for Potential Occurrence Within the BSA

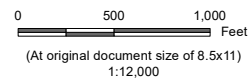
Attachment A – Figures



Pacific Ocean



■ Project Location



<i>Project Location</i>	Prepared by DL on 2023-03-30
Cleo Street Beach Access	TR by SET on 2023-03-30
Laguna Beach, California	IR by JV on 2023-03-30
<i>Client/Project</i>	2042652100

City of Laguna Beach
Cleo Street Beach Access Project

Figure No.




1

Project Location Map




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 2. Data Sources: Stantec 2023.
 3. Background Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
- Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
- Esri, Garmin, GEBCO, NOAA/NGDC, and other contributors

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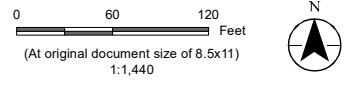


-  Biological Survey Area
-  Site Boundary
-  Project/Work Area Impacts

Vegetation Communities and Land Cover Types

-  Beach
-  Disturbed/Developed
-  Landscaped Ornamental
-  Open Ocean

Notes
 1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
 2. Data Sources: Stantec 2023.
 3. Background: © 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution Airbus DS



Project Location Cleo Street Beach Access
 Laguna Beach, California
Client/Project 2042652100

Prepared by DL on 2023-03-30
 TR by SET on 2023-03-30
 IR by JV on 2023-03-30

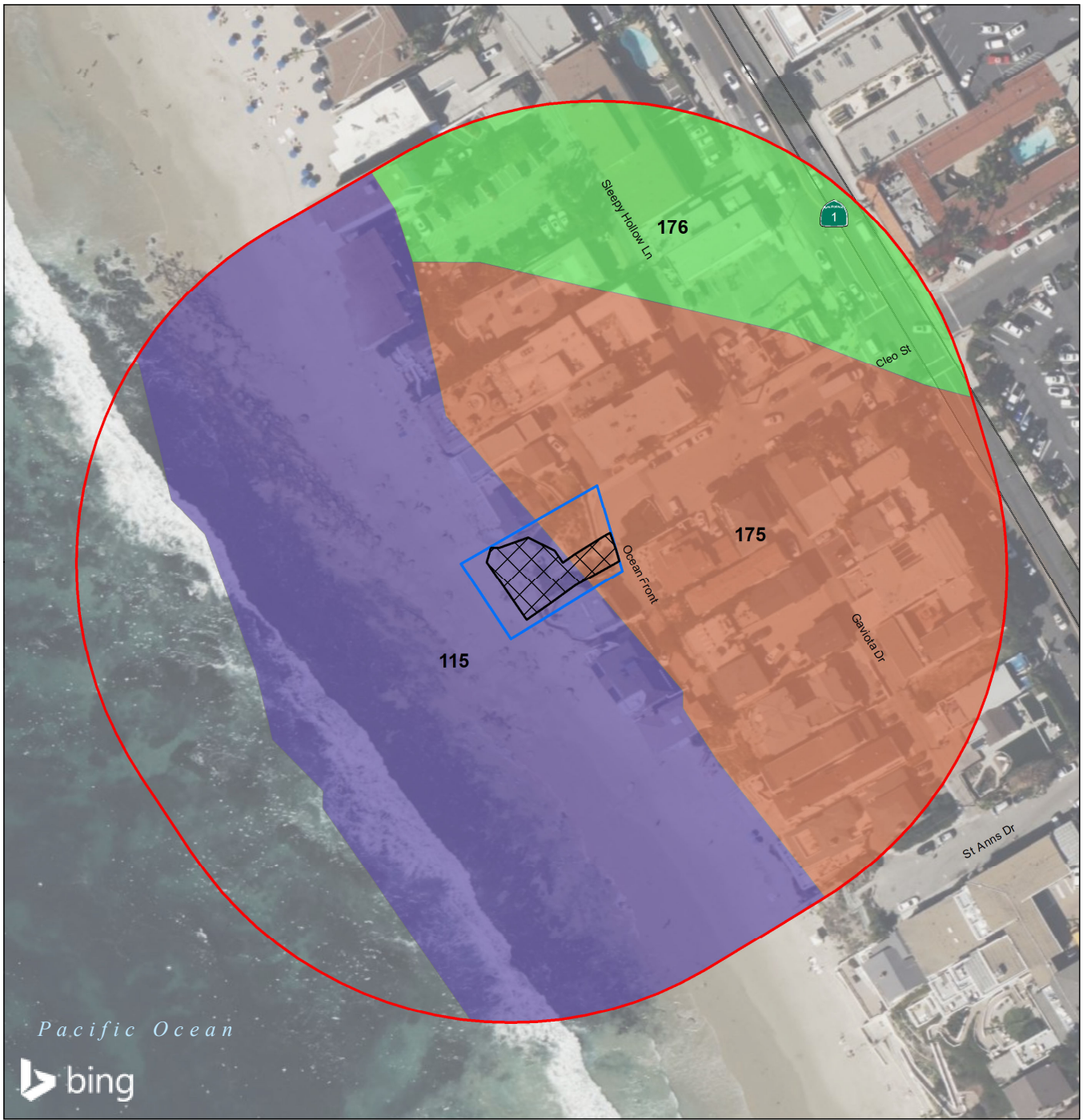
City of Laguna Beach
 Cleo Street Beach Access Project

Figure No.
2

Vegetation Communities and Land Cover Types

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Biological Survey Area

Site Boundary

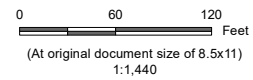
Project/Work Area Impacts

Soils Map Unit Symbol

115; Beaches

175; Myford sandy loam, 9 to 15 percent slopes

176; Myford sandy loam, 15 to 30 percent slopes



Project Location: Cleo Street Beach Access, Laguna Beach, California
 Prepared by DL on 2023-03-30, TR by SET on 2023-03-30, IR by JV on 2023-03-30

Client/Project: 2042652100

City of Laguna Beach
 Cleo Street Beach Access Project

Figure No.

3

Title

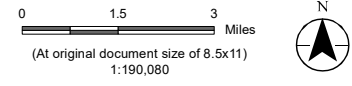
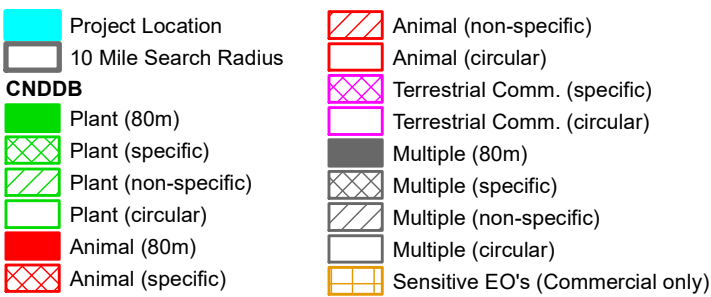
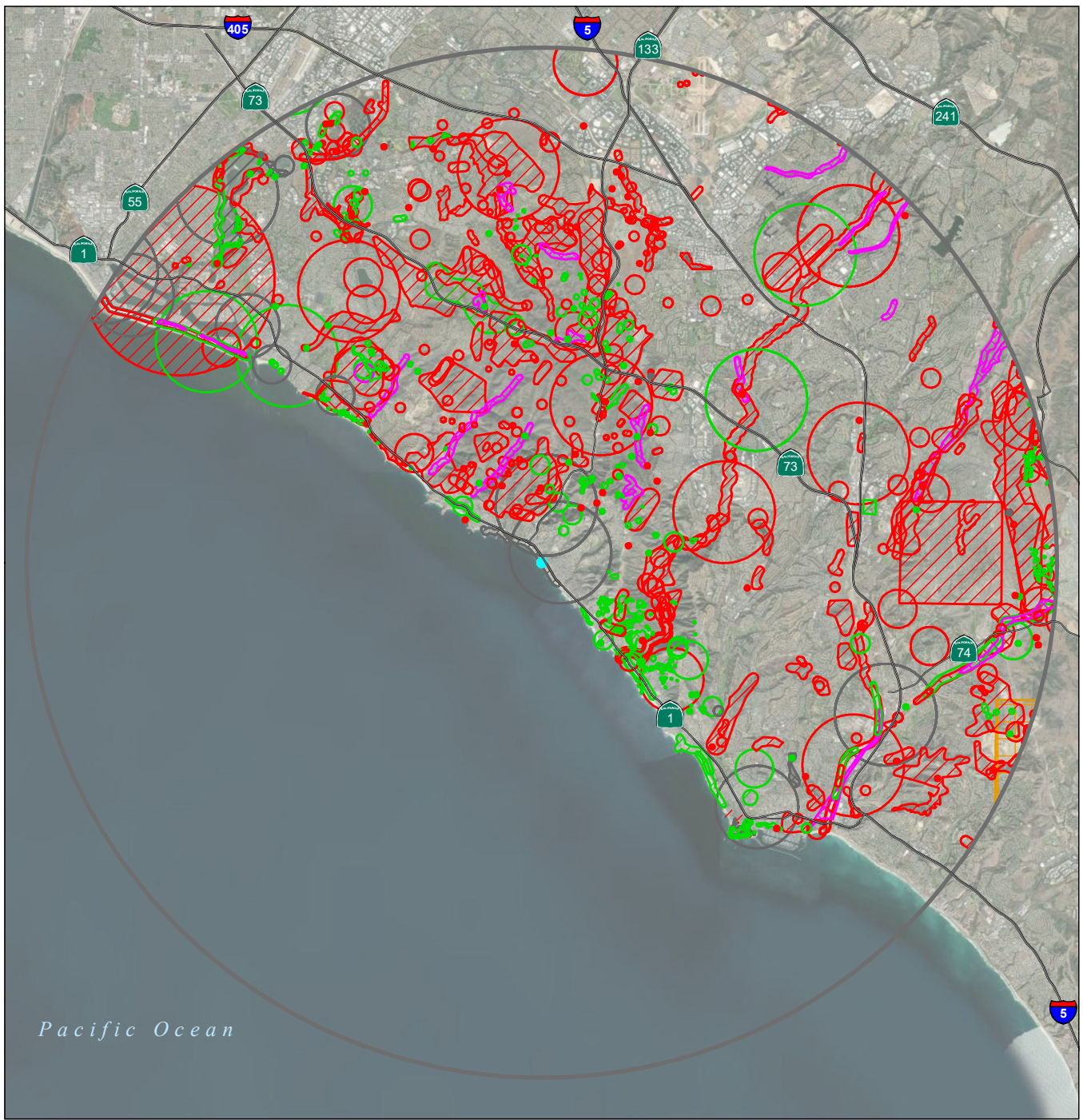
Historic Soils

Notes

1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
2. Data Sources: Stantec 2023. Soils from NRCS 2023.
3. Background: © 2023 Microsoft Corporation © 2023 Maxar © CNES (2023) Distribution Airbus DS

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Project Location
Cleo Street Beach Access
Laguna Beach, California

Prepared by DL on 2023-03-30
TR by SET on 2023-03-30
IR by JV on 2023-03-30

Client/Project 2042652100

City of Laguna Beach
Cleo Street Beach Access Project

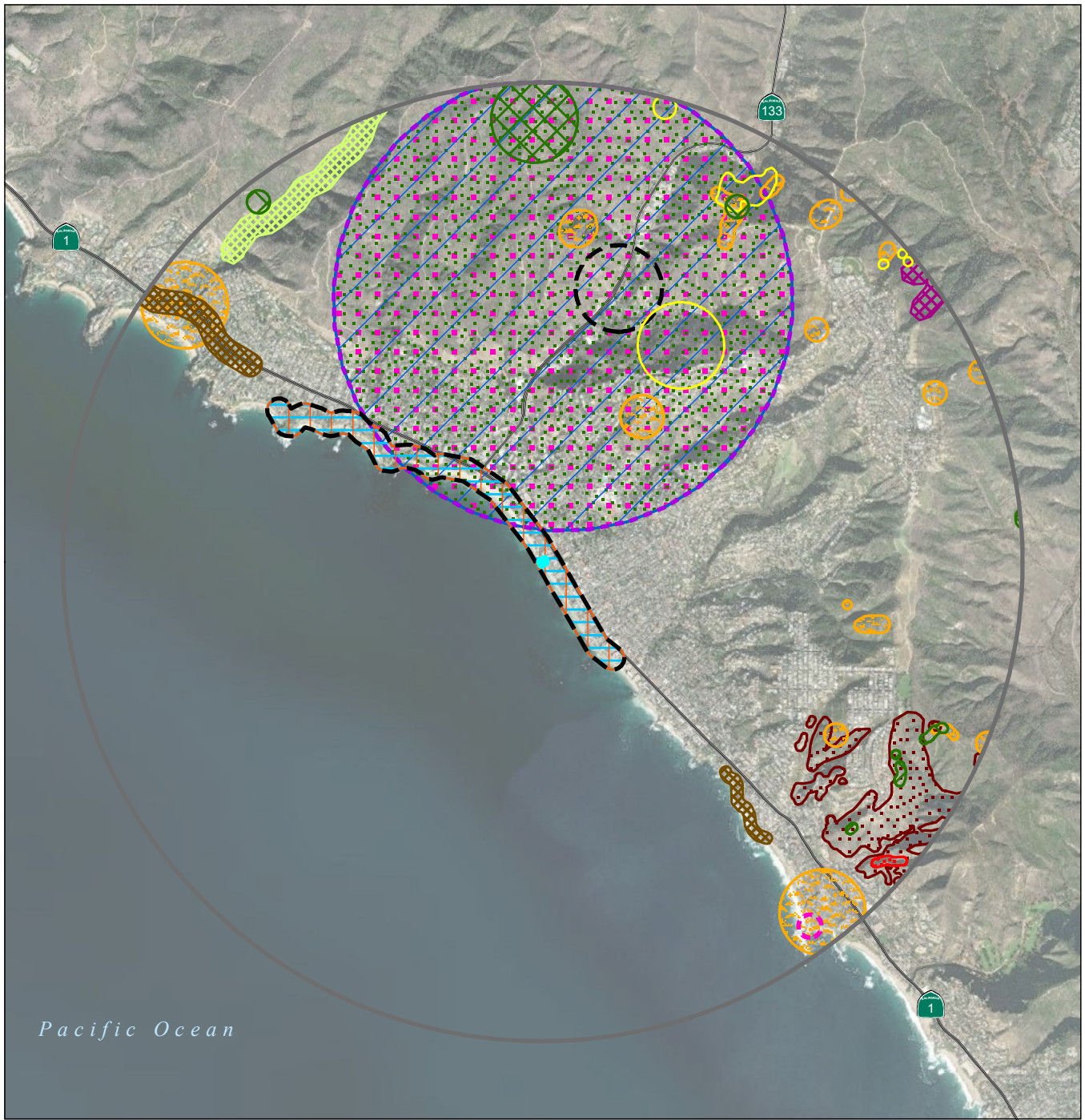
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Title
10 Mile CNDDDB Results

Notes
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2. Data Sources: Stantec 2023, CNDDDB from CDFW 2023.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

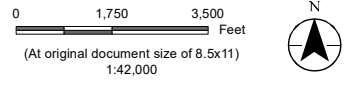
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- Project Location
- 2 Mile Search Radius
- 2 Mile CNDDDB Results**
- Plants**
- Davidson's saltscale
- Orcutt's pincushion
- mesa horkelia
- big-leaved crownbeard
- Laguna Beach dudleya
- south coast saltscale
- Parish's brittlescale

- intermediate mariposa-lily
- Coulter's saltbush
- prostrate vernal pool navarretia
- aphanisma
- summer holly
- decumbent goldenbush
- many-stemmed dudleya
- Terrestrial Communities**
- Southern Coast Live Oak Riparian Forest
- Southern Sycamore Alder Riparian Woodland



