

**ENVIRONMENTAL CHECKLIST FORM
CITY OF HUNTINGTON BEACH
PLANNING & BUILDING DEPARTMENT
MITIGATED NEGATIVE DECLARATION NO. 14-06**

- 1. PROJECT TITLE:** Brookhurst Street Bridge Preventative Maintenance Project
(State Bridge #55C-0096)
- 2. LEAD AGENCY:** City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648
- Contact:** Hayden Beckman, Project Planner
- Phone:** (714) 536-5271; HBeckman@surfcity-hb.org
- 3. PROJECT LOCATION:** The project is located in the City of Huntington Beach on Brookhurst Street over Talbert Channel (see **Figure 1**, Regional Location Map; **Figure 2**, Project Location Map; and **Figure 3**, Project Area Map).
- 4. PROJECT PROPONENT:** City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648
- Contact Person:** Jonathan Claudio, P.E., Sr. Civil Engineer
- Phone:** (714) 374-5380, JClaudio@surfcity-hb.org
- 5. GENERAL PLAN DESIGNATION:** Right of Way
- 6. ZONING:** Right of Way

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1. PROJECT DESCRIPTION:

The City of Huntington Beach (City), in cooperation with the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), proposes to repair and rehabilitate the Brookhurst Street Bridge (project) in the city of Huntington Beach (Huntington Beach), Orange County, California. The Brookhurst Street Bridge over Talbert Channel (Bridge #55C-0096) is located approximately 0.1 mile northeast of Highway 1/Pacific Coast Highway (PCH) (see **Figure 1**, Regional Location Map and **Figure 2**, Project Location Map). The purpose of the project is to enhance public safety and protect the Talbert Channel by performing maintenance activities on the bridge that restore the integrity of its original design.

The Brookhurst Street Bridge was constructed in 1958 and widened in 1989. The bridge is a 5-span pre-stressed voided slab bridge with six traffic lanes (three lanes in each direction) (see **Figure 3**, Project Area Map). Parts of the bridge have deteriorated during the last five decades from normal wear from vehicular traffic and from the tidal flux of salt water from the Pacific Ocean, which flows into the Talbert Channel. The bridge concrete barriers are cracked and spalled with exposed internal reinforcing that has noticeably corroded. The bridge columns and bent caps have unsound concrete. The asphalt-concrete (AC) overlay on the bridge deck is cracked, resulting in roadway water leaking through the deck into the Talbert Channel. These aspects of the bridge's deterioration may result in conditions that are potentially structurally unstable, and conditions that could compromise water quality in the Talbert Channel. Therefore, repair and rehabilitation of the bridge is proposed to address these existing conditions.

Bridge Repair and Rehabilitation

Bridge repair/rehabilitation would include the following maintenance measures (see **Attachment 1**, Project Plans):

- Concrete barrier and chain link railing on both sides of the bridge would be removed and replaced with corrosion-resistant materials, such as stainless steel fence posts and epoxy coated reinforcing steel.
- Existing AC overlay would be removed and replaced to protect the bridge and channel from water leaks and to provide a durable driving surface.
- Unsound concrete would be removed and concrete would be patched at the bridge bents and columns. Unsound concrete and patch concrete work over or near the channel would require working platforms with fully enclosed protective covers.

Existing utilities beneath the bridge include two underground electrical lines, a 16-inch water line, and an 84-inch reinforced concrete pipe sewer. These utilities would not be disturbed during implementation of the project.

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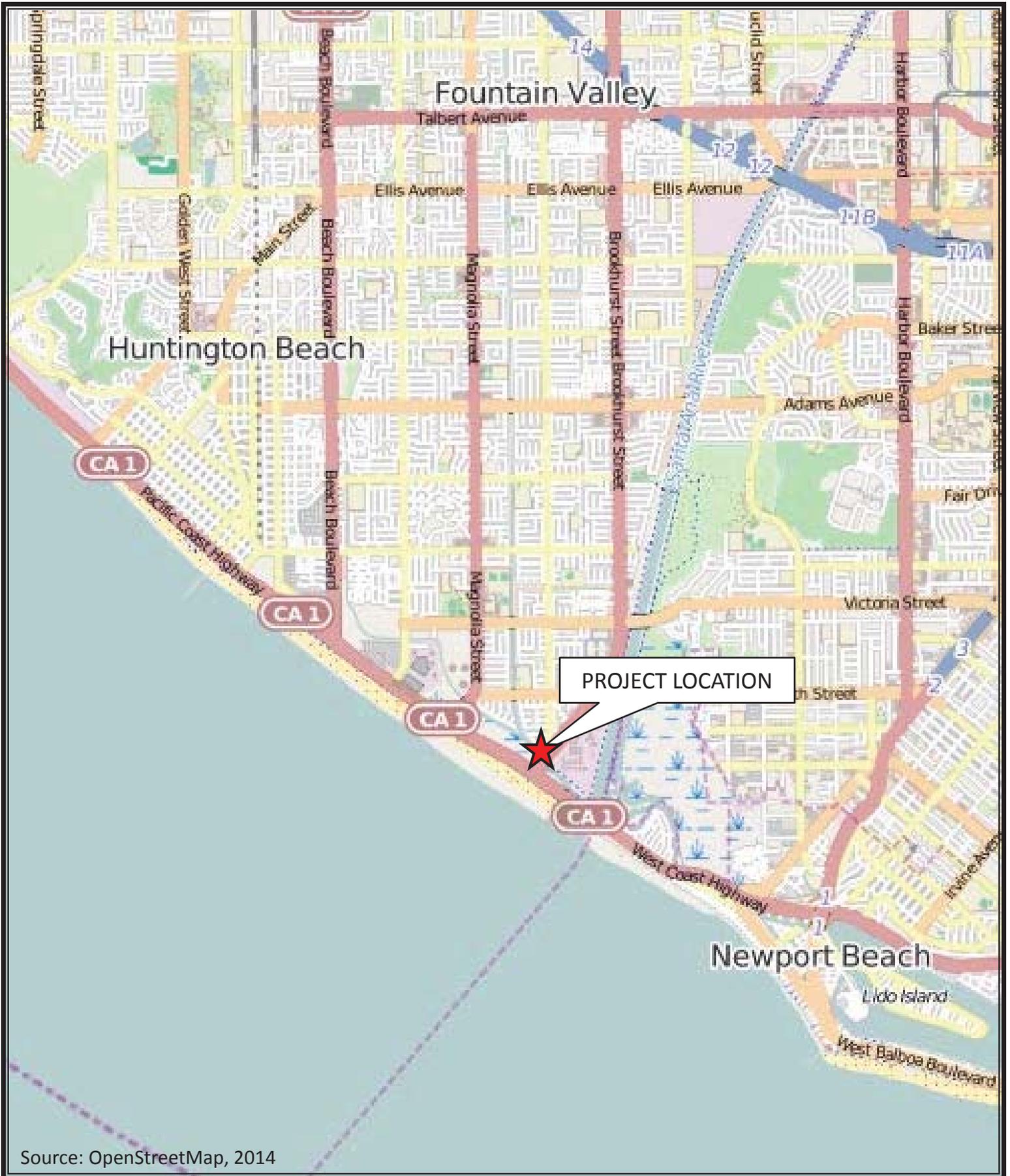
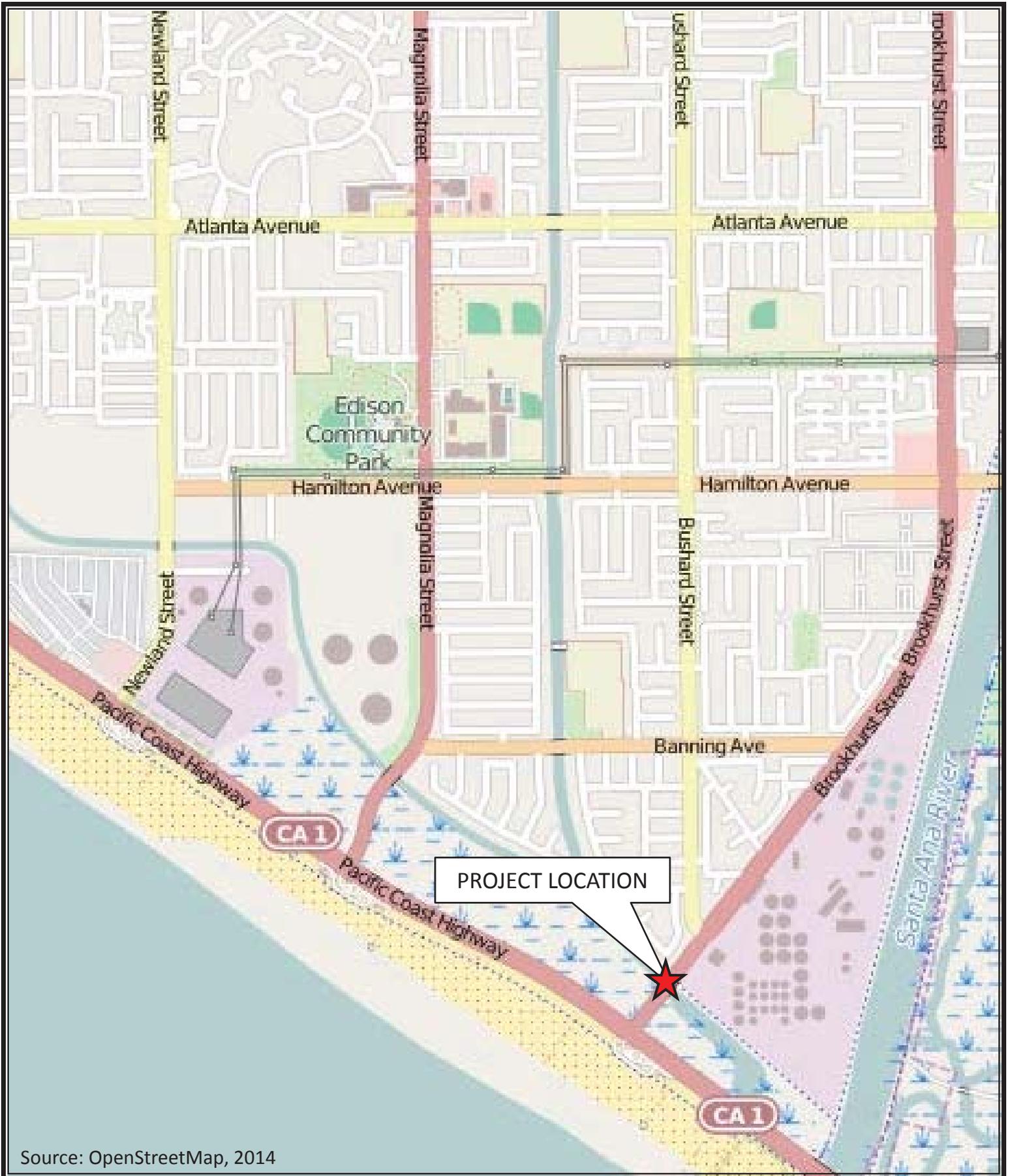


FIGURE 1. REGIONAL LOCATION MAP
Brookhurst Street Bridge Preventative Maintenance Project



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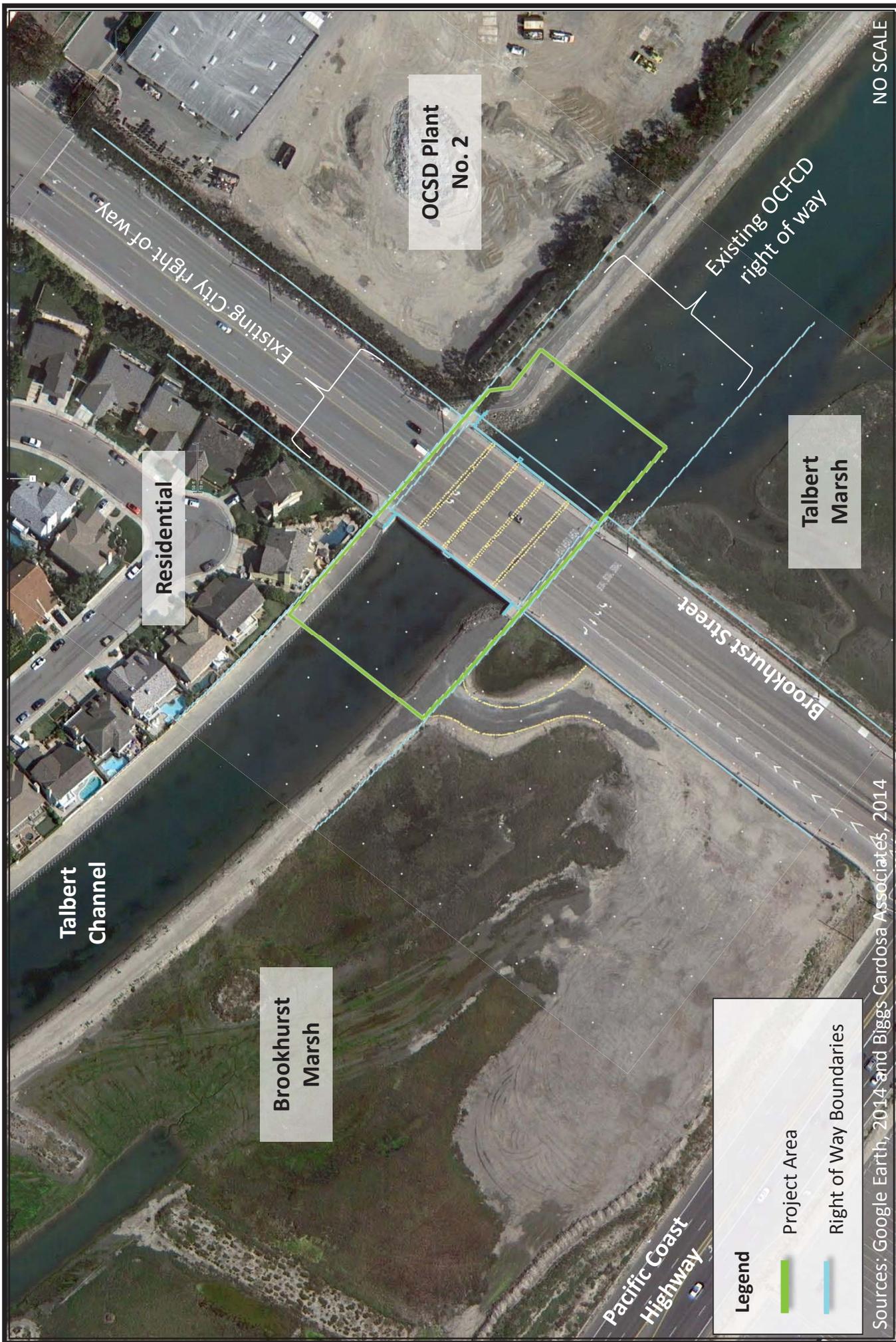
Source: OpenStreetMap, 2014



FIGURE 2. PROJECT LOCATION MAP
Brookhurst Street Bridge Preventative Maintenance Project



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NO SCALE



FIGURE 3. PROJECT AREA MAP
Brookhurst Street Bridge Preventative Maintenance Project



Sources: Google Earth, 2014 and Biggs Cardosa Associates, 2014

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Construction Equipment and Methods

Construction methods and equipment for the maintenance activities would include the following:

- Concrete barriers and chain link railing would be removed from the top of the bridge using jack hammers, bobcat loaders, tractor loaders and dump trucks. New concrete barriers and chain link railing would be placed from the top of existing bridge, using timber forms, concrete boom pumps and concrete trucks. Measures for preventing material, equipment, and debris from falling into the channel would be implemented at all times.
- AC overlay would be removed from the top of the existing bridge utilizing asphalt grinders, bobcat and tractor loaders, and dump trucks. AC overlay would be placed from the top of the existing bridge utilizing wheeled asphalt pavers and asphalt trucks. Measures for preventing material, equipment, and debris from falling into the channel would be implemented at all times.
- Unsound concrete would be removed from the underside of the bridge on working platforms with protective covers made of a tarp-type material, which would be placed around the area being worked on during low tide and which would be removed before high tide. The working platforms would be constructed of untreated timber, installed during low tide, and suspended from the existing bridge soffit and/or pier walls. A diagram of the working platforms is provided in **Attachment 1**, Project Plans. The protective covers would be designed to contain 100 percent of any debris produced during the operations. All operations would be performed from within the protective covers during low tide. Small hand-held jack hammers would be used to remove the unsound concrete as required. All exposed and corroded reinforcing would be replaced, if needed, and sand blasted clean. Patching would be completed with hand mixed concrete, small forms, and hand trowels.

Construction would be completed in three phases:

- Phase 1: Removal and replacement of the concrete barrier and railing on the northwest and southeast sides of the bridge, and removal of unsound concrete and patching of concrete below the bridge;
- Phase 2: Removal and replacement of existing AC overlay on the southeast side of the bridge; and
- Phase 3: Removal and replacement of existing AC overlay on the northwest side of the bridge.

All construction work would be within the City or Orange County Flood Control District (OCFCD) property. OCFCD would require that the City and contractor obtain construction permits for work on OCFCD property. Temporary construction easements (TCE) would not be required by OCFCD. Unless otherwise approved by the City, OCFCD, and/or Caltrans, all contractor equipment, construction materials (rocks, debris, etc.), and other possessions would be taken from the bridge at the end of each workday. A construction staging area would be located within the closed off curb lanes immediately southwest of the bridge.

Construction Schedule and Traffic Handling (Six Construction Months)

Brookhurst Street is a major arterial street and a direct link to Huntington State Beach; therefore, traffic handling and control would be scheduled and phased to minimize traffic disturbance and maintain access

to the beach. Construction work would also be scheduled during winter and early spring months, when beach traffic is lightest. Traffic would be staged through the project area, with three phases of traffic handling and control, as described below.

Phase 1

During Phase I, vehicular and pedestrian traffic would be moved to the center lanes of the bridge, allowing for construction on the northwest and southeast sides of the bridge (removal and replacement of concrete barrier and railing) and work below the bridge (removal of unsound concrete and patching of concrete). Vehicular capacity would be reduced from six lanes to two lanes (one lane in each direction) and pedestrian traffic would be accommodated in temporary K-rail lanes. Temporary K railing would separate traffic, pedestrian traffic, and construction activities. Construction of Phase 1 would be completed in approximately five months.

Phase 2

During Phase 2, vehicular and pedestrian traffic would be moved to the northwest lanes, allowing for construction on the southeast side of the bridge (removal and replacement of existing AC overlay). Vehicular capacity would remain two lanes (one lane in each direction), and pedestrians would use the sidewalk on the northwest side. Temporary K railing would separate traffic, pedestrian traffic, and construction activities. Construction of Phase 2 would be completed in approximately 0.5 month.

Phase 3

During Phase 3, vehicular and pedestrian traffic would be moved to the southeast lanes, allowing for construction on the northwest side of the bridge (removal and replacement of existing AC overlay). Vehicular capacity would remain two lanes (one lane in each direction), and pedestrians would use the sidewalk on the southeast side. Temporary K railing would separate traffic, pedestrian traffic, and construction activities. Construction of Phase 3 would be completed in approximately 0.5 month.

2. SURROUNDING LAND USES AND SETTING:

Huntington Beach is located in Orange County, approximately 35 miles south of Los Angeles and 90 miles north of San Diego. Huntington Beach encompasses approximately 27.7 square miles, and is bounded by the Pacific Ocean to the west, the cities of Westminster and Fountain Valley to the east, the city of Seal Beach to the north, and the city of Costa Mesa to the south. The project area includes the footprint of the existing bridge and bridge approaches, the footprint of temporary construction work that would extend just below and adjacent to the bridge deck, and the construction staging area within the closed off curb lanes immediately southwest of the bridge.

As shown in **Table 1** and on **Figure 3**, the project area is located adjacent to residences, protected open space (Talbert Marsh and Brookhurst Marsh, which are part of the Huntington Beach Wetlands), the Orange County Sanitation District (OCSD) Plant No. 2, and Talbert Channel. As shown in **Table 1** and on **Figure 4**, land within the project area is designated as Right of Way. Adjacent land uses are designated as Residential Low Density (RL), Conservation (OS-C), or Public (P).

Table 1: Surrounding Land Uses

Direction	Land Uses (see Figure 3)	General Plan Land Use Designations (see Figure 4)	Zoning Designations (see Figure 5)
Project Area	Existing Bridge	Right of Way	Right of Way
North	Residences	RL – Residential Low Density	RL – Residential Low Density
South	Talbert Marsh; Talbert Channel	OS-C – Conservation; P – Public	CC – Coastal Conservation; Right of Way
East	OCSD Plant No. 2	P – Public	RA – Residential Agriculture (with Oil Overlay) IL – Industrial Limited
West	Brookhurst Marsh; Talbert Channel	OS-C – Conservation; P – Public	CC – Coastal Conservation; Right of Way

Sources: City’s General Plan Land Use Map, 2014; City’s Zoning Map, 2014

As shown in **Table 1** and on **Figure 5**, land within the project area is zoned as Right of Way. Adjacent land uses are zoned as Residential Low Density (RL), Coastal Conservation (CC), or Residential Agriculture (RA) with an Oil Overlay. The project area is also within the City’s Coastal Zone (CZ) Overlay District.

3. OTHER PREVIOUS RELATED ENVIRONMENTAL DOCUMENTS

The following environmental documents were previously completed for the project:

- Preliminary Environmental Study for Brookhurst Street Bridge Rehabilitation over Talbert Channel; and
- Natural Environmental Study for Brookhurst Street Bridge Rehabilitation over Talbert Channel.

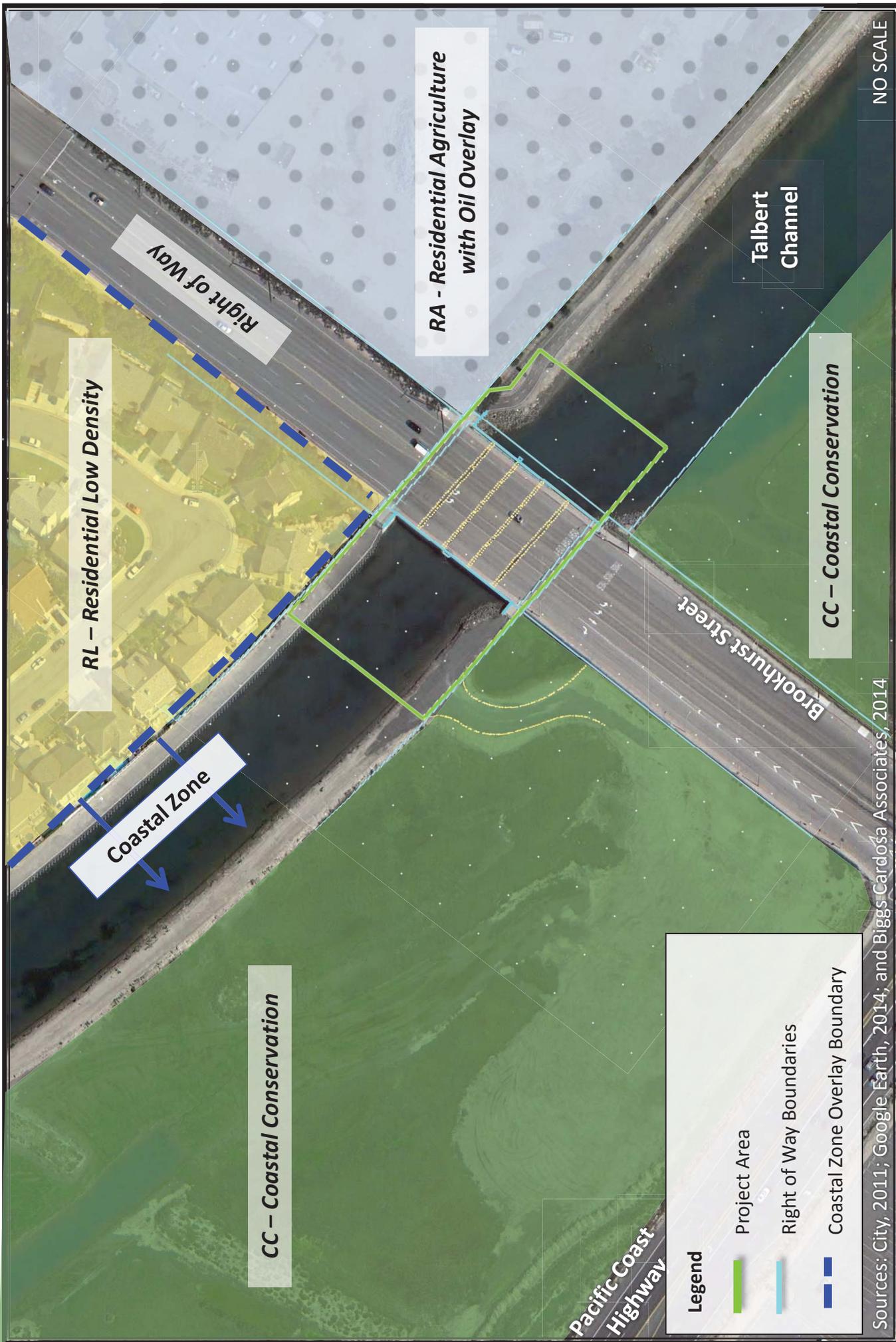
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FIGURE 4. LAND USE MAP
Brookhurst Street Bridge Preventative Maintenance Project



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NO SCALE



FIGURE 5. ZONING MAP
Brookhurst Street Bridge Preventative Maintenance Project



Legend

- Project Area
- Right of Way Boundaries
- - - Coastal Zone Overlay Boundary

Sources: City, 2011; Google Earth, 2014; and Biggs Carološa Associates, 2014

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4. OTHER AGENCIES WHOSE APPROVAL IS REQUIRED (AND PERMITS NEEDED)

The following approvals and permits would be required for the project:

- California Coastal Commission (CCC): Coastal Development Permit (CDP) under Section 30600, California Public Resources Code;
- California Department of Fish and Wildlife (CDFW): Section 1602 Streambed Alteration Agreement;
- Caltrans: Encroachment Permit for traffic management on limited portions of PCH
- Caltrans: National Environmental Policy Act (NEPA) approval;
- OCFCD: construction permits through the City;
- Regional Water Quality Control Board (RWQCB): Section 401 Water Quality Certification;
- United States Army Corps of Engineers (USACE): Section 404 Nationwide Permit 14 for linear transportation projects; and
- United States Fish and Wildlife Service (USFWS): Incidental Take Permit or Concurrence Letter pursuant to Section 7 of the Federal Endangered Species Act (ESA).

