CALIFORNIA COASTAL COMMISSION
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Th20c

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ADDENDUM

July 7, 2015

TO: Coastal Commissioners and Interested Parties

FROM: South Coast District Staff

SUBJECT: **ADDENDUM TO ITEM Th20c, CDP NO. 5-15-0148 FOR THE COMMISSION MEETING OF THURSDAY, JULY 9, 2015.**

CHANGES TO STAFF REPORT

Commission staff recommends modifications to the staff report dated 6/26/15 in the following sections of the staff report: Section III (Special Conditions), and Section IV (Findings and Declarations). Language to be added to the findings and conditions is shown in underlined text, and language to be deleted is identified by ~~strike-out~~.

1. Page 7 – Correct language in Special Condition No. 2, to accurately reflect the type of habitat required to be mitigated.

2. Final Habitat Mitigation and Monitoring Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, two (2) sets of a final habitat mitigation and monitoring plan (HMMP). The HMMP shall be in substantial conformance with the *Habitat Mitigation and Monitoring Plan (HMMP) for the Edinger Bridge Replacement Project,* dated June 2014, prepared by Dudek.

Any proposed changes to the approved HMMP shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

The mitigation and monitoring program shall at a minimum include the following:

A. Plans for site preparation and preservation of native seed bank;
B. Restoration plan including planting design, plant palette, source of plant material, plant installation, watering, erosion control, soil fertilization and weed abatement;
C. Description of the monitoring program (quantitative sampling methods such as quadrats, transects etc. and statistical analysis) that will be employed to determine the progress and ultimate success of the mitigation/restoration;
D. Final Success Criteria. The restoration will be considered successful if the overall species composition and vegetative cover of the dominant Southern Coastal Salt

Marsh habitat ~~coastal sage scrub species~~ are similar (no more than 15% difference) to relatively undisturbed Southern Coastal Salt Marsh habitat ~~coastal sage scrub habitat~~ in a nearby reference area (s) or as defined in the literature. Species composition shall be considered similar if all the dominant species and at least 70% of the non-dominant species at the reference site (or as defined in the literature) are present at the restored site;

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2. Page 25 – Include finding in Section C(1). Wetland Fill.

In addition to the 0.42 acre of permanent impacts, 1.11 acres of temporary impacts from the shading caused by the trestle piles are anticipated to occur to jurisdictional resources (USACOE, CDFW, RWQCB, United States Fish and Wildlife Service (USFWS) & CCC). While the acreage of temporary impacts based on CCC jurisdiction is 0.1308 acres, the temporary impacts based on the above Federal and State resource agencies results in a larger amount of temporary impacts, 1.11 acres. The HMMP plan states that the since no vegetation or soil disturbance will occur in these areas of temporary impact, that there is a high probability that these impact areas will passively revegetate after the structures are removed and sunlight is allowed to access the temporary impact area. However, the plan still outlines mitigation and monitoring measures for these temporary on-site impacts from shading caused by the temporary trestle piles if these impact areas do not passively revegetate. Should the areas of temporary impacts fail to attain pre-impact conditions after two years of monitoring, the acreage will be mitigated at a ratio of 3:1 at the Talbert mitigation site as Southern Coastal Salt Marsh habitat in conjunction with the mitigation for permanent impacts.

To avoid/minimize any additional impacts to habitat, the applicant has proposed measures including, but not limited to, the use of bubble and turbidity curtains prior to pile driving in the channel; and having a biological monitor present during vegetation removal.

The Commission finds that the proposed project involves wetland fill that is allowable as an incidental public service purpose, the proposed fill is the least environmentally damaging feasible alternative, and that mitigation measures, in the form of a net reduction in wetland fill, has been provided to minimize adverse environmental effects. Therefore, the proposed project, as conditioned, can be found consistent with Section 30233 of the Coastal Act.