Project Location
 Cleo Street Beach Access
 Laguna Beach, California

Prepared by DL on 2023-03-30
 TR by SET on 2023-03-30
 IR by JV on 2023-03-30

Client/Project
 2042652100

City of Laguna Beach
 Cleo Street Beach Access Project

Figure No.
5a

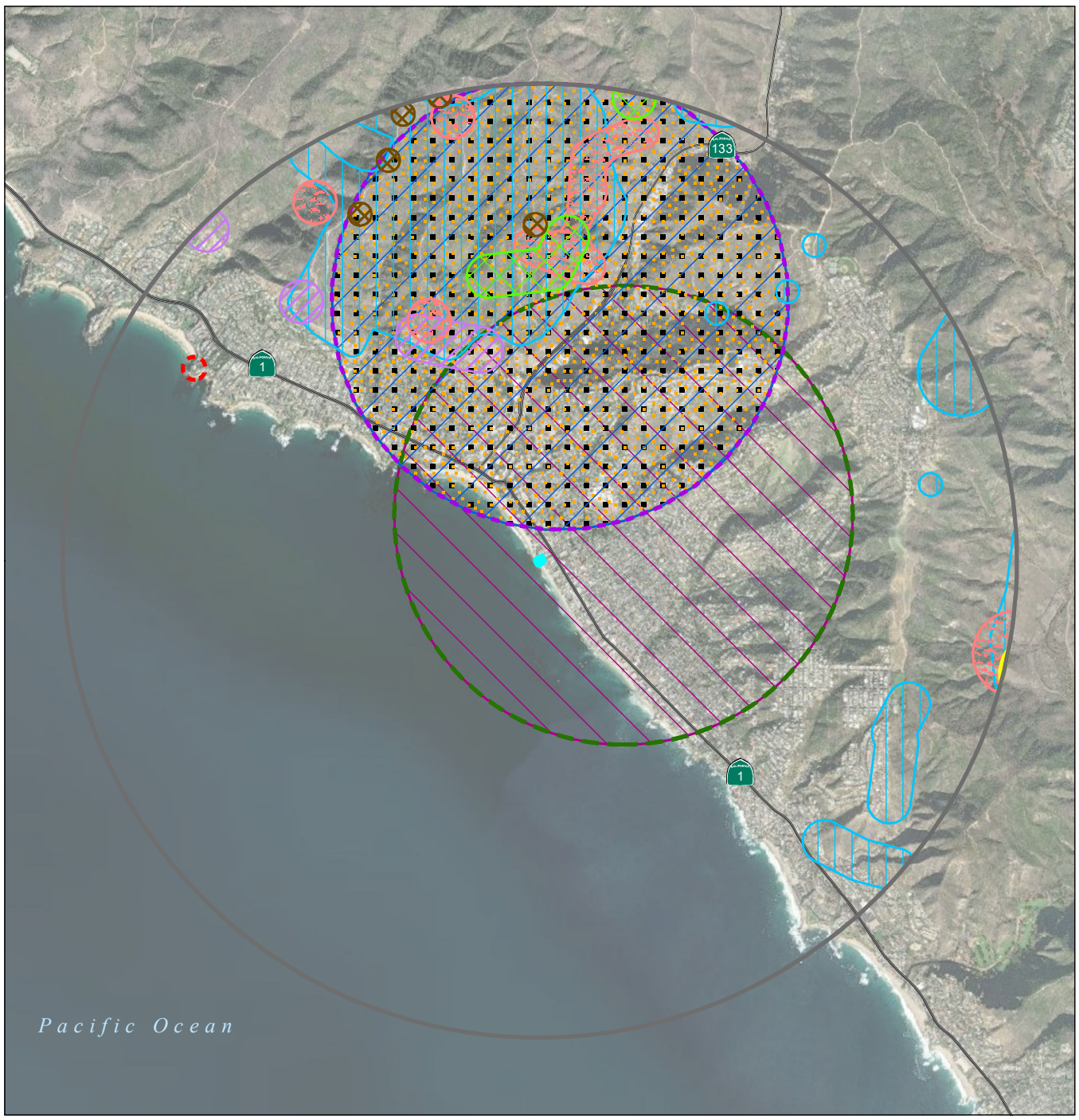
Title
2 Mile CNDDDB Results - Plants & Terrestrial Communities

Notes

1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
2. Data Sources: Stantec 2023. CNDDDB from CDFW 2023.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

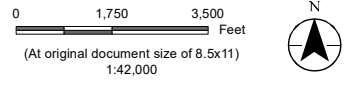
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- Project Location
- 2 Mile Search Radius
- 2 Mile CNDDB Results**
- Wildlife**
- coastal cactus wren
- southern California rufous-crowned sparrow
- monarch - California overwintering population
- western spadefoot
- coast horned lizard

- least Bell's vireo
- Cooper's hawk
- western pond turtle
- Southern California legless lizard
- tricolored blackbird
- coastal California gnatcatcher
- orange-throated whiptail
- Crotch bumble bee



Project Location Cleo Street Beach Access Laguna Beach, California
Prepared by DL on 2023-03-30
 TR by SET on 2023-03-30
 IR by JV on 2023-03-30
Client/Project 2042652100

City of Laguna Beach
 Cleo Street Beach Access Project
 Figure No. **5b**
 Title **2 Mile CNDDB Results - Wildlife**

Notes
 1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
 2. Data Sources: Stantec 2023, CNDDb from CDFW 2023.
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Attachment B – Special-Status Plant Species

Attachment B. Special status Plant Species Evaluated for Potential Occurrence Within the BSA

Scientific Name	Common Name	Status	Form; Habitat; and Distribution	Blooming Period	Potential to Occur
<i>Aphanisma blitoides</i>	aphanisma	S2, 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; about 1-305 m.	Feb-Jun	Low: Limited suitable habitat and substrate are present within the BSA. The most recent recorded occurrence is approximately 3.88 miles northwest of the BSA; this occurrence was recorded in 2019.
<i>Atriplex coulteri</i>	Coulter's saltbush	S1S2, 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland, ocean bluffs, ridgetops, as well as alkaline low places; alkaline, dry, or clay soils; 2-460 m.	Mar-Oct	Low: Limited suitable habitat and substrate are present within the BSA. The most recent recorded occurrence is approximately 3.1 miles northwest of the BSA; this occurrence was recorded in 2017.
<i>Atriplex pacifica</i>	south coast saltscale	S2, 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas; about 0-140 m.	Mar-Oct	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.6 miles southeast of the BSA; this occurrence was recorded in 2010.
<i>Atriplex parishii</i>	Parish's brittlescale	S1, 1B.1	Native to central and southern California often found in dry lake beds, playas, and ephemeral vernal pools; chenopod scrub; saline and alkaline soils; 0-470 m.	Jun-Oct	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 0.1 miles north of the BSA; this occurrence was recorded in 1907.
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	S1, 1B.2	Coastal scrub, bluffs, chenopod scrub, playas, and vernal pools from southern California to Baja California, Mexico; alkaline soils; 10-200 m.	Apr-Oct	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 9.15 miles northwest of the BSA; this occurrence was recorded in 1998.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT, SE, S2, 1B.1	Perennial bulbiferous herb; generally found in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools – in association with clay substrates; 25--860 m.	Mar-Jun	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 9.33 miles east of the BSA; this occurrence was recorded in 2017.

Scientific Name	Common Name	Status	Form; Habitat; and Distribution	Blooming Period	Potential to Occur
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa-lily	S3, 1B.2	Perennial bulbiferous herb generally found within chaparral, coastal scrub and valley and foothill grassland with rocky and calcareous substrates; < 680 m.	May-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 1.65 miles southeast of the BSA; this occurrence was recorded in 2020.
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	S2, 1B.1	Marshes and swamps (margins), valley and foothill grasslands (vernally mesic), and vernal pools; often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass; 0-480 m.	May-Nov	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 5.24 miles northeast of the BSA; this occurrence was recorded in 2017.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutts pincushion	S1, 1B.1	Brackish water habitats along the California Coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels; <100 m.	Jan-Aug	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.54 miles southeast of the BSA; this occurrence was recorded in 2010.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh birds-beak	FE, SE, S1, 1B.2	Coastal dunes, marshes, and swamps (coastal salt); 0-30 m.	May-Oct	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 8.48 miles northwest of the BSA; this occurrence was recorded in 2018.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	S2, 1B.2	Perennial evergreen shrub generally found in chaparral and cismontane woodland; 100--550 m.	Apr-Jun	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 1.85 miles northwest of the BSA; this occurrence was recorded in 2000.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochmans dudleya	S2, 1B.1	Rocky, often clay or serpentinite; coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland; 5-450 m.	Apr-Jun	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 6.33 miles southeast of the BSA; this occurrence was recorded in 2010.

Scientific Name	Common Name	Status	Form; Habitat; and Distribution	Blooming Period	Potential to Occur
<i>Dudleya multicaulis</i>	many-stemmed dudleya	S2, 1B.2	Chaparral, coastal scrub, valley and foothill grassland; often clay/perennial herb; < 600 m.	Apr-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 5.23 miles north of the BSA; this occurrence was recorded in 2016.
<i>Dudleya stolonifera</i>	Laguna Beach dudleya	FT, ST, S1, 1B.1	Perennial stoloniferous herb generally found within rocky chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland vegetation communities; <250 m.	May-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 1.65 miles northeast of the BSA; this occurrence was recorded in 2021.
<i>Euphorbia misera</i>	cliff spurge	S2, 2B.2	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/perennial shrub/ (Oct); < 500 m.	Dec-Aug	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.21 miles northwest of the BSA; this occurrence was recorded in 2013.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	S3, 4.2	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils; < 1000 m.	Mar-May	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 6.4 miles southeast of the BSA; this occurrence was recorded in 1991.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	SX, 1A	Historically in Los Angeles, Orange, Riverside, and San Bernardino counties; marshes and swamps (coastal salt and freshwater); still presumed to be extinct; 10-1525 m.	Aug-Oct	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 8.4 miles northwest of the BSA; this occurrence was recorded in 1933.
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	S1, 1B.1	Perennial herb; sandy or gravelly soils in chaparral, woodlands, and coastal scrub. San Luis Obispo County south to San Diego County, from about 230 to 2,700 ft. elev.	Feb-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 4.9 miles northwest of the BSA; this occurrence was recorded in 1988.
<i>Imperata brevifolia</i>	California satintail	S3, 2B.1	Perennial rhizomatous herb; chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), riparian scrub; mesic soils, 0-1215 m.	Sep-May	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 9.86 miles east of the BSA; this occurrence was recorded in 1995.

Scientific Name	Common Name	Status	Form; Habitat; and Distribution	Blooming Period	Potential to Occur
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	S2, 1B.2	Coastal scrub, chaparral. Sandy soils; often in disturbed sites; <200 m.	Apr-Nov	Low: Limited suitable habitat and substrate are present within the BSA. The nearest and most recent recorded occurrence is approximately 1.83 miles southeast of the BSA; this occurrence was recorded in 2018.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	S2, 1B.1	Marshes and swamps (coastal salt), playas, coastal dunes, coastal sage scrub, valley and foothill grassland, and vernal pools; usually found on clay and alkaline soils in playas, sinks, and grasslands; 1-1,375 m.	Feb-Jun	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 4.76 miles northwest of the BSA; this occurrence was recorded in 1997.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinsons peppergrass	S3, 4.3	Chaparral, coastal scrub, and shrubland; dry soils; 1-885 m.	Jan-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 7.47 miles northwest of the BSA; this occurrence was recorded in 2003.
<i>Nama stenocarpa</i>	mud nama	S1S2, 2B.2	Marshes and swamps, lake shores, riverbanks, intermittently wet areas; 5-500 m.	Jan-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 9.1 miles east of the BSA; this occurrence was recorded in 2001.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	S2, 1B.2	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps; alkaline soils in grassland, or in vernal pools; mesic, alkaline sites; 3-1235 m.	Apr-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 0.07 miles north of the BSA; this occurrence was recorded in 1890.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly-heads	S2, 1B.2	Coastal dunes and beaches; <100 m.	Apr-Sep	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 8.5 miles northwest of the BSA; this occurrence was recorded in 1993.
<i>Pentachaeta aurea</i> ssp. <i>allenii</i>	Allens pentachaeta	S1, 1B.1	Openings in coastal sage scrub and valley and foothill grassland. Elevation range 75- 520m.	Mar-Jun	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 4.11 miles southeast of the BSA; this occurrence was recorded in 2004.

Scientific Name	Common Name	Status	Form; Habitat; and Distribution	Blooming Period	Potential to Occur
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	S2, 2B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, dry stream bottoms, and canyon bottoms; sandy and gravelly substrates; 0-2100 m.	Aug-Nov	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 7.54 miles southeast of the BSA; this occurrence was recorded in 2011.
<i>Quercus dumosa</i>	Nuttalls scrub oak	S3, 1B.1	Closed-cone coniferous forest, chaparral, and coastal sage scrub. Occurring on sandy, clay loam soils; < 200 m.	Feb-Apr	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 3.82 miles southeast of the BSA; this occurrence was recorded in 2017.
<i>Senecio aphanactis</i>	chaparral ragwort	S2, 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m.	Jan-Apr	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 6.43 miles southeast of the BSA; this occurrence was recorded in 2010.
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	S2, 2B.2	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub; alkali springs and marshes; 15-1530 m.	Mar-Jun	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 9.81 miles east of the BSA; this occurrence was recorded in 2014.
<i>Suaeda esteroa</i>	estuary seablite	S2, 1B.2	Marshes and swamps; coastal salt marshes in clay, silt, and sand substrates; 0-80 m.	Jul-Oct	Not Likely to Occur: Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 8.64 miles northwest of the BSA; this occurrence was recorded in 2015.
<i>Symphotrichum defoliatum</i>	San Bernardino aster	S2, 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland; vernal mesic grassland or near ditches, streams and springs; disturbed areas; 3-2045 m.	Jul-Nov	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 8.4 miles northwest of the BSA; this occurrence was recorded in 1933.

Scientific Name	Common Name	Status	Form; Habitat; and Distribution	Blooming Period	Potential to Occur
<i>Verbesina dissita</i>	big-leaved crownbeard	FT, ST, S1, 1B.1	Southern maritime chaparral, coastal sage scrub; < 200 m.	Apr-Jul	Not Likely to Occur: Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 1.26 miles southeast of the BSA; this occurrence was recorded in 2016.

Sources: CNDDDB 2023, CNPS 2023

Federal Designation

FE = Federally Endangered

FT = Federally Threatened

FC = Federal Candidate Species for Listing CDFW State Designation

State Ranking

SE = State Endangered

SR = State Rare

ST = State Threatened

S1 = Critically Imperiled

S2 = Imperiled

S3 = Vulnerable

S4 = Apparently Secure

S5 = Secure

California Rare Plant Rank (CRPR)

1A Plants considered by the CNPS to be extinct in California.

1B Plants rare, threatened, or endangered in California and elsewhere.

2B Plants presumed extinct in California but more common elsewhere.

3 Review List: Plants about which more information is needed.

4 Plants of limited distribution – a watch list.

.1 Seriously threatened in California (high degree/immediacy of threat).

.2 Fairly threatened in California (moderate degree/immediacy of threat).

.3 Not very threatened in California (low degree/ immediacy of threat or no current threats known).