The following approvals and permits could be required for the project:

- CDFW: Incidental Take Permit under Section 2081 of the California Endangered Species Act (CESA); and
- USACE: Section 10 Rivers and Harbors Act (RHA) Permit.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by the project, involving at least one impact that is a “Potentially Significant Impact” or is “Potentially Significant Unless Mitigation is Incorporated,” as indicated by the checklist on the following pages.

- Land Use / Planning
- Biological Resources
- Aesthetics
- Population / Housing
- Mineral Resources
- Cultural Resources
- Geology / Soils
- Hazards and Hazardous Materials
- Recreation
- Hydrology / Water Quality
- Noise
- Agricultural Resources
- Air Quality
- Public Services
- Greenhouse Gas Emissions
- Transportation / Traffic
- Utilities / Service Systems
- Mandatory Findings of Significance

DETERMINATION

(To be completed by the Lead Agency) On the basis of this initial evaluation:

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

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigation is incorporated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, **nothing further is required**.

Signature

Date

Printed Name

Title

EVALUATION OF ENVIRONMENTAL IMPACTS:

The checklist on the following pages has been formatted using Appendix G of Chapter 3, Title 14, California Code of Regulations, but has been augmented to reflect the City's requirements.

1. A brief explanation has been provided for all responses. References to information sources (e.g., general plans, zoning ordinances) have been incorporated into the checklist and cited in the parentheses following each question (i.e. "Sources: 1, 35"). A source list has been provided in Section XIX. EARLIER ANALYSIS/SOURCE LIST.
2. All responses have taken into account the whole action involved and all potential impacts (i.e. within the project vicinity as well as in the project area, cumulative as well as project-level, indirect as well as direct, and construction as well as operational).
3. A "Potentially Significant Impact" determination is made if an impact would be significant or potentially significant, or if there is a lack of information to make a finding of insignificance. If the checklist indicates one or more impacts that are "Potentially Significant Impacts," preparation of an Environmental Impact Report is warranted. The project would not result in any "Potentially Significant Impacts"; therefore, there are no instances in which this determination has not been made in the following checklist.
4. A "Potentially Significant Impact Unless Mitigation is Incorporated" determination has been made if the incorporation of mitigation measures would reduce an impact from a "Potentially Significant Impact" to a "Less than Significant Impact." Mitigation measures have been provided throughout the document, along with an explanation of how they would reduce the impact to a less than significant level (measures may be cross-referenced). A summary of mitigation measures is included as **Attachment 2**, Summary of Mitigation Measures.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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I. LAND USE AND PLANNING.

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (Sources: 1, 2, 30) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The project area includes the footprint of the existing bridge and bridge approaches, the footprint of temporary construction work that would extend just below and adjacent to the bridge deck, and the construction staging area within the closed off curb lanes immediately southwest of the bridge. Land use within the project area is designated as Right of Way on the City’s General Plan 2014 Land Use Map (see **Figure 4**, Land Use Map). Land within the project area is zoned as Right of Way on the City’s 2014 Zoning Map (see **Figure 5**, Zoning Map).

The project would include repair and rehabilitation work on the existing bridge. Implementation of the project would not result in a change to the existing land use and/or zoning designations, and would not alter the size or intensity of the existing land use.

According to the City’s Zoning Map, the project area is also within the City’s CZ Overlay District. Section 245.06 of the City’s Zoning and Subdivision Ordinance states that any development in the CZ Overlay District requires a CDP.

The City’s Local Coastal Program includes the following implementation programs:

- Coastal Element, Implementation Program 9: “Continue to implement, review, monitor and update, as necessary to improve public coastal access, the following: 1. Existing and proposed roadway systems on an annual basis...”
- Coastal Element, Implementation Program 10: “Solicit funds for an improvement study, and the resulting design, construction, maintenance of the Coastal Zone’s infrastructure system.”

Section 245.06 of the City’s Zoning and Subdivision Ordinance also states that projects within the CCC’s original permit jurisdiction (which includes all tidelands, submerged lands, public trust lands, and navigable waterways), require a CDP issued and processed by the CCC.

The project would include repair and rehabilitation work on the existing bridge, which serves as roadway access to Huntington State Beach in the CZ. Implementation of the project would maintain essential infrastructure that provides access within the CZ. The project would not conflict with the City’s General

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Plan, Zoning and Subdivision Ordinance, Local Coastal Program; or any applicable land use plan, policy, or regulation of the City. A CDP application would be submitted to the CCC prior to construction. The project would not conflict with policies of the CCC or the California Coastal Act. Therefore, impacts would be less than significant and beneficial.

- b) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan? (Source: 35)

Discussion: The project area is located within the Orange County Transportation Authority Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP) area. The Orange County Transportation Authority NCCP/HCP is currently under development and is not yet applicable to the project. The only approved and implemented NCCP within Orange County is the Central/Coastal Orange County NCCP. The project area is not located within the plan area, and is therefore not subject to the provisions of the Central/Coastal Orange County NCCP. The project would not conflict with a HCP or NCCP; therefore, there would be no impact.

- c) Physically divide an established community? (Sources: 1, 3)

Discussion: The project would include repair and rehabilitation work on the existing bridge, which serves as roadway access to Huntington State Beach. The City does not propose to construct any additional structures that could physically divide a community. The bridge would remain in the same location, and existing access to and from the beach area would be maintained throughout construction, including pedestrian access. Because the bridge would continue to provide access during and after construction, the project would not result in the division of any neighborhoods or communities; therefore, there would be no impact.

II. POPULATION AND HOUSING.

Would the project:

- a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and business) or indirectly (e.g., through extensions of roads or other infrastructure)? (Source: 3)

Discussion: The project would include repair and rehabilitation work on the existing bridge, and would not induce growth in the area; therefore, there would be no impact.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: All bridge construction would be entirely within the existing bridge footprint or roadway, and would not result in displaced housing or necessitate the construction of replacement housing; therefore, there would be no impact.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: All bridge construction would be entirely within the existing bridge footprint or roadway, and would not result in displaced people requiring replacement housing; therefore, there would be no impact.

III. GEOLOGY AND SOILS.

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Source: 4) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion: The nearest earthquake fault shown on the Alquist-Priolo Earthquake Fault Zone Map for the Newport Beach Quadrangle is a potentially active, unnamed fault located approximately two miles northwest of the project area; therefore, there are no earthquake faults in the project area.

The project would include repair and rehabilitation work on the existing bridge, and would not result in increased risks associated with a rupture of a known fault. The project would not reduce the capability of the bridge to withstand rupture of a known earthquake fault. The project is expected to improve the structural stability of the bridge, and would be designed in compliance with standard engineering practices and applicable building codes, including the California Building Code and the City's municipal code. Therefore, there would be no impact.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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ii) Strong seismic ground shaking? (Sources: 1, 3, 4)

Discussion: Southern California geology and seismicity are affected by plate tectonics and the forces that cause these plates to move within the earth’s crust. The project would include repair and rehabilitation work on the existing bridge, and would not reduce the ability of the bridge to withstand seismic ground shaking. The project is expected to improve the structural stability of the bridge and would be designed in compliance with standard engineering practices and applicable building codes. Therefore, impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction? (Sources: 1, 3)

Discussion: The City’s General Plan indicates that the land in the project area has a very high potential for liquefaction. However, the project would include repair and rehabilitation work on the existing bridge. The project would not reduce the capability of the bridge to withstand seismic-related ground failure and would not increase exposure of people or structures to these impacts. Therefore, there would be no impact.

iv) Landslides? (Sources: 1, 3)

Discussion: According to the City’s General Plan, potential landslide areas in Huntington Beach are limited to those areas near mesa bluffs. The bridge is not located near the mesa bluffs, and there are no slopes adjacent to the project area; therefore, there would be no impact.

b) Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill? (Source: 3)

Discussion: The project would include repair and rehabilitation work on the existing bridge. No grading, fill, excavation, or vegetation removal around the bridge would be required. The project would not result in soil erosion, loss of topsoil, or changes in topography or unstable soil conditions; therefore, there would be no impact.

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

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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(Sources: 1, 3)

Discussion: According to the City’s General Plan, the project area has a very high potential for liquefaction. However, the project would include repair and rehabilitation work on the existing bridge, and would be designed according to applicable codes. Therefore, the project would not result in reduced geologic stability of the project area or increased risks to life or property related to liquefaction, and there would be no impact.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) 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? (Sources: 1, 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: According to the City’s General Plan, the potential for expansive soils varies from low to high in and adjacent to the project area. However, the project would include repair and rehabilitation work on the existing bridge, and would be designed according to applicable codes. Therefore, the project would not result in reduced geologic stability of the project area or increased risks to life or property related to soil expansion, and there would be no impact.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would include repair and rehabilitation work on the existing bridge, and would not require the use of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact.

IV. HYDROLOGY AND WATER QUALITY.

Would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Violate any water quality standards or waste discharge requirements? (Sources: 3, 6) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|

Discussion: The project would not include the discharge of waste; therefore, it would not violate waste discharge requirements. The project would require work over flowing water in the channel, and would include removing unsound concrete and patching concrete at the bridge bents and columns. Unsound concrete would be removed from the underside of the bridge on working platforms with protective covers made of a tarp-type material, which would be placed around the area being worked on during low tide and removed before high tide. The working platforms would be constructed of untreated timber, installed

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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during low tide, and suspended from the existing bridge soffit and/or pier walls to reduce the potential for impacts on water quality or the surrounding environment. The protective covers would be designed to contain 100 percent of any debris produced during the operations. All operations would be performed from within the protective covers during low tide.

As part of a Storm Water Pollution Prevention Plan (SWPPP), standard Best Management Practices (BMP) would be incorporated into the project to comply with the City’s National Pollutant Discharge Elimination System (NPDES) Permit, as well as other permits obtained from the USACE and RWQCB. BMPs that may be considered for the project include, but are not limited to, sediment controls, street sweeping, storm drain inlet protection, and waste management to ensure compliance with water quality standards. Specific BMPs would be identified prior to construction during the preparation of the SWPPP. With the incorporation of BMPs, compliance with required permits, and implementation of mitigation measures W-1 and W-2 listed below, impacts would be less than significant.

Water Quality Mitigation Measures:

To mitigate impacts on hydrology and water quality, the following mitigation measures will be implemented during project construction.

W-1 Reduced Work Areas

Work areas will be reduced to the maximum extent feasible to avoid the channel and minimize impacts on waters of the U.S. and state.

W-2 Hazardous Materials BMPs

To reduce the potential for chemical spills or contaminant releases, including any non-stormwater discharge, a spill prevention plan will be developed and provided to resource agencies for approval during the permitting process, and implemented during project construction. The plan will include standard hazardous materials management and spill control response measures, and identify BMPs to prevent accidental spills to minimize the potential for contamination of road surfaces and waters of the U.S. in the channel.

All vehicles and equipment will be checked daily for fluid and fuel leaks, and drip pans will be placed under all equipment that is parked and not in operation. Vehicles and equipment will not be refueled or maintained in areas where pollutants could be released into the channel. .

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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level which would not support existing land uses or planned uses for which permits have been granted)? (Sources: 3)

Discussion: The project would include repair and rehabilitation work on the existing bridge, and would not require any excavation or work below the surface of the channel floor. The project would not require the use of groundwater or interfere with groundwater recharge; therefore, there would be no impact.

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site? (Sources: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The original grades and alignment of the bridge deck would be maintained and there would be no increase in impervious surface area; therefore, the project would not result in altered drainage patterns on the bridge. In addition, there would be no new columns or structures placed in the channel, and the direction, course, volume, and speed of water flow would not be altered as a result of the project. Standard BMPs would be incorporated into the project to comply with regulatory permits. BMPs that may be considered for the project include, but are not limited to, sediment controls, runoff reduction, preservation of existing drainage flows, and erosion control to avoid erosion and siltation. Specific BMPs would be identified prior to construction during the preparation of the SWPPP. With the incorporation of BMPs and compliance with required permits, impacts would be less than significant.

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The original grades and alignment of the bridge deck would be maintained and there would be no increase in impervious surface area. In addition, no new columns or structures would be placed in the channel; therefore, the project would not result in altered drainage patterns or increased surface runoff that would result in flooding onsite or offsite. During construction, working platforms would be suspended under the bridge, but no structures would be placed within the channel bed. While the platforms would be inundated by high tide flows, the platforms would not substantially alter the drainage patterns in the channel during the temporary construction period. In addition, construction activities would not alter drainage patterns on the bridge or increase surface runoff that would result in flooding. Therefore, impacts would be less than significant.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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- e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? (Sources: 3)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Discussion: The original grades and alignment of the bridge deck would be maintained and there would be no increase in impervious surface area; therefore, the project would not result in increased runoff or contribute to runoff water that would exceed the capacity of the storm water drainage system. Therefore, there would be no impact.

- f) Otherwise substantially degrade water quality? (Sources: 3, 6)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Discussion: The project would require work over flowing water in the channel to remove unsound concrete and patch concrete at the bridge bents and columns, which could result in an impact on water quality if materials were to enter the channel. Standard BMPs would be incorporated into the project to comply with regulatory permits. BMPs that may be considered for the project include, but are not limited to, preservation of existing vegetation, silt fences, street sweeping, storm drain protection, waste management, and water conservation practices to avoid the degradation of water quality. Specific BMPs would be identified prior to construction during the preparation of the SWPPP, which would be required to comply with the City’s NPDES permit.

With the incorporation of BMPs, compliance with required permits, and implementation of mitigation measures W-1 and W-2 listed in response a), impacts would be less than significant.

- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (Source: 3)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Discussion: The project would include repair and rehabilitation work on the existing bridge, and would not include the construction of any housing; therefore, there would be no impact.

- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Sources: 3, 7)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Discussion: The project area is located within the base (100-year) floodplain elevation. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Orange County (Map

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Number 06059C0264J, revised December 3, 2009) indicates that the project area is within Zone AE, which is a Special Flood Hazard Area that is subject to inundation by the one percent annual chance flood (100-year flood). This area is further specified as having a base flood elevation (BFE) of 8, meaning that the water-surface elevation would rise an estimated eight feet during a 100-year flood event.

Implementation of the project would not result in any permanent hydraulic changes in the channel. No physical changes would be made to the floodplain, and the existing freeboard, base floodplain elevation, flow volumes, patterns, and rates would be maintained. Additionally, there would be no longitudinal encroachments, no risk to life or property resulting from hydraulic modifications, and the natural and beneficial floodplain values would remain in their existing state. Therefore, there would be no impact.

- i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? (Sources: 3, 7)

Discussion: The bridge crosses over Talbert Channel, which is a 100-year flood hazard area; however, the location, design, and footprint of the existing bridge would be maintained, and the risk of loss, injury, or death involving flooding would not be increased. Therefore, there would be no impact.

- j) Inundation by seiche, tsunami, or mudflow? (Sources: 3, 5, 8, 36)

Discussion: A seiche is an oscillation of an enclosed or partially enclosed water body, such as a lake or harbor; a tsunami is a large ocean wave associated with a seismic event; and a mudflow is the rapid, downhill movement of a large mass of mud formed from loose soil and water. Land within and near the project area is relatively flat and developed within residential neighborhoods that have limited exposed soils; therefore, the project area would not be impacted by mudflows.

The project area is within a tsunami inundation area, according to the *Tsunami Inundation Map for Emergency Planning* for the Newport Beach Quadrangle, dated March 15, 2009. Seiches are typically caused by meteorological effects, seismic activity, or tsunamis, which have the potential to occur in the project area (see also Section III. GEOLOGY AND SOILS). The location, design, and footprint of the existing bridge would be maintained, and the likelihood or potential damage associated with inundation by seiche or tsunami would not be increased. Therefore, there would be no impact.

- k) Potentially impact storm water runoff from construction activities? (Sources: 3, 6)

Discussion: Construction activities would include jackhammering, sandblasting, and patching to remove and replace unsound concrete, and using petroleum-based products, paints, solvents, and sealers. Standard

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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BMPs would be incorporated into the project to comply with regulatory permits and to minimize the potential for polluted runoff. BMPs that may be considered for the project include, but are not limited to, sediment control, sandbags, and street vacuuming to collect construction-related runoff. Specific BMPs would be identified prior to construction during the preparation of the SWPPP. With the incorporation of BMPs, compliance with required permits, and implementation of mitigation measures W-1 and W-2 listed in response a), impacts would be less than significant.

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| l) Potentially impact storm water runoff from post-construction activities? (Sources: 1, 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: Increases in impervious surfaces or changes in drainage patterns can increase the amount of storm water runoff. The original grades and alignment of the bridge deck would be maintained and there would be no increase in impervious surface area; therefore, the project would not result in additional storm water runoff from the bridge, and there would be no impact.

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| m) Result in a potential for discharge of storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks, or other outdoor work areas? (Sources: 1, 3, 6) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|

Discussion: Construction activities would include jackhammering, sandblasting, and patching to remove and replace unsound concrete, which would involve using petroleum-based products, paints, solvents, and sealers. These activities could result in a discharge of storm water pollutants. Standard BMPs would be incorporated into the project to comply with regulatory permits. BMPs that may be considered for the project include, but are not limited to, stockpile management, spill prevention, and material delivery management to avoid impacts from outdoor work areas. Specific BMPs would be identified prior to construction during the preparation of the SWPPP.

Use of waste and hazardous materials during construction would be handled in compliance with City, county, state, and federal pollution control requirements. With the incorporation of BMPs, compliance with required permits and regulations, and implementation of mitigation measures W-1 and W-2 listed in response a), impacts would be less than significant.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| n) Result in a potential for discharge of storm water to affect the beneficial uses of the receiving waters? (Sources: 1, 3, 6) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Discussion: The project could result in water quality impacts if materials or debris from construction was to enter the channel in storm water runoff. Project-related storm water runoff would be contained in the project area during construction, and beneficial uses of the receiving waters would not be affected. Standard BMPs would be incorporated into the project to comply with regulatory permits. BMPs that may be considered for the project include, but are not limited to, sediment controls, runoff reduction, preservation of existing drainage flows, and erosion control to avoid erosion and siltation. Specific BMPs would be identified prior to construction during the preparation of the SWPPP. With the incorporation of BMPs and compliance with required permits, impacts would be less than significant.

- o) Create or contribute significant increases in the flow velocity or volume of storm water runoff or cause environmental harm? (Sources: 1, 3)

Discussion: Increases in impervious surfaces or changes in drainage patterns can increase the amount of storm water runoff. The original grades and alignment of the bridge deck would be maintained and there would be no increase in impervious surface area; therefore, the project would not result in an increase in velocity or volume of storm water runoff or cause environmental harm, and there would be no impact.

- p) Create or contribute significant increases in erosion of the project area or surrounding areas? (Sources: 1, 3)

Discussion: Vegetation removal, which may expose bare soils, can result in erosion. No tree removal or vegetation removal is anticipated as part of the project. Increases in impervious surfaces or changes in drainage patterns can also increase the amount of surface water runoff, which can result in erosion. The original grades and alignments of the bridge deck would be maintained and there would be no increase in impervious surface area. Existing drainage patterns in or near the project area would not be affected.

Standard BMPs would be incorporated into the project to comply with regulatory permits and to reduce the potential for erosion. BMPs that may be considered for the project include, but are not limited to, sediment controls, runoff reduction, preservation of existing drainage flows, and erosion control to avoid erosion and siltation. Specific BMPs would be identified prior to construction during the preparation of the SWPPP. With the incorporation of BMPs and compliance with required permits, impacts would be less than significant.

V. AIR QUALITY.

Would the project:

- a) Violate any air quality standard or contribute substantially to an existing or projected air

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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quality violation? (Sources: 3, 9, 10, 11, 12, 13, 14, 37)

Discussion: The project would not result in an increased number of lanes or increased capacity on the bridge; therefore, it would not result in the generation of new stationary or mobile sources of emissions. Project construction would require the use of various types of construction equipment, including dump trucks, front end loaders, air compressors, pneumatic tools, concrete mixers, pump trucks, small jackhammers, and sandblasters. Construction of the project would result in the generation of temporary, short-term emissions of various air pollutants, including fugitive dust emissions and mobile source emissions. Fugitive dust emissions include any solid PM that is lifted into the ambient air. Construction activities with the potential to result in fugitive dust emissions include demolition activities (e.g., removal of concrete from the bridge).

Mobile source emissions include primarily oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter up to ten micrometers in size (PM₁₀) and 2.5 micrometers in size (PM_{2.5}), and mobile source air toxics (MSATs), such as diesel particulate matter (DPM). Emissions could also lead to the formation of ozone (O₃), which is a regional pollutant that is derived from NO_x and VOCs when combined with of sunlight and heat. Construction activities that have the potential to result in mobile source emissions include the use of construction equipment (bulldozers, trucks, and scrapers), truck delivery of construction materials, hauling of construction debris, and workers commuting to and from the project area. Mobile source emissions from construction equipment are typically highest during use of heavy-duty, diesel-fueled equipment.

The California Air Resources Board (CARB) has passed a number of regulations to reduce the public's exposure to DPM and NO_x emissions. For example, the In-Use Off-Road Diesel Vehicle Regulation includes enforceable elements, such as limits on vehicle idling to no more than five consecutive minutes, and equipment reporting and labeling. Standard BMPs would be incorporated into the project to comply with CARB's regulations as well as the South Coast Air Management District's (SCAQMD) Rule 403, Fugitive Dust, which requires the implementation of measures to prevent, reduce, or mitigate fugitive dust emissions. BMPs that may be considered for the project include, but are not limited to, limitations on idling, maintenance of construction equipment, and dust control to comply with CARB and SCAQMD regulations.

Pollutant emissions would vary from day to day depending on the intensity and type of construction activity. Construction activities would be short-term and would be completed in approximately six months. CalEEMod emissions software was used to estimate the emissions of criteria pollutants from construction activities. Estimates of the types of equipment anticipated in each phase of construction were based on the project description and construction phases. Equipment exhaust emissions were determined using the CalEEMod default values for horsepower and load factors. Estimated emissions do not take into account emission reductions as a result of typical fugitive dust control measures. The estimates were based on conservative assumptions, and present a worst-case scenario for planning purposes. As shown in

ISSUES (and Supporting Information Sources): Potentially Significant Impact Potentially Significant Unless Mitigation is Incorporated Less Than Significant Impact No Impact

Table 2, the unmitigated estimated daily emissions would be below the SCAQMD significance thresholds for all criteria pollutants.

Table 2: Estimated Project Construction Emissions

	<u>Pollutant Emission (lbs/day)</u>					
	<u>VOC/ROG</u>	<u>NO_x</u>	<u>CO</u>	<u>PM₁₀</u>	<u>PM_{2.5}</u>	<u>SO_x</u>
Estimated Emissions	2.8	12.9	8.9	1.3	0.9	0.0
SCAQMD Significance Thresholds	75	100	550	150	55	150
Significant Impact?	No	No	No	No	No	No

Source: CalEEMod

Therefore, with compliance with CARB and SCAQMD regulations, air quality impacts associated with construction of the project would be less than significant. Operation of the project would not include the generation of new stationary or mobile sources of emissions. Therefore, no long-term air quality impacts are anticipated.

- b) Expose sensitive receptors to substantial pollutant concentrations? (Sources: 3, 6)

Discussion: Sensitive receptors are persons who are more susceptible to air pollution than the general population, such as children, athletes, the elderly, and the chronically ill. Sensitive receptors are typically considered those found in areas where there are residences, schools, daycare centers, parks, recreation areas, medical facilities, nursing homes, and convalescent care facilities. The project area is adjacent to and south of single-family residences, which are considered sensitive receptors.

The project would not result in an increased number of lanes or increased capacity on the bridge; therefore, operation of the project would not result in the generation of increased criteria pollutant emissions. Emissions from project construction would be short-term and intermittent, and construction would be conducted in compliance with CARB and SCAQMD regulations to minimize pollutant emissions. Therefore, impacts would be less than significant.

- c) Create objectionable odors affecting a substantial number of people? (Sources: 3, 6)

Discussion: Operation of construction equipment would generate odors (i.e. diesel exhaust) that could affect adjacent properties. In addition, odors would be generated by hot asphalt during the paving process. However, these odors would be temporary, limited to daytime hours, and would be expected to dissipate quickly. Potential odors from the project would not be expected to affect a substantial number of people. Therefore, impacts would be less than significant.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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| d) Conflict or obstruct implementation of the applicable air quality plan? (Sources: 3, 15, 16, 17) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The most recently approved applicable air quality plan for the project area is the 2012 Air Quality Management Plan (AQMP), which was designed to meet both federal and state requirements. The AQMP strategy is based on projections from local general plans and regional growth projects developed by the Southern California Association of Governments (SCAG). A project would be considered inconsistent with an AQMP if the project would result in population and/or employment growth that exceeds growth estimates included in the AQMP.

The project would include repair and rehabilitation work on the existing bridge. Implementation of the project would not affect population, housing units, or employment, or be inconsistent with the growth forecasts identified in the AQMP. In addition, the project was included in the regional emissions analysis conducted by SCAG for the conforming 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The project is also included as RTP I.D. ORA020501 in SCAG's 2013 Federal Transportation Improvement Program (FTIP), which allocates funding to implement the RTP. In federal non-attainment or maintenance areas, the RTP and FTIP projects are required to comply with the transportation conformity requirements in the U.S. EPA's Transportation Conformity Regulations.

The project design and scope have not changed from what was analyzed in the RTP. Therefore, implementation of the project would not conflict or obstruct implementation of the 2012 AQMP, and there would be no impact.

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| e) 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)? (Sources: 3, 10, 11, 12) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The South Coast Air Basin (SCAB) is currently in non-attainment for both state and federal ambient air quality standards for O₃, PM₁₀, and PM_{2.5}, and in non-attainment for the state nitration dioxide (NO₂) standard. As shown in **Table 2**, the unmitigated estimated daily emissions would be below the SCAQMD significance thresholds for all criteria pollutants. Construction emissions would be short-term and intermittent, and project construction would comply with CARB and SCAQMD regulations to minimize pollutant emissions; the increase in criteria pollutants resulting from construction activities

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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would not be cumulatively considerable. Therefore, impacts would be less than cumulatively considerable and less than significant.

The project would not result in an increased number of lanes on the bridge or an increased capacity of the bridge; therefore, it would not result in the permanent generation of new criteria pollutant emissions. Implementation of the project would not result in population or job growth, and would be consistent with the AQMP.

VI. TRANSPORTATION/TRAFFIC.

Would the project:

- a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (Sources: 1, 18, 19)

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Discussion: The project would include repair and rehabilitation work on the existing bridge to ensure the safe and efficient movement of people and vehicles to and from Huntington State Beach and nearby roadways. The project would be consistent with the City’s General Plan. .