3. Page 26 – Include finding In Section C(2). Channel Alteration.

of the proposed replacement bridge. If fact, such erosion did impact the stability of the existing bridge, which required emergency stabilization. Thus, the proposed stream channelization/substantial alteration is necessary to protect existing structures in the flood plain and to ensure public safety. The applicant is proposing the use of rock slope protection that will provide ‘hard’ protection from high-flow scour events, but will also allow sediment to cover the bottom during lower flow conditions. Alternative types of ‘softer’ bank protection (e.g. brush mat bank protection) would not be appropriate in this area. The Commission’s engineer reviewed the proposed stream/channel bank stabilization design and determined that the proposed type and quantity of stabilization are the minimum necessary and the most appropriate at this location.

The installation of the rock slope protection (riprap) will result in permanent impacts to 0.42 acres of wetland, but the applicant is mitigating those impacts by creating /restoring 1.26 acres of non-tidal Southern Coastal Salt Marsh habitat (3:1 ratio) within a County-owned portion of the Talbert Nature Preserve South adjacent to the Santa Ana River (Orange County). Therefore, adequate mitigation has been proposed.

The proposed stream channelization/substantial alteration is necessary to protect and is the only method of protecting existing development in the floodplain and assuring public safety. Therefore, the Commission finds the proposed development consistent with Section 30236 of the Coastal Act.

4. Page 26 – Remove findings in Section C(3). Lighting, pertaining to wetland fill and instead include this language in Section C(1). Wetland Fill.

~~To avoid/minimize any additional impacts to habitat, the applicant has proposed measures such as: use of bubble and turbidity curtains prior to pile driving in the channel; having a biological monitor present during vegetation removal; construction activity limited to, etc.~~

~~The Commission finds that the proposed project involves wetland fill that is allowable as an incidental public service purpose, the proposed fill is the least environmentally damaging feasible alternative, and that mitigation measures, in the form of a net reduction in wetland fill, has been provided to minimize adverse environmental effects. Therefore, the proposed project, as conditioned, can be found consistent with Section 30233 of the Coastal Act.~~

5. Page 33 – Remove the third full paragraph language in Section E. Hazards, which incorrectly refers to Coastal Act Section 30235.

The proposed project also includes filling of a deep scour hole near the bridge's northwest section caused by local scour at the western bridge piers from higher channel velocities at the outside of the bridge bend. This scour hole is as deep as 17-feet, which is approximately 8-feet deeper than the channel invert. The scour hole extends approximately 500-feet upstream and 300-feet downstream of the bridge. At its widest point (at the bridge), it is approximately 70-feet with an average width of approximately 40 feet. The scour hole will be filled to an elevation of approximately -12 feet to provide protection to the proposed bridge abutments and obtain a level channel bottom resulting in fill of wetlands. The scour hole will be filled with ungrouted riprap (rocks) and covered with similar soft bottom material to prevent the scour hole from reoccurring and adversely impacting the bridge. The proposed scour fill is the minimum work necessary to fill the hole to protect the bridge abutments.

~~The proposed rock slope protection is not expected to have adverse impacts to the shoreline sand supply. The project is covering an embankment that was previously protected and was not contributing to the shoreline sand supply. Areas where additional protection would be added have been minimized, and are not expected to have contributed significantly to sediment supplies. Additionally, the project is located inside a bay, and is therefore not expected to directly impact the lateral flow of sand along the ocean. Therefore, the project would not have a significant adverse impact to the shoreline sand supply, consistent with the requirements of Coastal Act Section 30235.~~

The proposed bridge will continue to be subject to tidal action from Bolsa Chica Channel and development at such a location is inherently risky. Therefore, the Commission imposes **Special Condition No. 13**, requiring the applicant to assume the risk for the development. As

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Filed:	2/5/15
180th Day:	8/4/15
Staff:	F. Sy-LB
Staff Report:	6/26/15
Hearing Date:	7/9/15

STAFF REPORT: REGULAR CALENDAR

Application No.: **5-15-0148**

Applicant: **Orange County Public Works**

Project Location: Edinger Avenue Bridge, City of Seal Beach and Huntington Beach (Orange County)

Project Description: Demolition and replacement of the Edinger Avenue Bridge that will consists of a new 340-foot long, 4-span bridge with one travel lane in each direction, bicycle lanes, pedestrian walkways, lighting, and supported by twelve, 4' diameter concrete piles at the bents in the Bolsa Chica Channel and eight, 4' diameter concrete piles at the abutments. The project also includes: installation of a drainage inlet; minor street improvement to Edinger Avenue, Countess Drive, and Sunset Way East; installation of rock slope protection along sections of the Bolsa Chica Channel walls; fill of a scour hole within the channel; and mitigation for impacts to wetland habitat, Coastal Salt Marsh Habitat, as a result of the project.