Attachment C – Special-Status Wildlife Species

Attachment C. Special status Wildlife Species Evaluated for Potential Occurrence Within the BSA

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
Invertebrates					
<i>Bombus crotchii</i>	Crotch bumble bee	SCE, S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 3.93 miles east of the BSA; this occurrence was recorded in 2020.	Not likely to occur
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE, S1	This species is a vernal pool habitat specialist found in small, shallow vernal pools but can also be found in ditches and road ruts that support suitable conditions.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 9.05 miles east of the BSA; this occurrence was recorded in 2010.	Not likely to occur
<i>Cicindela hirticollis gravida</i>	sandy beach tiger beetle	S2	Extirpated from most sites but documented extant populations from north of San Francisco to Mexico. Occurs in areas adjacent to non-brackish water in clean, dry, light-colored sand in the upper zones and coastal sand dunes. Forages in open unvegetated areas such as marsh pannes and levees. Burrows are in moist soils that are far enough away from water bodies to avoid being inundated with water.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 6.98 miles northwest of the BSA; this occurrence was recorded in 1955.	Not likely to occur
<i>Cicindela latesignata</i>	western beach tiger beetle	S1	Open, unvegetated areas in or near salt marshes.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 6.98 miles northwest of the BSA; this occurrence was recorded in 1979.	Not likely to occur
<i>Coelus globosus</i>	globose dune beetle	S1S2	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 6.98 miles northwest of the BSA; this occurrence was recorded in 1937.	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
<i>Danaus plexippus plexippus pop. 1</i>	monarch butterfly - California overwintering population	FC, S2	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation. Roosts located in wind protected tree groves (eucalyptus, pine, cypress), with nectar and water sources nearby.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.92 miles southeast of the BSA; this occurrence was recorded in 2022.	Not likely to occur
<i>Habroscelimorpha gabbii</i>	western tidal-flat tiger beetle	S1	Salty coastal habitats including salt marshes, tidal flats, and beaches.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 6.98 miles northwest of the BSA; this occurrence was recorded in 1949.	Not likely to occur
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE, S2	Endemic to western Riverside, Orange and San Diego Counties. Prefers swales/basins in grassland and coastal sage scrub. Inhabit seasonal pools filled by winter/spring rains. Typically hatch in warm water later in the season.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 9.07 miles east of the BSA; this occurrence was recorded in 2010.	Not likely to occur
<i>Tryonia imitator</i>	mimic tryonia (=California brackishwater snail)	S2	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in brackish water in a variety of sediment types; able to withstand a wide range of salinities.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 8.5 miles northwest of the BSA; this occurrence was recorded in 1996.	Not likely to occur
Fish					
<i>Eucyclogobius newberryi</i>	tidewater goby	FE, S3	Brackish water habitats along the California Coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need still but not stagnant water and high oxygen levels.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 2.27 miles southeast of the BSA; this occurrence was recorded in 1996.	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
<i>Gila orcuttii</i>	arroyo chub	S2, SSC	Native to streams from Malibu creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego River basins. Found in habitats characterized by slow-moving water, mud or sand substrate, and depths greater than 40 cm. Most abundant in low gradient pools that support at least some aquatic vegetation. Feeds heavily on aquatic invertebrates. Most spawning occurs in habitats with low velocity, such as pools or edge waters.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.84 miles east of the BSA; this occurrence was recorded in 1998.	Not likely to occur
<i>Oncorhynchus mykiss irideus pop. 10</i>	steelhead - southern California DPS	FE, SCE, S1	Inhabits seasonally accessible rivers and streams with gravel for spawning. Requires sufficient flows in their natal streams to be able to return from oceans and lakes to spawn. Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerance to warmer water and more variable conditions.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.21 miles southeast of the BSA; this occurrence was recorded in 2016.	Not likely to occur
Amphibians					
<i>Anaxyrus californicus</i>	arroyo toad	FE, S2	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash; rivers with sandy banks, willows, cottonwoods, and/or sycamores.	Suitable habitat is not present within the BSA. The nearest and most recent occurrence is approximately 9.35 miles east of the BSA; this occurrence was recorded in 2001.	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
<i>Spea hammondi</i>	western spadefoot	S3S4	Occurs in the Central Valley and adjacent foothills and the non-desert areas of Southern California and Baja California, Mexico. Grassland habitats, valley-foothill hardwood woodlands, and coastal sage scrub. Vernal pools and other temporary rain pools, cattle tanks, and occasionally pools of intermittent streams are essential for breeding and egg-laying. Burrows in loose soils during dry season.	Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 1.34 miles north of the BSA; this occurrence was recorded in 2011.	Not likely to occur
Reptiles					
<i>Anniella stebbinsi</i>	Southern California legless lizard	S3	Generally, south of the transverse range, extending to northwestern Baja California, Mexico. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations occur in the Tehachapi and Piute mountains in Kern County. Occurs in a variety of habitats; generally, in moist, loose soils as they prefer soils with a high moisture content.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.89 miles northwest of the BSA; this occurrence was recorded in 1949.	Not likely to occur
<i>Arizona elegans occidentalis</i>	California glossy snake	S2	Generally found in arid scrub, rocky washes, grasslands, and chaparral.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.92 miles northeast of the BSA; this occurrence was recorded in 1952.	Not likely to occur
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	S2S3	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slope of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 9.94 miles northeast of the BSA; this occurrence was recorded in 2017.	Not likely to occur
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	S3	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 2.34 miles southeast of the BSA; this occurrence was recorded in 2001.	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
<i>Crotalus ruber</i>	red-diamond rattlesnake	S3	Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 5.92 miles northwest of the BSA; this occurrence was recorded in 2001.	Not likely to occur
<i>Emys marmorata</i>	western pond turtle	S3	A thoroughly aquatic turtle of small ponds and lakes, marshes, permanent and ephemeral shallow wetlands, stock ponds, reservoirs, treatment lagoons, irrigation ditches, and slow-moving permanent or intermittent rivers, streams, usually with aquatic vegetation, below 6000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg-laying. Abundant cover necessary including logs, rocks, and submerged vegetation.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.27 miles southeast of the BSA; this occurrence was recorded in 2006.	Not likely to occur
<i>Phrynosoma blainvillii</i>	coast horned lizard	S4	Primarily in sandy soil in open areas, especially sandy washes and floodplains, in many plant communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Main prey item is harvester ants. Occurs west of the deserts from northern Baja California, Mexico north to Shasta County below 2,400 m (8,000 feet) elevation.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 1.09 miles north of the BSA; this occurrence was recorded in 2001.	Not likely to occur
<i>Thamnophis hammondi</i>	two-striped gartersnake	S3S4	Coastal California from vicinity of Salinas to northwest Baja California, Mexico. From sea level to about 7,000 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 7.47 miles northeast of the BSA; this occurrence was recorded in 2005.	Not likely to occur
Birds					
<i>Accipiter cooperii</i>	Coopers hawk	S4, WL	Woodland, chiefly of open,	Suitable habitat is not present within the	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
			interrupted, or marginal type; nest sites mainly in riparian growths of deciduous trees.	BSA. The most recent recorded occurrence is approximately 8.46 miles north of the BSA; this occurrence was recorded in 2016.	
<i>Agelaius tricolor</i>	tricolored blackbird	ST, S1S2, SSC	Highly colonial species, most numerous in the Central Valley and vicinity, and largely endemic to California. Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs. Forages in grassland and cropland habitats with insect prey within a few kilometers of the colony. They are itinerant breeders, nesting more than once at different locations during the breeding season.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 4.1 miles east of the BSA; this occurrence was recorded in 2014.	Not likely to occur
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	S3, WL	Resident in southern Calif. coastal sage scrub and sparse mixed chaparral; frequents relatively steep, often rocky hillsides with grass and forb patches.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 8.69 miles southeast of the BSA; this occurrence was recorded in 2017.	Not likely to occur
<i>Ammodramus savannarum</i>	grasshopper sparrow	S3, SSC	Open grassland and prairies with patches of bare ground.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 6.27 miles northeast of the BSA; this occurrence was recorded in 2003.	Not likely to occur
<i>Athene cunicularia</i>	burrowing owl	S3, SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Owls are found in microhabitats highly altered by humans, including flood risk management and irrigation basins, dikes, banks, abandoned fields surrounded by agriculture, and road cuts and margins. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 9.61 miles northeast of the BSA; this occurrence was recorded in 2010.	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
			<i>(Otospermophilus beecheyi)</i> .		
<i>Campylorhynchus brunneicapillus sandiegensis</i>	coastal cactus wren	S2, SSC	Inhabits coastal sage scrub, nesting almost exclusively in thickets of coastal cholla (<i>Cylindropuntia prolifera</i>) and prickly pear (<i>Opuntia littoralis</i> or <i>Opuntia oricola</i>), typically below 500 feet elevation.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 7.53 miles northwest of the BSA; this occurrence was recorded in 2021.	Not likely to occur
<i>Charadrius nivosus nivosus</i>	western snowy plover	FT, S3, SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	The tidal fluctuation is too great to support nesting habitat within the BSA. The nearest and most recent recorded occurrence is approximately 7.1 miles northwest of the BSA; this occurrence was recorded in 2017.	Foraging: Low Nesting: Not Likely to Occur
<i>Coturnicops noveboracensis</i>	yellow rail	S1S2, SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 7.1 miles northwest of the BSA; this occurrence was recorded in 1896.	Not likely to occur
<i>Elanus leucurus</i>	white-tailed kite	S3S4, FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 7.92 miles northwest of the BSA; this occurrence was recorded in 2021.	Not likely to occur
<i>Eremophila alpestris actia</i>	California horned lark	S4, WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 6.25 miles northeast of the BSA; this occurrence was recorded in 2003.	Not likely to occur
<i>Icteria virens</i>	yellow-breasted chat	S3, SSC	Inhabits riparian thickets of willow and other brushy tangles near water courses; nests in low, dense riparian vegetation; nests and forages within 10 feet of ground.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 3 miles northeast of the BSA; this occurrence was recorded in 2016.	Not likely to occur
<i>Laterallus jamaicensis coturniculus</i>	California black rail	ST, S1, FP	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
			grassy vegetation.	8.5 miles northwest of the BSA; this occurrence was recorded in 1983.	
<i>Pandion haliaetus</i>	osprey	S4, WL	Forages and nests along rivers, lakes, and reservoirs.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 8.52 miles northwest of the BSA; this occurrence was recorded in 2006.	Not likely to occur
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	SE, S3	Locally common non-migratory resident of coastal saltmarsh. An obligate breeder in middle elevation saltmarsh, nearly always characterized by pickleweed (<i>Salicornia</i> spp.), either in tidal situations or non-tidal alkaline flats nearby. Foraging primarily stems from saltmarsh and mudflat, individuals, particularly post-breeding birds, can be found foraging in a wide variety of habitats including upper marsh, adjacent ruderal and ornamental vegetation, open beach and mudflat, and even dirt and gravel parking lots.	Open beach habitat is present to support foraging. The nearest and most recent recorded occurrence is approximately 5.75 miles north of the BSA; this occurrence was recorded in 2006.	Foraging: Low Nesting: Not likely to occur
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT, S2, SSC	Obligate, permanent resident of coastal sage scrub below 2500 feet in southern California. Low, coastal sage scrub in arid washes and on mesas and slopes with California sagebrush (<i>Artemisia californica</i>) as a dominant or co-dominant species. Not all areas classified as coastal sage scrub are occupied.	Limited suitable habitat is present within the BSA. The nearest recorded occurrence is approximately 0.87 miles north of the BSA; this occurrence was recorded in 2020.	Foraging: Low Nesting: Not likely to occur
<i>Rallus obsoletus levipes</i>	light-footed Ridgways rail	FE, SE, S1, FP	Found in salt marshes where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover, feeds on mollusks and crustaceans.	Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 8.74 miles northwest of the BSA; this occurrence was recorded in 2020.	Not likely to occur
<i>Riparia riparia</i>	bank swallow	ST	Colonial nester; nests primarily in riparian and other lowland habitats	Suitable habitat is not present within the BSA. The nearest and most recent	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
			west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole. Forage in open areas and avoid places with tree cover	recorded occurrence is approximately 8.69 miles northwest of the BSA; this occurrence was recorded in 1916.	
<i>Setophaga petechia</i>	yellow warbler	S3S4, SSC	Inhabits riparian plant associations near water. Nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Also, nesting and forages in willow shrubs and thickets and in other riparian plants including cottonwoods, sycamores, ash, and alders.	Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 2.91 miles northeast of the BSA; this occurrence was recorded in 2016.	Not likely to occur
<i>Sternula antillarum browni</i>	California least tern	FE, SE, S2, FP	Nests on sandy upper ocean beaches, open barren sites, and occasionally uses mudflats. Forages on adjacent surf line, estuaries, or the open ocean where fish are abundant. Colonies are located near the ocean shoreline (within 0.5 miles [about 800 meters]), typically on nearly flat, loose sandy substrates with lightly scattered short vegetation and debris, although some colonies have been located on hard-packed surfaces, even unused asphalt. Colony sites must provide access to the shoreline for juveniles and must be relatively free of predators or the colony may abandon breeding efforts before completion.	Limited suitable habitat is present within the BSA. The most recent recorded occurrence is approximately 9 miles northwest of the BSA; this occurrence was recorded in 2016.	Foraging: Low Nesting: Not Likely to Occur
<i>Vireo bellii pusillus</i>	least Bells vireo	FE, SE, S2	Spring and summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 feet. Often inhabits structurally diverse woodlands along watercourses including cottonwood-willow and oak woodlands and mulefat scrub. Nests placed along margins of bushes or on	Suitable habitat is not present within the BSA. The nearest recorded occurrence is approximately 1.98 miles southeast of the BSA; this occurrence was recorded in 2011.	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
			twigs projecting into pathways, usually willow, mulefat, or mesquite.		
Mammals					
<i>Antrozous pallidus</i>	pallid bat	S3, SSC	Inhabits desert, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 9.86 miles east of the BSA; this occurrence was recorded in 1998.	Not likely to occur
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	S3, SSC	Variety of habitats including coastal scrub, chaparral and grassland in san Diego County. Attracted to grass-chaparral edges.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 5.49 miles southeast of the BSA; this occurrence was recorded in 1932.	Not likely to occur
<i>Eumops perotis californicus</i>	western mastiff bat	S3S4, SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Roosts in crevices in cliff faces, high buildings, bridges, trees, and tunnels. In California, most records are from rocky areas at low elevations.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.36 miles northeast of the BSA; this occurrence was recorded in 1991.	Not likely to occur
<i>Lasiurus cinereus</i>	hoary bat	S4	Forages over a wide range of habitats but prefers open habitats with access to water and trees for roosting. Typically, solitary, roosting in the foliage of shrubs or coniferous and deciduous trees. Roosts are usually near the edge of a clearing.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 8.69 miles northwest of the BSA; this occurrence was recorded in 1990.	Not likely to occur
<i>Myotis yumanensis</i>	Yuma myotis	S4	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 6.94 miles east of the BSA; this occurrence was recorded in 1997.	Not likely to occur

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	S3S4, SSC	Coastal scrub of southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes, as well as in desert scrub, coastal sage scrub, and chaparral.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 5.95 miles southeast of the BSA; this occurrence was recorded in 2002.	Not likely to occur
<i>Nyctinomops macrotis</i>	big free-tailed bat	S3, SSC	Occurs in low-lying arid areas in southern California. Prefers rugged, rocky terrain. Often forages over water sources. Roosts in buildings, caves, and occasionally in holes in trees. Also roosts in crevices in high cliffs or rock outcrops.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 6.11 miles northwest of the BSA; this occurrence was recorded in 1988.	Not likely to occur
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	FE, S2, SSC	Occurs in low-lying arid areas in southern California. Prefers rugged, rocky terrain. Often forages over water sources. Roosts in buildings, caves, and occasionally in holes in trees. Also roosts in crevices in high cliffs or rock outcrops.	Suitable habitat is not present within the BSA. The most recent recorded occurrence is approximately 6.21 miles southeast of the BSA; this occurrence was recorded in 1999.	Not likely to occur
<i>Sorex ornatus salicornicus</i>	southern California saltmarsh shrew	S1, SSC	Coastal marshes in Los Angeles, Orange, and Ventura counties. Requires dense vegetation and woody debris for cover.	Suitable habitat is not present within the BSA. The nearest and most recent recorded occurrence is approximately 8.4 miles northwest of the BSA; this occurrence was recorded in 1933.	Not likely to occur

Sources: CNDDB 2023, Stantec 2021

Federal Rankings:
FE = Federally Endangered
FT = Federally Threatened
FC = Federal Candidate for Listing

State Rankings:
FP = Fully Protected
SE= State Endangered
ST = State Threatened
SA = CDFW Special Animal
SC = State Candidate for Listing
WL = CDFW Watch List
SSC = Species of Special Concern
S1 = Critically Imperiled
S2 = Imperiled
S3 = Vulnerable
S4 = Apparently Secure

APPENDIX D

Cultural Resources Memorandum





To: City of Laguna Beach From: Emily Rinaldi, Architectural Historian
Ben Kerridge, Archaeologist
Stantec Consulting Services Inc.