Brookhurst Street is classified as a major arterial street and is a direct link from the region to Huntington State Beach. The roadway also serves as a local bus transit route (Route 35) in the Orange County Transportation Authority’s Bus Transit System. Route 35 buses run between the cities of Fullerton and Huntington Beach via Brookhurst Street on weekdays (approximately every 30 to 45 minutes from 4:31 a.m. until 9:56 p.m.), Saturdays (approximately every 45 minutes from 4:50 a.m. until 7:58 p.m.), and Sundays and holidays (approximately every hour from 5:04 a.m. until 7:37 p.m.). The closest bus stop to the project area is at the Brookhurst Street/PCH intersection. If necessary during project construction, the City would coordinate any bus stop relocations or closures with the Orange County Transportation Authority. After construction is complete, all bus stops would be re-opened consistent with existing conditions.

The roadway is also classified as a bike lane (on-road striped lane) on the City’s Bikeways Map. There is also an off-road paved bike path along the northeast bank of Talbert Channel adjacent to the project area.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Within the project area, the roadway includes six traffic lanes, 8-foot wide shoulders that allow for bicycle travel on both sides of the existing bridge, and 7-foot-wide sidewalks on both sides of the bridge. Throughout construction, pedestrian and bicycle access would be maintained on the bridge. In addition, bike access along the northeast bank of Talbert Channel would not be impacted during construction.

During the 6-month construction period, vehicular traffic would be limited to one-half or within the center lanes of the bridge. Although traffic flow on the bridge and PCH would be temporarily restricted during construction, following construction the roadways would be restored to existing conditions, and long-term circulation would not be affected. In addition, traffic management activities would be implemented on PCH to minimize impacts during construction. Following construction, both sidewalks and bicycle lanes on the bridge would be returned to existing conditions and no long-term impacts would occur. Therefore, impacts to the existing circulation system would be less than significant.

- b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? (Source: 20)
-

Discussion: The project would not conflict with the existing Orange County Congestion Management Program (CMP), which requires that CMP Highway System (CMPHS) intersections maintain a level of service (LOS, a measure of traffic flow) of ‘E’ or better, unless the baseline LOS is lower than ‘E.’ PCH is located approximately 0.1 mile southwest of the project area and is within the CMPHS; however, there are no CMPHS intersections within or near the project area. Traffic along PCH could be impacted during project construction; therefore; traffic management activities would be required on PCH to minimize potential impacts. While traffic flow on the bridge and PCH would be temporarily restricted during construction, the roadway and traffic flow on connecting roadways would be restored to existing conditions after construction is complete, and operational circulation would not be affected. Therefore, impacts would be less than significant.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (Source: 3)
-

Discussion: The project area is approximately 5.6 miles southwest of the nearest airport, the John Wayne Airport, and is not within an airport land use planning area. The project would include repair and rehabilitation work on the existing bridge and would not include any elements that would result in an increase in air traffic levels. In addition, the project would not include vertical structures or sources of

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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light or glare that would interfere with air traffic or result in substantial safety risks. Therefore, there would be no impact.

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses? (Source: 3)

Discussion: The project would not include changes to the existing bridge alignment, design, or function that would result in hazards related to a design feature or incompatible use; therefore, there would be no impact.

- e) Result in inadequate emergency access? (Source: 3)

Discussion: During the 6-month construction period, traffic lanes on the bridge would be reduced to two lanes (one lane in each direction). While traffic flow on the bridge would be temporarily restricted, emergency vehicles would continue to have access within the project area throughout the construction period. Construction activities would be coordinated with the City’s emergency service providers to avoid disruption of emergency access. In addition, traffic management activities would be implemented on the bridge and PCH to minimize impacts during construction. Following construction, the roadways would be restored to existing conditions, and long-term emergency access would not be affected. Therefore, impacts would be less than significant.

- f) Result in inadequate parking capacity? (Source: 3)

Discussion: Parking is not permitted on the bridge or near bridge approaches, and would not be permitted following project construction; therefore, there would be no impact.

- g) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (Sources: 3, 18, 19)

Discussion: According to the City’s General Plan Circulation Element, the City has a goal to “facilitate the safe and effective movement of people and goods...” Brookhurst Street is classified as a bikeway on the City’s Bikeways Map, and the roadway serves as a public transit route on the Orange County Transportation Authority’s Bus System Map. There are sidewalks on both sides of the existing bridge.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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The project would be consistent with plans to promote safety within the City’s transportation system. Pedestrian and bicycle access would be maintained on one the bridge throughout construction. Following construction, sidewalks and bicycle lanes would be returned to their current condition. If necessary during project construction, the City would coordinate any bus stop relocations or closures with the Orange County Transportation Authority. After construction is complete, all bus stops would be re-opened consistent with existing conditions. Therefore, the project would not conflict with adopted policies, plans, or programs related to public transit, bicycle, or pedestrian facilities. With implementation of a City-approved traffic control plan (see **Attachment 1**, Project Plans, sheets TC1-TC4), there would be no impact.

VII. BIOLOGICAL RESOURCES.

Would the project:

- 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? (Source: 34)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Discussion:

The following discussion incorporates the results of the Natural Environmental Study (NES) that was conducted for the project. Biological surveys were conducted for of the Biological Study Area (BSA) on July 3, 2012, and a jurisdictional delineation was conducted on July 24, 2013. The BSA includes the project footprint and the associated 500-foot buffer. Land use in the BSA consists of single-family residences to the north, Talbert Marsh to the south, OCS D Plant No. 2 to the east, and Brookhurst Marsh to the west.

Talbert Marsh and Brookhurst Marsh are part of the Huntington Beach Wetlands and consist of southern coastal salt marsh vegetation communities, including disturbed alkali sink scrub, pickleweed mat, and saltgrass flats. There is coastal sage scrub southeast of the bridge adjacent to the bike path, and the dominant plant species observed include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), bush sunflower (*Encelia californica*), and California buckwheat (*Erigonum fasciculatum*). There are also non-native Eucalyptus (*Eucalyptus* sp.) trees adjacent to the bike path. Northeast of the bridge, Brookhurst Street is lined on both sides by non-native ornamental landscaping including mock orange (*Pittosporum tobira*) and Eucalyptus. Talbert Channel consists of open water habitat, mudflats, and eelgrass beds.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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The California Natural Diversity Database (CNDDDB) includes plants on the inventory list compiled by the USFWS, CDFW, and the California Native Plant Society (CNPS). A search of the CNDDDB was conducted, and there are several special-status plant and wildlife species with potential to be in the project area, based on geographic distribution. Various special-status plant and wildlife species were observed within the BSA during the biological surveys, including estuary seablite (*Suaeda esteroa*), Belding’s savannah sparrow (*Passerculus sandwichensis*), black skimmer (*Rynchops niger*), California least tern (*Sternula antillarum browni*), northern harrier (*Circus cyaneus*), light-footed clapper rail (*Rallus longirostris levipes*), and California brown pelican (*Pelecanus occidentalis*). In addition, coast woolly heads (*Nemacaulis denudata* var. *denudate*) were observed outside the BSA in Brookhurst Marsh. Based on existing habitat and the close proximity to the marshes, there is potential for special-status species to be in the BSA during construction. Consultation with the USFWS under Section 7 of the FESA would likely be required for impacts on federally-listed species, and consultation with CDFW may be required for impacts on state-listed species. Talbert Channel, including portions of the channel the BSA, has been designated as Essential Fish Habitat (EFH) and a Habitat Area of Particular Concern (HAPC) under the Magnuson-Stevens Act (MSA), and the Pacific Groundfish Species Fishery Management Plan (PGFMP). The channel is designated as EFH for Pacific groundfish under the PGFMP and as a HAPC because of the eelgrass beds within the channel. These areas are utilized by a multitude of marine fish, including federally-managed fish species. Several fish species, including California skate (*Raja inornata*), English sole (*Parophrys vetulus*), leopard shark (*Triakis semifasciata*), lingcod (*Ophiodon elongates*), silvergray rockfish (*Sebastes brevispinis*), spiny dogfish (*Squalus acanthius*), Dover sole (*Microstomus pacificus*), California scorpionfish (*Scorpaena guttata*), grass rockfish (*Sebastes rastrelliger*), and kelp rockfish (*Sebastes atrovirens*) have potential to be in the BSA during construction.

There is potential for special-status plant and wildlife species to be in the BSA, which could be impacted by habitat disturbance, noise, or vibration from construction activities. EFH could also be impacted if construction materials and debris were to fall into the channel. With the implementation of mitigation measures B-1 through B-11 listed below and W-1 through W-2 listed in Section IV. HYDROLOGY AND WATER QUALITY, impacts would be less than significant.

Biological Resources Mitigation Measures:

To mitigate impacts on biological resources, the following mitigation measures will be implemented during project construction.

B-1 Reduced Construction Areas

The construction contractor will set construction boundaries to exclude environmentally sensitive habitat areas (ESHA) from the construction footprint, as appropriate.

The project footprint will be limited to previously disturbed areas, thus minimizing threats to sensitive areas, when possible.

		Potentially Significant		
	Potentially Significant	Unless Mitigation is Incorporated	Less Than Significant	No Impact
ISSUES (and Supporting Information Sources):	Impact			

Project work areas will be limited to the OCFCD right of way (ROW) greatly reducing the risk of impacting sensitive biological resources.

Huntington Beach Wetland Conservancy (HBWC) lands will not be entered by the construction crew and will be flagged as an ESHA thus minimizing threats to sensitive biological resources.

The project footprint will be set at the minimum size to accomplish necessary work, resulting in minimal impacts on the sensitive biological resources.

All personnel, equipment, and vehicles will remain within the set construction boundaries at all times to prevent impacts on special status species and sensitive vegetation communities.

B-2 *Caulerpa Taxifolia* Survey

To satisfy the EFH Assessment as mandated under Section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act, the request of Bryant Chesney of the National Marine Fisheries Service (NMFS), and the anticipated CDP through the CCC, the City will conduct one underwater Surveillance Level Survey for *Caulerpa taxifolia* as defined within the *Caulerpa Control Protocol* (Version 4, February 25, 2008), whereby 20 percent of the project area with the 10-meter buffer will be surveyed by a certified *Caulerpa* surveyor for the presence or absence of *Caulerpa*. The survey will be conducted within 30 to 90 days of project initiation during the high growth season (March 1 – October 31). If project start is outside of the growing season, a request will be made to the conduct the survey during that time. If *Caulerpa* is found, NMFS and CDFW will be notified within 24 hours of the discovery and a report will be submitted within 15 days following the discovery.

B-3 *Eelgrass* Survey

Pre-Construction Eelgrass Survey

A pre-construction eelgrass survey will be completed during the period of active growth of eelgrass (typically March through October). The pre-construction survey will be completed prior to the beginning of construction and will be valid until the next period of active growth. The survey will be prepared in compliance with the *Southern California Eelgrass Mitigation Policy* (SCEMP) (NMFS 1991) Revision 11 adopted by the NMFS and will be prepared in consultation with the CCC, CDFW, and the USACE. The survey will identify eelgrass within the project area that would be impacted by the project, and consultation with the aforementioned agencies would continue in order to determine necessary compensatory mitigation requirements.

Post Construction Eelgrass Survey

The City will survey the project area within one month after the conclusion of construction to determine if the eelgrass surveyed during the pre-construction survey has been adversely impacted. The survey will be prepared in compliance with the *Southern California Eelgrass Mitigation Policy* (SCEMP) (NMFS 1991)

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Potentially Significant Less Than Significant Impact	No Impact
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Revision 11 adopted by the NMFS and will be prepared in consultation with the CCC, CDFW, and USACE. The City will submit the post-construction eelgrass survey for the review and approval to the aforementioned agencies within 30 days after completion of the survey. If eelgrass has been impacted, the City will replace the impacted eelgrass at a minimum 1.2:1 ratio on-site, or at another location, in accordance with the SCEMP. All impacts on eelgrass habitat will be mitigated at a minimum ratio of 1.2:1 (mitigation: impact) or as negotiated with the aforementioned agencies. The exceptions to the required 1.2:1 mitigation ratio found within SCEMP will not apply.

B-4 Pre-Construction Botanical Surveys

Currently, the project footprint contains barren, compacted soils, gravel paths, and rock slope protection, all of which are devoid of vegetation. Due to an unknown project start date, this measure addresses the potential for future colonization by special status plant species. A qualified biologist will conduct pre-construction surveys for special status plant species that have the potential to occur within the BSA on OCFCD property, such as estuary seablite and coast woolly heads. If any special status plants are detected during pre-construction surveys, then the City will inform the USFWS and CDFW to determine what conservation measures will need to be implemented.

Additionally, the City will retain a qualified biologist to delineate and flag the boundaries of the nearby HBWC property, which does contain special status plants. This area will be flagged as an ESHA. The biologist will record and report observations during construction.

If special status plants are observed in the project footprint, these areas will also be flagged for avoidance as an ESHA immediately prior to construction. If this area cannot be avoided then the appropriate conservation measures will be applied, as approved by the agencies.

B-5 Pre-Construction Breeding Bird Surveys

To be in compliance with the MBTA and the California Fish and Game Code, and to avoid impacts or take of migratory non-game breeding birds, their nests, young, and eggs, the following avoidance and minimization measures will be implemented. These measures will help to reduce direct and indirect impacts caused by construction on migratory non-game breeding birds.

- Project activities that will remove or disturb potential nest sites will be scheduled outside the breeding bird season. The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions.
- If project activities cannot be avoided during February 15 through September 15, then a qualified biologist will conduct a pre-construction breeding bird survey for breeding birds and active nests or potential nesting sites within accessible areas the BSA. HBWC lands will be conducted only with binoculars. The survey will be conducted no more than seven days prior to the onset of scheduled activities, such as mobilization and staging. It will end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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- If no breeding birds or active nests are observed during the pre-construction survey or they are observed and will not be impacted, project activities may begin with a qualified biologist present up to eight hours weekly or as directed by the resource agencies.
- Some birds nest early in the breeding season, some birds nest late in the breeding season, and some birds nest multiple times throughout the season; therefore pre-construction breeding bird surveys may occur several times during the breeding season during construction in order to limit impacts on breeding birds.
- If a breeding bird territory is located during the pre-construction survey, a nesting bird deterrence and removal program may be implemented, as approved by the resource agencies, within the project footprint area for non-special status birds. Such deterrence methods may include removal of previous years' nesting materials and removal of partially completed nests in progress where possible. If nest deterrence is not possible, the identified nest with eggs or hatched young will be monitored until the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities.
- If an active bird nest is located during the pre-construction survey and will be potentially impacted, the site will be mapped and a "No Work/No Construction" buffer zone will be marked (fencing, stakes, flagging, orange construction fencing, etc.) a minimum of 200 feet in all directions or 500 feet in all directions for listed bird species and all raptors. The limits of the buffer will be demarcated so as to not provide a specific indicator of the location of the nest to predators or people. Materials used to demarcate the nests will be removed as soon as work is complete or the fledglings have left the nest. The biologist will determine the appropriate buffer size based on the type of activities planned near the nest and the type of bird that created the nest. Some bird species are more tolerant than others of noise and activities occurring near their nest. This no-activity buffer zone will not be disturbed until a qualified biologist has determined that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a biologist will be performed to determine when nesting is complete. After the nesting cycle is complete, project activities may begin within the buffer zone. The biologist will be present up to eight hours weekly during construction or as deemed appropriate by the resource agencies.
- If listed bird species are observed within the BSA during the pre-construction survey, the biologist will immediately map the area and notify the appropriate resource agency to determine suitable protection measures and/or mitigation measures and to determine if additional surveys or focused protocol surveys are necessary. Project activities may begin within the area only when concurrence is received from the appropriate resource agency.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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- Birds or their active nests will not be disturbed, captured, handled, or moved. Active nests will not be removed or disturbed; however, nests can be removed or disturbed if determined inactive by a qualified biologist.

B-6 Installation of Noise Controls

During breeding bird season, if construction noise is found to exceed ambient noise levels, then the City will install temporary noise barriers to ensure that construction does not result in impacts on resident or breeding special status birds, including the Belding’s savannah sparrow and light-footed clapper rail. Equipment will be fitted with mufflers and when feasible will use energy sources other than combustion engines, such as solar, or connect to the local power grid.

B-7 Pre-Construction Wildlife Surveys

To avoid impacts on special status wildlife species, a qualified biologist will perform a pre-construction survey of the BSA in suitable habitat within 30 days prior to construction and immediately prior to the first groundbreaking activities. A permitted biologist will be retained for species requiring a 10(A)(1)(a) permit for survey and monitoring.

- If no special status species are observed during the pre-construction survey or they are observed and will not be directly impacted from the project, project activities may begin and no further actions will be required.
- If special status species are observed during the pre-construction survey, appropriate measures will be implemented to avoid impacts on the species, such as flushing the species out of the area (if possible); flagging and avoiding the area; delaying project activities in the area until the animal species has cleared out; erecting orange construction fencing, silt fencing, exclusion fencing or other barriers to assure that the animal does not enter the construction area; or having a biologist present during work. However, if avoidance is not possible and the species will be directly impacted from the project, the biologist will be mark/stake the site(s) and map the individuals on an aerial map and with a GPS unit. The biologist will then contact the appropriate resource agencies to develop additional avoidance, minimization, and/or mitigation measures, prior to commencing project activities. Appropriate permits, if necessary, will also be obtained.
- If special status wildlife species are discovered during pre-construction surveys then the biologist will provide a description of each and explain the conservation measures relevant to their protection as part of the Workers’ Environmental Awareness Program (WEAP). During each visit, the monitor will ensure that mitigation measures are being implemented and impacts on these species will not be greater than anticipated.
- Conservation measures identified as part of the USFWS Section 7 Consultation and/or CDFW CESA consultation process will provide appropriate actions necessary to avoid and minimize impacts on resident and/or nesting federal/state listed species and other special status species within the BSA.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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The qualified biologist will assist in implementation of these measures with the construction personnel prior to the initiation of grading or any activity that involves the removal/disturbance of marsh habitat, including clearing, grubbing, mowing, disking, trenching, grading, or any other construction-related activity on the project area. Conservation measures are expected to include a WEAP, use of noise attenuation barriers, flagging of the 300-foot buffer zone, and monitoring and reporting for changes in nesting behavior.

- Weekly surveys for federal/state listed species and other special status species will occur throughout construction during the nesting season by a qualified biologist, or as deemed appropriate by the agencies.

B-8 Pre-Construction Bat Survey

To the extent feasible, the contractor will schedule construction activity outside of bat roosting season (typically between April 15 and August 1). Within 30 days prior to construction activities (including vegetation clearing and/or trimming), a qualified approved biologist will conduct a pre-construction survey for the presence of roosting bats within 300 feet of the project footprint.

Active Nursery Roosts

If active nursery roosts are found (typically between April 15 and August 1) within 300 feet of the project footprint, a work exclusion buffer of 300 feet would be cordoned off by the biologist. No work may be conducted within the work exclusion buffer until an approved biologist, in consultation with the project biologist, has determined that the juvenile bats are able to forage independently.

Non-Maternal Roosts

If the approved biologist finds evidence of roosting bats within 300 feet of the project footprint, prior to initiation of construction a biologist will be designated to monitor construction activities and advise construction personnel of the procedures for protecting bats and their habitats during the project, so long as the bat roost is in use by bats. If, as a result of pre-construction surveys, exclusion zones around trees or buildings are established to protect roosting bats, the biologist will advise the construction crews of those areas, the requirement to maintain work exclusion zones and will enforce the maintenance of those zones.

- The biologist will provide at least one bat safety training for the entire crew and will provide the training for construction workers who are new to the site, prior to their starting work. The biologist will also provide onsite direction for addressing habitat- or species-specific issues.
- Workers will be instructed regarding health risks and to avoid direct contact with bats.
- Because bats are nocturnal, work activities will not be conducted within 100 feet of any structure or tree identified as bat roosts (where evidence of present roosting bats has been identified) between sunset and sunrise. Airspace access to and from any bat roost is to remain approximately the same.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Bird-exclusion netting must not be used and access for bats shall not be blocked off. No clearing and grubbing will occur within 100 feet of bat roosts. Night lighting for construction activities is not to be used within 100 feet of any bat roost. Internal combustion equipment, such as generators, pumps, and vehicles are not to be parked, nor operated, under or adjacent to any occupied roosts. Personnel are not to be within 100 feet of a bat roost between sunset and sunrise.

- Under the supervision of the biologist, workers should cover unoccupied spaces that may later become bat roosts using material that will not trap birds or bats, such as plywood or tarps. Bird netting must not be used.

B-9 Invasive Species Control

Invasive species within the temporary disturbance areas will be controlled to the maximum extent feasible using hand pulling or hand tool removal methods only, per the request of OCFCD. Limiting control methods to hand pulling or hand tools will further protect the surrounding habitat and special status plant species. The spread of invasive weeds will be prevented to ensure the integrity of the southern coastal salt marsh habitat. No herbicides will be used on site due to its proximity to Talbert Channel.

B-10 Intertidal Work Will Take Place During Low Tide Only

Activities within intertidal areas will only occur during low tide to limit introduction of pollutants into the water and to minimize impacts on aquatic life.

B-11 General Construction Measures

The following general construction measures would be implemented during project construction:

- Prior to initiation of construction activities, the City will secure a Streambed Alteration Agreement from CDFW pursuant to 1600-1616 of the California Fish and Game Code, a Dredge and Fill permit from USACE pursuant to Section 404 of the CWA, a Water Quality Certification from the RWQCB pursuant to Section 401 of the CWA, and a CDP from the CCC pursuant to Section 30231 and 30233 of the California Coastal Act. The City will implement all conditions and measures contained within the “jurisdictional waters permits.”
- No vegetation clearing is expected for construction; however, every effort will be made to avoid encroaching upon the vegetated areas, and vegetation clearing will be kept to the absolute minimum.
- The entire work area will be clearly delineated with flagging and fencing. After the original fence has been removed, temporary construction fencing on the bridge will be installed to direct avian wildlife over vehicular traffic, and will remain in place until the new fence has been installed.
- All trash will be cleaned up and disposed of properly following each work day.
- Equipment will be checked each day to ensure that the fluid and contaminants are not leaking.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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- Silt fencing will be installed in upland areas to reduce potential for pollutants to enter the channel, including topsoil and construction debris. The silt fencing will be cleared of this debris, as needed, following storm events.
- No nighttime work will occur.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Source: 34)

Discussion: The project area is adjacent to the Talbert Marsh (to the south) and Brookhurst Marsh (to the west). The marshes consist of coastal saltwater marsh communities including disturbed alkali sink, pickleweed mats, and saltgrass flats. There is approximately 0.19 acre of disturbed alkali sink, 1.5 acres of pickleweed mat, and 4.8 acres of saltgrass flats within the marsh areas within the BSA. The saltmarsh communities have potential to be temporarily impacted by construction activities during staging. Because the project includes restoring the bridge to its original design specifications and there are no saltmarsh communities within the immediate work area, permanent impacts are not anticipated. There is also approximately 0.137 acre of tidal mudflats within the BSA; however, no temporary or permanent impacts on the mudflats are anticipated.

There is approximately 0.07 acre of eelgrass beds within the channel in the BSA. Eelgrass beds are important ecological communities because they serve as predation refuge and a food source to many estuarine species. Eelgrass beds could be impacted during construction if construction debris or material were to fall into the channel during construction or if they were to be smothered during installation of BMPs required for the project. With the implementation of mitigation measures B-1 through B-4 and B-9 through B-11 listed in response a) and W-1 through W-2 listed in Section IV. HYDROLOGY AND WATER QUALITY, impacts would be less than significant.

c) 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? (Source: 34)

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Discussion: A portion of the Huntington Beach Wetlands are within the BSA and are managed by the HBWC. The Huntington Beach Wetlands are tidally-influenced marshes that receive seawater via Talbert Channel and freshwater runoff from the Huntington Beach municipal stormwater system.

Talbert Channel is considered waters of the U.S. and state because it connects to a navigable waterway, and there are wetlands along the bank on the southwest side of the channel. There is approximately 0.733 acre of waters of the U.S. and state within the BSA within the intertidal and subtidal zones, and approximately 0.023 acre of waters of the state in the BSA above the high tide line. These areas could be temporarily impacted by the project if construction debris or material were to fall into the channel during construction.

All repair work would be completed on the bridge piers or decks above the high-water line. A working platform with protective cover would be required to contain the construction activities and would be installed during low tide. The working platforms and protective covers would be cleaned of debris and fine silt at the end of each work day before high tide, when they would become inundated. It is assumed that the protective covers would not be designed and constructed for channel flow loads, and should be removed at the end of each work day before high tide.

Because the project could result in temporary impacts on waters of the U.S., a Section 404 permit would be required. The project is expected to be permitted under Section 404 Nationwide Permit 14 for linear transportation projects. A Pre-construction Notification package would be submitted to USACE prior to project construction.

Because the project requires a 404 permit, a Section 401 Water Quality Certification would be required from the applicable RWQCB under CWA Section 401. A Water Quality Certification Application Package would be submitted to the RWQCB prior to project construction. Because the project would impact areas within CDFW jurisdiction, a Section 1602 of the California Fish and Game Code and a Streambed Alteration Agreement would also be required for the project.

With the implementation of mitigation measures B-1 and B-9 through B-11 listed in response a) and W-1 through W-2 listed in Section IV. HYDROLOGY AND WATER QUALITY, impacts would be less than significant.

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| 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? (Source: 34) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Discussion: There are no CDFW designated wildlife corridors in the BSA. However, the Talbert and Brookhurst Marshes are in the Pacific Flyway, and serve as a migration stop for various bird species.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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There are mature trees adjacent to the bike path and there is potential for birds to nest in the project area. In addition, removal of unsound concrete on the bridge piers could result in impacts on nesting birds if they are nesting on the bridge during construction. Most of the bird species observed in the BSA are common in developed areas and tolerant of human activity and disturbed habitats. However, there is potential that special-status birds could move into the area and nest in the BSA prior to construction.

The work area on the bridge would be enclosed with a working platform and protective cover, and dewatering of the channel would not be required for the project. Water flow in the channel would be unimpeded, and impacts on native resident or migratory fish species is not anticipated.

If sensitive wildlife species were to move into the project area during construction, construction activities in the channel could potentially result in direct and/or indirect impacts on these species through habitat disturbance. However, with the implementation of mitigation measures W-1 through W-4 listed in Section IV. HYDROLOGY AND WATER QUALITY and mitigation measures B-1 through B-11 listed in response a), impacts on nesting and migratory birds would be less than significant.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Source: 34)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Discussion: There are mature trees within the project area; however, no tree removal or vegetation removal is anticipated as part of the project. The project would be consistent with local policies and ordinances protecting biological resources, including the General Plan. Therefore, there would be no impact.