Staff Recommendation: Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

Commission staff is recommending **APPROVAL** of the replacement of the existing Edinger Avenue Bridge, which spans the approximately 260-foot wide Bolsa Chica Channel, a trapezoidal, soft-bottom, man-made channel with rock riprap on some sections of its west bank, that includes areas subject to tidal influence, between the Cities of Huntington Beach and Seal Beach. The major issues raised by this proposed development concern impacts to marine resources, water quality, visual resources, hazards, and public access. The bridge provides the

only public access (vehicular, bicycle and pedestrian) to the County-owned Sunset aquatic park, public marina and leased shipyard, a regional recreational facility. The replacement of this bridge is necessary to maintain access to this recreational public access facility.

The applicant's submitted project plans were not the completed final plans. Thus, the Commission imposes **Special Condition No. 1**, which requires the permittee to submit a Final Project Plan.

The proposed project will occur within a wetland resource located in the Bolsa Chica Channel. The project involves installation of new piles, abutments, rock slope protection (riprap) and scour hole fill within a Southern Coastal Salt Marsh habitat area and these activities are considered fill of wetland resources. This fill is necessary to replace an existing bridge that provides an important public service by providing the only access between Pacific Coast Highway and inland Orange County to the park and marina regional recreational facility that provides coastal access. No expansion of road capacity is created by the project. Therefore, the fill is associated with an incidental public service and is therefore an allowable purpose under the Coastal Act. Although the proposed fill is an allowable type of fill, the project can only be found consistent with the Coastal Act if it is the least environmentally damaging feasible alternative and feasible mitigation measures have been provided to minimize environmental effects. Other alternatives were evaluated; however, the proposed project was determined to be the least environmentally damaging alternative. Additionally, the applicant has proposed feasible mitigation measures to minimize environmental effects as a result of the fill of 0.42 acres of permanent impacts and also temporary impacts to Southern Coastal Salt Marsh habitat, as proposed in the applicant's *Habitat Mitigation and Monitoring Plan (HMMP) for the Edinger Bridge Replacement Project,* dated June 2014, prepared by Dudek. To ensure that the HMMP is consistent and up to date, **Special Condition No. 2**, requires the applicant to submit a Final Habitat Monitoring and Mitigation Plan.

According to the applicant, lighting for the safety of pedestrians and bicyclists is necessary. The proposed project includes the installation of four, approximately 14-feet high light standards (curved light pole with a modern lamp shield) on the south railing of the bridge, approximately 80-feet apart. Lighting that is not controlled could have adverse effects upon the adjacent habitat. To ensure that the proposed lighting does not impact habitat, such as wetland resources, the Commission imposes **Special Condition No. 3**, which requires the applicant to submit a Lighting Plan.

Any potential changes to the proposed project, such as design of the bridge or the railings may result in adverse impacts to habitat. Thus, the Commission imposes **Special Condition No. 4**, which is a future improvements special condition.

The project site is located in an area of state or federally listed rare, threatened, or endangered species; such as the California Least Tern (*Sternula [Sterna] antillarum browni*), Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*), and Light-Footed Clapper Rail (*Rallus longirostris levipes*) and there is potential for the project to impact these special status bird species. Therefore, the Commission imposes **Special Condition No. 5**, which requires: a) pre-construction surveys for nesting birds and avoidance of nesting sites during nesting; b) pre-

construction surveys for sensitive species; and c) a requirement for monitoring of the site during construction to ensure that construction activities do not result in impacts to sensitive species.

Eelgrass (*Zostera marina*) was discovered near the project site, but is not expected to be impacted by the project. However, to verify that no eelgrass is impacted, a pre-construction eelgrass survey should be conducted. Therefore, the Commission imposes **Special Condition No. 6**, which requires a new eelgrass survey and identifies the procedures necessary to be completed prior to beginning construction, in case the new survey also expires prior to commencement of construction.