File: Cleo Street Beach Access Date: April 17, 2023
Rehabilitation Project

Reference: Cleo Street Beach Access Rehabilitation Project

The purpose of this memorandum is to analyze whether the Cleo Street Beach Access Rehabilitation Project (Project) would impact archaeological and historical resources as defined by the California Environmental Quality Act (CEQA). The Project site is at the western terminus of Cleo Street to the west of the intersection with Ocean Front in the City of Laguna Beach (City) (see **Figure 1**). It is situated within the public right-of-way and occupied by a beach access stair.

Stantec Consulting Services Inc. (Stantec) was retained to: (1) identify archaeological resources at the Project site based on existing records, a desktop analysis, and a field survey; and (2) identify built-environment historical resources at the Project site, including those that are eligible for inclusion in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and Laguna Beach Historic Landmark Program. The Project's potential to result in a substantial adverse change in the significance of historical resources, pursuant to Title 14 California Code of Regulations Section 15064.5, is documented in this memorandum.

Stantec Architectural Historian Emily Rinaldi-Williams was the primary author of this memorandum. Ms. Rinaldi-Williams received a Master of Science degree in Historic Preservation from Columbia University and has more than eight years of cultural resource management experience. Ms. Rinaldi qualifies as an Architectural Historian and Historian under the Secretary of the Interior's Professional Qualification Standards.

Stantec Archaeologist Ben Kerridge performed the records search and pedestrian survey of the Project area as well as assisted in authoring this memorandum. Mr. Kerridge has a Master of Arts degree in Anthropology from California State University, Fullerton, and has a decade of cultural resource management experience. Mr. Kerridge qualifies as an Archaeologist under Secretary of the Interior's Professional Qualification Standards.

DESCRIPTION OF PROJECT SITE

The Project site is located along the coast of Laguna Beach, surrounded by residential development and in immediate proximity to the City Beach and the Pacific Ocean. It is developed with a beach access stair on a steep slope between the beach and the roadway at the western terminus of Cleo Street (**Figure 1**). The stair is constructed of concrete and is bordered by a metal pipe railing (**Photograph 1** and **Photograph 2**). It consists of four flights in tight formation with 90-degree turns and three mid-stair landings. At the top of the stair along Ocean Front, there is a concrete wall with decorative stone (**Photograph 3**). To the west of the wall along the slope, there are two retaining walls. One is near the top of the slope and is constructed of concrete block (**Photograph 4**). The other is further west near the bottom of the slope and is constructed of concrete and clad in decorative stone (**Photograph 5**). Above the stone retaining wall is a concrete pad with electrical equipment. To the north of the pad is a pump station consisting of a small rectangular building with a front gable roof (**Photograph 6**). It is clad in stucco, wood siding, and stone. It has two door openings on the west elevation, each consisting of a single wood plank door.

April 17, 2023

City of Laguna Beach

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Reference: Cleo Street Beach Access Rehabilitation Project



Photograph 1: View of Cleo Street beach access stair, looking south (Stantec, March 2023)



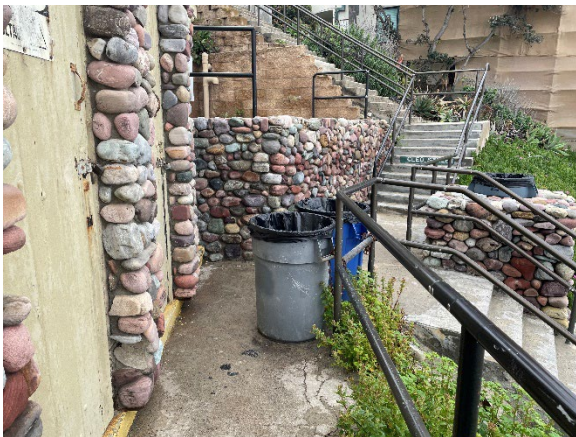
Photograph 2: View of Cleo Street beach access stair, looking west (Stantec, March 2023)



Photograph 3: View of concrete wall at top of Cleo Street beach access stairs, looking west (Stantec, March 2023)



Photograph 4: View of concrete block retaining wall and concrete pad (Stantec, March 2023)



Photograph 5: View of retaining wall clad in stone, view looking south (Stantec, March 2023)



Photograph 6: View of pump station, looking north (Stantec, March 2023)

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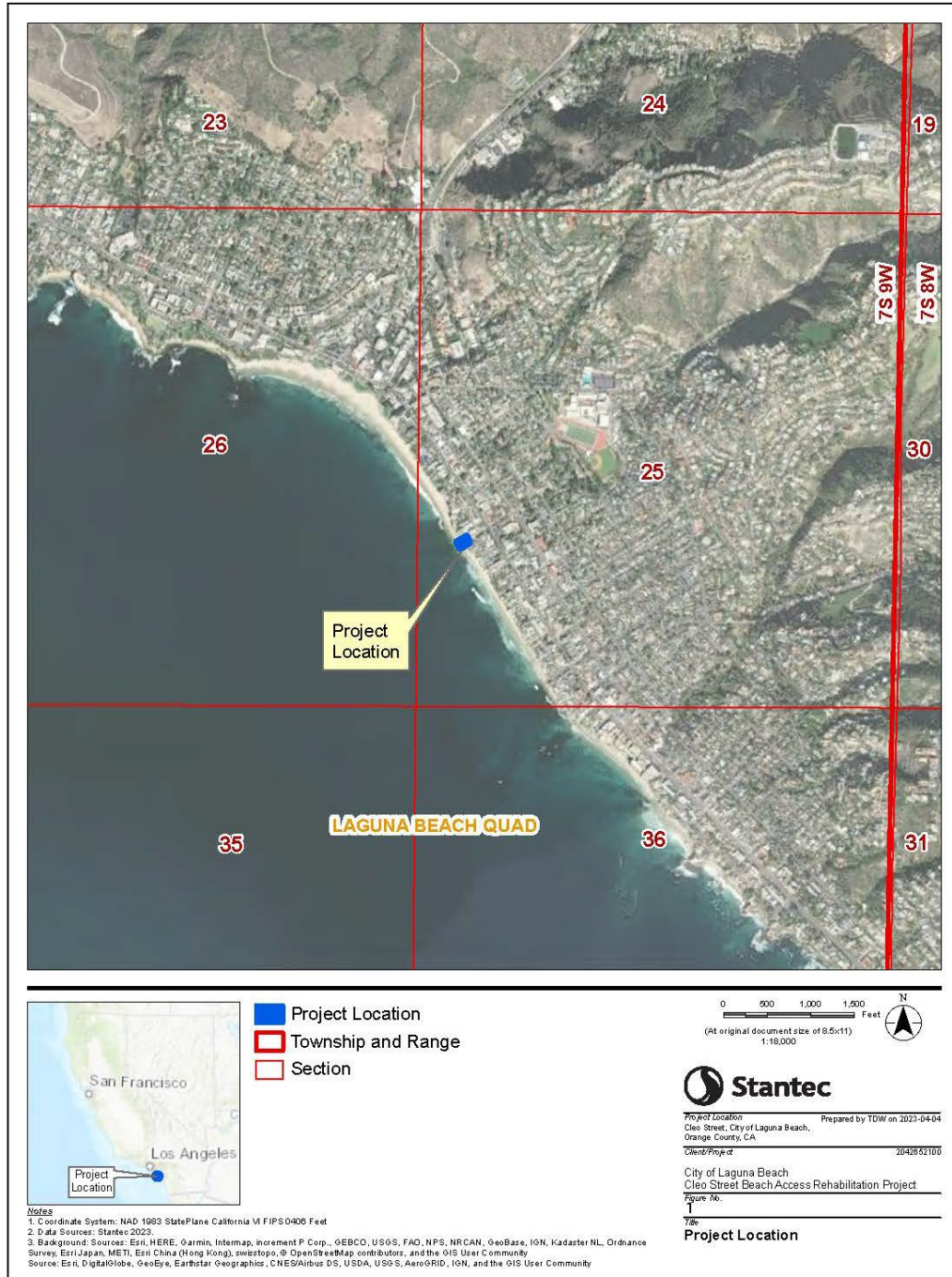
Reference: Cleo Street Beach Access Rehabilitation Project

Elevations in the Project area range from 3 feet above mean sea level at the bottom of the stairs to 48 feet above mean sea level at the corner of Ocean Front and Cleo Street, with the top of the stairs sitting at 36 feet above mean sea level. There is a moderate incline toward the north along Ocean Front and a steep incline toward the east along the slope portion of the Project area. The native ground surface of the Project area is heavily disturbed in all portions except for that of the beach itself, with the top of the stairs occupied by the cement and stone wall, sidewalk, and the paved road Ocean Front. The stairs themselves cover the ground surface completely. The slope to either side of the stairs is densely covered in landscaped plants with thick mulch and imported topsoil and shows evidence of underground infrastructure, such as protruding pipe heads, in varying degrees of decay. Along the slope to the north side of the stairs sits the existing pump station facility. Together with the adjacent concrete pad situated beneath a retaining wall and between the building and the stairs, this building obscures much of the ground surface of the middle slope north of the stairs.

At the base of the stairs, decaying remnants of abandoned-in-place stormwater infrastructure (in the form of concrete housed pipes) jut out from the north side of the stairs along the ground surface. To the south of the bottom of the stairs are modern elements of stormwater infrastructure, including the exposed face of the existing headwall and baffle structure. Directly at the bottom of the stairs is the only portion of the Project area in which native ground surface was visible at the time of the survey. Sediment consisted of medium- to course-grained subangular beach sands with minimal subrounded pebbles and no observed clasts. All vegetation within the Project area was landscaped.

Reference: Cleo Street Beach Access Rehabilitation Project

Figure 1. Project Location Map



Reference: Cleo Street Beach Access Rehabilitation Project

DESCRIPTION OF PROJECT

To maximize public access to and along the coast of Laguna Beach, the Project proposes to enhance and restore an access area to the beaches and coastal resources of the City. Specifically, a coastal access facility will be restored and enhanced at Cleo Street in the City of Laguna Beach. The Project would remove the existing walkway and stairs, replacing these with new stairs, walkways and landings designed to improve access and restore landscape areas impacted by the work. It would not impact the existing concrete wall along Ocean Front, the concrete block retaining wall, or the pump station facility. Construction staging and equipment/material storage would be located at the terminus of Cleo Street and Ocean Front.

The concept design preserves the approximate beginning elevation and alignment of stairs; however, the location and end elevation of the stairs would need to be changed to provide proper landing at the bedrock elevation to address the current drop off condition and estimated long term beach erosion. Profile rise and run of the stairs would be dictated by the California Building Code, while the ramp design and landings would be dictated by Americans with Disabilities Act (ADA) requirements. The construction methods for the Project would entail the following:

- Cast-In-Drilled-Hole foundations installed with a small drill rig or by hand digging with jackhammer (30-inch maximum diameter piles)
- Slotted spread footing type foundations in shallow bedrock excavated by hand with jackhammer (minimum 2-foot embedment in competent bedrock)
- Low retaining walls with a total height less than three feet to facilitate landscape terracing (if required)
- Suspended slab stairway construction
- Slab on grade stairway construction
- Concrete forming, reinforcement, and placement
- Salvage and reconstruct decorative river rock cladding on new trash receptacle enclosure
- Minor associated structural earthwork and grading with a backhoe or small excavator or jackhammers
- Installation of new aluminum hand railings
- Miscellaneous landscaping, irrigation, and amenities
- Repair of exposed face of the existing storm drain headwall and baffle structure
- Removal of exposed abandoned sewer pipe, cap, and plug the remaining portion
- Placement of new grouted and un-grouted riprap slope protection

REGULATORY FRAMEWORK

Generally, a lead agency must consider a property a historical resource under CEQA if it is eligible for the California Register of Historical Resources (CRHR), which is modeled after the National Register of Historic Places (NRHP). A property is presumed to be historically significant if it is listed in a local register of historical

Reference: Cleo Street Beach Access Rehabilitation Project

resources or has been identified as historically significant in a historic resources survey (provided certain statutory criteria and requirements are satisfied) unless a preponderance of evidence demonstrates that the property is not historically or culturally significant. A lead agency may also treat a resource as historical if it meets statutory requirements and substantial evidence supports the conclusion.

National Register of Historic Places

The National Historic Preservation Act of 1966, as amended, authorized the creation of the NRHP. The NRHP is "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."¹ For a property to be considered eligible for the NRHP, it must typically be at least 50 years old and meet one or more of four criteria for evaluation set forth in 36 Code of Federal Regulations Part 60.4:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.²

A property must also be significant within a historic context under one or more of the criteria listed above. "National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation" states that the significance of a historic property can be judged only when it is evaluated within its historic context. Historic contexts are "those patterns, themes, or trends in history by which a specific...property or site is understood and its meaning...is made clear."³ A historic property must therefore represent an important aspect of history or prehistory.

In addition to possessing significance, a property must possess integrity, defined by seven aspects:

Location: the place where the historic property was constructed or the place where the historic event took place.

¹ Title 36 Code of Federal Regulations (CFR) Part 60.2.

² Title 36 CFR Part 60.4.

³ "National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation," U.S. Department of the Interior, National Park Service, Cultural Resources, eds. Patrick Andrus and Rebecca Shrimpton, accessed February 24, 2023, https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf, 7-8.

Reference: Cleo Street Beach Access Rehabilitation Project

Design: the composition of elements that constitute the form, plan, space, structure, and style of a property.

Setting: the physical environment of a historic property that illustrates the character of the place.

Materials: the physical elements combined in a particular pattern or configuration.

Workmanship: the physical evidence of the crafts of a particular culture or people during any given period of history.

Feeling: the quality that a historic property has in evoking the aesthetic or historic sense of a past period of time.

Association: the direct link between a property and the event or person for which the property is significant.⁴

California Register of Historical Resources

The CRHR was established in 1992 by Assembly Bill 2881. It is an authoritative guide used by state and local agencies, private groups, and citizens to identify historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse impacts.⁵ The criteria for eligibility of listing in the CRHR are based upon the NRHP criteria, and are identified as 1–4 instead of A–D. To be eligible for the CRHR, a property generally must be at least 50 years of age and must possess significance at the local, state, or national level, under one or more of these four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

Like the NRHP, properties eligible for the CRHR may include buildings, sites, structures, objects, and districts. The enabling legislation for the CRHR is less rigorous than the NRHP with regard to the issue of integrity, yet the expectation is that eligible properties should retain enough of their historic-period character or appearance to be recognizable as historical resources and to convey the reasons for their significance.⁶

⁴ "National Register Bulletin #15," 44.

⁵ Public Resource Code (PRC) Section 5024.1(a).

⁶ "California Office of Historic Preservation Technical Assistance Series #7: How to Nominate a Resource to the California Register of Historical Resources," California Office of Historic Preservation, accessed February 24, 2023, https://ohp.parks.ca.gov/pages/1056/files/07_TAB%207%20How%20To%20Nominate%20A%20Property%20to%20California%20Register.pdf, 11.