- 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? (Source: 35)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Discussion: The project area is located within the Orange County Transportation Authority Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP) area. The Orange County Transportation Authority NCCP/HCP is currently in preparation and is not yet applicable to the project. The only approved and implemented NCCP within Orange County is the Central/Coastal Orange County NCCP. The project area is not located within the plan area, and is therefore not subject to the provisions of the Central/Coastal Orange County NCCP. The project would not conflict with a HCP or NCCP; therefore, there would be no impact.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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VIII. MINERAL RESOURCES.

Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state? (Sources: 1, 21)

Discussion: Huntington Beach has historically been an area used for oil, gas, sand, gravel, and peat extraction. According to the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), there is one plugged oil well approximately 0.1 mile southwest of the project area, and another plugged oil well approximately 0.1 mile west of the project area. However, there are no active oil wells within the project area, and there are no other known mineral resources in the project area. The project would include repair and rehabilitation work on the existing bridge, and implementation of the project would not affect oil wells. Therefore, there would be no impact.

- 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? (Source: 1)

Discussion: According to the City’s General Plan, the project area is not within a mineral resource recovery site. The project would include repair and rehabilitation work on the existing bridge. Therefore, there would be no impact.

IX. HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Sources: 3, 6)

Discussion: Existing routine maintenance activities for the bridge include the use of paint on the bridge, sealants on the asphalt roadway surface, and other materials associated with routine maintenance of the structure. During construction, hazardous materials may be used including petroleum-based products, paints, solvents, and sealers; however, the transport, use, or disposal of these materials would be conducted in compliance with City, County, state, and federal regulations, which would minimize potential hazards. Following construction, there would be no increase in the routine transport, use, or

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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disposal of hazardous materials above routine maintenance. Therefore, impacts would be less than significant.

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| 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? (Sources: 3, 6) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Discussion: The project would include the removal and replacement of the concrete barriers and AC overlay; and removal and replacement of unsound concrete on the bridge bents and columns. Structures built before 1978 may contain asbestos-containing materials and/or lead-based paint. Because the bridge was constructed in 1958, there is potential for asbestos-containing material to be in bridge joints and concrete piping, and for lead-based paint to be in the steel members and pavement markings.

During construction, hazardous materials may be used, including petroleum-based products, paints, solvents, and sealers; however, the transport, use, or disposal of these materials would be conducted in compliance with City, County, state, and federal regulations. With adherence to existing construction standards and requirements, and implementation of mitigation measures H-1 through H-2 listed below, impacts would be less than significant.

Hazardous Materials Mitigation Measures:

To mitigate potential impacts resulting from hazardous materials, the following mitigation measures will be implemented during project construction.

H-1 Lead and Asbestos Survey

A lead and asbestos survey will be completed by a licensed specialist prior to construction to determine if there are lead- or asbestos-containing materials in the bridge structure. If none are found, no further action is necessary.

H-2 Proper Disposal

If found in the bridge structure, lead- and asbestos-containing materials will be handled and disposed of in a manner approved by the California Division of Occupational Safety and Health (Cal-OSHA), and the SCAQMD would be notified of the asbestos removal.

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| c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school? (Sources: 3, 6) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Discussion: The project area is not within 0.25 mile of an existing or proposed school; therefore, there would be no impact.

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| 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, create a significant hazard to the public or the environment? (Sources: 3, 22) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: A search of the California Department of Toxic Substances Control (DTSC) EnviroStor website did not identify any Federal Superfund Sites, State Response Sites, Voluntary Cleanup Sites, School Cleanup Sites, Permitted Sites, or Corrective Action Sites in or adjacent to the project area. There are two Leaking Underground Storage Tank (LUST) sites at the adjacent OCSD Plant No. 2, located northeast of the project area; however, these two sites have closed cases, indicating that cleanup of the sites has been completed.

As shown in **Figure 6** (Hazardous Materials Sites), there is a former oil derrick pad with leaking hydrocarbons located adjacent and southwest of the project area. The project would not require access into the former oil derrick pad area, and no excavation or ground-disturbing activities would be required for the project. Therefore, there would be no impact.



NO SCALE

Sources: City, 2011; Google Earth, 2014; and Biggs Cardoza Associates, 2014



FIGURE 6. HAZARDOUS MATERIALS SITES
Brookhurst Street Bridge Preventative Maintenance Project



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ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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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 for people residing or working in the project area? (Source: 3)

Discussion: The project area is approximately 5.6 miles southwest of the nearest airport, the John Wayne Airport. The project area is not within an airport land use planning area or within two miles of a public airport or public use airport; therefore, there would be no impact.

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Source: 3)

Discussion: The project area is not within the vicinity of a private airstrip. The closest private air strip is the Los Alamitos Army Airfield, which is about 10.9 miles northwest of the project area; therefore, there would be no impact.

- g) Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Sources: 3, 5)

Discussion: According to the City’s Tsunami Evacuation Map, Brookhurst Street is designated as a tsunami evacuation path. Other emergency evacuations in the City would be expected to follow a similar route. Two lanes (one lane in each direction) would be maintained on the bridge at all times during construction, and coordination would be conducted with the City’s emergency service providers to ensure that emergency response and evacuation can be properly implemented during construction. Construction and operation activities associated with the project would be conducted in compliance with the City’s Emergency Management and Homeland Security (EMHS) emergency response procedures. Therefore, impacts would be less than significant.

- h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (Source: 1)

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

Discussion: Wildlands are undisturbed areas where vegetation and wildlife remain in their natural state. The project area is in a developed area, and there are no wildlands within or adjacent to the project area; therefore, there would be no impact.

X. NOISE.

Would the project result in:

- a) 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? (Sources: 3, 6, 23)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Discussion: Construction activities for the project could result in short-term and intermittent increases in noise levels in the project area. Noise levels would vary depending on construction activity, equipment type, duration of use, and the distance between noise source and receiver. Typical sound emission characteristics of construction equipment that may be used during project construction are provided in Table 3 below (Construction Equipment Noise Levels). The noise levels are described in terms of Lmax, which is the maximum sound level of a particular noise event.

Table 3: Construction Equipment Noise Levels

Equipment Type	Maximum Noise Level (Lmax) of Equipment at 50 Feet (in A-weighted decibels (dBA))
Dump Truck	76
Front End Loader	79
Air Compressor	78
Pneumatic Tools	85
Concrete Mixer Truck	79
Concrete Pump Truck	81
Jackhammer	89
Sand Blasting	96

Source: U.S. Department of Transportation, Federal Highway Administration, 2011
Notes: The noise levels shown above are actual, measured noise levels based on measurements performed for the Central Artery/Tunnel Project. Noise measurements were averaged to compute the actual emission level.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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The construction equipment noise levels shown in **Table 3** exceed the noise levels specified in the City’s Noise Ordinance for residential land uses (55 A-weighted decibels (dBA) during the daytime, and 50 dBA during the nighttime). Single-family residences are located adjacent to and north of the project area. Therefore, sensitive noise receptors in surrounding residences would likely be exposed to noise levels in excess of the levels included in the Noise Ordinance. However, Chapter 8.40.090 of the City’s Municipal Code exempts construction activities from the provisions of the code, as long as a City permit is obtained, and construction activities do not take place between the hours of 8 p.m. and 7 a.m. from Monday through Saturday, and at any time on Sunday or a federal holiday.

Construction activities would be short-term and intermittent, and noise levels would return to existing conditions following construction. With adherence to the City’s Noise Ordinance for construction hours impacts would be less than significant.

Following construction, the roadway would remain on the same alignment with the same number of vehicle lanes; the project would not result in travel lanes being moved closer to the surrounding residential properties. Therefore, operation of the project would not change the existing noise environment in or near the project area. The project would not result in an increase in permanent noise levels that would exceed the noise standards included in the City’s Noise Ordinance.

- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (Sources: 6, 24)

Discussion: Groundborne vibration results from sound waves radiating through the ground. The sound caused by groundborne vibration is called groundborne noise. The ground motion caused by groundborne vibration is measured as peak particle velocity (PPV) in inches per second, and groundborne noise is measured as vibration decibels (Vdb). Typical outdoor sources of perceptible groundborne vibration and noise are construction equipment and traffic on rough roads.

The Federal Transit Administration (FTA) uses a PPV of 0.2 inch per second as the vibration damage threshold for fragile buildings and a PPV of 0.12 inch per second for extremely fragile historic buildings. The FTA criterion for infrequent groundborne noise events (fewer than 30 events per day) that may cause annoyance are 80 Vdb for residences and other buildings where people normally sleep.

The FTA has published standard vibration level and peak particle velocities for construction equipment operations. The calculated root mean square (RMS) velocity level expressed in Vdb and PPV for construction equipment at distances of 25, 50, and 100 feet are listed below in **Table 4** (Vibration Levels of Construction Equipment).

ISSUES (and Supporting Information Sources):

	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Table 4: Vibration Levels of Construction Equipment

Equipment	PPV at 25 feet (ft) in inches per second (in/sec)	RMS at 25 ft (Vdb)	PPV at 50 ft (in/sec)	RMS at 50 ft (Vdb)	PPV at 100 ft (in/sec)	RMS at 100 ft (Vdb)
Loaded Truck	0.0760	86	0.0269	77	0.0095	68
Jackhammer	0.0350	79	0.0124	70	0.0044	61
Small Bulldozer	0.0030	58	0.0011	49	0.0004	40

Source: Federal Transit Administration, 2006

Notes: PPV = peak particle velocity; in/sec = inches per second; RMS = root mean square; Vdb = vibration decibels

Following construction, the roadway would remain on the same alignment with the same number of vehicle lanes, and traffic lanes would not be moved closer to the surrounding residential properties. Therefore, operational groundborne vibration would not change within or near the project area.

As shown in **Table 4**, the groundborne vibration level of construction equipment would be below the most conservative FTA damage threshold of 0.12 inch per second PPV for extremely fragile historic buildings at a distance of 25 feet from the project area; therefore, buildings near the project area would not be damaged by construction-generated groundborne vibration. However, the groundborne noise level of a loaded truck would exceed the FTA criterion of 80 Vdb for infrequent groundborne noise events that may cause annoyance for residences. Sensitive noise receptors adjacent to the project area may potentially be exposed to groundborne noise levels above the FTA threshold.

It is expected that groundborne noise from project construction would be intermittent and would be localized near the project area. In addition, with adherence to the City’s noise control provisions, which prohibit construction between the hours of 8 p.m. and 7 a.m. from Monday through Saturday, and at any time on Sunday or a federal holiday, impacts would be less than significant.

- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (Source: 3)
-

Discussion: Following construction, the roadway would remain on the same alignment with the same number of vehicle lanes, and travel lanes would not be moved closer to the surrounding residential properties. Therefore, the project would not result in changes in the existing ambient noise levels within or near the project area, and there would be no impact.

- d) A substantial temporary or periodic increase in
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ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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ambient noise levels in the project vicinity above levels existing without the project?
(Sources: 6, 23)

Discussion: The project would result in the generation of noise levels during construction that would exceed levels specified in the City’s Noise Ordinance for residential uses; however, Chapter 8.40.090 of the City’s Municipal Code exempts the proposed construction from the provisions of the code, as long as a City permit is obtained, and construction activities do not take place between the hours of 8 p.m. and 7 a.m. from Monday through Saturday, and at any time on Sunday or a federal holiday. In addition, construction noise would be temporary and intermittent; noise levels would vary depending on the phase of construction and type of equipment used. With adherence to the City’s noise control provisions that require a permit and prohibit construction between the hours of 8 p.m. and 7 a.m. from Monday through Saturday, and at any time on Sunday or a federal holiday. Although impacts would be less than significant, the following measures are proposed to reduce noise during construction and minimize annoyance to sensitive receptors.

Noise Mitigation Measures:

During construction, the following mitigation measures will be included in the project specifications and implemented.

N-1 Noise Control Measures

- All construction equipment, fixed or mobile, will be maintained in proper operating condition, and mufflers shall be working adequately.
- All construction equipment will be located so that emitted noise is directed away from sensitive noise receptors.
- Stockpiling and vehicle-staging areas will be located away from sensitive noise receptors during construction activities, to the extent feasible.
- Two weeks prior to construction, notification of construction will be provided in writing to residences within 150 feet of the active construction area.
- Temporary noise barriers, including sound blankets, will be installed between the areas of active construction and sensitive receptors, as needed.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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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 expose people residing or working in the project area to excessive noise levels? (Sources: 1, 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area is approximately 5.6 miles southwest of the nearest airport, the John Wayne Airport. The project area is not within an airport land use planning area or within two miles of a public airport or public use airport; therefore, there would be no impact.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (Sources: 1, 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area is not in the vicinity of a private airstrip. The closest private air strip is the Los Alamitos Army Airfield, which is about 10.9 miles northwest of the project area; therefore, there would be no impact.

XI. PUBLIC SERVICES.

Would the project result in substantial adverse physical impacts associated with the provision of 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:

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Fire protection? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities or governmental services? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion a) – e): The project would include repair and rehabilitation work on the existing bridge, which is a public facility. The project would not result in an increased number of lanes on the bridge or an increased capacity of the bridge; therefore, the project would not result in population growth that would

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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require the need for additional fire protection services, police protection services, schools, parks, or other public facilities or governmental services. The purpose of the project is to enhance public safety, extend the useful life of the bridge, and prevent environmental damage by performing repair and rehabilitation work on the existing bridge. Therefore, there would be no impact.

XII. UTILITIES AND SERVICE SYSTEMS.

Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (Source: 3)

Discussion: Implementation of the project would not induce population growth or generate wastewater; therefore, there would be no impact.

- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Source: 3)

Discussion: Implementation of the project would not induce population growth or result in a need for additional water or wastewater treatment facilities; therefore, there would be no impact.

- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Sources: 3)

Discussion: Existing storm water drainage facilities on the bridge include curbs and gutters that divert storm water onto adjacent roadways. During project construction, storm water management would comply with standard BMPs and regulatory permits. BMPs that may be considered for the project include, but are not limited to, preservation of existing vegetation, silt fences, street sweeping, storm drain protection, and waste management to avoid the degradation of water quality. Specific BMPs would be identified prior to construction during the preparation of the SWPPP. Operation of the project would not result in increases in impermeable surfaces that would require new or expanded storm water drainage facilities. In addition, no alterations or modifications would be made to the storm drain system. Therefore, there would be no impact.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (Source: 3)

Discussion: Implementation of the project would not induce population growth or require a water supply; therefore, there would be no impact.

- e) 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? (Sources: 1, 3)

Discussion: The project would not require wastewater treatment; therefore, there would be no impact.

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (Sources: 3, 25)

Discussion: Solid waste generated in Huntington Beach is transported to the Frank R. Bowerman Landfill in the City of Irvine. The landfill is permitted to receive a maximum of 11,500 tons per day and is anticipated to close in 2053. Solid waste, including concrete and asphalt waste, would be generated during the construction phase, which would be accommodated by the existing landfill. Any lead and asbestos containing materials found at the time of inspection and removed during demolition would be disposed of at a location approved by Cal-OSHA. After construction is completed, solid waste would not be produced during the operational phase of the project. Therefore, impacts would be less than significant.

- g) Comply with federal, state, and local statutes and regulations related to solid waste? (Sources: 3, 25)

Discussion: The project would comply with federal, state, and local statutes and regulations related to solid waste, and temporary construction waste would be accommodated by the Frank R. Bowerman Landfill in the City of Irvine; therefore, there would be no impact.

- h) Include a new or retrofitted storm water treatment control Best Management Practice (BMP) (e.g., water quality treatment basin,

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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constructed treatment wetlands)? (Source: 3)

Discussion: During project construction, storm water management would comply with standard BMPs and regulatory permits. BMPs that may be considered for the project include, but are not limited to, preservation of existing vegetation, silt fences, street sweeping, storm drain protection, and waste management to avoid the degradation of water quality. Specific BMPs would be identified prior to construction during the preparation of the SWPPP. Operation of the project would not require a new or retrofitted storm water treatment control BMP; therefore, there would be no impact.

XIII. AESTHETICS.

Would the project:

- a) Have a substantial adverse effect on a scenic vista? (Sources: 1, 3)

Discussion: Scenic vistas visible from the roadway include views of the channel and Huntington Beach Wetlands to the south and west, and the Pacific Ocean to the southwest. Single-family residences to the north of the project area, as well as pedestrians and bicyclists traveling along the northeast bank of the channel, also have views of the roadway, in addition to the channel, wetlands, and the ocean.

The project would restore the integrity of the bridge’s original design, and would not change the size, profile, or location of the bridge; therefore, the general aesthetics of the bridge and surrounding area would remain the same. During construction, the project would result in short-term visual impacts on residents with views of the bridge and vehicles driving across the bridge; however, the bridge would be restored to its original condition following construction. Therefore, impacts would be less than significant.

- b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Sources: 1, 26)

Discussion: Traffic management activities would be required on PCH, which is designated as an Eligible State Scenic Highway; however, these activities would be temporary and there would be no permanent impacts on scenic resources. Therefore, impacts would be less than significant.

- c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Sources: 1, 3)

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Discussion: The project area includes views of the channel and Huntington Beach Wetlands to the south and west, and the Pacific Ocean to the southwest. The project would restore the integrity of the bridge's original design, and would not change the size, profile, or location of the bridge. Therefore, the general aesthetics of the bridge and surrounding area would remain the same. During construction, the project would result in short-term visual impacts on residents with views of the bridge and vehicles driving across the bridge; however, the bridge would be restored to its original condition following construction. The project would not substantially change or degrade the visual character or quality of the project area or its surroundings; therefore, impacts would be less than significant.

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Source: 3)

Discussion: The project would include repair and rehabilitation work on the existing bridge, and construction activities would be completed during daytime hours before 8 p.m. in compliance with the City's Noise Ordinance. No new sources of light or glare would be included in the project; therefore, there would be no impact.

XIV. CULTURAL RESOURCES.

Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (Sources: 27, 28)

Discussion: According to the Caltrans Historical Bridge Inventory (July 2014), the bridge is not eligible for listing in the National Register of Historic Places (NRHP). According to the NRHP, no historic places are recorded within 0.5 mile of the project area. The listing of California Historic Landmarks was also reviewed, and no historic landmarks are located within 0.5 mile of the project area. Therefore, there would be no impact.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Source: 3)

Discussion: See response b) - d), below.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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| c) Directly or indirectly destroy a unique paleontological resource or site unique geologic feature? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: See response b) - d), below.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Disturb any human remains, including those interred outside formal cemeteries? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion b) – d): The project would include repair and rehabilitation work on the existing bridge. There would be no excavation or soil disturbance required for the project. Archaeological resources, paleontological resources, unique geologic features, and human remains are not expected to be in the project area because the area has been previously disturbed. Therefore, impacts would be less than significant.

XV. RECREATION.

Would the project:

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| a) Increase the use of existing neighborhood, community, and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would include repair and rehabilitation work on the existing bridge, and would not result in an increased use of existing neighborhood and regional parks, or other recreational facilities. A bike path is located along the northeast bank of the channel, but the project would not affect access to or use of the path both during and following construction. Therefore, the project would not result in physical deterioration of parks or recreational facilities, and there would be no impact.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would include repair and rehabilitation work on the existing bridge, and would not include the construction of new recreational facilities or require the expansion of existing recreational facilities. Therefore, there would be no impact.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
c) Affect existing recreational opportunities? (Sources: 1, 3, 6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion: There are sidewalks and bike lanes on both sides of the bridge and roadway that are part of the circulation network providing access to Huntington State Beach. Therefore, repair and rehabilitation of the bridge is essential in maintaining long-term coastal access via Brookhurst Street. During construction, pedestrian and bicycle access would be maintained at all times; therefore, impacts would be less than significant.

XVI. AGRICULTURAL AND FOREST RESOURCES.

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (Sources: 3, 29)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Discussion: According to the Orange County Important Farmland 2010 Map produced by the California Department of Conservation, there are no farmlands in or adjacent to the project area. Therefore, there would be no impact.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (Source: 30)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Discussion: Land within and adjacent to the project area is zoned as RL, CC, and RA. The area zoned as RA is located on the adjacent OCSD property (Plant No. 2). All project construction would be completed within existing City or OCFCD ROW; therefore, the project would not conflict with existing zoning for agricultural use.

Williamson Act contracts are contracts with counties and cities to restrict land use to agricultural and compatible open space uses, for the purpose of discouraging conversion to urban uses. There is no land used for agricultural purposes in or adjacent to the project area; therefore, the project would not conflict with a Williamson Act contract, and there would be no impact.

c) 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (Source: 30)

Discussion c) – d): Land within and adjacent to the project area is zoned as RL, CC, and RA. There is no land zoned for forest land or timberland in or adjacent to the project area. Therefore, there would be no impact.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Result in the loss of forest land or conversion of forest land to non-forest use? (Source: 30) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: See response c) - d), above.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? (Sources: 3, 29, 30) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: As discussed above, the project area is not within an area designated for or being used for agricultural or forest uses; therefore, there would be no impact.

XVII. GREENHOUSE GAS EMISSIONS.

Would the project:

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Source: 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion:

The SCAQMD has prepared a Draft Guidance Document entitled Interim CEQA Greenhouse Gas Significance Thresholds (October 2008) for evaluating operational and construction impacts of proposed industrial projects, and has adopted an interim threshold of 10,000 tonnes of CO₂-equivalent per year. (One tonne, or "metric ton," is equivalent to 1,000 kilograms.)

Operation of the project would not result in an increased number of lanes on the bridge or increased bridge capacity; therefore, operation of the project would not result in the generation of new sources of greenhouse gas (GHG) emissions.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Potentially Significant Less Than Significant Impact	No Impact
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Construction-related GHG emissions are typically generated by motorized vehicles used for material transportation or the commute of construction workers. Construction of the project would result in the generation of temporary, short-term emissions of GHG; the amount of emissions generated would vary depending on multiple factors, including the type of equipment used and the length of use. Mobile source emissions from construction equipment are typically highest during use of heavy-duty, diesel-fueled equipment. CARB has adopted the In-Use Off-Road Diesel Vehicle Regulation, which includes enforceable elements, such as limits on vehicle idling to no more than five consecutive minutes, and equipment reporting and labeling. Construction would be conducted in compliance with these regulations.

The project area would be less than 0.5 acre and construction activities would be completed within approximately six months. Because the project is small in scale and short-term in duration, the contribution of construction GHG emissions to climate change would be minor. CalEEMod estimated the project to generate 219.2 metric tons over the construction period. Therefore, the project would generate less CO₂ than the SCAQMD interim threshold, and 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? (Sources: 3, 31, 37)

Discussion: GHG gas emissions in California are regulated through Assembly Bill (AB) 32, which requires California’s GHG emissions to be reduced to 1990 levels by 2020. As discussed above, operation of the project would not result in an increased number of lanes on the bridge or an increase bridge capacity; therefore, it would not result in the generation of new sources of GHG emissions. Construction activities for the project would be limited to six months; therefore, the contribution of construction GHG emissions to climate change would be minimal. As discussed in response a.), the project would generate less CO₂ than the SCAQMD interim threshold and therefore would not conflict with any local or state targets for GHG reductions.

The project was included in regional transportation plans and associated emissions analyses, including the FTIP and emissions analysis conducted by SCAG for the conforming 2012-2035 RTP/SCS. The project would not conflict with any local or state policies for GHG emissions. Therefore, impacts would be less than significant.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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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?

Discussion: There are several special-status plant and wildlife species with potential to be in the project area, based on geographic distribution. Several sensitive-species were observed in the BSA during biological surveys, and based on existing habitat, there is potential for threatened or endangered species to be in the project area. Construction activities could potentially result in direct and/or indirect impacts on these species through habitat disturbance.

Construction of the project would result in temporary impacts on approximately 0.733 acre of waters of the U.S. and 0.756 acre of waters of the state. In addition, Talbert Channel is designated EFH for Pacific groundfish under the PGFMP, and EFH could be impacted if construction materials and debris were to fall into the channel.

Replacement of unsound concrete on the bridge piers could also result in impacts on nesting birds if they are on the bridge during construction. With compliance with regulatory permits and implementation of mitigation measures W-1 through W-4 listed in Section IV. HYDROLOGY AND WATER QUALITY and B-1 through B-11 listed in Section VII. BIOLOGICAL RESOURCES, impacts would be less than significant.

- b) Does the project have 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.) (Sources: 3, 32, 33)
-

Discussion: Because the project is small in scale, the cumulative impact area for the project has been identified as a 1-mile radius from the bridge. Past projects in this cumulative impact area include the construction of the existing channel, surrounding residential neighborhoods, and the adjacent OCSD Plant No. 2. To determine current and future construction and development projects, a list of current planning applications for the City (as of May 16, 2014) was reviewed, and a query of the CEQAnet environmental database was conducted for projects submitted to the State Clearinghouse for environmental review from

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--	--------------------------------	---	------------------------------	-----------

August 2013 through August 2014. Based on this research, the following construction and development projects within a 1-mile radius of the project area have been included in the cumulative analysis:

- City planning application to permit a Master Conditional Use Permit (CUP) for installation of 38 Water Division Data Collection Units (DCU) on 30 foot high poles at various City facilities.
- City planning application for a CUP to demolish an existing gas station and construct a new 3,120 square foot Chase bank at 21502 Brookhurst Street.
- Southwest Costa Mesa Trunk Sewer Project No. 6-19: Notice of Determination and Final Environmental Impact Report submitted to the State Clearinghouse on July 29, 2014 to construct a new trunk sewer from the existing Newport Beach Pump Station site at the west end of Walkabout Circle to the OCSD Interplant Line in Brookhurst Street (OCSD sewer pipeline). The project also includes the construction of several Costa Mesa Sanitary District (CMSD) and City of Newport Beach pipelines connecting to the proposed OCSD sewer pipeline, and the abandonment of several CMSD and City of Newport Beach pump stations.
- Newport Beach General Plan Land Use Element Amendment: Supplemental EIR submitted to the State Clearinghouse on March 17, 2014 and Notice of Determination submitted on July 24, 2014 to amend the City of Newport Beach General Plan Land Use Element. The amendment is intended to shape future development within the City of Newport Beach and involves the alteration, intensification, and redistribution of land uses in certain areas of Newport Beach, including major areas such as Newport Center/Fashion Island and the Airport Area near John Wayne Airport. The amendment proposes changes to land use designation and/or development capacities in these subareas. The proposed project also includes revisions to the Land Use Element goals and policies as they relate to land use changes, in support of recent Neighborhood Revitalization efforts, and, as appropriate, updates/refinements to policies. Subsequent amendments of the Newport Beach Coastal Land Use Plan (CLUP), and Zoning code and Map will be necessary to reflect the amendment to the General Plan.
- Magnolia Street Bridge Preventative Maintenance Project: Mitigated Negative Declaration submitted to the State Clearinghouse on October 24, 2013 to perform maintenance activities on the existing Magnolia Street bridge that are intended to restore the integrity of its original design.
- Remedial Action Plan for Ascon Landfill Site: Draft Environmental Impact Report submitted to the State Clearinghouse on August 28, 2013 to implement a Remedial Action Plan (RAP) at the Ascon Landfill Site. The preferred alternative per the RAP to remedy the site generally includes partial removal of waste materials within the site and a protective cap over the remaining waste materials. However, the EIR includes an analysis of a range of alternatives to remedy the site, including removal of all waste materials from the site.