A *Caulerpa Taxifolia* survey was completed for the project site and none was discovered. However, to verify that no *Caulerpa Taxifolia* is impacted, a pre-construction *Caulerpa Taxifolia* survey should be conducted. Therefore, the Commission imposes **Special Condition No. 7**, which requires the applicant, prior to commencement of development, to survey the project area for the presence of *Caulerpa Taxilfolia*.

During construction and post construction, the proposed project has potential for adverse impacts to water quality and marine resources. Therefore, as a result, several standard special conditions have been imposed in order to minimize any impacts to water quality and marine resources the proposed project may result in: **Special Condition No. 8** requires the applicant to implement construction Best Management Practices (BMPs) to protect water quality; **Special Condition No. 9** requires the applicant submit a Storm Water Pollution Prevention Plan (SWPPP); **Special Condition No. 10** requires the applicant to submit a Construction Staging Plan; **Special Condition No. 11** requires the applicant to submit a Revised Water Quality Management Plan (WQMP); and **Special Condition No. 12** requires the applicant a Landscape Plan that only consists of native plants or non-native drought tolerant plants, which are non-invasive.

The proposed bridge will continue to be subject to tidal action from Bolsa Chica Channel and development at such a location is inherently risky. Therefore, the Commission imposes **Special Condition No. 13**, requiring the applicant to assume the risk for the development.

The proposed project may result in significant adverse impacts to coastal public access, as a result, special conditions have been imposed in order to minimize any impacts to public access the proposed project may result in: **Condition No. 10** requires the applicant to submit a Construction Staging Plan, and **Special Condition No. 14** requires the applicant to submit an Access Detour Plan.

As conditioned, the proposed project will conform with Coastal Act Policy Sections 30230, 30231, 30232, 30233, 30236, 30240(b), 30251, 30253, 30210, 30211, and 30254 of the Coastal Act.

The bridge is located within the City of Huntington Beach, which has a certified Local Coastal Program (LPC). However, the project contains development occurring over coastal waters as well, which is within an area of the Commission's retained permit jurisdiction. The applicant has exercised the consolidated permit provisions in Section 30601.3 of the Coastal Act, which allows the Commission to process a coastal development permit for development located in both its

jurisdiction and the City's jurisdiction. In such cases, the standard of review is Chapter 3 of the Coastal Act. Nonetheless, the City's certified Local Coastal Program may be used as guidance.

The bridge is also located within the City of Seal Beach, which does not does not have a certified Local Coastal Program (LCP). Therefore, the Coastal Commission is the permit issuing entity and the standard of review is Chapter 3 of the Coastal Act.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** Coastal Development Permit No. 5-15-0148 pursuant to the staff recommendation.*

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves a Coastal Development Permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that will substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Final Project Plans.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, two (2) full size sets of final project plans. The final project plans shall be in substantial conformance with the project plans dated on June 6, 2014.

   The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

2. **Final Habitat Mitigation and Monitoring Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, two (2) sets of a final habitat mitigation and monitoring plan (HMMP). The HMMP shall be in substantial conformance with the *Habitat Mitigation and Monitoring Plan (HMMP) for the Edinger Bridge Replacement Project,* dated June 2014, prepared by Dudek.

   Any proposed changes to the approved HMMP shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

   The mitigation and monitoring program shall at a minimum include the following:

   A. Plans for site preparation and preservation of native seed bank;
   B. Restoration plan including planting design, plant palette, source of plant material, plant installation, watering, erosion control, soil fertilization and weed abatement;
   C. Description of the monitoring program (quantitative sampling methods such as quadrats, transects etc. and statistical analysis) that will be employed to determine the progress and ultimate success of the mitigation/restoration;
   D. Final Success Criteria. The restoration will be considered successful if the overall species composition and vegetative cover of the dominant coastal sage scrub species are similar (no more than 15% difference) to relatively undisturbed coastal sage scrub habitat in a nearby reference area (s) or as defined in the literature. Species composition shall be considered similar if all the dominant species and at least 70% of the non-dominant species at the reference site (or as defined in the literature) are present at the restored site;