Reference: Cleo Street Beach Access Rehabilitation Project

Evaluations for the CRHR are based upon the evaluation instructions and classification system prescribed by the California Office of Historic Preservation (OHP) in its “Instructions for Recording Historical Resources,” which include Status Codes to classify potential historical resources. These Status Codes are used statewide in the preparation of historical resource surveys and evaluation reports. The specific Status Codes referred to in this report are:

6Z Found ineligible for the NRHP, CRHR, or local designation through survey evaluation

The CRHR may include properties identified during historic resource surveys. However, properties included must be based on surveys that meet these criteria:

1. The survey has been or will be included in the State Historic Resources Inventory;
2. The survey and the survey documentation were prepared in accordance with office (OHP) procedures and requirements;
3. The resource is evaluated and determined by the office (OHP) to have a significance rating of Category 1 to 5 on a DPR Form 523; and
4. If the survey is five or more years old at the time of its nomination for inclusion in the CRHR, the survey is updated to identify historical resources that have become eligible or ineligible due to changed circumstances or further documentation and those that have been demolished or altered in a manner that substantially diminishes the significance of the resource.⁷

Laguna Beach Historic Preservation Ordinance

The City adopted the Historic Preservation Ordinance in 1989 and revised it in 2022. The Ordinance established the Laguna Beach Historic Register. To be listed in the historic register, a property must meet criteria (1) and also one or more of criteria (2) through (11):

1. The owner of the property voluntarily agrees to the placement on the register;
2. It is listed on the National Register or the State Register;
3. It exemplifies the cultural, political, economic, social or historical heritage of the community;
4. It is identified with a person, events, culture or site significant in local, state or national history;
5. It is representative of the work of a notable builder, designer, architect, or artist including those of local importance;
6. It embodies distinguishing architectural characteristics of a style, type, period or method of construction that exemplify a particular architectural style or way of life important to the City;
7. It embodies elements that represent a significant structural, engineering, or architectural achievement or innovation;

⁷ PRC Section 5024.1.

Reference: Cleo Street Beach Access Rehabilitation Project

8. It has a unique location, a singular physical characteristic, or is an iconic visual feature or public view point within the City;
9. Is one of the remaining examples in the City, region, state or nation possessing distinguishing characteristics of architectural, cultural or historical importance;
10. Is an iconic landscape, garden, space or public view point that is significant to the history and heritage of the City; or
11. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

California Environmental Quality Act

The State CEQA Guidelines set the standard for determining whether a proposed project will result in a “substantial adverse change” in the significance of historical resources. Title 14 CCR Section 15064.5(b) states:

A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.⁸

Title 14 CCR Section 15064.5(b)(1) further clarifies “substantial adverse change” as:

Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.⁹

Title 14 CCR Section 15064.5(b)(2) in turn explains that a historical resource is “materially impaired” when a project:

Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.¹⁰

As a result, the test for determining if a proposed project will have a significant impact on an identified historical resource is whether the project will alter the physical integrity of the historical resource in an adverse manner such that it would no longer be eligible for the NRHP, the CRHR, or other landmark programs.

⁸ Title 14 CCR Section 15064.5(b).

⁹ Title 14 CCR Section 15064.5(b)(1).

¹⁰ Title 14 CCR Section 15064.5(b)(2).

Reference: Cleo Street Beach Access Rehabilitation Project

METHODOLOGY

To prepare this memorandum, Stantec performed the following tasks:

- Conducted a field inspection of the Project site on March 20, 2023. Digital photographs of the existing beach access stair on the Project site and the immediate vicinity were taken during the field inspection.
- Identified a Study Area to account for potential impacts on cultural (archaeological and historical) resources at the Project site and vicinity (see **Figure 2**).
- Reviewed existing information to determine if there are any listed or previously recorded cultural resources within the Project site or immediate vicinity. The following sources were consulted:
 - Conducted a records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on February 22, 2023. The purpose of this search was to determine if the Project site plus a search radius of 500 feet contains any resources that are listed under national, state, or local landmark or historic district programs, or contains any other cultural resources that have been previously identified or evaluated.
 - Consulted the California Built Environment Resource Directory (BERD), which is maintained by the California OHP, to determine if the Project site plus a search radius of 100 feet contains any properties listed and determined eligible for listing in the NRHP, listed and determined eligible for listing in the CRHR, or that had been evaluated in historic resource surveys and other planning activities. The BERD also includes a list of California Registered Historical Landmarks, Points of Historical Interest, as well as properties that have been evaluated in historic resource surveys and other planning activities.
 - Consulted the Laguna Beach Historic Register to determine if the Project site plus a search radius of 100 feet contains any properties listed by the City.
- Conducted research into the history of the beach access stair at the Project site. Sources referenced included newspaper archives and Sanborn Fire Insurance maps available through the Los Angeles Public Library, as well as historical aerial photographs available through the University of California, Santa Barbara.
- Reviewed and analyzed ordinances, statutes, regulations, bulletins, and technical materials relating to national, state, and local historic preservation designations, and assessment processes and programs. The review was done to evaluate the significance and integrity of the Cleo Street beach access stair as a potential historical resource.

STUDY AREA

The Study Area was identified as the Project site and all parcels within a 100-foot radius from the Project site (**Figure 2**). This Study Area was established to account for potential impacts on cultural resources in the vicinity. Parcels beyond this Study Area were not included because the Project would have no potential to directly or indirectly impact cultural resources on these distant parcels or their settings. The buildings and streets within the Study Area that immediately surround the Project site create a geographic and visual separation between the Study Area and the parcels beyond the Study Area boundaries. Due to this

Reference: Cleo Street Beach Access Rehabilitation Project

intervening space, the Project site cannot be reasonably considered part of the environmental setting of cultural resources beyond the Study Area.

Figure 2. Study Area Map



Reference: Cleo Street Beach Access Rehabilitation Project

PREVIOUSLY IDENTIFIED CULTURAL RESOURCES

The SCCIC records search indicates that there are no previously recorded resources within the Project site or within 500 feet of the Project site. The review of the BERD and the City's Historic Register indicate that there are no previously recorded resources within the Project site or within the Study Area.

FIELD SURVEY

On March 20, 2023, Stantec archaeologist Ben Kerridge conducted an intensive-level pedestrian field survey of the Project area. As the configuration of the Project area was such that transects were not possible, during the field survey, Mr. Kerridge walked along Ocean Front, up and down the stairs, along accessible portions of the exposed slope, and along the beach at the bottom of the stairs carefully examining the ground surface for evidence of archaeological materials. In this way, the ground surface was inspected for any archaeological resources dating to either the precontact period or historic period (i.e., 50 years old or older). Visibility of the ground surface was negligible to poor (zero to 10 percent) for all of the project area except for the beach itself at the bottom of the stairs which had excellent (90 to 100 percent) ground surface visibility.

LAGUNA BEACH HISTORICAL CONTEXT¹¹

Millenia before Laguna Beach was occupied by homesteaders beginning in the 1870s, native peoples arrived along the coast and settled present-day southern California as early as 12,000 years ago. Native Americans occupied the area in successive "periods", as defined by the archaeological record. Establishment of Mission San Gabriel in 1771 made for direct and regular contact between Spanish settlers and the native Gabrielino/Tongva.

In spite of Euro-American occupation of native lands, the Gabrielino/Tongva tribe continues to the present-day. In 1994, the State of California officially recognized the Tongva in Assembly Joint Resolution 96. The Joint Resolution states that the State of California "recognizes the Gabrielino-Tongva Nation as the aboriginal tribe of the Los Angeles Basin and takes great pride in recognizing the Indian inhabitation of the Los Angeles Basin and the continued existence of the Indian community".

Laguna Beach and her sister community South Laguna together now form the City of Laguna Beach. Northern Laguna Beach was once part of the Rancho San Joaquin land grant, while the downtown area and southern area (formerly South Laguna) were leftover government land available for homesteading. Following passage of the Timber-Culture Act in 1871, many families headed west to stake out 160-acre claims, and plant 10 acres of trees as required, almost always eucalyptus trees. The trees were a bust for lumber, and the groves grew so dense that they had to be cut down to provide room for the developing community. William and Nathaniel Brooks, brothers who arrived in 1876, were the first homesteaders in Laguna Beach. William filed on 169.24 acres at Arch Beach (present Diamond Street) and developed a subdivision. His brother Nathaniel brought water via a series of pipes and tunnels to Arch Beach for the subdivision. They were bought out temporarily by Hubbard Goff who in 1886 opened the first hotel in Laguna Beach, the Arch Beach Hotel.

¹¹ Adapted from Carol R. Demcak, Archaeological Resource Management Corporation, *Cultural Resources Assessment for Proposed Replacement of Beach Access Stairs at Pearl Street, City of Laguna Beach, California*, Prepared for Hodge and Associates, July 28, 2016, 6-7.

Reference: Cleo Street Beach Access Rehabilitation Project

During the boom years of the 1880s Arch Beach formed a separate community with its own post office opened in 1889. Laguna got its own post office in 1891, but it was called “Lagona”, a corruption of the Spanish word for lagoon. South Laguna was late in having a post office. It opened in 1933 under the name “Three Arches”. A write-in vote the following year chose the name of South Laguna instead.

John Damron acquired property near the mouth of Laguna Canyon in 1878. The land included Temple Hills and the flats above Arch Beach. George Rogers bought Damron’s holdings and developed the acreage. He built a school to educate his children and hired a teacher. Other pupils attended this first version of a public school in Laguna Beach. The Mormons built a second school in 1888 near their settlement at the intersection of Laguna Canyon Road and El Toro Road. The school was operated until 1892 when it was moved, along with the Mormons, inland to the community of El Toro. It was known as the Niguel District School. The school was later moved to the Canyon Acres area of Laguna and eventually became first a church and then the art studio of Joseph Kleitsch.

A third school was built in 1908 over an old cemetery and later moved to its present location where it became home to the American Legion. Grading for a new school in 1928 unearthed the grave of Captain Oliver Brooks whose remains were reburied in Santa Ana. The present high school was built in 1935. Prior to that date students were transported to Tustin High.

Laguna Beach opened its second hotel, Hotel Laguna, in 1889. Built by Henry Goff, it was purchased by Joseph Yoch. He took sections of the defunct Arch Beach Hotel and added them to his establishment to make a massive structure comprising 30 bedrooms and two bathrooms. After the building was condemned in 1928, the present Hotel Laguna was built on the same location.

Among the early residents of Laguna Beach were Oscar Warling and Fred Trefren, operators of a stage line to Santa Ana and El Toro from 1884 to 1901. John N. Isch ran the livery stable and a grocery store that provided self-service and pay-later amenities and the only telephone in the community for many years. Another important early settler was Elmer Jahraus who opened a cigar factory and a lumber company. The ease of obtaining building materials contributed mightily to the expansion of Laguna Beach in the early part of the century. In the same time period, South Laguna was home to homesteaders who raised beans and melons. The area had a narrow escape from urbanization when in 1889 the Santa Fe Railroad announced plans to lay tracks on Goff Island (now Treasure Island), planning a depot and resort on their newly acquired land. The plan fell through and the railroad line ran inland instead. When the depression of the 1890s came, it effectively killed development of South Laguna. North Laguna, or Laguna Cliffs, was subdivided in 1905 by Howard Heisler, L.C. McKnight, and the Thumb Brothers. They laid out right-angle streets and piped in water from Laguna Canyon to service the homes.

Laguna Beach has become the focal point for arts and crafts in Orange County. This reputation began in the early part of the century when the first artists began to arrive and set up their easels. News of this charming village spread, and more and more artists flocked to Laguna. The first exhibition was held in 1918, setting the stage for the Laguna Beach Art Association and Museum of Art. The City is home to the Festival of the Arts and Pageant of the Masters that is known internationally.

Despite considerable growth and commercial development, Laguna Beach retains much of its village character. Its relative isolation has helped to keep it out of the wider urban development of surrounding cities.

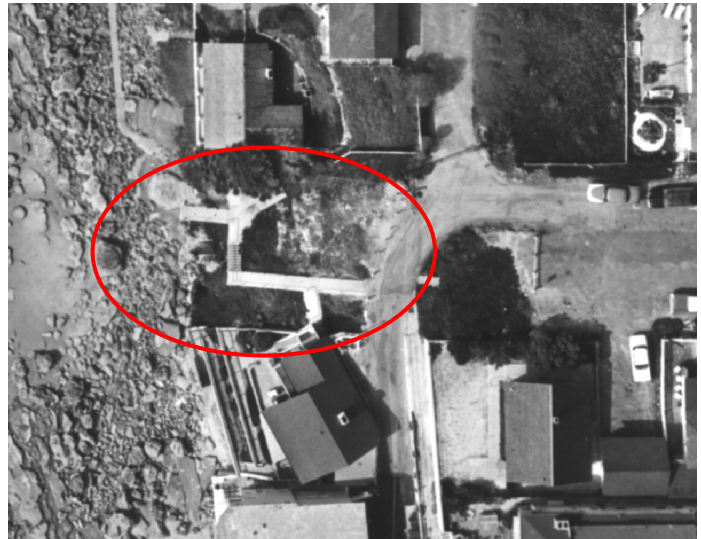
Reference: Cleo Street Beach Access Rehabilitation Project

HISTORY AND EVALUATION OF CLEO STREET BEACH ACCESS STAIR

The City currently maintains 29 beach accessways, which provide public access to approximately 47 acres of beach along 4.3 linear miles of coastline. Based on a review of historic aerial photographs, public beach accessways appear to have primarily consisted of maintained dirt trails through the 1950s after which new beach access stairs, paths, and viewing platforms were constructed by the City. The stair at Cleo Street were constructed sometime between 1952 and 1963 (see **Photograph 7** and **Photograph 8**). In recent years, the City has demolished and replaced several of the beach access stairs previously built in between the mid-1950s and early 1960s. These include the Thalia Street, Pearl Street, Oak Street, Mountain Road, Agate Street, Circle Way, and Moss Street beach access stairs, amongst others.



Photograph 7: 1952 aerial photograph, future location of Cleo Street beach access stair circled in red (UCSB)



Photograph 8: 1963 aerial photograph, Cleo Street beach access stair circled in red (UCSB)

The Cleo Street beach access stair is not currently listed under national, state, or local landmark programs, nor has it been identified as eligible for such designation in a historic resources survey. Because the stair would be demolished as part of the Project and is over 50 years of age, Stantec completed an evaluation to assess its eligibility for listing in the NRHP, CRHR, and City Historic Register as part of the Project's CEQA environmental review.

To be eligible under NRHP Criterion A, a property must have a direct association with events that have made a significant contribution to the broad patterns of our history. The most applicable context for evaluating the Cleo Street beach access stair is the History of Laguna Beach.

Properties associated with early development in this area of Laguna Beach were generally constructed between the early 1900s and 1920s. The Cleo Street beach access stair was constructed sometime between 1952 and 1963 and does not represent a very early period of development in this area. It is instead associated with an ongoing trend in the construction of upgrades to public infrastructure such as streets and sidewalks by the City following World War II. "National Register Bulletin 15" states that a "mere association with historic events or trends is not enough [...] to qualify under Criterion A: a property's specific association

Reference: Cleo Street Beach Access Rehabilitation Project

must be considered important as well.”¹² Research did not reveal that the Cleo Street beach access stair has any significant associations within the context of the History of Laguna Beach. Rather, it represents one of several public infrastructure projects constructed during this period, including the construction of many of the existing beach access stairs along the City’s coastline. Therefore, it does not appear to be significant under Criterion A.

NRHP Criterion B states that to be eligible, a property must be associated with the lives of persons significant in our past. Research did not reveal the name of any person or persons associated with the Cleo Street beach access stair. Due to this lack of available information, it is reasonable to assume that no individuals of historic significance were associated with the structure. Therefore, the Cleo Street beach access stair does not appear to be significant under Criterion B.

A property can be eligible under NRHP Criterion C if it embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, possesses high artistic values, or lastly, represents a significant and distinguishable entity whose components may lack individual distinction.