ISSUES (and Supporting Information Sources):	Potentially Significant Impact	Potentially Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
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Along with the planned projects and other potential projects in the cumulative impact area, the project has the potential to contribute to cumulative impacts. With the implementation of standard BMPs, compliance with regulatory permits, and implementation of mitigation measures (see **Attachment 2**, Summary of Mitigation Measures), project impacts would be less than significant. Therefore, when viewed in connection with other planned projects, the project’s contribution to cumulative impacts would be less than cumulatively considerable.

- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (Source: 3)
-

Discussion: The project would include repair and rehabilitation work on the existing bridge. All bridge construction would be completed within the City’s or OCFCD’s ROW, and the existing grade, alignment, and design of the bridge would be maintained. With the implementation of standard BMPs, compliance with regulatory permits, and implementation of mitigation measures (see **Attachment 2**, Summary of Mitigation Measures), neither construction nor operation of the project would result in substantial adverse impacts on human beings, either directly or indirectly, and impacts would be less than significant.

XIX. EARLIER ANALYSIS/SOURCE LIST.

Earlier analyses may be used where, pursuant to the tiering, a program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration (*CEQA Guidelines, Section 15063 (c)(3)(D)*). Earlier documents prepared and utilized in this analysis, as well as sources of information, are as follows:

<u>Reference #</u>	<u>Document Title</u>	<u>Available for Review At:</u>
1	City of Huntington Beach General Plan	City of Huntington Beach Planning and Building Dept. 2000 Main Street, Huntington Beach, CA and at http://www.huntingtonbeachca.gov/government/departments/planning/gp/index.cfm
2	City of Huntington Beach Zoning and Subdivision Ordinance	City of Huntington Beach City Clerk's Office, 2000 Main Street, Huntington Beach, CA and at http://www.huntingtonbeachca.gov/Government/Elected_Officials/city_clerk/Zoning_Code/index.cfm?cross=ture&department=planning&sub=zoning&page=
3	Project Plans	See Attachment 1
4	Alquist-Priolo Earthquake Fault Zoning Map, Newport Beach Quadrangle, Effective July 1, 1986, California Department of Conservation	http://gmw.consrv.ca.gov/shmp/download/quad/NEWPORT_BEACH/maps/NEWPORTBCH.PDF
5	Tsunami Evacuation Map, September 2010, City of Huntington Beach Information Services Department	http://www.huntingtonbeachca.gov/about/maps/tsunami-evacuation.pdf
6	City of Huntington Beach Municipal Code	City of Huntington Beach City Clerk's Office, 2000 Main Street, Huntington Beach, CA and at http://www.huntingtonbeachca.gov/government/elected_officials/city_clerk/municipal_code/
7	FEMA FIRM for Orange County, Map Number 06059C0264J, Revised December 3, 2009	FEMA Map Service Center: https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1

8	Tsunami Inundation Map, Newport Beach Quadrangle, March 15, 2009, California Emergency Management Agency, California Geological Survey, University of Southern California	http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Orange/Documents/Tsunami_Inundation_NewportBeach_Quad_Orange.pdf
9	Ambient Air Quality Standards, June 14, 2013, CARB	http://www.arb.ca.gov/research/aaqs/aaqs2.pdf
10	Final 2012 Lead State Implementation Plan, SCAQMD	http://www.aqmd.gov/hb/attachments/2011-2015/2012May/2012-May4-030.pdf
11	2012 State Area Designations, April 1, 2013, CARB	http://www.arb.ca.gov/desig/adm/adm.htm
12	Green Book Non-attainment Areas for Criteria Pollutants Webpage, 2013, U.S. EPA	http://www.epa.gov/oaqps001/greenbk/index.html
13	Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, Adopted July 22, 2004, 13 California Code of Regulations (CCR) Section 2485, CARB	http://www.arb.ca.gov/msprog/truck-idling/2485.pdf
14	Rule 403, Fugitive Dust, Last Amended June 3, 2005, SCAQMD	http://www.aqmd.gov/rules/reg/reg04/r403.pdf
15	Final 2012 AQMP, February 2013, SCAQMD	http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan
16	2012-2035 RTP/SCS, Project List (Page 68), Adopted April 4, 2012, SCAG	http://rtpscs.scag.ca.gov/Documents/2012/final/SR/2012fRTP_ProjectList.pdf
17	Final 2013 FTIP, Adopted September 19, 2012, Orange County, Local Highways Project Listing (Page 6), SCAG	http://www.scag.ca.gov/ftip/pdf/final/2013/F2013-FTIP-LocalORA.pdf
18	Bikeways Map, March 2012, City of Huntington Beach Information Services Department	http://www.huntingtonbeachca.gov/about/maps/CityBikeways.pdf
19	Bus System Map, Effective June 8, 2014, Orange County Transportation Authority (OCTA)	http://www.octa.net/pdf/OCTASystemMapjune14.pdf
20	2013 Orange County CMP, OCTA	http://www.octa.net/pdf/Final%202013%20CMP.pdf

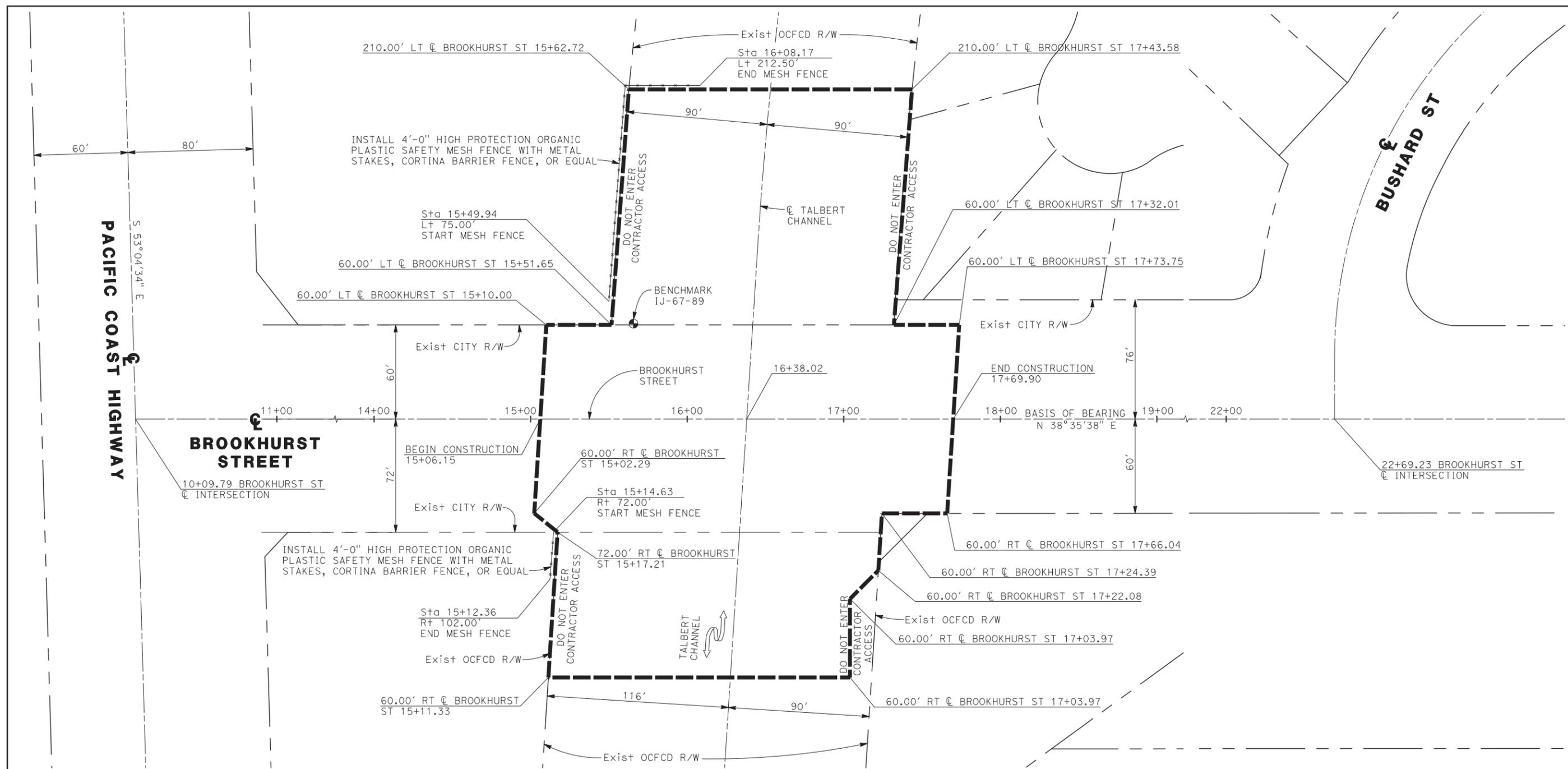
21	DOGGR Online Mapping System, California Department of Conservation	http://maps.conservation.ca.gov/doggr/index.html#openModal
22	DTSC Envirostor Website	http://www.envirostor.dtsc.ca.gov/public/
23	Construction Noise Handbook, Chapter 9.0 Construction Equipment Noise Levels and Ranges, Updated July 5, 201, U.S. Department of Transportation, Federal Highway Administration	http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm
24	Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, Federal Transit Administration	http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf
25	OC Waste & Recycling, Frank R. Bowerman Landfill	http://oclandfills.com/landfill/active/bowerman
26	Caltrans Scenic Highway Program	http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm
27	Caltrans Historical Bridge Inventory, Local Agency Bridges	http://www.dot.ca.gov/hq/structur/strmaint/hs_local.pdf
28	National Register of Historic Places, Database Search	http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome
29	2010 Orange County Important Farmland Map, Published August 2011, California Department of Conservation	ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/ora10.pdf
30	City of Huntington Beach Zoning Map, 2014, Information Services Department	http://www.huntingtonbeachca.gov/about/maps/zoning.pdf
31	Assembly Bill 32: Global Warming Solutions Act	http://www.arb.ca.gov/cc/ab32/ab32.htm
32	City of Huntington Beach Current Planning Applications, Updated May 16, 2014, City of Huntington Beach Planning and Building Department	http://www.huntingtonbeachca.gov/announcements/attachments/planning-division-application-log.pdf
33	CEQAnet Database	http://www.ceqanet.ca.gov/QueryForm.asp
34	Brookhurst Street Bridge Preventive Maintenance Project, Natural Environment Study, August 2014, Caltrans	City of Huntington Beach Planning and Building Dept. 2000 Main Street, Huntington Beach, CA

- 35 California Regional Conservation Plans, March 2014, CDFW <https://www.dfg.ca.gov/habcon/nccp/status/>
- 36 What is a Seiche?, National Oceanic and Atmospheric Administration <http://oceanservice.noaa.gov/facts/seiche.html>
- 37 California Air Pollution Control Officers Association, CalEEMod 2013.2.2 <http://www.caleemod.com/>

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Attachment 1

Project Plans



BENCHMARKS AND BASIS OF BEARINGS:

HORIZONTAL CONTROL:
 THE HORIZONTAL COORDINATES OF THIS SURVEY ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE VI, 1983 NAD, (1991.35 EPOCH OCS GPS ADJUSTMENTS).
 THE BEARING N38°35'38"E OF THE MONUMENT LINE OF BROOKHURST STREET, AS SHOWN ON THAT CERTAIN RECORD OF SURVEY 2005-1075 IN THE CITY OF HUNTINGTON BEACH, COUNTY OF ORANGE, STATE OF CALIFORNIA, FILED FOR RECORD ON DECEMBER 23, 2008, IN BOOK 232 OF RECORD OF SURVEYS AT PAGES 1 THROUGH 10 INCLUSIVE, RECORDS OF ORANGE COUNTY, WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS SURVEY.

VERTICAL CONTROL:
 BENCHMARK: 1J-67-89
 FOUND ORANGE COUNTY PUBLIC WORKS 3 3/4" OCS ALUMINUM BENCHMARK DISK IN THE SOUTHERLY END OF A CONCRETE HEADWALL. MONUMENT IS LOCATED IN THE SOUTHWEST CORNER OF THE INTERSECTION OF THE TALBERT CHANNEL AND BROOKHURST STREET, 65 FEET WESTERLY OF THE CENTERLINE OF BROOKHURST STREET AND 85 FEET SOUTHERLY OF A 36 IN RCP SOUND IN THE CENTER OF THE BRIDGE. DISK IS STAMPED "1J-67-89".
 ELEVATION = 11.191 FEET (NAVD 88)



PLAN CHECK SET/NOT FOR CONSTRUCTION (1/9/15)

Underground Service Alert

 Call: 811
 TWO WORKING DAYS BEFORE YOU DIG

REVISIONS				
REV.	DATE	BY	DESCRIPTION	APP/VD

REFERENCES			

BIGGS CARDOSA ASSOCIATES INC
 STRUCTURAL ENGINEERS
 500 So. Main St., Suite 400
 Orange, California 92668
 714-550-4665

REGISTERED PROFESSIONAL ENGINEER
 MICHAEL A. THOMAS
 No. S4676
 Exp. 9/30/16

PREPARED UNDER THE SUPERVISION OF:
 Michael A. Thomas PRINCIPAL S.E. DATE
 R.S.E. NO.: S4676 EXP. DATE: 9/30/16
 APPROVED BY:
 M. Todd Broussard PRINCIPAL C.E. DATE
 R.C.E. NO.: C57144 EXP. DATE: 12/31/15

CITY OF HUNTINGTON BEACH
 DEPARTMENT OF PUBLIC WORKS

SITE PLAN
BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE
 (OVER TALBERT CHANNEL)
 STA. 15+06.15 TO STA. 17+69.90

SHEET NO.	2
OF	13
T2	

COAST HWY

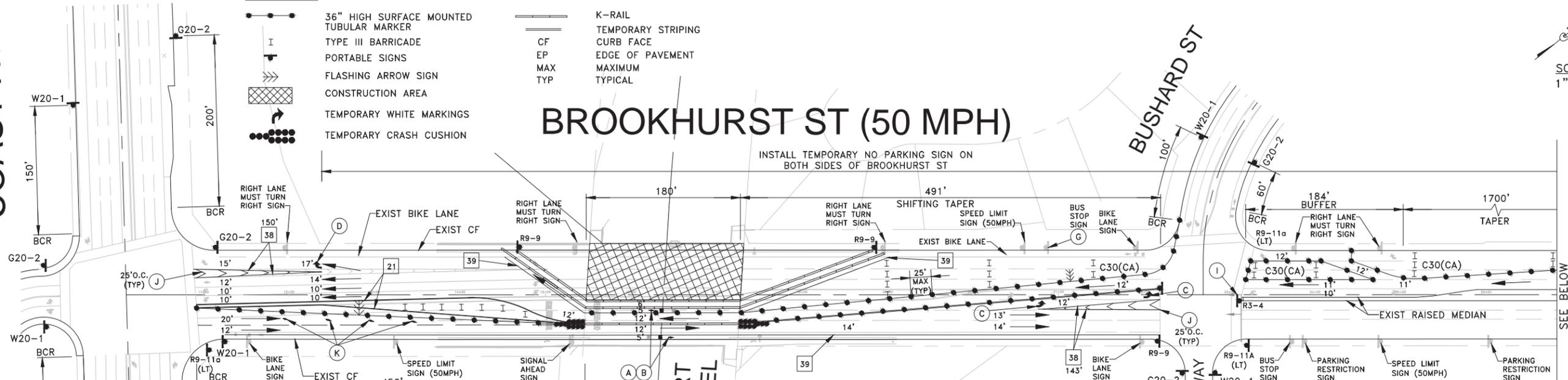
PACIFIC

LEGEND

- 36" HIGH SURFACE MOUNTED TUBULAR MARKER
- TYPE III BARRICADE
- PORTABLE SIGNS
- FLASHING ARROW SIGN
- CONSTRUCTION AREA
- TEMPORARY WHITE MARKINGS
- TEMPORARY CRASH CUSHION
- K-RAIL
- TEMPORARY STRIPING
- CURB FACE
- EDGE OF PAVEMENT
- MAXIMUM TYPICAL

BROOKHURST ST (50 MPH)

SCALE 1"=60'



TEMPORARY STRIPING AND MARKINGS NOTES:

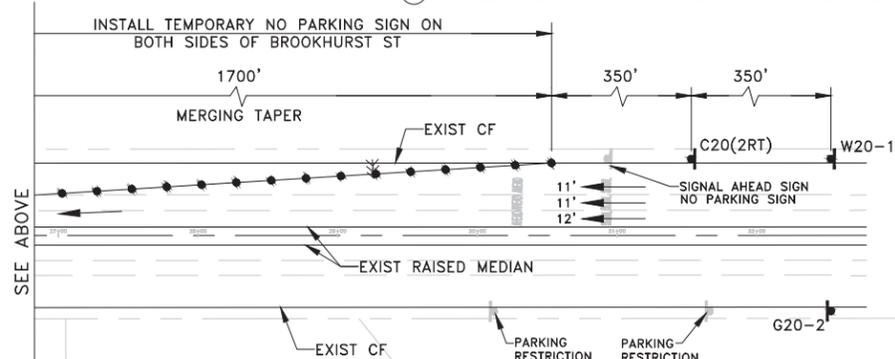
ALL TEMPORARY STRIPINGS AND PAVEMENT MARKINGS SHALL BE PER CALTRANS STANDARD PLANS (LATEST EDITION).

59A INDICATES DETAIL NUMBER PER CALTRANS STD PLANS A20A TO A20D.

- (A) INSTALL BIKE LANE ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (B) INSTALL "BIKE LANE" PAVEMENT MARKING PER CALTRANS STD PLANS A24D.
- (C) INSTALL TYPE IV(L) ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (D) INSTALL TYPE IV(R) ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (E) INSTALL TYPE I ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (F) INSTALL 4" WIDE WHITE SOLID LINE.
- (G) COVER EXISTING CONFLICTING SIGN.
- (H) INSTALL TYPE I THROUGH ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (I) INSTALL SIGN ON EXISTING TRAFFIC SIGNAL MAST ARM.
- (J) INSTALL 12" WIDE WHITE CHEVRON LINE PER CROSSWALK AND LIMIT LINE DETAIL IN CALTRANS STANDARD PLANS A24E.
- (K) INSTALL TYPE VI ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.

GENERAL NOTES TRAFFIC CONTROL:

1. A. ALL TRAFFIC CONTROL WORK FOR CONSTRUCTION SHALL CONFORM TO THE PART 6 OF THE CALIFORNIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (2012 EDITION) (CAMUTCD).
- B. ALL NEW SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE CALIFORNIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC DEVICES FOR STREETS AND HIGHWAYS (CAMUTCD), 2012 EDITION. ALL SIGN SIZES SHALL BE THE STANDARD SIZE SHOWN IN THEIR RESPECTIVE PUBLICATIONS UNLESS NOTED OTHERWISE ON THE PLAN. ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL BE REFLECTORIZED. ALL TUBULAR PORTABLE DELINEATORS SHALL BE 36" MINIMUM HEIGHT AND SHALL HAVE 2 HIGH INTENSITY REFLECTIVE BANDS WITH A TOTAL OF 6" HEIGHT. CONES SHALL BE 28" MINIMUM HEIGHT AND SHALL HAVE 2 HIGH INTENSITY REFLECTIVE BANDS WITH A TOTAL OF 10" HEIGHT REFLECTIVE SURFACE.
- C. ALL NEW STRIPING, PAVEMENT MARKERS, PAVEMENT LEGENDS, ARROWS, MARKINGS AND CURB PAINTING SHALL CONFORM TO THE 2010 CALTRANS STANDARD SPECIFICATIONS SECTION 84, TRAFFIC STRIPES AND PAVEMENT MARKINGS, AND SECTION 85, PAVEMENT MARKERS, STANDARD PLANS A20A-D AND A24A-E. THE CURRENT CITY OF HUNTINGTON BEACH PUBLIC WORKS DEPARTMENT STANDARD PLANS, AND THESE PLANS. CONTRACTOR SHALL RESTORE ANY AND ALL STRIPING AND PAVEMENT MARKINGS DAMAGED OR REMOVED DURING CONSTRUCTION PER CITY OF HUNTINGTON BEACH REQUIREMENTS. CONTRACTOR MAY USE PREFABRICATED REMOVABLE DETOUR TAPE, PAVEMENT ARROWS, AND RAISED PAVEMENT MARKERS FOR SHORT-TERM USE AS DIRECTED BY THE ENGINEER.
2. NOTHING IN THESE NOTES OR PLANS SHALL RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS.
3. THE ENGINEER SHALL BE DEFINED AS THE CITY OF HUNTINGTON BEACH TRAFFIC ENGINEER OR HIS REPRESENTATIVE OR THE STATE INSPECTOR WITHIN STATE R/W.
4. THE ENGINEER AND STATE INSPECTOR WILL HAVE THE RIGHT TO DEMAND THE INSTALLATION OF ADDITIONAL TRAFFIC CONTROL DEVICES OR MODIFICATIONS TO THESE PLANS AND NOTES, AS HE DEEMS NECESSARY TO PROMOTE THE SAFE AND ORDERLY FLOW OF TRAFFIC AND PEDESTRIANS THROUGH THE CONSTRUCTION WORK ZONE. THE CONTRACTOR SHALL COMPLY WITH THESE ADDITIONAL REQUESTS OR MODIFICATIONS WITH DUE DILIGENCE AT NO ADDITIONAL COST TO THE AGENCY.
5. CONSTRUCTION ACTIVITY IN THE ROADWAY WILL BE LIMITED TO THE HOURS BETWEEN 7:00 A.M. AND 4:00 P.M.. ALL TRENCH EXCAVATIONS WITHIN THE ROADWAY SHALL BE COVERED WITH STEEL PLATES OR TEMPORARILY BACKFILLED AND SURFACED FROM 4:00 P.M. TO 7:00 A.M., UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER (STATE INSPECTOR WITHIN STATE R/W).
6. FLASHING BEACONS AND WARNING LIGHTS SHALL BE USED AS DIRECTED BY THE ENGINEER; OR THE STATE INSPECTOR IN OR IN ADVANCE OF STATE R/W.
7. ALL EXISTING TRAFFIC CONTROL SIGNS AND STREET SIGNS SHALL BE MAINTAINED IN VISIBLE LOCATIONS DURING CONSTRUCTION, UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. THE CONTRACTOR SHALL RESTORE OR REPLACE (AT THE DISCRETION OF THE ENGINEER) ANY STRIPING OR SIGNING DAMAGED DURING CONSTRUCTION OPERATIONS, INCLUDING RAISED PAVEMENT MARKERS.
8. WHEN ENTERING OR LEAVING ROADWAYS CARRYING PUBLIC TRAFFIC, THE CONTRACTOR'S EQUIPMENT, WHETHER EMPTY OR LOADED, SHALL IN ALL CASES YIELD TO PUBLIC TRAFFIC.
9. ACCESS TO DRIVEWAYS ADJACENT TO THE CONSTRUCTION WORK ZONE SHALL BE MAINTAINED AT ALL TIMES IF AT ALL POSSIBLE. ADDITIONAL CONES OR DELINEATORS MAY BE REQUIRED TO DELINEATE THE DRIVEWAY ACCESS ROUTE THROUGH THE CONSTRUCTION WORK ZONE. A MINIMUM OF ONE TRAVEL LANE SHALL BE MAINTAINED ACROSS THE DRIVEWAYS, UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER.
10. 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE IMMEDIATE VICINITY OF A TRAFFIC SIGNAL CONTROLLED INTERSECTION, THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (800-422-4133). THIS PRIOR NOTICE WILL ALLOW THE LOCATION AND MARKING OF UNDERGROUND TRAFFIC SIGNAL CONDUIT AND TRAFFIC SIGNAL LOOP DETECTORS PRIOR TO CONSTRUCTION DAMAGES TO TRAFFIC SIGNAL CONDUIT, CONDUCTORS, LOOP DETECTORS, OR OTHER TRAFFIC SIGNAL EQUIPMENT SHALL BE REPAIRED WITHIN 24 HOURS AT THE CONTRACTOR'S EXPENSE, PER THE CITY OF HUNTINGTON BEACH STANDARD SPECIAL PROVISIONS FOR THE CONSTRUCTION OF TRAFFIC SIGNALS AND STREET LIGHTING, LATEST EDITION.
11. SPILLAGE RESULTING FROM HAULING OPERATIONS ALONG OR ACROSS ANY PUBLIC TRAVELED WAY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR AT HIS EXPENSE. STREETS ALONG THE HAUL ROUTE SHALL BE SWEEPED OR WASHED DAILY, DURING EACH DAY OF HAULING OPERATIONS.
12. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SANDBLAST ALL TEMPORARY STRIPING AND PAVEMENT MARKINGS. CONTRACTOR SHALL RESTORE EXISTING STRIPING, REMOVED DURING CONSTRUCTION, BACK TO ITS ORIGINAL OR BETTER CONDITION AS DIRECTED BY THE ENGINEER IN THE FIELD.
13. ALL ADVANCE WARNING SIGNS INSTALLED SHALL REMAIN IN PLACE FOR THE DURATION OF THE CONSTRUCTION PHASE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN THE FIELD TO BE REMOVED OR RELOCATED.
14. REMOVE ANY EXCESS AND/OR CONFLICTING EXISTING PAVEMENT MARKINGS AND STRIPING BY SANDBLASTING.
15. THE CONTRACTOR SHALL COORDINATE BUS STOP RELOCATIONS AND CLOSURES WITH OCTA TRANSIT.
16. THE CONTRACTOR SHALL COVER ALL CONFLICTING SIGNS.