The Cleo Street beach access stair does not embody the distinctive characteristics that would make it significant as an example of any one particular style or method of construction. It is therefore not an important example within the context of a specific architectural style and does not demonstrate any innovative, important, or outstanding design features. Research did not reveal the name of an architect, engineer, or contractor associated with the design and construction of the structure. It is unlikely, given the stair’s appearance, that it is representative of the work of a master architect or builder. The possession of high artistic values refers to a building or structure’s articulation of a particular concept of design so fully that it expresses an aesthetic ideal.¹³ A building or structure eligible under this aspect of Criterion C would need to possess ornamentation and detail to lend it high artistic value, which the Cleo Street beach access stair does not possess. Finally, the Cleo Street beach access stair does not form or contribute to a historically significant distinguishable entity whose components may lack individual distinction. It is not located within the boundaries of an existing historic district, and during field investigations, it was determined that not enough properties with shared physical characteristics or historical associations were in the area to be considered a potential historic district. For all the reasons outlined above, the Cleo Street beach access does not appear to be significant under Criterion C.

To be eligible for listing under NRHP Criterion D, a property’s physical material must have yielded, or may be likely to yield, information important to history or prehistory. This generally applies to archaeological resources but may apply to a built resource in instances where a resource may contain important information about such topics as construction techniques or human activity. In any case, the resource must be the principal source of information. This is unlikely to be true for a beach access stair from the postwar period. Therefore, the Cleo Street beach access stair does not appear to be significant under Criterion D.

The Cleo Street beach access stair does not appear to be significant under any of the NRHP criteria. Because the CRHR and Laguna Beach Historic Register criteria are similar to that of the NRHP, the Cleo Street beach access stair appears to be ineligible for the CRHR and City Historic Register for the same reasons outlined above. The resource has no period of significance, and its physical and historical integrity do not require examination.

¹² “National Register Bulletin 15,” 12.

¹³ “National Register Bulletin 15,” 20.

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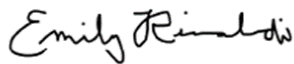
For these reasons, this evaluation finds that the Cleo Street beach access stair does not meet the criteria for listing in the NRHP, CRHR, or City Historic Register. The property, therefore, does not appear to be a historical resource for the purposes of CEQA pursuant to Title 14 CCR §15064.5. The recommended Status Code is 6Z, ineligible for national, state, and local designation through survey evaluation.

CONCLUSIONS

The SCCIC records search and desktop archaeological review did not identify precontact or historical archaeological resources. During the intensive-level pedestrian field survey, it was observed that most of the native ground surface of the Project area was obscured by built-environment features including the paved road Ocean Front, the stairs themselves, the existing pump station facility, and the exposed concrete-encased pipe at the bottom of the stairs. The slope portion of the project area, where ground surface was exposed, displayed signs of recent disturbance from landscaping and underground utility maintenance. No precontact or historical archaeological resources were observed.

Impacts to historical resources were also analyzed. The Project would have no direct impacts on historical resources. There are no historical resources on the Project site and no historical resources would be demolished, destroyed, altered, or relocated as a result of the Project. Additionally, there are no identified historical resources within the Study Area. Therefore, the demolition of the Cleo Street access stair would have no indirect impact on identified historical resources in the vicinity. No mitigation is required or recommended.

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APPENDIX E

Paleontological Resource Assessment







**PALEONTOLOGICAL RESOURCES
ASSESSMENT FOR THE CLEO STREET
BEACH ACCESS REHABILITATION
PROJECT, ORANGE COUNTY,
CALIFORNIA**

An analysis of existing data in support of
CEQA review

April 18, 2023

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**Paleontological Resources Assessment for the Cleo Street Beach Access Rehabilitation Project,
Orange County, California**

Revision	Description	Author	Date	Quality Check	Date	Independent Review	Date



Paleontological Resources Assessment for the Cleo Street Beach Access Rehabilitation Project, Orange County, California

The conclusions in the Report titled Paleontological Resources Assessment for the Paleontological Resources Assessment for the Cleo Street Beach Access Rehabilitation Project, Orange County, California, are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the City of Laguna Beach (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

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Executive Summary

Stantec Consulting Services Inc. (Stantec) conducted a paleontological resources assessment on behalf of the City of Laguna Beach for the Cleo Street Beach Access Rehabilitation Project (the Project) located on the west side of Ocean Front, at the western terminus of Cleo Street in the City of Laguna Beach, Orange County, California. This paleontological study was conducted in support of the proposed comprehensive rehabilitation of the existing beach access improvements.

Because the proposed Project may require construction and grading permits from the City of Laguna Beach, it is subject to compliance with the California Environmental Quality Act (CEQA) requirements regarding the Project's potential impacts on paleontological resources. As part of CEQA compliance, a paleontological resources assessment was conducted to assess potential impacts of the proposed Project on paleontological resources.

This paleontological resource assessment consisted of an analysis of existing data including a museum records search from the Natural History Museum of Los Angeles County and a review of the most recent geologic mapping, relevant scientific literature, and the online collections of the University of California Museum of Paleontology. This research was used to assign paleontological potential rankings of the Society of Vertebrate Paleontology (2010) to the geologic units present in the Project area, either at the surface or in the subsurface. Following this, Project plans were reviewed to identify any potential impacts to paleontological resources and develop appropriate mitigation recommendations to reduce potential impacts to less than significant.

The results of this study indicate that two geologic units are likely present in the Project area: very young marine deposits, which are assessed as having low paleontological potential; and the Topanga Group, which is assessed as having high paleontological potential. In order to avoid impacts to paleontological resources and satisfy CEQA and City of Laguna Beach requirements, Stantec recommends a qualified paleontologist meeting professional standards as defined by Murphey et al. (2019) be retained as the designated Project Paleontologist to oversee all aspects of paleontological mitigation. In order to avoid impacts to paleontological resources, Stantec recommends the following mitigation activities for the Project:

- The Project Paleontologist should develop and oversee the implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential, whether at the surface or in the subsurface, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include steps to follow in the event of a fossil discovery and provisions for a monitoring report following construction. Fulltime paleontological monitoring is recommended:
 - For all ground disturbance into previously undisturbed sediments in areas mapped as the Topanga Formation.
 - Once excavations reach 5 feet in depth in areas mapped as very young marine deposits.



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- The Project Paleontologist may alter the frequency of monitoring based on subsurface conditions.
- The Project Paleontologist should develop a Worker's Environmental Awareness Program training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.
- In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The Project Paleontologist shall assess the find. Should the Project Paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data and curation fees.

Based on the findings in this study and the implementation of the above mitigation recommendations, the proposed Project should not cause an adverse impact to paleontological resources. Therefore, no additional paleontological resource studies are recommended or required at this time. Changes to the Project plans or Project area from those assessed in this study will require additional assessment for impacts to paleontological resources.



Acronyms/Abbreviations

CEQA	California Environmental Quality Act
CIDH	Cast-In-Drilled-Hole
City	City of Laguna Beach
GIS	Geographic Information System
LACM	Natural History Museum of Los Angeles County
LOT	Lifeguard observation tower
Mya	Millions of years ago
PRC	Public Resources Code
PRPA	Paleontological Resources Preservation Act
SVP	Society of Vertebrate Paleontology
UCMP	University of California Museum of Paleontology



Glossary

Paleontological Monitor	An individual who has academic training (B.S., B.A., M.A., or M.S.) with an emphasis in paleontology or demonstrated equivalent experience (a minimum of two years of cumulative professional or nonprofessional work in laboratory preparation, curation, or field work related to paleontology, as well as documented self-taught knowledge of the discipline of paleontology). [Murphey et al. 2019]
Paleontological Monitoring	Full-time observation of construction activities in high potential geologic units by a paleontological monitor, under supervision of the project paleontologist.
Paleontological Resource	Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i. e., older than about 5,000 radiocarbon years) [Society of Vertebrate Paleontology 2010]
Project Paleontologist	Someone with an advanced academic degree (M.A., M.S. or Ph.D.) with an emphasis in paleontology or demonstrated equivalent professional experience (e.g., minimum of 3 years [or 75 projects] of project experience with paleontological mitigation is considered equivalent to a graduate degree), in combination with 2 years (or 50 projects) of demonstrated professional experience and competency with paleontological resource mitigation projects at the level of field supervisor. [Murphey et al. 2019]



1 Introduction

Stantec Consulting Services Inc. (Stantec) conducted a paleontological resources assessment on behalf of the City of Laguna Beach (the City) for the Cleo Street Beach Access Rehabilitation Project (the Project) located on the west side of Ocean Front, at the western terminus of Cleo Street in the City of Laguna Beach, Orange County, California. This paleontological study was conducted in support of the proposed comprehensive rehabilitation of the existing beach access improvements.

Because the proposed Project may require construction and grading permits from the City of Laguna Beach, it is subject to compliance with California Environmental Quality Act (CEQA) requirements regarding the Project's potential impacts on paleontological resources. As part of CEQA compliance, a paleontological resources assessment was conducted to assess potential impacts of the proposed Project on paleontological resources.

1.1 Project Description

1.1.1 PROJECT LOCATION AND BOUNDARIES

The Project is located within the City at the intersection of Cleo Street and Ocean Front; Cleo Street dead ends at the City Beach, two blocks west of South Coast Highway. The street end features a series of existing improvements that are designed to facilitate access to the beach and public viewing of the beach and ocean environment at Cleo Street. The existing beach access facility needs rehabilitation and improvement to address accessibility and enhance landscaping to ensure continued beach access safety. Specifically, the Project area is located in a portion of Section 25, Township 7 South, Range 9 West, as depicted on the Laguna Beach, CA United States Geological Survey 7.5-minute series topographic quadrangle (Figure 1 and Figure 2).

1.1.2 EXISTING SITE CHARACTERISTICS

The Project site is located along the coast of Laguna Beach, surrounded by urban development and in immediate proximity to the City Beach and the Pacific Ocean. The existing beach access is on a steep slope between the beach and roadway and is a popular spot for snorkeling and swimming at this small, secluded beach. Beach access currently consists of concentrated retaining walls and terraced landings from Cleo Street adjacent to existing residences, concrete stairs in tight formation with two 90-degree turns, and four flights of stairs with three mid-stairs landings and a small landing before ending at the beach level. There is an existing pump facility located between the street and beach levels adjacent to the stairs. There is an existing 60-inch storm drainpipe and headwall outlet structure southeast of the stairs. The storm drain system features a Continuous Deflective Separator unit and low flow diversion to the sewer lift station. There is also an abandoned partially exposed sewer pipe near bottom of stairs at beach level. There is currently no Lifeguard Observation Tower (LOT) at this beach access location. The Project



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site is primarily used by the public, including residents and visitors to the City. The surrounding and nearby uses are predominantly residential uses along Coast Highway.



Figure 1. Project Vicinity



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Figure 2. Project Location



1.1.3 PROJECT CONSTRUCTION AND PHASING

The Project is proposed to be constructed as funding becomes available for each coastal access project. At this time the construction start and completion dates have not been determined. Below is a brief description of anticipated Project phasing:

- *Mobilization* – This phase would entail mobilization of equipment and personnel to the work site.
- *Clearing and Grubbing* – This phase would include the demolition and removal of the existing stairs, landings, one decorative trash receptable, and railings, clearing of any conflicting vegetation, trees and associated roots or stumps from the Project site. The existing river rock walls, terraced CMU and Keystone retaining walls, pump station (including wet well, valve vault, mid-slope diversion vault [only top of structure would be reconstructed], abandoned pump house, and existing bench), and marine protected area sign would be maintained in place.
- *Grading* – This phase involves making sure that there is a level base and appropriate slopes for the beach access stairs.
- *Trenching and Structures* – This phase includes structure excavation and preparing trenches for the relocation of any affected utilities or other underground components of the beach access stairway. It also entails the construction of any above or below ground structures.
- *Landscaping and Demobilization* – This phase includes removing equipment, material, and personnel from the worksite and restoring the existing landscaping and associated irrigation and addition of planting (if required).

The proposed Project would remove and reconstruct the existing beach access (stairs) located at the western terminus of Cleo Street. The Project would entail demolition and disposal of existing stairs. The construction methods would entail the following:

- Cast-In-Drilled-Hole (CIDH) foundations installed with a small drill rig or by hand digging with jackhammer (30-inch maximum diameter piles)
- Slotted spread footing type foundations in shallow bedrock excavated by hand with jackhammer (minimum 2-foot embedment in competent bedrock)
- Low retaining walls (with a total height less than three feet to facilitate landscape terracing [if required])
- Suspended slab stairway construction
- Slab on grade stairway construction
- Concrete forming, reinforcement, and placement
- Salvage and reconstruct decorative river rock cladding on new trash receptacle enclosure



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- Minor associated structural earthwork and grading with a backhoe or small excavator or jackhammers
- Installation of new aluminum hand railings
- Miscellaneous landscaping, irrigation, and amenities
- Repair of exposed face of the existing storm drain headwall and baffle structure
- Removal of exposed abandoned sewer pipe, cap, and plug the remaining portion
- Placement of new grouted and un-grouted riprap slope protection

The concept design preserves the approximate beginning elevation and alignment of stairs; however, location and end elevation of the stairs would need to be changed to provide proper landing at bedrock elevation to address the current drop off condition and estimated long term beach erosion. Profile rise and run of the stairs will be controlled by the California Building Code, while the ramp design and landings will be controlled by Americans with Disabilities Act requirements. The construction duration is estimated to take up to four months to complete.

1.2 Paleontological Resources

Fossils are any evidence of ancient life. This includes the remains of the body of an organism, such as bones, skin impressions, shell, or leaves, as well as traces of an organism's activity, such as footprints or burrows, called trace fossils. In addition to the fossils themselves, geologic context is an important component of paleontological resources, and includes the stratigraphic placement of the fossil as well as the lithology of the rock in order to assess paleoecologic setting, depositional environment, and taphonomy. Fossils are protected by federal, state, and local regulations as nonrenewable natural resources.

While CEQA does not define a significance threshold for paleontological resources, the standards of the Society of Vertebrate Paleontology (SVP) are often used in the absence of a legal definition of significance. The SVP defines significant paleontological resources as:

identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i. e., older than about 5,000 radiocarbon years). (SVP 2010: 11).

Using this definition, the concept of scientific importance, or significance, is included in the definition of paleontological resources; thus, not all fossils are considered to be paleontological resources.

It should be noted that the threshold for significance varies with factors including geologic unit, geographic area, and the current state of scientific research, and may also vary between different



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agencies (Murphey et al. 2019). Numerous paleontological studies have developed criteria for the assessment of significance for fossil discoveries (e.g., Eisentraut and Cooper 2002, Murphey et al. 2019, Murphey and Daitch 2007, Scott and Springer 2003). In general, these studies assess fossils as significant if one or more of the following criteria apply:

- The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct.
- The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events, through biochronology or biostratigraphy and the correlation with isotopic dating.
- The fossils provide ecological data, such as the development of biological communities, the interaction between paleobotanical and paleozoological biotas, or the biogeography of lineages.
- The fossils demonstrate unusual or spectacular circumstances in the history of life.
- The fossils provide information on the preservational pathways of paleontological resources, including taphonomy, diagenesis, or preservational biases in the fossil record.
- The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.
- The fossils inform our understanding of anthropogenic affects to global environments or climate.

A geologic unit known to contain significant paleontological resources is considered sensitive to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either disturb or destroy fossil remains directly or indirectly. This definition of sensitivity differs fundamentally from the definition for archaeological resources as follows:

It is extremely important to distinguish between archaeological and paleontological (fossil) resource sites when defining the sensitivity of rock units. The boundaries of archaeological sites define the areal extent of the resource. Paleontological sites, however, indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case. [SVP 2010: 2].

Many archaeological sites contain features that are visually detectable on the surface. In contrast, fossils are often contained within surficial sediments or bedrock and are therefore not observable or detectable unless exposed by erosion or human activity.

In summary, in the absence of observable paleontological resources on the surface, paleontologists must assess the potential of geologic units as a whole to yield paleontological resources based on their known



potential to produce significant fossils elsewhere. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if these remains are significant, successful mitigation and salvage efforts may be undertaken to prevent adverse impacts to these resources.

2 Regulatory Framework

California and the City of Laguna Beach have enacted multiple laws and regulations that provide for the protection of paleontological resources. This investigation was conducted to meet these requirements regarding paleontological resources on the lands proposed for development.

2.1 State of California

2.1.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA (Public Resources Code [PRC] Sections 21000 et seq) requires that before approving most discretionary projects, the Lead Agency must identify and examine any significant adverse environmental effects that may result from activities associated with such projects. As updated in 2016, CEQA separates the consideration of paleontological resources from cultural resources (PRC Section 21083.09). The Appendix G checklist (Title 14, Division 6, Chapter 3, California Code of Regulations 15000 et seq.) requires an answer to the question, “Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” Under these requirements, Stantec has conducted a paleontological resources assessment to determine impacts of the proposed project on paleontological resources within the Project area.

2.1.2 PUBLIC RESOURCES CODE

The California PRC (Chapter 1.7, Sections 5097 and 30244) includes additional state-level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, define the removal of paleontological sites or features from state lands as a misdemeanor, and prohibit the removal of any paleontological site or feature from state land without permission of the applicable jurisdictional agency.

2.1.3 COASTAL MANAGEMENT ACT

Chapter 444 of the Coastal Management Act requires reasonable mitigation measures where development would adversely impact historical, archaeological, or paleontological resources that have been designated by the state historic preservation officer (Section 22a-92: J).



2.2 Local Regulations

2.2.1 CITY OF LAGUNA BEACH GENERAL PLAN

The Open Space and Conservation Element of the City of Laguna Beach General Plan (2012) recognizes the importance of paleontological resources with two policies that provide for their protection:

12A. Promote the conservation of land having archaeological and/or paleontological importance, for its value to scientific research and to better understand the cultural history of Laguna Beach and environs; and

12D. Preserve cultural/scientific sites, including geologically unique formations having archaeological significance.

3 Professional Standards

The SVP (2010) and a number of scientific studies (Eisentraut and Cooper 2002; Murphey et al. 2019; Scott and Springer 2003) have developed guidelines for professional qualifications, conducting paleontological assessments, and developing mitigation measures for the protection of paleontological resources. These guidelines are broadly similar, and include the use of museum records searches, scientific literature reviews, and, in some cases, field surveys to assess the potential of an area to preserve paleontological resources. Should that potential be high, accepted mitigation measures include paleontological monitoring, data recordation of all fossils encountered, collection and curation of significant fossils and associated data, and in some cases screening of sediment for microfossils.

This study has been conducted in accordance with these guidelines and the recommendations provided herein meet these standards.

4 Geologic Setting

The Project area is located in the Peninsular Ranges geomorphic province. The Peninsular Ranges formed as a volcanic island arc collided with the west coast of North America and was accreted onto the margin of the continent, resulting in the expansion of the continent westward. The Peninsular Ranges are part of a larger subduction zone that extends all along western North America, with this particular geomorphic province extending from the Los Angeles Basin in the north to Baja in the south, and extending to Santa Catalina, Santa Barbara, San Nicolas, and San Clemente Islands on the west and the Colorado Desert on the east (Norris and Webb 1990). The core of the Peninsular Ranges formed as the core of a magmatic arc in the Mesozoic that resulted from active subduction along the Pacific Plate boundary (Harden 2004).

Two main batholiths of plutonic rock form the core of the Peninsular Ranges. The western batholith, where the project area is located, was emplaced first and is 140 – 105 million years old (Ma) and consists



Paleontological Resources Assessment for the Cleo Street Beach Access Rehabilitation Project, Orange County, California

of mafic plutonic rocks, while the eastern batholith is 99 – 92 Ma and consist of silica-rich granodiorites and tonalities (Kimbrough et al. 2001). These plutonic rocks intruded into the older rocks of a Paleozoic carbonate platform, heavily metamorphosing them (Harden 2004). There was volcanic activity associated with the subduction zone as well, with the Santiago Peak Volcanics deposited from 130 – 120 Ma as primarily andesitic and silicic flows, that were then metamorphosed by the ongoing batholith emplacement (Fife et al. 1967). Later in the Cretaceous, marine sedimentary rocks accumulated over the plutons and volcanic rocks, deposited as turbidity currents in what was an ocean at the time (Kimbrough et al. 2001). These rocks are in turn overlain by more recent sedimentary deposits leading up to the present day, that have been heavily uplifted and faulted by tectonic activity throughout the Cenozoic. These deposits were marine through the Eocene and then shifted to terrestrial volcanic and sedimentary strata by the Oligocene and lower Miocene (Powell 1993).

Locally, the Project area is located on the coast at the base of the San Joaquin Hills. The San Joaquin Hills form the southern boundary of the Los Angeles Basin and are some of the northern-most hills of the Peninsular Ranges province. The basement rock complex is called the Catalina Schist, thinly-foliated metamorphic rocks that are best seen on Catalina Island, and are buried within the core of the mountains on most of the mainland (Vedder 1970). The basement complex is covered by approximately 1.5 kilometers of Cenozoic-aged sedimentary rocks that are primarily marine in origin and have been uplifted over the last 120,000 years (Grant et al. 1999). An important feature of the San Joaquin Hills is a series of eight prominent wave-cut terraces that date to the Pleistocene (Vedder 1970), one of which forms the cliff that the Project area traverses.

5 Methodology

The paleontological resource assessment reported herein consisted of an analysis of existing data incorporating a museum records search from the Natural History Museum of Los Angeles County (LACM) and a review of the scientific literature, geologic mapping, and the online database of the University of California Museum of Paleontology (UCMP). The UCMP's database does not provide specific geographic locations beyond the county the fossils were recovered from but does include locality names that can sometimes be used to infer the general area of the locality.

To assess if paleontological resources are likely to be encountered in any given area, the paleontological potential of the geologic units present in the area is assessed. Paleontological potential of a geologic unit consists of both (a) the potential for yielding abundant vertebrate fossils or for yielding significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data (SVP 2010). Unlike archaeological resources that often have a limited aerial extent, paleontological resources may occur throughout a geologic unit, and so paleontological potential is assessed for the unit as a whole. Provided below is the methodology used during the current study to assess the potential of the Project to impact paleontological resources.

The paleontological assessment presented here was conducted by Stantec Principal Paleontologist Alyssa Bell, Ph.D. Geographic Information System (GIS) maps and figures were drafted by GIS



Paleontological Resources Assessment for the Cleo Street Beach Access Rehabilitation Project, Orange County, California

Technician Todd Wilson, B.A. This report was authored by Alyssa Bell with assistance from Paleontologist Ben Kerridge, M.A. and peer reviewed Senior Principal Cara Corsetti, M.S. Stantec's work in support of the Project was managed by Principal Environmental Planner Gilberto Ruiz, M.A., who coordinated all work and provided quality assurance and control.

5.1 Analysis of Existing Data

In order to assess the paleontological potential of the Project area, the most recent geologic mapping of the Project area and vicinity (Morton and Miller 2006) was consulted to identify all geologic units present at the surface or likely present in the subsurface. A records search was obtained from the LACM (Appendix A) and a review of the scientific literature was conducted to determine the history of each of the geologic units mapped as present at the surface or likely present in the subsurface of the Project area for preserving paleontological resources.

5.2 Paleontological Resources Assessment

The results of the desktop analysis were used to assign the paleontological potential rankings of the SVP (2010) to the geologic units likely present in the Project area. These rankings are designed to inform the development of appropriate mitigation measures for the protection of paleontological resources and are widely accepted as industry standards in paleontological mitigation (Murphey et al. 2019; Scott and Springer 2003). These rankings are as follows:

High Potential. Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rock units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations that are temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.), some volcanoclastic formations (e. g., ashes or tephtras), and some low-grade metamorphic rocks.

Undetermined Potential. Rock units for which little information is available in the literature or museum records concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study and field work is necessary to determine if these rock units have high or low potential to contain significant paleontological resources.

Low Potential. Rock units that are poorly represented by fossil specimens in institutional collections or, based on general scientific consensus, only preserve fossils in rare circumstances (e. g., basalt flows or Recent colluvium) have low paleontological potential.



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No Potential. Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites).

Following the assessment of paleontological potential, an impacts assessment was conducted comparing planned Project activities in terms of locations, depths, and ground disturbance methods with mapped geologic units. Where potential adverse impacts from Project activities were identified, mitigation recommendations were developed to reduce those impacts to less than significant.

5.3 Paleontological Impacts Assessment

Impacts to paleontological resources can be classified as direct, indirect, or cumulative. Impacts can also be considered as adverse impacts or as positive impacts. Direct adverse impacts on paleontological resources are the result of damage or destruction of these nonrenewable resources by surface disturbing actions including construction excavations. Therefore, in areas that contain paleontologically sensitive geologic units, ground disturbance has the potential to adversely impact paleontological resources, by damaging or destroying them and rendering them permanently unavailable to science and society. Positive direct impacts, however, may result when paleontological resources are identified during construction and the appropriately documented and salvaged, thus ensuring the specimens are protected for future study and education.

Indirect impacts typically include those effects which result from the continuing implementation of management decisions and resulting activities, including normal ongoing operations of facilities constructed within a given project area. They also occur as the result of the construction of new roads and trails in areas that were previously less accessible. This increases public access and therefore increases the likelihood of the loss of paleontological resources through vandalism and unlawful collecting, thus constituting an adverse indirect impact. Human activities that increase erosion also cause indirect impacts to surface and subsurface fossils as the result of exposure, transport, weathering, and reburial.

Cumulative adverse impacts can result from incrementally minor but collectively significant actions taking place over time. The incremental loss of paleontological resources over time from construction-related surface disturbance or vandalism and unlawful collection would represent a significant cumulative adverse impact, because it would result in the destruction of non-renewable paleontological resources and the associated irretrievable loss of scientific information.

The impact assessment conducted here takes into consideration all planned project activities in terms of aerial and subsurface extents, including the possibility of subsurface geologic units having a different paleontological potential than surficial units. For example, younger surficial sediments (alluvium, lacustrine, eolian, etc.) have low potential to preserve paleontological resources due to their age; yet sediments increase in age with depth and so these surficial deposits often overly older units that have high paleontological potential. In areas with this underlying geologic setting surficial work may be of low risk for impacting paleontological resources while activities that require excavations below the depth of the surficial deposits would be at greater risk of impacting paleontological resources. For this reason, the



impact assessment takes into consideration both the surface and subsurface geology, and is tailored to Project activities.

6 RESULTS

6.1 Project Area Geology and Paleontology

Geologic mapping by Morton and Miller (2006) indicates the surface of the project area consists of two geologic units: very young marine deposits and the Topanga Group (Figure 3). These geologic units range in age from the Recent to approximately 20 million years ago (mya) and are described below.

Very young marine deposits (Qm in Figure 3). Very young marine deposits are mapped along the flat beach surface within the intertidal zone, at the bottom of the stairs. These sediments consist of unconsolidated, active, or recently active sandy beach deposits along the coast (Morton and Miller 2006). These sediments are relatively young in age, dating to the late Holocene, and are likely underlain by the Topanga Group (see below) at undetermined depths. Given their relatively recent age, they are too young to preserve paleontological resources, but may overlie older geologic units that do have the potential to preserve fossils.

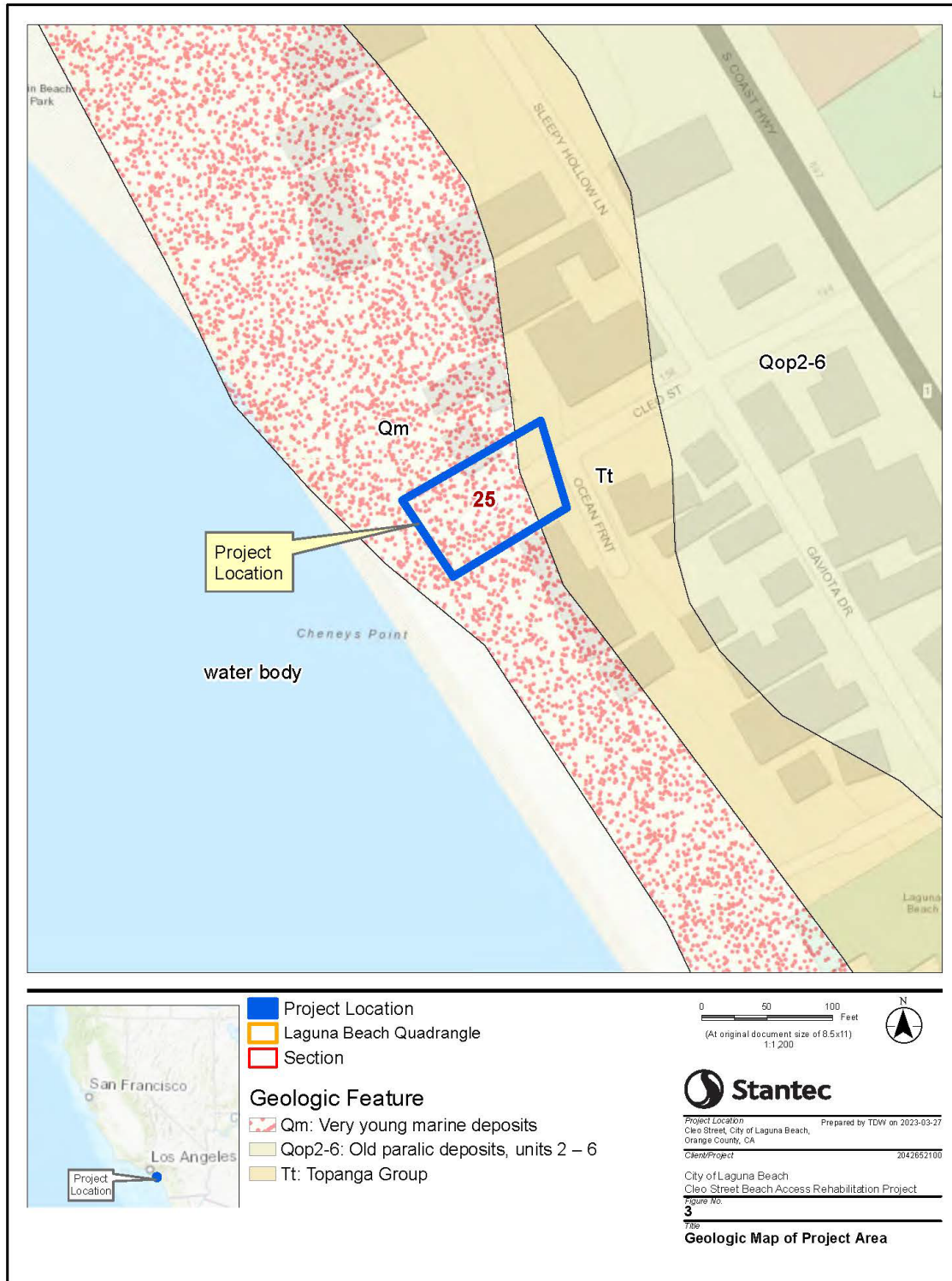
Topanga Group (Tt in Figure 3). The Topanga Group is mapped along the slope of the Project area where the stairs sit. This was confirmed during the site visit conducted for the cultural resources survey (Figure 4). The Topanga Group in the vicinity of the Project area is mapped as a single undifferentiated unit but includes three formations: Paulerino Formation, Los Trancos Formation, and Bommer Formation (from youngest to oldest) (Morton and Miller 2006). The Topanga Group date to the middle Miocene, with Potassium-Argon results from the base of the formation providing dates of 17.1 to 14.5 mya (Morton and Miller 2006) and is interpreted as wave-dominated coastal deposits in the lower units that grade into fluviodeltaic deposits and fluvial deposits in the upper units (Critelli and Ingersoll 1995).

The Paulerino Formation consists of a poorly exposed sequence of interbedded sandstone, siltstone, and breccia, with some of the sandstone including tuffaceous beds. Breccia in this formation is discretely bedded and composed mainly of andesitic clasts (Morton and Miller 2006). It disconformably overlies the Los Trancos Formation (described below).