BROOKHURST ST (50 MPH)

SCALE 1"=60'

ESTIMATED DURATION OF THIS STAGE: XX WORKING DAYS

PHASE 3

PORTABLE SIGN INDEX	
CODE	MESSAGE
C20(LT/RT)	LEFT/RIGHT LANE CLOSED AHEAD
C30(CA)	LANE CLOSED
G20-2	END ROAD WORK
R3-4	NO U-TURN
R9-9	SIDEWALK CLOSED
R9-11a(LT/RT)	SIDEWALK CLOSED CROSS HERE (LEFT/RIGHT)
W12-1	DOUBLE ARROW
W20-1	ROAD WORK AHEAD

Underground Service Alert

 Call: 811
 TWO WORKING DAYS BEFORE YOU DIG

REVISIONS				
REV.	DATE	BY	DESCRIPTION	APP'VD

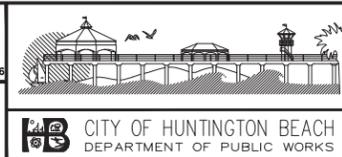
REFERENCES		

W.G.ZIMMERMAN ENGINEERING, INC.
 5772 BOLSA AVE SUITE 200
 HUNTINGTON BEACH, CA 92649
 TEL: (714) 799 1700
 FAX: (714) 799 1701

DRAWN BY:	AT	01/07/2015
DESIGNED BY:	CC	01/07/2015
CHECKED BY:	BZ	01/07/2015



PREPARED UNDER THE SUPERVISION OF:
 WILLIAM G. ZIMMERMAN, P.E.
 R.C.E. NO.: C48667 EXP. DATE: 06/30/2016
 APPROVED BY:
 TRANSPORTATION ENGINEER DATE



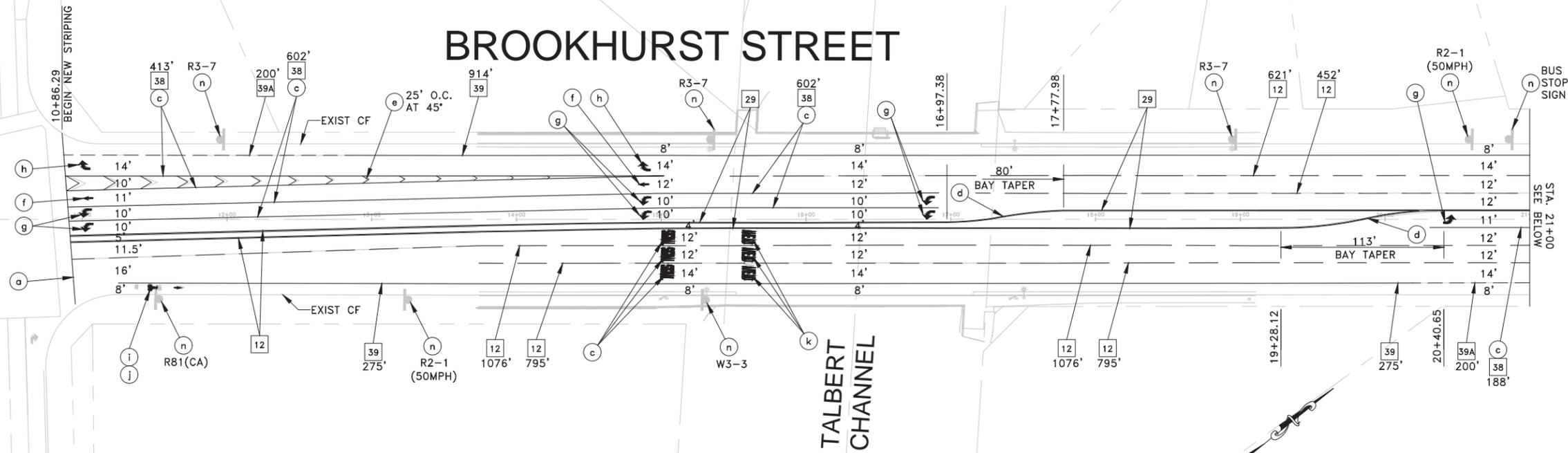
TRAFFIC CONTROL PLAN 3
BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE
 (OVER TALBERT CHANNEL)
 STA. 15+06.15 TO STA. 17+69.90

SHEET NO. 6 OF 13
 TC3

COAST HWY

PACIFIC

BROOKHURST STREET



LEGEND

- RIGHT OF WAY
- CENTERLINE
- EXISTING SIGN
- CF CURB FACE
- EXIST EXISTING

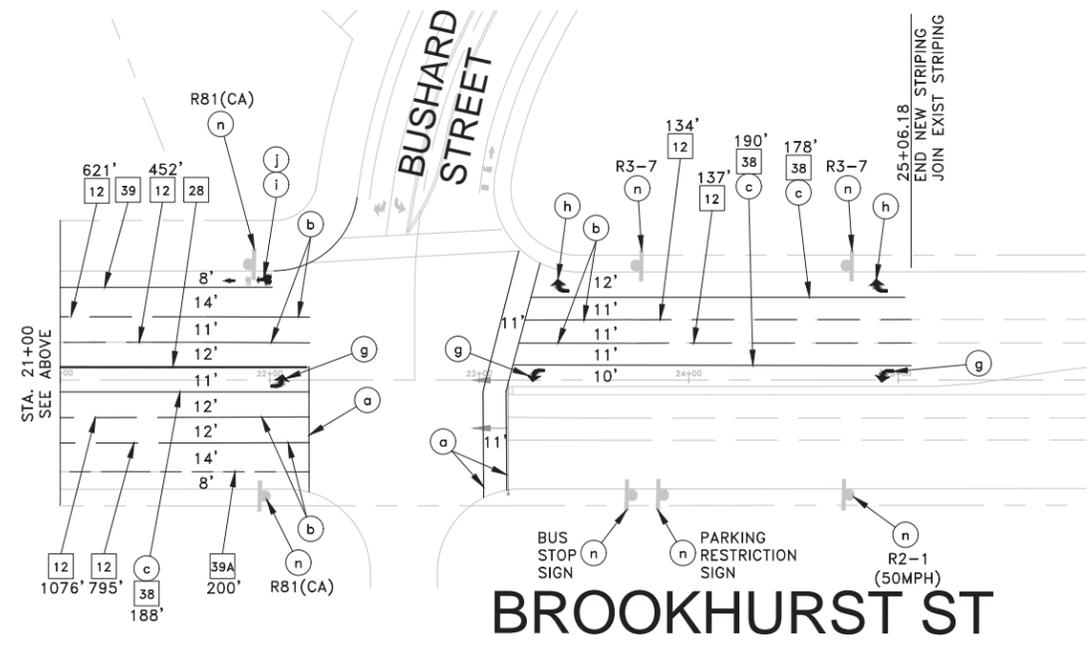
SCALE
1"=40'

SIGNING AND STRIPING NOTES:

ALL STRIPINGS AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AND PER CALTRANS STANDARD PLANS (LATEST EDITION).

39A INDICATES DETAIL NUMBER PER CALTRANS STD PLANS A20A TO A20D.

- (a) INSTALL 12" WIDE WHITE CROSSWALK AND LIMIT LINE PER CALTRANS STD PLANS A24E.
- (b) INSTALL 4" WIDE 50' LONG WHITE SOLID LINE WITH TYPE G REFLECTIVE MARKERS AT BOTH ENDS PER CALTRANS STD PLAN A20A.
- (c) INSTALL 4" WIDE WHITE SOLID LINE WITH TYPE G REFLECTIVE MARKERS AT BOTH ENDS PER CALTRANS STD PLAN A20A.
- (d) INSTALL BAY TAPER PER CALTRANS HIGHWAY DESIGN MANUAL.
- (e) INSTALL 12" WIDE WHITE CHEVERON PER CALTRANS STD PLAN PLAN A24E, CROSSWALK AND LIMIT LINE DETAIL.
- (f) INSTALL TYPE I ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (g) INSTALL TYPE IV (L) ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (h) INSTALL TYPE IV (R) ARROW PAVEMENT MARKING PER CALTRANS STD PLANS A24A.
- (i) INSTALL BIKE LANE ARROW PAVEMENT MARKING PER CALTRANS STD PLAN A24A.
- (j) REMOVE EXIST "BIKE LANE" AND INSTALL BIKE LANE SYMBOL WITH PERSON PAVEMENT MARKING PER CALTRANS STD PLANS A24C.
- (k) INSTALL WHITE "AHEAD" PAVEMENT MARKING PER CALTRANS STD PLANS A24D.
- (l) INSTALL WHITE "SIGNAL" PAVEMENT MARKING PER CALTRANS STD PLANS A24D.
- (m) INSTALL "ONLY" PAVEMENT MARKING PER CALTRANS STD PLANS A24E.
- (n) PROTECT IN PLACE.



BROOKHURST ST

BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE

C.C. No. 1449

Underground Service Alert



REVISIONS				
REV.	DATE	BY	DESCRIPTION	APP'VD

REFERENCES		

W.G.ZIMMERMAN ENGINEERING, INC.
 5772 BOLSA AVE SUITE 200
 HUNTINGTON BEACH, CA 92649
 TEL: (714) 799 1700
 FAX: (714) 799 1701

DRAWN BY:	AT	01/07/2015
DESIGNED BY:	CC	01/07/2015
CHECKED BY:	BZ	01/07/2015



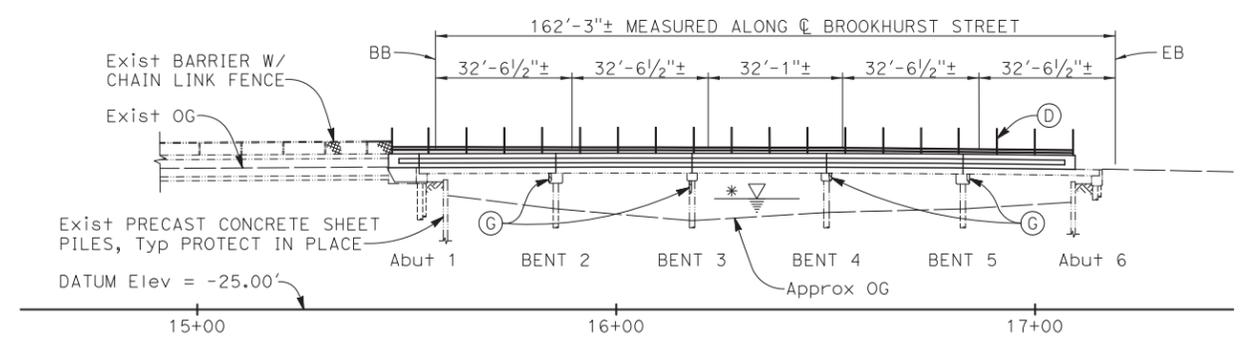
PREPARED UNDER THE SUPERVISION OF:
 WILLIAM G. ZIMMERMAN, P.E. DATE
 R.C.E. NO.: C48667 EXP. DATE: 06/30/2018

APPROVED BY:
 TRANSPORTATION ENGINEER DATE



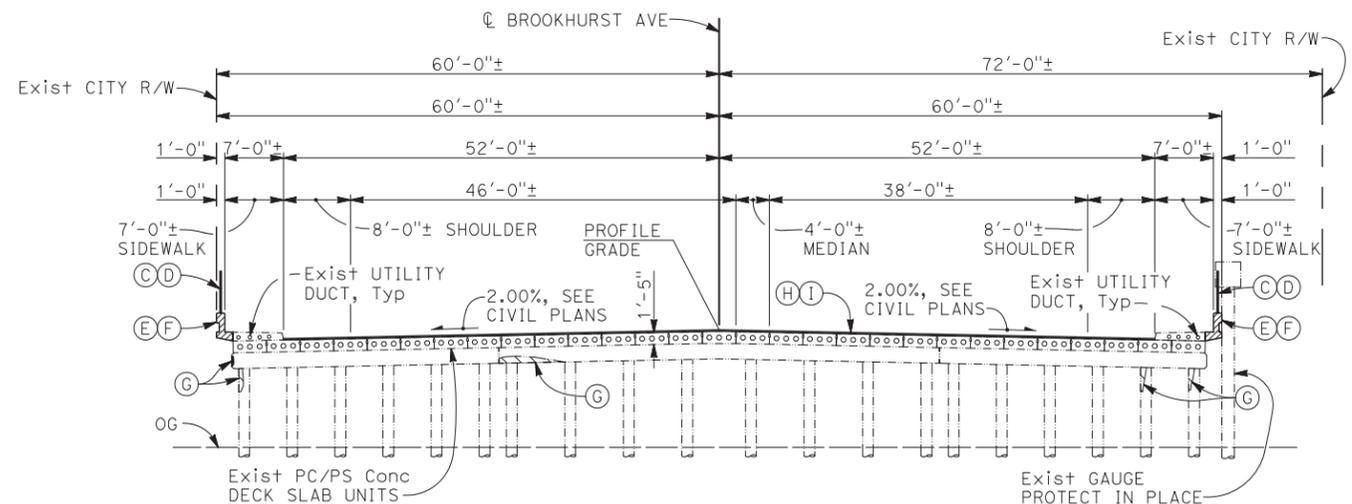
SIGNING AND STRIPING PLAN
BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE
 (OVER TALBERT CHANNEL)
 STA. 15+06.15 TO STA. 17+69.90

SHEET NO.
 7
 OF
 13
 SS1

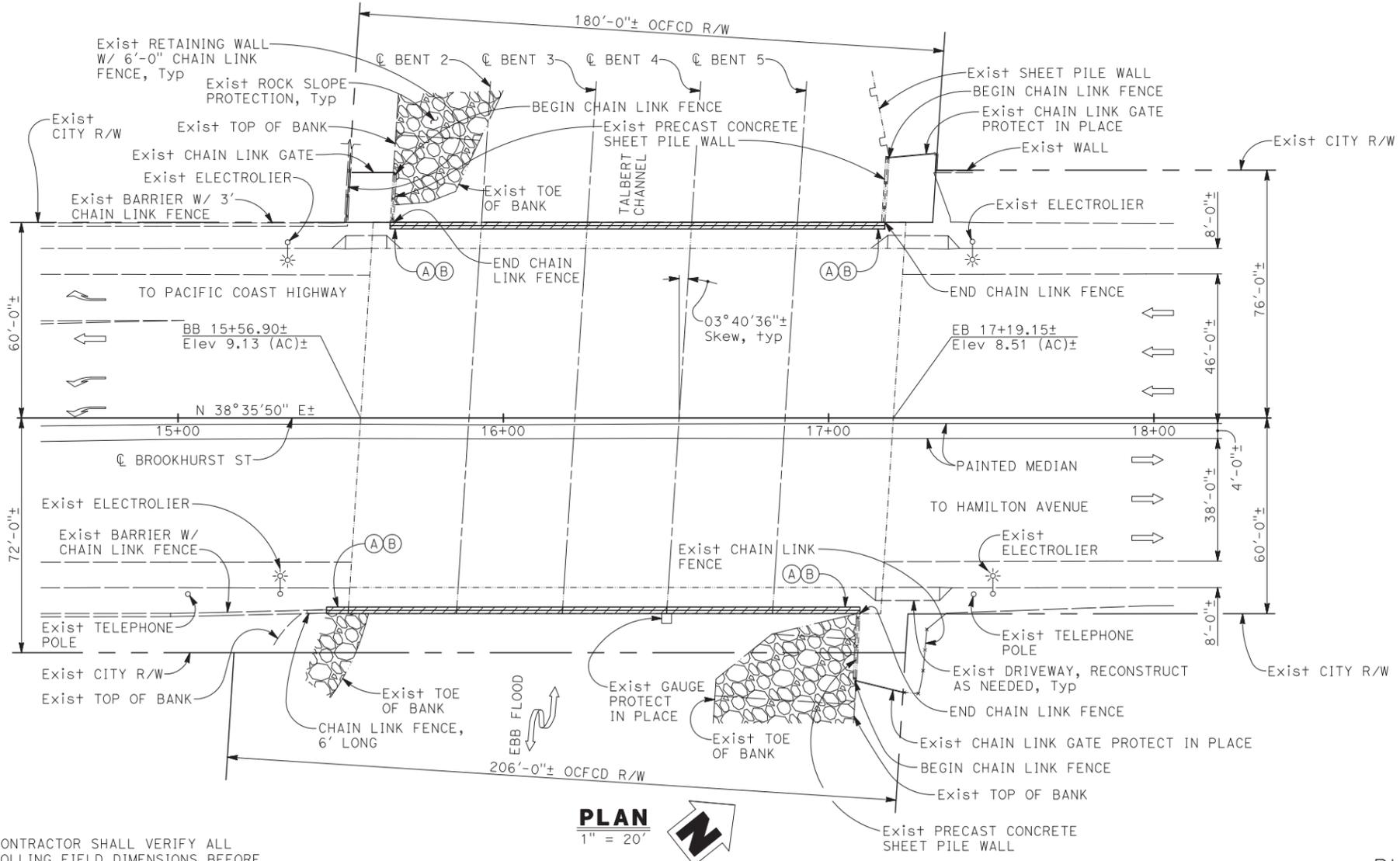


ELEVATION
1" = 20'

* WATER ELEVATION VARIES FROM LOW TO HIGH TIDE, SEE NOAA TIDES AND CURRENTS FOR ELEVATIONS



TYPICAL SECTION
1" = 10'



PLAN
1" = 20'

- NOTES:
- (A) Paint 'BRIDGE No. 55C-0096'
 - (B) Stainless Steel Placard
 - (C) Remove existing Chain Link Railing
 - (D) Wildlife Protection Railing
 - (E) Remove existing Concrete Barrier
 - (F) Concrete Barrier Type 26 (Mod)
 - (G) Remove and patch unsound concrete
 - (H) Remove AC Pavement, see Civil Plans
 - (I) ARHM Pavement, see Civil Plans

- LEGEND:
- Indicates portion of existing bridge to be removed
 - Indicates existing structure
 - Indicates new construction
 - Indicates direction of travel
 - Indicates existing Rock Slope Protection
 - Indicates unsound concrete to be removed and patched

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

PLAN CHECK SET/NOT FOR CONSTRUCTION (1/7/15)

Underground Service Alert

Call: 811

TWO WORKING DAYS BEFORE YOU DIG

REVISIONS				
REV.	DATE	BY	DESCRIPTION	APP'VD

REFERENCES

BIGGS CARDOSA ASSOCIATES INC
STRUCTURAL ENGINEERS

500 So. Main St., Suite 400
Orange, California 92668
714-550-4665

BER

REGISTERED PROFESSIONAL ENGINEER
MICHAEL A THOMAS
No. S4676
Exp. 9/30/16

REGISTERED PROFESSIONAL ENGINEER
M. Todd Broussard
No. C57144
Exp. DATE: 12/31/15

DRAWN BY: DM 12/31/14
DESIGNED BY: RBS 12/31/14
CHECKED BY:

PREPARED UNDER THE SUPERVISION OF:

Michael A. Thomas PRINCIPAL S.E. DATE
R.S.E. NO.: S4676 EXP. DATE: 9/30/16

APPROVED BY:

M. Todd Broussard PRINCIPAL C.E. DATE
R.C.E. NO.: C57144 EXP. DATE: 12/31/15

CITY OF HUNTINGTON BEACH
DEPARTMENT OF PUBLIC WORKS

GENERAL PLAN

BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE

(OVER TALBERT CHANNEL)

STA. 15+06.15 TO STA. 17+69.90

SHEET NO.

8

OF

13

S1

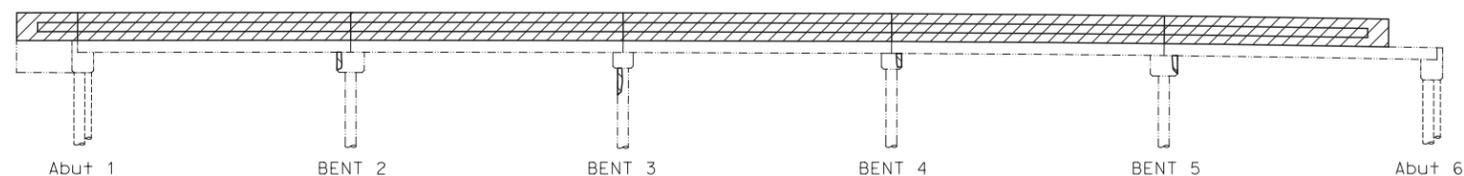
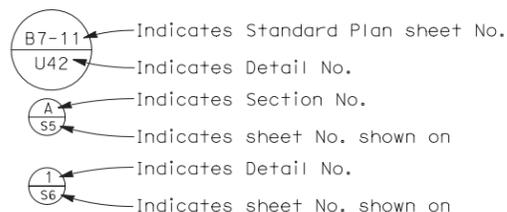
**GENERAL NOTES
LOAD & RESISTANCE FACTOR DESIGN**

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition and Caltrans Amendments, preface dated Dec. 2008; except that geotechnical design of deep foundations is designed using Bridge Design Specifications ('96 AASHTO with Revisions by Caltrans)

CONCRETE: $f_y = 60$ ksi
 $f'_c =$ see "CONCRETE STRENGTH AND TYPE LIMITS"

CALTRANS 2010 STANDARD PLANS

A10A ABBREVIATIONS (SHEET 1 OF 2)
A10B ABBREVIATIONS (SHEET 2 OF 2)
A10C LINES AND SYMBOLS (SHEET 1 OF 3)
A10D LINES AND SYMBOLS (SHEET 2 OF 3)
A10E LINES AND SYMBOLS (SHEET 3 OF 3)
A62A EXCAVATION AND BACKFILL MISCELLANEOUS DETAILS
B11-51 TUBULAR HAND RAILING
B11-54 CONCRETE BARRIER TYPE 26



- Concrete Barrier, Type 26 (Mod) or Type 732 (Mod) ($f'_c = 3600$ psi at 28 days)
- Portland Cement Concrete Patch ($f'_c = 3600$ psi at 28 days)
- Existing Concrete

CONCRETE STRENGTH AND TYPE LIMITS

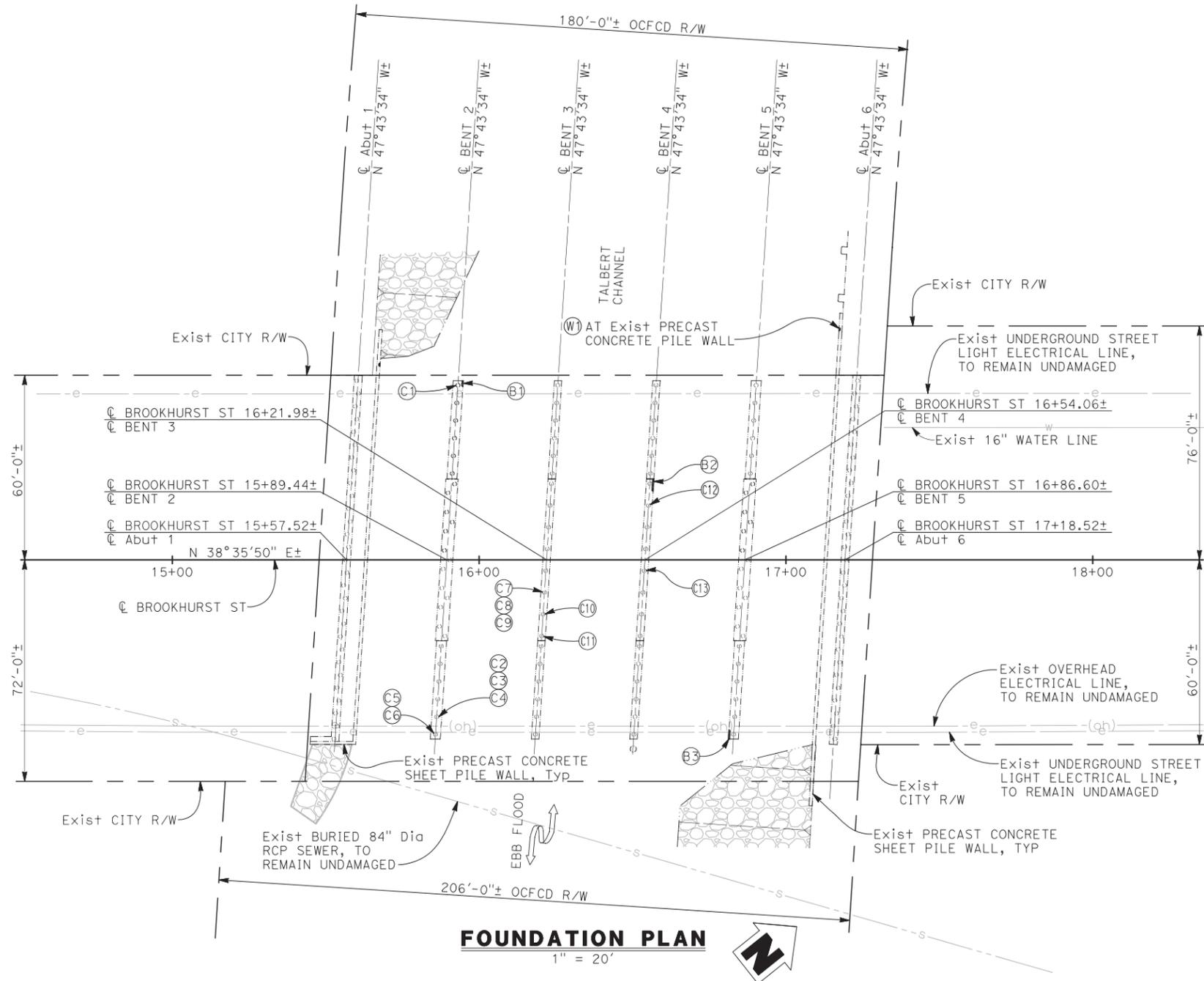
1" = 10'

NOTE:
Per Green Book Section 201-4.1, a clear curing compound will be applied to all new concrete surfaces.

NOTE:
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PLAN CHECK SET/NOT FOR CONSTRUCTION (12/31/14)

 Call: 811 TWO WORKING DAYS BEFORE YOU DIG	REVISIONS	REFERENCES	BIGGS CARDOSA ASSOCIATES INC STRUCTURAL ENGINEERS 500 So. Main St., Suite 400 Orange, California 92668 714-550-4665	PREPARED UNDER THE SUPERVISION OF: Michael A. Thomas PRINCIPAL S.E. DATE R.S.E. NO.: S4676 EXP. DATE: 9/30/16 APPROVED BY: M. Todd Broussard PRINCIPAL C.E. DATE R.C.E. NO.: CS7144 EXP. DATE: 12/31/15	 CITY OF HUNTINGTON BEACH DEPARTMENT OF PUBLIC WORKS	GENERAL NOTES BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE (OVER TALBERT CHANNEL) STA. 15+06.15 TO STA. 17+69.90	SHEET NO. 9 OF 13 S2																														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> <th>APP'VD</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV.	DATE	BY	DESCRIPTION	APP'VD																					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DRAWN BY: DM</td> <td>12/31/14</td> </tr> <tr> <td>DESIGNED BY: RBS</td> <td>12/31/14</td> </tr> <tr> <td>CHECKED BY:</td> <td> </td> </tr> </table>	DRAWN BY: DM	12/31/14	DESIGNED BY: RBS	12/31/14	CHECKED BY:			Michael A. Thomas PRINCIPAL S.E. DATE R.S.E. NO.: S4676 EXP. DATE: 9/30/16 APPROVED BY: M. Todd Broussard PRINCIPAL C.E. DATE R.C.E. NO.: CS7144 EXP. DATE: 12/31/15	CITY OF HUNTINGTON BEACH DEPARTMENT OF PUBLIC WORKS	GENERAL NOTES BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE (OVER TALBERT CHANNEL) STA. 15+06.15 TO STA. 17+69.90
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NOTES:

- ① Indicates unsound concrete at bent (B), at column (C), or at wall (W), see "Repair and Patch Schedule"
- Indicates existing structure
- Indicates new construction
- Utilities shown are for illustrative purposes only, verify with Road Plans and As-Built Plans
- ⊞ Indicates existing Rock Slope Protection
- ⊞ Indicates unsound concrete to be removed and patched

REMOVE AND PATCH SCHEDULE

Abut/BENT No.		
2	①	2'-0" X 1'-0" X 5" DEEP UNSOUND CONCRETE
4	②	4'-0" X 1'-0" X 5" DEEP UNSOUND CONCRETE
5	③	3'-0" X 1'-6" X 5" DEEP UNSOUND CONCRETE
2	①	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
2	②	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
2	③	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
2	④	3'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
2	⑤	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
2	⑥	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
3	⑦	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
3	⑧	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
3	⑨	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
3	⑩	3'-0" X 6" X 4 1/2" DEEP UNSOUND CONCRETE
3	⑪	3'-0" X 6" X 4 1/2" DEEP UNSOUND CONCRETE
4	⑫	2'-0" X 8" X 4 1/2" DEEP UNSOUND CONCRETE
4	⑬	3'-0" X 1'-0" X 4 1/2" DEEP UNSOUND CONCRETE
6	①	22'-0" X 1'-0" X 1'-0" DEEP UNSOUND CONCRETE

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Underground Service Alert
CALL BEFORE YOU DIG
Call: 811
TWO WORKING DAYS BEFORE YOU DIG

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BIGGS CARDOSA ASSOCIATES INC
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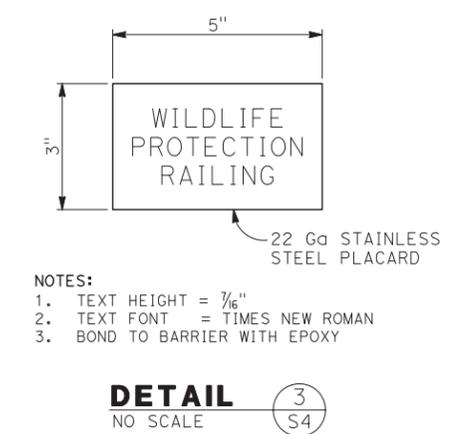
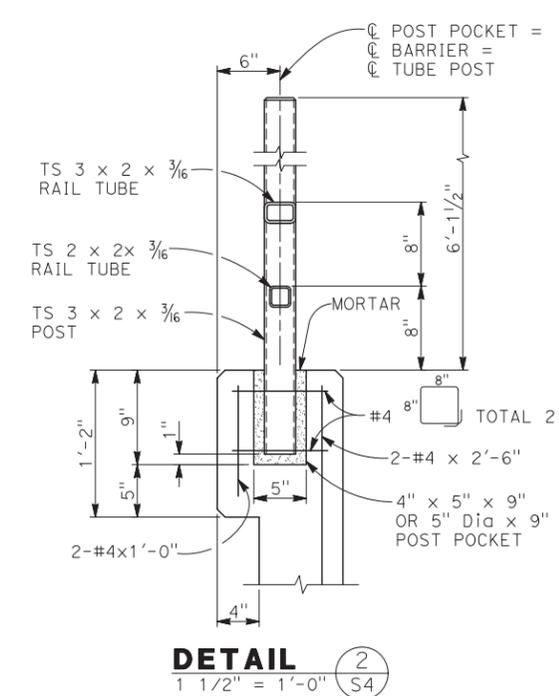
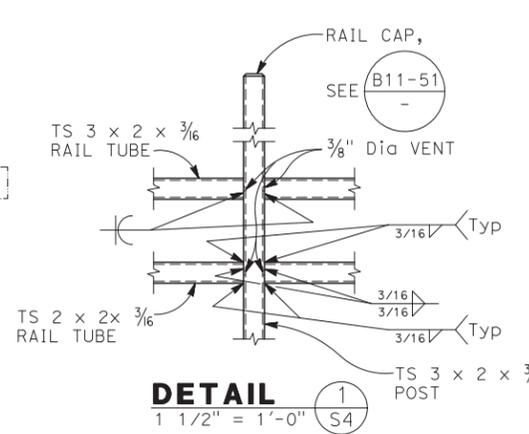
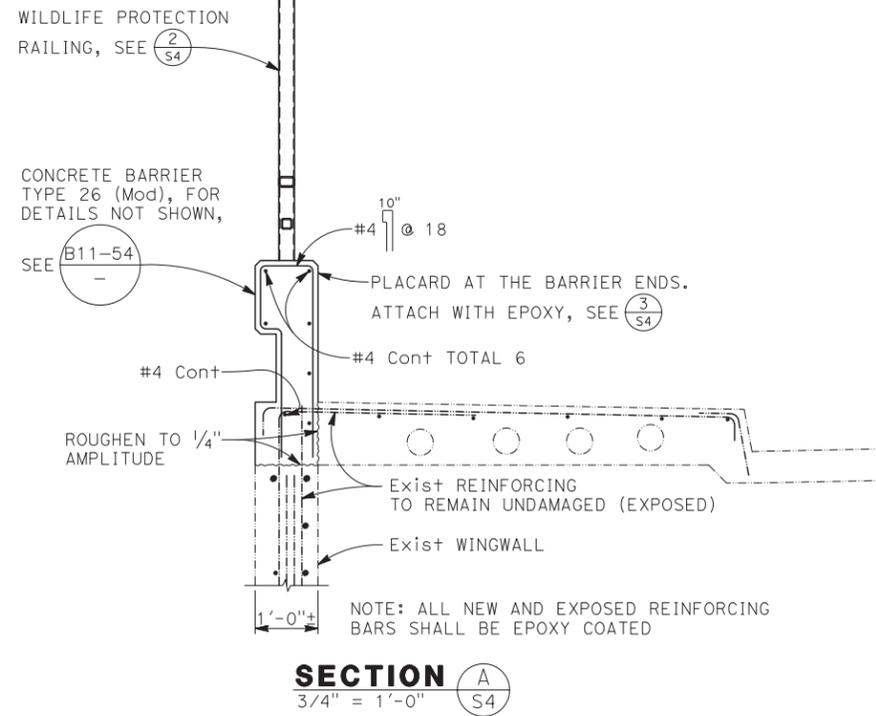
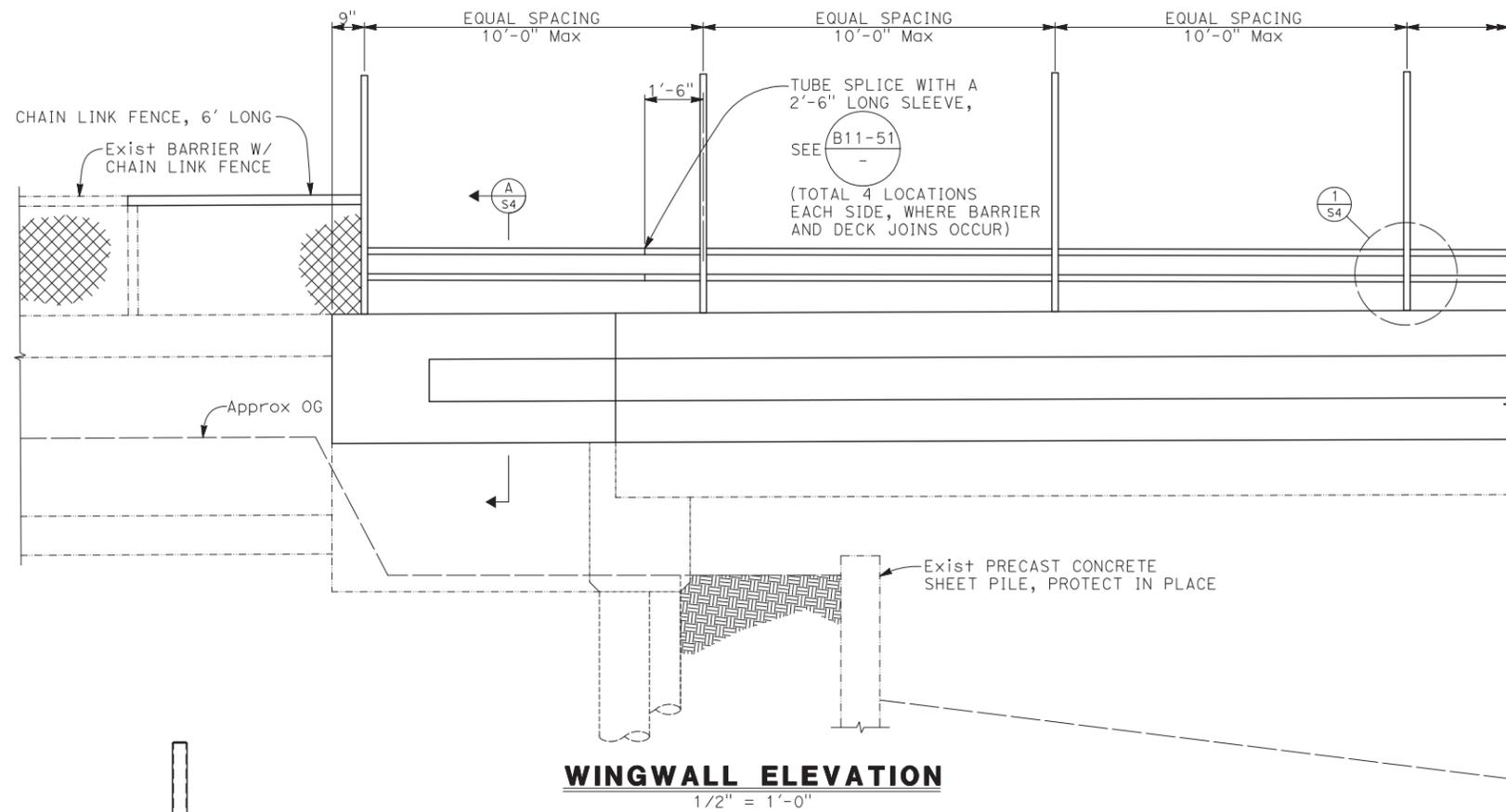
CITY OF HUNTINGTON BEACH
DEPARTMENT OF PUBLIC WORKS

FOUNDATION PLAN
BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE
(OVER TALBERT CHANNEL)
STA. 15+06.15 TO STA. 17+69.90

SHEET NO.
10
OF
13
S3

- LEGEND:**
- Indicates existing structure
 - Indicates new construction
 - ▨ Indicates soil backfill

- RAILING NOTES:**
1. Post shall be normal to railing.
 2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 950'.
 3. Tube splices shall be located in the tubes spanning deck or wall wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
 4. For details and reinforcement not shown see Standard Plan B11-54.



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714-550-4665

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No. S4676
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STATE OF CALIFORNIA

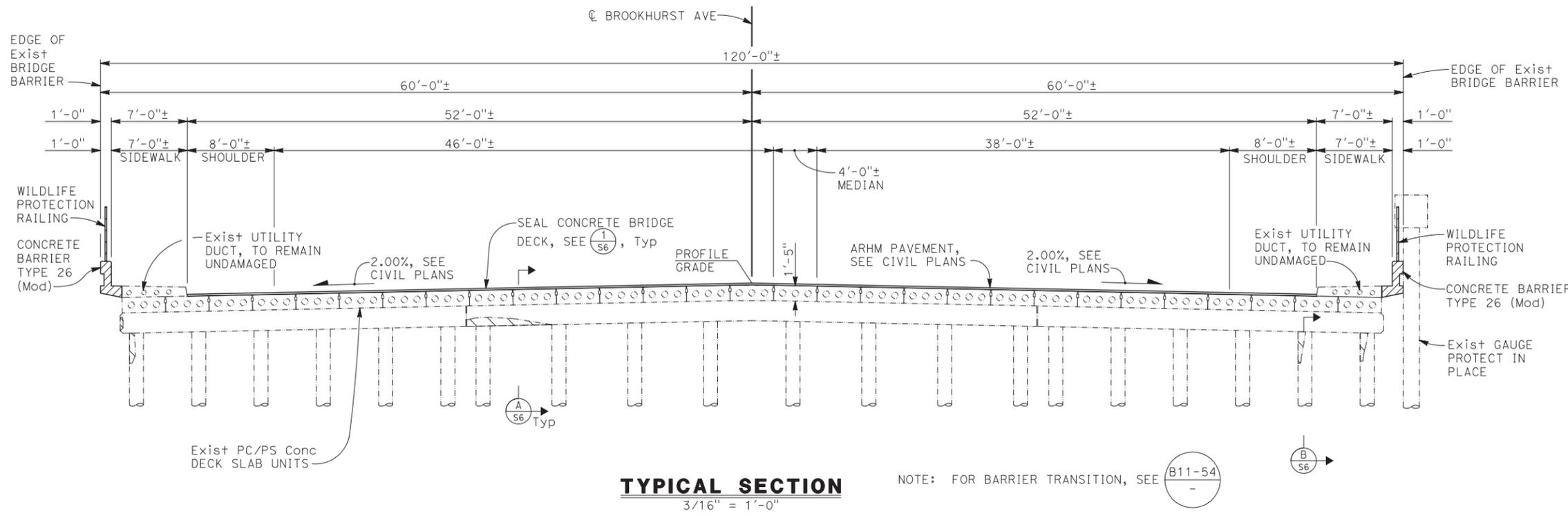
PREPARED UNDER THE SUPERVISION OF:
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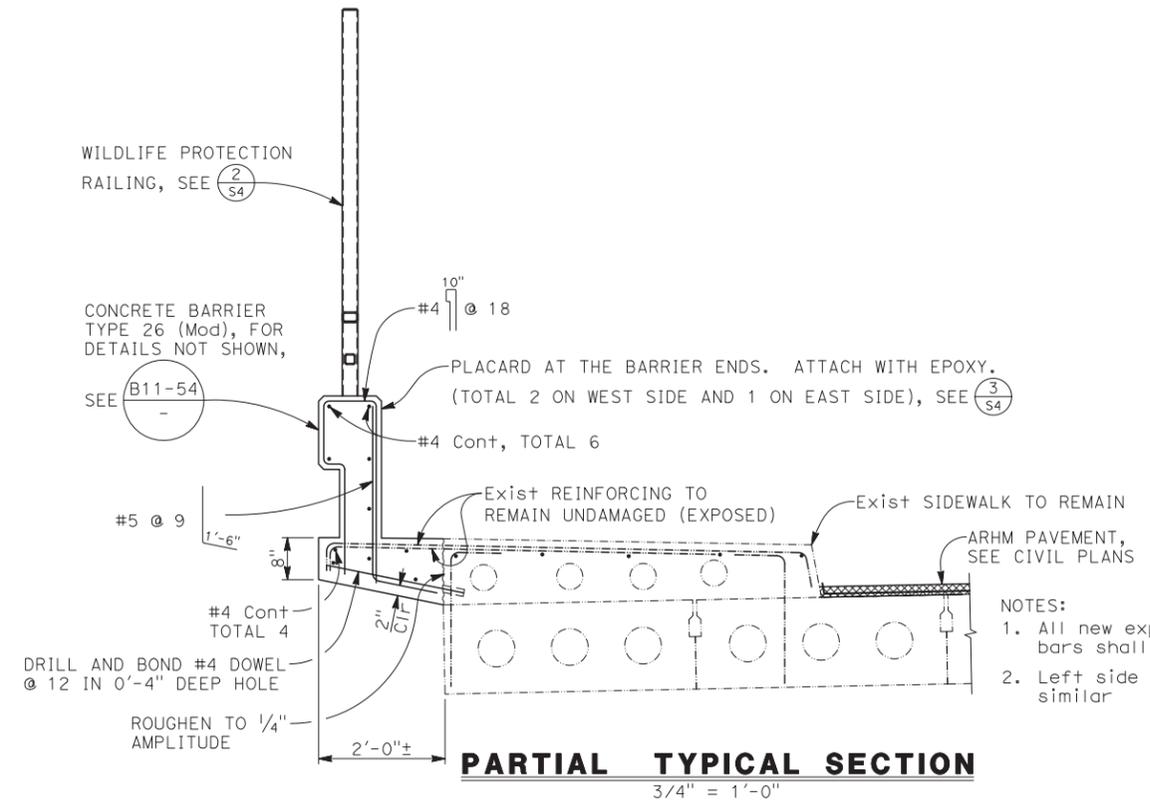
CITY OF HUNTINGTON BEACH
DEPARTMENT OF PUBLIC WORKS

RAILING DETAILS
BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE
(OVER TALBERT CHANNEL)
STA. 15+06.15 TO STA. 17+69.90

SHEET NO.
11
OF
13
S4



- LEGEND:**
- Indicates portion of existing bridge to be removed
 - Indicates existing structure
 - Indicates new construction
 - Indicates unsound concrete to be removed and patched
 - Indicates ARHM Pavement, see Civil Plans



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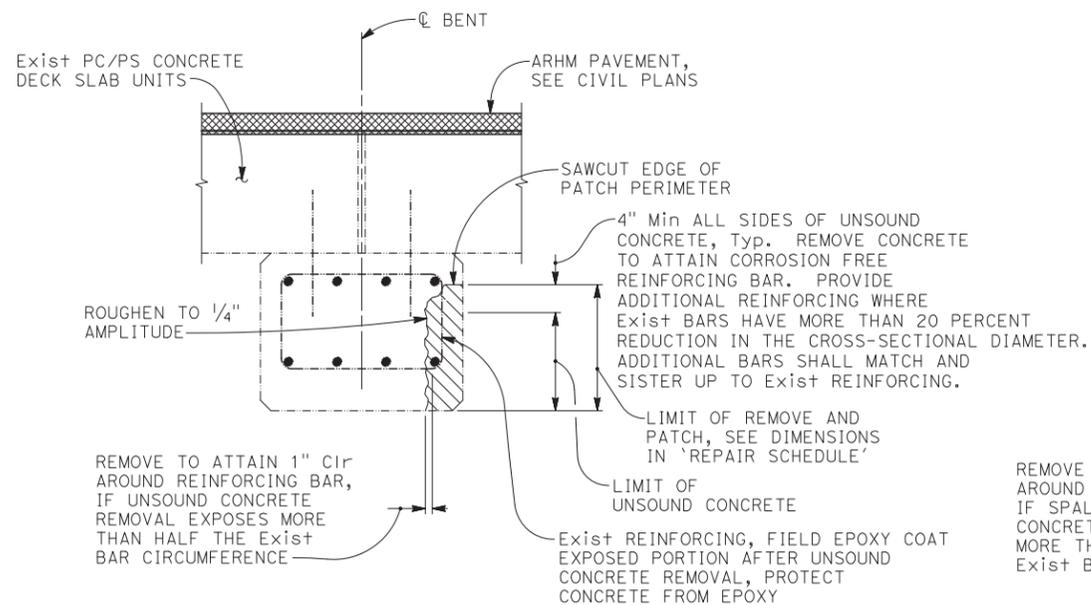
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CITY OF HUNTINGTON BEACH
DEPARTMENT OF PUBLIC WORKS

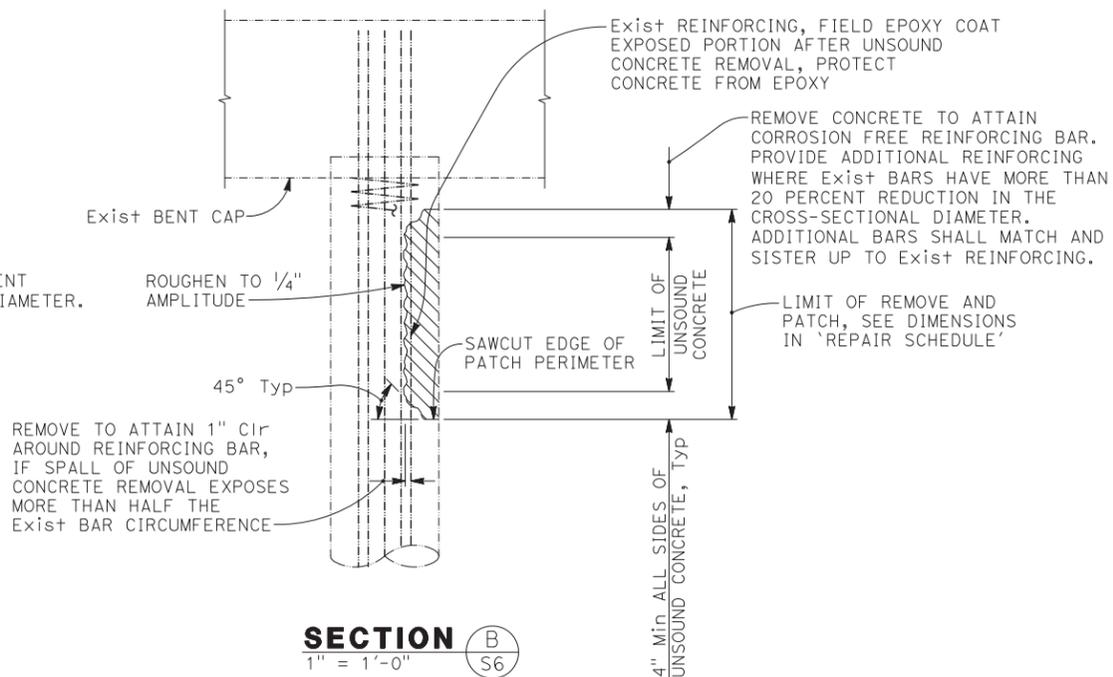
TYPICAL SECTION
BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE
(OVER TALBERT CHANNEL)
STA. 15+06.15 TO STA. 17+69.90

SHEET NO.	12
OF	13
	S5



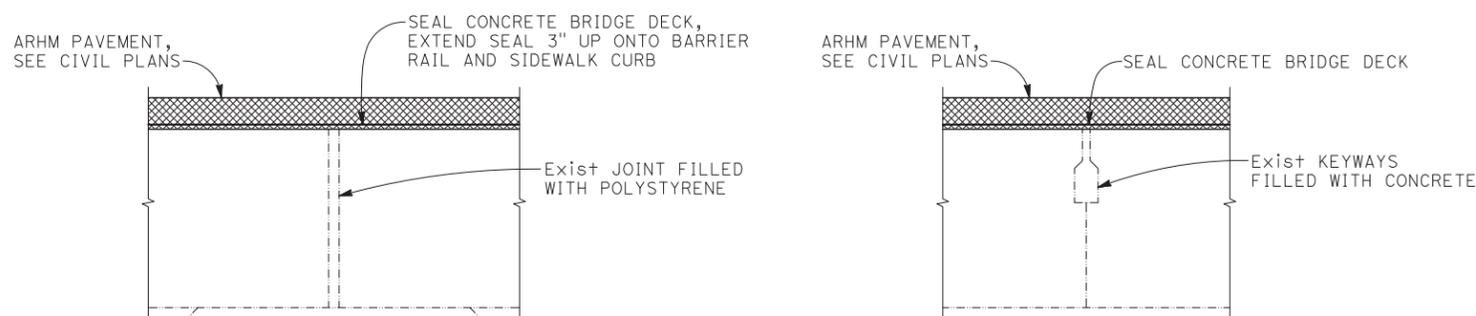
SECTION A
1" = 1'-0"

NOTE: BENT CAP FOR BENTS 3 AND 4 SHOWN, BENTS 2 AND 5 SIMILAR



SECTION B
1" = 1'-0"

- UN SOUND CONCRETE NOTES:**
The work for remove and patch unsound concrete shall include, but not be limited to, the following:
- Contractor shall submit a work plan for remove and patch unsound concrete.
 - Construct working platform with removable protective cover.
 - Remove unsound concrete to the limits given in the project documents and to the engineers satisfaction.
 - Blast clean reinforcing.
 - Measure corroded reinforcing to determine if more than a 20% reduction in cross-section has taken place.
 - Apply bonding agent to the patch area.
 - Apply Portland Cement Concrete Patch.