The Los Trancos Formation consists of mostly pale gray to brownish-gray, thin- to medium-bedded siltstone and fine-grained sandstone with medium- to coarse-grained sandstone and shale beds interbedded and features blueschist and related rocks (Morton and Miller 2006). It conformably overlies the Bommer Formation. . The Bommer Formation consists of gray to brownish gray, thick bedded, locally conglomeratic, medium- to coarse-grained sandstone and interbedded fine-grained sandstone and siltstone(Morton and Miller 2006b).



Paleontological Resources Assessment for the Cleo Street Beach Access Rehabilitation Project, Orange County, California



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Figure 3. Geologic Map of the Project Area



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The locality search from the LACM indicates there are four fossil localities known to the LACM in the vicinity of the Project area from Miocene-aged sediments, three of which are from the Topanga Group and one of which did not have the unit identified (Table 1). Two of these localities consisted of unspecified invertebrate fossils found at unknown depths (LACM 2023). The closest of these is from the sea cliffs near Cheney’s Point, which is less than 100 feet from the Project area found in gray to brown sandstone of the Topanga Formation (LACM 2023). The other such locality is located “near Laguna Beach” with no more precise location data available (LACM 2023).

The two remaining Miocene-aged localities identified by the LACM preserved specimens of the marine mammal *Desmostylus* (LACM 2023). One of these was found at the head of Rim Rock Canyon, approximately 1.5 miles to the east of the Project area and the other was found at the surface approximately 2.7 miles to the southeast of the Project area, west of the drainage of Aliso Creek (LACM 2023).

A review of the online, publicly accessible database of the UCMP (2023) indicates that they have records of 34 fossil localities associated with the Topanga Group in Orange County. Of these, 29 preserved invertebrate fossils, two preserved vertebrate fossils (both marine mammals: *Dioplotherium allisoni* and *Desmostylus hesperus*), and one preserved microfossils. While the database does not include more specific locality information for any of these sites, 11 of the invertebrate sites are listed as being from Laguna Beach.

A review of the scientific literature indicates the Topanga Group is known to preserve numerous invertebrate (Lander 2011; Morton and Miller 2006) and vertebrate marine fossils, including sharks and bony fishes (Campbell and Yerkes 1980), birds (Kloess 2015), whales, dolphins, and seals (Boessenecker and Churchill 2015; Lander 2011; Velez-Juarbe 2017), as well as terrestrial fossils including land plants, small reptiles, and mammals (Lander 2011). One study identified portions of the Topanga Group as among the most fossiliferous units in the Santa Monica Mountains (Tweet et al. 2014). Given the extensive record of significant fossils recovered from the Topanga Group, this unit is assessed as having high paleontological potential.

Table 1. Summary of the records search from the Natural History Museum of Los Angeles County

Locality Number	Geologic Unit	Age	Taxa	Approximate Location
LACM IP 24374	Topanga Formation (Gray to brown sandstone)	Miocene	Invertebrates (unspecified)	Less than 100 feet from the Project area
LACM IP 2951	Unknown formation	Miocene	Invertebrates (unspecified)	Near Laguna Beach (more precise location information not available)
LACM VP 4007	Topanga Group	Miocene	Marine mammal (<i>Desmostylus</i>)	1.5 miles to the east of the Project area
LACM VP 3222	Topanga Group (brecciated conglomeratic sandstone)	Miocene	Marine mammal (Desmostylia)	2.7 miles to the southeast of the Project area



6.2 Paleontological Potential of Geologic Units in the Project Area

In order to assess the potential of the geologic units present at the surface or in the subsurface to preserve paleontological resources, Stantec conducted an analysis of existing data, as described above. These investigations were used to assign the paleontological potential rankings of the SVP (2010) to the geologic units present at the Project area, both at the surface and in the subsurface. The results of this assessment are described below for each of the geologic units in the Project area (Table 4).

Very young marine deposits ([Qm] in Figure 3). The very young marine deposits present in the Project area date to the late Holocene, which ranges from the present to approximately 4,200 years old. As defined by the SVP (2010), paleontological resources must be over 5,000 years in age, corresponding to the middle part of the Holocene. Therefore, the very young marine deposits in the Project area are too young to preserve paleontological resources. Therefore, the southwestern Project area mapped as very young marine deposits should be considered to have low paleontological potential. These deposits may overlie the Topanga Group, and so excavations that exceed the thickness of this low-potential unit risk impacting high potential sediments at depth.

Topanga Group ([Tt] in Figure 3). The Topanga Group is well known to preserve paleontological resources in Southern California, including in the vicinity of the Project area. Given the extensive record of significant paleontological resources recovered from Miocene-aged Topanga Group, this unit is assessed as having high paleontological potential.

Table 2. Paleontological potential of geologic units within the Project area

Geologic Unit	Age	Occurrence within Project area	Paleontological Potential*
Very young marine deposits	Late Holocene	Surface along the beach at the bottom of the stairs	Low
Topanga Group	Middle Miocene	Surface of the slope face and subsurface of the entire Project area.	High

**ranking based on the SVP (2010) classifications*

6.3 Potential Impacts to Paleontological Resources from Project Activities

The Project plans to remove and replace the existing stairs, repair the exposed face of the existing storm drain headwall and baffle structure, remove the exposed abandoned sewer pipe, and cap and plug the remaining portion of the sewer pipe. Table 3 provides a review of Project activities and their potential to impact paleontological resources.



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Table 3. Summary of recommendations

Type of Ground Disturbance	Dimensions	Recommended Mitigation, Based on Geologic Mapping	
		Very Young Marine Deposits	Topanga Group
Clearing and Grubbing	Unknown	None	None
Grading	Unknown	Up to 5 feet depth: none Over 5 feet depth: paleontological monitoring	Paleontological Monitoring
Trenching	Unknown	Up to 5 feet depth: none Over 5 feet depth: paleontological monitoring	Paleontological Monitoring
CIDH foundation installation with a small drill rig or by hand digging with jackhammer	30-inch maximum diameter piles (unknown depth)	Up to 5 feet depth: none Over 5 feet depth: paleontological monitoring	Paleontological Monitoring
Slotted spread footing type foundations in shallow bedrock excavated by hand with jackhammer	Minimum 2-foot embedment in competent bedrock	NA (not bedrock)	Paleontological Monitoring
Installation of retaining walls	Unknown	Up to 5 feet depth: none Over 5 feet depth: paleontological monitoring	Paleontological Monitoring
Stairway construction	Unknown	Up to 5 feet depth: none Over 5 feet depth: paleontological monitoring (should new ground disturbance occur)	Paleontological Monitoring (should new ground disturbance occur)
Removal of exposed abandoned sewer pipe, cap, and plug the remaining portion	No fresh disturbance anticipated	None	None
Minor associated structural earthwork and grading with a backhoe or small excavator or jackhammers	Unknown	Up to 5 feet depth: none Over 5 feet depth: paleontological monitoring	Paleontological Monitoring
Landscaping, riprap, cladding	No fresh disturbance anticipated	None	None

Within the Project area, activities planned for the Project have the potential to encounter paleontological resources at the surface along the slope of the Project area as well as in the subsurface throughout the Project area.

Should paleontological resources be encountered during construction, their damage or destruction would constitute a direct adverse impact. Therefore, Stantec has developed recommendations for mitigation that will avoid damage or destruction of paleontological resources in the Project area, thus reducing direct adverse impacts to less than significant (Table 3). It is not anticipated that the Project will pose indirect or



cumulative adverse impacts to paleontological resources, as the final Project will not entail increased exposure or erosion of native sediments beyond the duration of the ground disturbance described above.

7 Recommendations and Management Considerations

The paleontological resources assessment described herein conducted an analysis of existing data, consisting of a records search from the LACM and a review of geologic mapping, the scientific literature, and the online collections of the UCMP, to assess the potential of the geologic units in the Project area to preserve paleontological resources. The results of this assessment show that geologic units with high paleontological potential are present at the surface along the slope face as well as in the subsurface at unknown depths throughout the Project area.

Project activities may include clearing, grubbing, grading, demolition, CIDH foundations, slotted spread footing foundations, excavation by jackhammer, installation of retaining walls, removal of existing abandoned pipe and casing, and minor structural earthwork. Should Project-related activities encounter paleontological resources, the damage or destruction of those resources would constitute an adverse impact under CEQA. In order to avoid impacts to paleontological resources, Stantec recommends a qualified paleontologist meeting professional standards as defined by Murphey et al. (2019) be retained as the designated Project Paleontologist to oversee all aspects of paleontological mitigation. In order to avoid impacts to paleontological resources, Stantec recommends the following mitigation activities for the Project:

- The Project Paleontologist should develop and oversee the implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential, whether at the surface or in the subsurface, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include steps to follow in the event of a fossil discovery and provisions for a monitoring report following construction. Fulltime paleontological monitoring is recommended:
 - For all ground disturbance into previously undisturbed sediments in areas mapped as the Topanga Formation.
 - Once excavations reach 5 feet in depth in areas mapped as very young marine deposits.
 - The Project Paleontologist may alter the frequency of monitoring, based on subsurface conditions.
- The Project Paleontologist should develop a Worker's Environmental Awareness Program training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.



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- In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The Project Paleontologist shall assess the find. Should the Project Paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data and curation fees.

Based on the findings in this study and the implementation of the above mitigation recommendations, the proposed Project should not cause an adverse impact to paleontological resources. Therefore, no additional paleontological resource studies are recommended or required at this time. Changes to the Project plans or Project area from those assessed in this study will require additional assessment for impacts to paleontological resources.



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**Appendix A Records search from the Natural History
Museum of Los Angeles County**

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

March 26, 2023

Stantec Consulting Services Inc.
Attn: Ben Kerridge

re: Paleontological resources for the Cleo Street Beach Access Improvement Project (204265210)

Dear Ben:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Cleo Street Beach Access Improvement project area as outlined on the portion of the Laguna Beach USGS topographic quadrangle map that you sent to me via e-mail on March 21, 2023. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County (NHMLA).

Locality Number	Location	Formation	Taxa	Depth
LACM IP 12	Hills near Laguna Beach	Unknown formation (Pleistocene)	Invertebrates (<i>Neobemaya spadicea</i> and others)	Unknown
LACM IP 24374	In sea cliffs near Cheney's Point	Topanga Formation (Gray to brown sandstone)	Invertebrates (unspecified)	Unknown
LACM IP 2951	Near Laguna Beach (more precise location information not available)	Unknown formation (Miocene)	Invertebrates (unspecified)	Unknown
LACM VP 4007	In the head of Rim Rock Canyon south of Temple Hill Drive & west of Top of the World on Temple Hill	Topanga Formation	Marine mammal (<i>Desmostylus</i>)	Unknown
LACM VP 3222	Two miles north of South Laguna; west of the drainage of Aliso Creek; southeast of Temple Hill	Topanga Formation (brecciated conglomeratic sandstone)	Marine mammal (<i>Desmostylia</i>)	surface
LACM IP 12651, 12652	Crystal Cove State Beach	Pleistocene Terrace deposits	Invertebrates (unspecified)	Unknown

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the NHMLA. It is not intended as a

paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

A handwritten signature in black ink that reads "Alyssa Bell". The signature is written in a cursive, flowing style. The name "Alyssa" is written in a larger, more prominent script than "Bell". The signature is centered horizontally and is set against a light gray rectangular background.

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice

APPENDIX F

Noise Impact Supplemental Information





Noise Fundamentals and Terminology

Noise is generally defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an existing sound level.

Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written as dB(A) and referred to as A-weighted decibels. There is a strong correlation between A-weighted sound levels and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Table 1 summarizes typical A-weighted sound levels for different common noise sources.

Table 1: Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet flyover at 1,000 Feet	-110-	Rock band
Gas lawnmower at 3 Feet	-100-	
Diesel truck at 50 Feet at 50 MPH	-90-	Food blender at 3 Feet
Noisy urban area, daytime	-80-	Garbage Disposal at 3 Feet
Gas lawnmower, 100 Feet	-70-	Vacuum Cleaner at 10 Feet
Commercial area	-60-	Normal Speech at 3 Feet
Heavy traffic at 300 Feet	-60-	
Quiet urban daytime	-50-	Large business office
Quiet urban nighttime	-50-	Dishwasher in next room
Quiet suburban nighttime	-40-	Theater, large conference room (Background)
Quiet rural nighttime	-30-	Library
	-20-	Bedroom at night, concert hall (Background)
	-10-	
	-0-	Broadcast/recording studio

Source: Caltrans, Technical Noise Supplement Traffic Noise Analysis Protocol, September 2013 (<https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf>)

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (Leq), the minimum and maximum sound levels (Lmin and Lmax), percentile-exceeded sound levels (such as L10, L20), the day-night sound level (Ldn), and the community noise equivalent level (CNEL). Ldn and CNEL values often differ by less than 1 dB. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment. Table 2 defines sound measurements and other terminology related to noise.

Table 2: Definition of Sound Measurements

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dB(A))	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
Maximum Sound Level (Lmax)	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.

Sound Measurements	Definition
Equivalent Sound Level (Leq)	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (Lxx)	The sound level exceeded xx % of a specific time period. L10 is the sound level exceeded 10% of the time. L90 is the sound level exceeded 90% of the time. L90 is often considered to be representative of the background noise level in a given area.
Day-Night Level (Ldn)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Peak Particle Velocity (Peak Velocity or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Source: Federal Highway Administration Construction Noise Handbook, 2006¹

With respect to how humans perceive and react to changes in noise levels, a 1 dB(A) increase is imperceptible, a 3 dB(A) increase is barely perceptible, a 5 dB(A) increase is clearly noticeable, and a 10 dB(A) increase is subjectively perceived as approximately twice as loud. These subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broadband noise and to changes in levels of a given noise source. These statistical indicators are thought to be most applicable to noise levels in the range of 50 to 70 dB(A), as this is the usual range of voice and interior noise levels. Numbers of agencies and municipalities have developed or adopted noise level standards, consistent with these and other similar studies to help prevent annoyance and to protect against the degradation of the existing noise environment.

For a point source such as a stationary compressor or construction equipment, sound attenuates based on geometry at a rate of 6 dB per doubling of distance. For a line source such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance. Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a slightly greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1–2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.

¹ https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook02.cfm, Last Accessed March 20, 2023.

Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one source produces a sound pressure level of 70 dB(A), two identical sources would combine to produce 73 dB(A). The cumulative sound level of any number of sources can be determined using decibel addition.

Vibration Standards

Vibration is like noise such that noise involves a source, a transmission path, and a receiver. While related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system that is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. Vibration is commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

- 65 VdB - threshold of human perception
- 72 VdB - annoyance due to frequent events
- 80 VdB - annoyance due to infrequent events
- 94-98 VdB - minor cosmetic damage

The operation of heavy construction equipment, particularly pile driving and other impact devices, such as pavement breakers and jackhammers, create seismic waves that radiate along the surface of the ground and downward into the earth. These surface waves can be felt as ground vibration. Vibration from the operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance. Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities.

Figure 1 contains the construction noise calculation for the proposed Project.

Figure 3 RCNM Construction Noise Calculation

Roadway Construction Noise Model (RCNM), Version 1.1							
Report date:		3/20/2023					
Case Description:		Cleo St Beach Access Rehabilitation - Demolition Equipment					
---- Receptor #1 ----							
Baselines (dBA)							
Description	Land Use	Daytime	Evening	Night			
Residential	Residential	60	60	50			
Equipment							
		Impact	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Description		Device					
Jackhammer		Yes	20		88.9	100	0
Backhoe		No	40		77.6	100	0
Compressor (air)		No	40		77.7	100	0
Results							
Calculated (dBA)							
Equipment		Lmax	Leq				
Jackhammer		82.9	75.9				
Backhoe		71.5	67.6				
Compressor (air)		71.6	67.7				
Total		83.5	77				