TRANSVERSE

LONGITUDINAL

NOTE: BENT CAP FOR BENTS 3 AND 4 SHOWN, BENTS 2 AND 5 SIMILAR

- LEGEND:**
- Indicates ARHM Pavement, see Civil Plans
 - Indicates unsound concrete to be removed and patched
 - Indicates existing structure
 - Indicates new construction

SEAL CONCRETE BRIDGE DECK
1 1/2" = 1'-0"

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TYPICAL SECTION DETAILS
BROOKHURST ST BRIDGE PREVENTIVE MAINTENANCE
(OVER TALBERT CHANNEL)
STA. 15+06.15 TO STA. 17+69.90

SHEET NO.	13
OF	13
S6	

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Attachment 2
Summary of Mitigation Measures

<u>Description of Impact</u>	<u>Mitigation Measure</u>
Impacts related to water quality	<p>W-1 Reduced Work Areas</p> <p>Work areas will be reduced to the maximum extent feasible to avoid the channel and minimize impacts on waters of the U.S. and state.</p>
Impacts related to water quality	<p>W-2 Hazardous Materials BMPs</p> <p>The contractor will implement appropriate hazardous material BMPs to reduce the potential for chemical spills or contaminant releases, including any non-stormwater discharge. Implementation of standard hazardous materials management and spill control response measures will minimize the potential for contamination of road surfaces and waters of the U.S. in the channel.</p> <p>All vehicles and equipment will be checked daily for fluid and fuel leaks, and drip pans will be placed under all equipment that is parked and not in operation. Vehicles and equipment will not be refueled or maintained in areas where pollutants could be released into the channel. BMPs will be implemented to prevent accidental spills, including development of a spill prevention plan that will be provided to resource agencies for approval during the permitting process, and implemented during project construction.</p>
Impacts related to biological resources	<p>B-1 Reduced Construction Areas</p> <p>The construction contractor will set construction boundaries to exclude environmentally sensitive habitat areas (ESHA) from the construction footprint, as appropriate.</p> <p>The project footprint will be limited to previously disturbed areas, thus minimizing threats to sensitive areas, when possible.</p> <p>Project work areas will be limited to the OCFCD right of way (ROW) greatly reducing the risk of impacting sensitive biological resources.</p> <p>Huntington Beach Wetland Conservancy (HBWC) lands will not be entered by the construction crew and will be flagged as an ESHA thus minimizing threats to sensitive biological resources.</p> <p>The project footprint will be set at the minimum size to accomplish necessary work, resulting in minimal impacts on the sensitive biological resources.</p> <p>All personnel, equipment, and vehicles will remain within the set construction boundaries at all times to prevent impacts on special status species and sensitive vegetation communities.</p>
Impacts related to biological resources	<p>B-2 <i>Caulerpa Taxifolia</i> Survey</p> <p>To satisfy the EFH Assessment as mandated under Section</p>

	<p>305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act, the request of Bryant Chesney of the National Marine Fisheries Service (NMFS), and the anticipated CDP through the CCC, the City will conduct one underwater Surveillance Level Survey for <i>Caulerpa taxifolia</i> as defined within the <i>Caulerpa Control Protocol</i> (Version 4, February 25, 2008), whereby 20 percent of the project area with the 10-meter buffer will be surveyed by a certified <i>Caulerpa</i> surveyor for the presence or absence of <i>Caulerpa</i>. The survey will be conducted within 30 to 90 days of project initiation during the high growth season (March 1 – October 31). If project start is outside of the growing season, a request will be made to the conduct the survey during that time. If <i>Caulerpa</i> is found, NMFS and CDFW will be notified within 24 hours of the discovery and a report will be submitted within 15 days following the discovery.</p>
<p>Impacts related to biological resources</p>	<p>B-3 Eelgrass Survey</p> <p>A pre-construction eelgrass survey will be completed during the period of active growth of eelgrass (typically March through October). The pre-construction survey will be completed prior to the beginning of construction and will be valid until the next period of active growth. The survey will be prepared in compliance with the <i>Southern California Eelgrass Mitigation Policy</i> (SCEMP) (NMFS 1991) Revision 11 adopted by the NMFS and will be prepared in consultation with the CCC, CDFW, and the USACE. The survey will identify eelgrass within the project area that would be impacted by the project, and consultation with the aforementioned agencies would continue in order to determine necessary compensatory mitigation requirements.</p> <p><i>Post Construction Eelgrass Survey</i></p> <p>The City will survey the project area within one month after the conclusion of construction to determine if the eelgrass surveyed during the pre-construction survey has been adversely impacted. The survey will be prepared in compliance with the <i>Southern California Eelgrass Mitigation Policy</i> (SCEMP) (NMFS 1991) Revision 11 adopted by the NMFS and will be prepared in consultation with the CCC, CDFW, and USACE. The City will submit the post-construction eelgrass survey for the review and approval to the aforementioned agencies within 30 days after completion of the survey. If eelgrass has been impacted, the City will replace the impacted eelgrass at a minimum 1.2:1 ratio on-site, or at another location, in accordance with the SCEMP. All impacts on eelgrass habitat will be mitigated at a minimum ratio of 1.2:1 (mitigation: impact) or as negotiated with the aforementioned agencies. The</p>

	<p>exceptions to the required 1.2:1 mitigation ratio found within SCEMP will not apply.</p>
<p>Impacts related to biological resources</p>	<p>B-4 Pre-Construction Botanical Surveys</p> <p>Currently, the project footprint contains barren, compacted soils, gravel paths, and rock slope protection, all of which are devoid of vegetation. Due to an unknown project start date, this measure addresses the potential for future colonization by special status plant species. A qualified biologist will conduct pre-construction surveys for special status plant species that have the potential to occur within the BSA on OCFCD property, such as estuary seablite and coast woolly heads. If any special status plants are detected during pre-construction surveys, then the City will inform the USFWS and CDFW to determine what conservation measures will need to be implemented.</p> <p>Additionally, the City will retain a qualified biologist to delineate and flag the boundaries of the nearby HBWC property, which does contain special status plants. This area will be flagged as an ESHA. The biologist will record and report observations during construction.</p> <p>If special status plants are observed in the project footprint, these areas will also be flagged for avoidance as an ESHA immediately prior to construction. If this area cannot be avoided then the appropriate conservation measures will be applied, as approved by the agencies.</p>
<p>Impacts related to biological resources</p>	<p>B-5 Pre-Construction Breeding Bird Surveys</p> <p>To be in compliance with the MBTA and the California Fish and Game Code, and to avoid impacts or take of migratory non-game breeding birds, their nests, young, and eggs, the following avoidance and minimization measures will be implemented. These measures will help to reduce direct and indirect impacts caused by construction on migratory non-game breeding birds.</p> <ul style="list-style-type: none"> • Project activities that will remove or disturb potential nest sites will be scheduled outside the breeding bird season. The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions. • If project activities cannot be avoided during February 15 through September 15, then a qualified biologist will conduct a pre-construction breeding bird survey for breeding birds and active nests or potential nesting sites within accessible areas the BSA. HBWC lands will be conducted only with binoculars. The survey

will be conducted no more than seven days prior to the onset of scheduled activities, such as mobilization and staging. It will end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.

- If no breeding birds or active nests are observed during the pre-construction survey or they are observed and will not be impacted, project activities may begin with a qualified biologist present up to eight hours weekly or as directed by the resource agencies.
- Some birds nest early in the breeding season, some birds nest late in the breeding season, and some birds nest multiple times throughout the season; therefore pre-construction breeding bird surveys may occur several times during the breeding season during construction in order to limit impacts on breeding birds.
- If a breeding bird territory is located during the pre-construction survey, a nesting bird deterrence and removal program may be implemented, as approved by the resource agencies, within the project footprint area for non-special status birds. Such deterrence methods may include removal of previous years' nesting materials and removal of partially completed nests in progress where possible. If nest deterrence is not possible, the identified nest with eggs or hatched young will be monitored until the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities.
- If an active bird nest is located during the pre-construction survey and will be potentially impacted, the site will be mapped and a "No Work/No Construction" buffer zone will be marked (fencing, stakes, flagging, orange construction fencing, etc.) a minimum of 200 feet in all directions or 500 feet in all directions for listed bird species and all raptors. The limits of the buffer will be demarcated so as to not provide a specific indicator of the location of the nest to predators or people. Materials used to demarcate the nests will be removed as soon as work is complete or the fledglings have left the nest. The biologist will determine the appropriate buffer size based on the type of activities planned near the nest and the type of bird that created the nest. Some bird species are more tolerant than others of noise and activities occurring near their nest. This no-activity buffer zone will not be disturbed until a qualified biologist has determined that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a

	<p>biologist will be performed to determine when nesting is complete. After the nesting cycle is complete, project activities may begin within the buffer zone. The biologist will be present up to eight hours weekly during construction or as deemed appropriate by the resource agencies.</p> <ul style="list-style-type: none"> • If listed bird species are observed within the BSA during the pre-construction survey, the biologist will immediately map the area and notify the appropriate resource agency to determine suitable protection measures and/or mitigation measures and to determine if additional surveys or focused protocol surveys are necessary. Project activities may begin within the area only when concurrence is received from the appropriate resource agency. • Birds or their active nests will not be disturbed, captured, handled, or moved. Active nests will not be removed or disturbed; however, nests can be removed or disturbed if determined inactive by a qualified biologist.
<p>Impacts related to biological resources</p>	<p>B-6 Installation of Noise Controls</p> <p>During breeding bird season, if construction noise is found to exceed ambient noise levels, then the City will install temporary noise barriers to ensure that construction does not result in impacts on resident or breeding special status birds, including the Belding’s savannah sparrow and light-footed clapper rail. Equipment will be fitted with mufflers and when feasible will use energy sources other than combustion engines, such as solar, or connect to the local power grid.</p>
<p>Impacts related to biological resources</p>	<p>B-7 Pre-Construction Wildlife Surveys</p> <p>To avoid impacts on special status wildlife species, a qualified biologist will perform a pre-construction survey of the BSA in suitable habitat within 30 days prior to construction and immediately prior to the first groundbreaking activities. A permitted biologist will be retained for species requiring a 10(A)(1)(a) permit for survey and monitoring.</p> <ul style="list-style-type: none"> • If no special status species are observed during the pre-construction survey or they are observed and will not be directly impacted from the project, project activities may begin and no further actions will be required. • If special status species are observed during the pre-construction survey, appropriate measures will be implemented to avoid impacts on the species, such as flushing the species out of the area

	<p>(if possible); flagging and avoiding the area; delaying project activities in the area until the animal species has cleared out; erecting orange construction fencing, silt fencing, exclusion fencing or other barriers to assure that the animal does not enter the construction area; or having a biologist present during work. However, if avoidance is not possible and the species will be directly impacted from the project, the biologist will be mark/stake the site(s) and map the individuals on an aerial map and with a GPS unit. The biologist will then contact the appropriate resource agencies to develop additional avoidance, minimization, and/or mitigation measures, prior to commencing project activities. Appropriate permits, if necessary, will also be obtained.</p> <ul style="list-style-type: none"> • If special status wildlife species are discovered during pre-construction surveys then the biologist will provide a description of each and explain the conservation measures relevant to their protection as part of the Workers' Environmental Awareness Program (WEAP). During each visit, the monitor will ensure that mitigation measures are being implemented and impacts on these species will not be greater than anticipated. • Conservation measures identified as part of the USFWS Section 7 Consultation and/or CDFW CESA consultation process will provide appropriate actions necessary to avoid and minimize impacts on resident and/or nesting federal/state listed species and other special status species within the BSA. The qualified biologist will assist in implementation of these measures with the construction personnel prior to the initiation of grading or any activity that involves the removal/disturbance of marsh habitat, including clearing, grubbing, mowing, disking, trenching, grading, or any other construction-related activity on the project area. Conservation measures are expected to include a WEAP, use of noise attenuation barriers, flagging of the 300-foot buffer zone, and monitoring and reporting for changes in nesting behavior. • Weekly surveys for federal/state listed species and other special status species will occur throughout construction during the nesting season by a qualified biologist, or as deemed appropriate by the agencies.
<p>Impacts related to biological resources</p>	<p>B-8 Pre-Construction Bat Survey</p> <p>To the extent feasible, the contractor will schedule construction activity outside of bat roosting season (typically between April 15 and August 1). Within 30 days prior to construction activities (including vegetation clearing and/or trimming), a qualified approved biologist will conduct a pre-construction survey for the presence of roosting</p>

bats within 300 feet of the project footprint.

Active Nursery Roosts

If active nursery roosts are found (typically between April 15 and August 1) within 300 feet of the project footprint, a work exclusion buffer of 300 feet would be cordoned off by the biologist. No work may be conducted within the work exclusion buffer until an approved biologist, in consultation with the project biologist, has determined that the juvenile bats are able to forage independently.

Non-Maternal Roosts

If the approved biologist finds evidence of roosting bats within 300 feet of the project footprint, prior to initiation of construction a biologist will be designated to monitor construction activities and advise construction personnel of the procedures for protecting bats and their habitats during the project, so long as the bat roost is in use by bats. If, as a result of pre-construction surveys, exclusion zones around trees or buildings are established to protect roosting bats, the biologist will advise the construction crews of those areas, the requirement to maintain work exclusion zones and will enforce the maintenance of those zones.

- The biologist will provide at least one bat safety training for the entire crew and will provide the training for construction workers who are new to the site, prior to their starting work. The biologist will also provide onsite direction for addressing habitat- or species-specific issues.
- Workers will be instructed regarding health risks and to avoid direct contact with bats.
- Because bats are nocturnal, work activities will not be conducted within 100 feet of any structure or tree identified as bat roosts (where evidence of present roosting bats has been identified) between sunset and sunrise. Airspace access to and from any bat roost is to remain approximately the same. Bird-exclusion netting must not be used and access for bats shall not be blocked off. No clearing and grubbing will occur within 100 feet of bat roosts. Night lighting for construction activities is not to be used within 100 feet of any bat roost. Internal combustion equipment, such as generators, pumps, and vehicles are not to be parked, nor operated, under or adjacent to any occupied roosts. Personnel are not to be within 100 feet of a bat roost between sunset and sunrise.
- Under the supervision of the biologist, workers should cover unoccupied spaces that may later become bat roosts using material that will not trap birds or bats, such as plywood or tarps. Bird netting must not be used.

<p>Impacts related to biological resources</p>	<p>B-9 Invasive Species Control</p> <p>Invasive species within the temporary disturbance areas will be controlled to the maximum extent feasible using hand pulling or hand tool removal methods only, per the request of OCFCD. Limiting control methods to hand pulling or hand tools will further protect the surrounding habitat and special status plant species. The spread of invasive weeds will be prevented to ensure the integrity of the southern coastal salt marsh habitat. No herbicides will be used on site due to its proximity to Talbert Channel.</p>
<p>Impacts related to biological resources</p>	<p>B-10 Intertidal Work Will Take Place During Low Tide Only</p> <p>Activities within intertidal areas will only occur during low tide to limit introduction of pollutants into the water and to minimize impacts on aquatic life.</p>
<p>Impacts related to biological resources</p>	<p>B-11 General Construction Measures</p> <p>The following general construction measures would be implemented during project construction:</p> <ul style="list-style-type: none"> • Prior to initiation of construction activities, the City will secure a Streambed Alteration Agreement from CDFW pursuant to 1600-1616 of the California Fish and Game Code, a Dredge and Fill permit from USACE pursuant to Section 404 of the CWA, a Water Quality Certification from the RWQCB pursuant to Section 401 of the CWA, and a CDP from the CCC pursuant to Section 30231 and 30233 of the California Coastal Act. The City will implement all conditions and measures contained within the “jurisdictional waters permits.” • No vegetation clearing is expected for construction; however, every effort will be made to avoid encroaching upon the vegetated areas, and vegetation clearing will be kept to the absolute minimum. • The entire work area will be clearly delineated with flagging and fencing. After the original fence has been removed, temporary construction fencing on the bridge will be installed to direct avian wildlife over vehicular traffic, and will remain in place until the new fence has been installed. • All trash will be cleaned up and disposed of properly following each work day. • Equipment will be checked each day to ensure that the fluid and contaminants are not leaking. • Silt fencing will be installed in upland areas to reduce potential

	<p>for pollutants to enter the channel, including topsoil and construction debris. The silt fencing will be cleared of this debris, as needed, following storm events.</p> <ul style="list-style-type: none"> • No nighttime work will occur.
<p>Impacts related to hazardous materials</p>	<p>H-1 Lead and Asbestos Survey</p> <p>A lead and asbestos survey will be completed by a licensed specialist prior to construction to determine if there are lead- and asbestos-containing materials in the bridge structure. If none are found, no further action is necessary.</p>
<p>Impacts related to hazardous materials</p>	<p>H-2 Proper Disposal</p> <p>If found in the bridge structure, lead- and asbestos-containing materials will be handled and disposed of in a manner approved by the California Division of Occupational Safety and Health (Cal-OSHA), and the SCAQMD would be notified of the asbestos removal.</p>
<p>Impacts related to construction noise</p>	<p>N- 1 Noise Control Measures</p> <ul style="list-style-type: none"> • All construction equipment, fixed or mobile, will be maintained in proper operating condition, and mufflers shall be working adequately. • All construction equipment will be located so that emitted noise is directed away from sensitive noise receptors. • Stockpiling and vehicle-staging areas will be located away from sensitive noise receptors during construction activities, to the extent feasible. • Two weeks prior to construction, notification of construction will be provided in writing to residences within 150 feet of the active construction area. • Temporary noise barriers, including sound blankets, will be installed between the areas of active construction and sensitive receptors, as needed.

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Attachment 3
CalEEMod Calculations

Brookhurst Street Bridge Rehabilitation over Talbert Channel Preventative Maintenance Project (State South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assumed bridge was 120x180 sq ft.

Construction Phase - .

Off-road Equipment -

Off-road Equipment - .

Off-road Equipment -

Off-road Equipment - .

Off-road Equipment - .

Demolition - 1 cubic yard of hot asphalt mix weighs 2.025 tons. Assume bridge is 60 yards by 40 yards = 2400 yd². Assume 1 yd depth = 2400 yd³. Assume railing is 60 yd x .3 yd x 1 yd = 20 yd³. Total removal = 2420 cubic yards = 4900 tons.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	112.00
tblConstructionPhase	NumDays	10.00	112.00
tblConstructionPhase	NumDays	5.00	112.00
tblConstructionPhase	NumDays	1.00	112.00
tblConstructionPhase	PhaseEndDate	11/10/2015	6/6/2015
tblConstructionPhase	PhaseEndDate	6/5/2015	6/6/2015
tblConstructionPhase	PhaseEndDate	11/10/2015	6/6/2015
tblConstructionPhase	PhaseEndDate	11/10/2015	6/6/2015
tblConstructionPhase	PhaseStartDate	6/7/2015	1/1/2015
tblConstructionPhase	PhaseStartDate	6/7/2015	1/1/2015
tblConstructionPhase	PhaseStartDate	6/7/2015	1/1/2015
tblGrading	AcresOfGrading	56.00	0.50
tblProjectCharacteristics	OperationalYear	2014	2016

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	0.1002	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-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	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	0.1002	0.0000	2.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004

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	0.1002	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-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	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	0.1002	0.0000	2.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-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	Demolition	Demolition	1/1/2015	6/6/2015	5	112	
2	Site Preparation	Site Preparation	1/1/2015	6/6/2015	5	112	
3	Paving	Paving	1/1/2015	6/6/2015	5	112	
4	Architectural Coating	Architectural Coating	1/1/2015	6/6/2015	5	112	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 31,500; Non-Residential Outdoor: 10,500 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	4	10.00	0.00	485.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2015

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					0.0524	0.0000	0.0524	7.9400e-003	0.0000	7.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0791	0.6687	0.4936	6.7000e-004		0.0490	0.0490		0.0468	0.0468	0.0000	60.9953	60.9953	0.0125	0.0000	61.2568
Total	0.0791	0.6687	0.4936	6.7000e-004	0.0524	0.0490	0.1014	7.9400e-003	0.0468	0.0548	0.0000	60.9953	60.9953	0.0125	0.0000	61.2568

3.2 Demolition - 2015

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	4.9000e-003	0.0795	0.0567	1.8000e-004	4.1600e-003	1.3200e-003	5.4700e-003	1.1400e-003	1.2100e-003	2.3500e-003	0.0000	16.5174	16.5174	1.3000e-004	0.0000	16.5202
Vendor	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
Worker	2.5000e-003	3.6700e-003	0.0381	8.0000e-005	6.1400e-003	6.0000e-005	6.2000e-003	1.6300e-003	5.0000e-005	1.6800e-003	0.0000	5.9621	5.9621	3.4000e-004	0.0000	5.9692
Total	7.4000e-003	0.0832	0.0948	2.6000e-004	0.0103	1.3800e-003	0.0117	2.7700e-003	1.2600e-003	4.0300e-003	0.0000	22.4796	22.4796	4.7000e-004	0.0000	22.4894

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					0.0524	0.0000	0.0524	7.9400e-003	0.0000	7.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0791	0.6687	0.4936	6.7000e-004		0.0490	0.0490		0.0468	0.0468	0.0000	60.9952	60.9952	0.0125	0.0000	61.2567
Total	0.0791	0.6687	0.4936	6.7000e-004	0.0524	0.0490	0.1014	7.9400e-003	0.0468	0.0548	0.0000	60.9952	60.9952	0.0125	0.0000	61.2567

3.2 Demolition - 2015

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	4.9000e-003	0.0795	0.0567	1.8000e-004	4.1600e-003	1.3200e-003	5.4700e-003	1.1400e-003	1.2100e-003	2.3500e-003	0.0000	16.5174	16.5174	1.3000e-004	0.0000	16.5202
Vendor	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
Worker	2.5000e-003	3.6700e-003	0.0381	8.0000e-005	6.1400e-003	6.0000e-005	6.2000e-003	1.6300e-003	5.0000e-005	1.6800e-003	0.0000	5.9621	5.9621	3.4000e-004	0.0000	5.9692
Total	7.4000e-003	0.0832	0.0948	2.6000e-004	0.0103	1.3800e-003	0.0117	2.7700e-003	1.2600e-003	4.0300e-003	0.0000	22.4796	22.4796	4.7000e-004	0.0000	22.4894

3.3 Site Preparation - 2015

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8008	0.4148	5.2000e-004		0.0493	0.0493		0.0453	0.0453	0.0000	50.0177	50.0177	0.0149	0.0000	50.3312
Total	0.0796	0.8008	0.4148	5.2000e-004	2.7000e-004	0.0493	0.0495	3.0000e-005	0.0453	0.0454	0.0000	50.0177	50.0177	0.0149	0.0000	50.3312

3.3 Site Preparation - 2015

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	0.0000
Vendor	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	0.0000
Worker	1.2500e-003	1.8300e-003	0.0190	4.0000e-005	3.0700e-003	3.0000e-005	3.1000e-003	8.2000e-004	3.0000e-005	8.4000e-004	0.0000	2.9811	2.9811	1.7000e-004	0.0000	2.9846	
Total	1.2500e-003	1.8300e-003	0.0190	4.0000e-005	3.0700e-003	3.0000e-005	3.1000e-003	8.2000e-004	3.0000e-005	8.4000e-004	0.0000	2.9811	2.9811	1.7000e-004	0.0000	2.9846	

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8008	0.4148	5.2000e-004		0.0493	0.0493		0.0453	0.0453	0.0000	50.0176	50.0176	0.0149	0.0000	50.3312
Total	0.0796	0.8008	0.4148	5.2000e-004	2.7000e-004	0.0493	0.0495	3.0000e-005	0.0453	0.0454	0.0000	50.0176	50.0176	0.0149	0.0000	50.3312

3.3 Site Preparation - 2015

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	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
Worker	1.2500e-003	1.8300e-003	0.0190	4.0000e-005	3.0700e-003	3.0000e-005	3.1000e-003	8.2000e-004	3.0000e-005	8.4000e-004	0.0000	2.9811	2.9811	1.7000e-004	0.0000	2.9846
Total	1.2500e-003	1.8300e-003	0.0190	4.0000e-005	3.0700e-003	3.0000e-005	3.1000e-003	8.2000e-004	3.0000e-005	8.4000e-004	0.0000	2.9811	2.9811	1.7000e-004	0.0000	2.9846

3.4 Paving - 2015

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					
Off-Road	0.0677	0.6464	0.4121	6.2000e-004		0.0406	0.0406		0.0375	0.0375	0.0000	55.5546	55.5546	0.0151	0.0000	55.8714
Paving	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0684	0.6464	0.4121	6.2000e-004		0.0406	0.0406		0.0375	0.0375	0.0000	55.5546	55.5546	0.0151	0.0000	55.8714

3.4 Paving - 2015**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	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
Worker	4.5000e-003	6.6000e-003	0.0685	1.4000e-004	0.0111	1.0000e-004	0.0112	2.9400e-003	9.0000e-005	3.0300e-003	0.0000	10.7318	10.7318	6.1000e-004	0.0000	10.7446
Total	4.5000e-003	6.6000e-003	0.0685	1.4000e-004	0.0111	1.0000e-004	0.0112	2.9400e-003	9.0000e-005	3.0300e-003	0.0000	10.7318	10.7318	6.1000e-004	0.0000	10.7446

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					
Off-Road	0.0677	0.6464	0.4121	6.2000e-004		0.0406	0.0406		0.0375	0.0375	0.0000	55.5545	55.5545	0.0151	0.0000	55.8713
Paving	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0684	0.6464	0.4121	6.2000e-004		0.0406	0.0406		0.0375	0.0375	0.0000	55.5545	55.5545	0.0151	0.0000	55.8713

3.4 Paving - 2015

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	0.0000
Vendor	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	0.0000
Worker	4.5000e-003	6.6000e-003	0.0685	1.4000e-004	0.0111	1.0000e-004	0.0112	2.9400e-003	9.0000e-005	3.0300e-003	0.0000	10.7318	10.7318	6.1000e-004	0.0000	10.7446	
Total	4.5000e-003	6.6000e-003	0.0685	1.4000e-004	0.0111	1.0000e-004	0.0112	2.9400e-003	9.0000e-005	3.0300e-003	0.0000	10.7318	10.7318	6.1000e-004	0.0000	10.7446	

3.5 Architectural Coating - 2015

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					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.1439	0.1065	1.7000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	14.2982	14.2982	1.8600e-003	0.0000	14.3373
Total	0.2661	0.1439	0.1065	1.7000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	14.2982	14.2982	1.8600e-003	0.0000	14.3373

3.5 Architectural Coating - 2015

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	0.0000
Vendor	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	0.0000
Worker	5.0000e-004	7.3000e-004	7.6100e-003	2.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1924	1.1924	7.0000e-005	0.0000	1.1938	
Total	5.0000e-004	7.3000e-004	7.6100e-003	2.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1924	1.1924	7.0000e-005	0.0000	1.1938	

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					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.1439	0.1065	1.7000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	14.2982	14.2982	1.8600e-003	0.0000	14.3373
Total	0.2661	0.1439	0.1065	1.7000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	14.2982	14.2982	1.8600e-003	0.0000	14.3373

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	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
Other Asphalt Surfaces	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
0.513363	0.060352	0.180146	0.139338	0.042155	0.006672	0.015739	0.030749	0.001928	0.002503	0.004351	0.000593	0.002111

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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						
Other Asphalt Surfaces	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								

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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	0.1002	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Unmitigated	0.1002	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-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	tons/yr										MT/yr					
Architectural Coating	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0759					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Total	0.1002	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-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	tons/yr										MT/yr					
Consumer Products	0.0759					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004
Architectural Coating	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1002	0.0000	2.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.2000e-004	5.2000e-004	0.0000	0.0000	5.5000e-004

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			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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

	<u>Pollutant Emission</u>					
	<u>VOC/</u> <u>ROG</u>	<u>NO_x</u>	<u>CO</u>	<u>PM₁₀</u>	<u>PM_{2.5}</u>	<u>SO_x</u>
CalEEMod Emissions in tons/year	0.5	2.4	1.6	0.2	0.2	0.0
Estimated Emissions in lbs/day	2.8	12.9	8.9	1.3	0.9	0.0
SCAQMD Significance Thresholds	75	100	550	150	55	150
Significant Impact?	No	No	No	No	No	No

Source: CalEEMod, 2014; GPA Consulting

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