E. Provisions assessing the initial biological and ecological status of the "as built" restoration site within 30 days of establishment of the restoration site in accordance with the approved restoration program;
F. Provisions for monitoring and remediation of the restoration site in accordance with the approved final restoration program for a period of five-years or until it has been determined that success criteria have been met or have failed to be met, whichever comes first;
G. Provisions for submission of annual reports of monitoring results to the Executive Director for the duration of the required monitoring period, beginning the first year after submission of the "as-built" assessment. Each report shall be a cumulative report that summarizes all previous reports. Each report shall document the condition of the restoration with photographs taken from the same fixed points in the same directions. Each report shall also include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of the restoration project in relation to the performance standards; and
H. Provisions for submission of a final monitoring report to the Executive Director at the end of the reporting period. The final report must be prepared in conjunction with a qualified biologist. The report must evaluate whether the restoration site conforms to the goals, objectives, and performance standards set forth in the approved final restoration program. The report must address all of the monitoring data collected over the five-year period.

If the final report indicates that the restoration project has been unsuccessful, in part, or in whole, based on the approved performance standards, the applicant shall submit within 90 days a revised or supplemental restoration program to compensate for those portions of the original program that were necessary to offset project impacts which did not meet the approved performance standards. The revised restoration program, if necessary, shall be processed as an amendment to this coastal development permit.

The permittee shall monitor and remediate the Coastal Salt Marsh restoration site in accordance with the approved monitoring program, including any revised restoration program approved by the Commission or its staff. Any proposed changes to the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

3. Lighting.

A. All lighting within the development shall be directed and shielded so that light is directed away from wetlands, ESHA, and other habitat and buffer areas. No skyward-casting lighting shall be used. The lowest intensity lighting shall be used that is appropriate to the intended use of the lighting. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, two (2) sets of lighting plans to protect the wetlands, ESHA, and other habitat and buffer areas from light generated by the project. The lighting plan to be submitted to the Executive Director shall be accompanied by an analysis of the lighting plan prepared by a qualified biologist which documents that it is effective at preventing

lighting impacts upon adjacent wetlands and environmentally sensitive habitat and buffer areas.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. Future Development. This permit is only for the development described in Coastal Development Permit No. 5-15-0148. Pursuant to Title 14 California Code of Regulations Section 13250(b)(6), the exemptions otherwise provided in Public Resources Code Section 30610(a) shall not apply to the development governed by Coastal Development Permit No. 5-15-0148. Accordingly, any change in use or intensity of use and any future improvements to the work authorized by this permit, including but not limited to repair and maintenance identified as requiring a permit in Public Resources Section 30610(b) and Title 14 California Code of Regulations Sections 13253(a)-(b), shall require an amendment to Permit No. 5-15-0148 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

5. Avoidance of Sensitive Species.

A. Nesting Birds. Prior to commencement of any construction activities between February 15 through August 31, a qualified biologist shall conduct a breeding behavior and nesting survey for birds protected by the United States Fish and Wildlife Service, California Department of Fish and Wildlife, the Migratory Bird Treaty Act, and California species of special concern within 300 feet of the project site (500 feet for raptors and owls). If any occupied nests of any sensitive species are discovered, construction activities within 300-feet of the nest (500-feet for raptors and owls) shall be monitored to ensure that construction noise levels do not exceed 65 dB peak within 100 feet of the nest until the nest is vacated and juveniles have fledged and there is no longer evidence of a second attempt at nesting. The applicant shall implement a larger buffer if the biologist recommends a larger buffer from the nest area.

B. Sensitive Species Monitoring. Prior to undertaking any development including, but not limited to, construction, grading, or excavation, a qualified biologist shall survey the project site to determine whether sensitive bird species, including but not limited to California Least Tern, Belding's Savannah Sparrow, and/or Light-Footed Clapper Rail, are present within 100-feet of the project site, and whether sensitive plant species, including but not limited to Sagebrush Scrub and Coastal Goldenbush, Southern Coastal Salt Marsh, and Mulefat Scrub are located within 25-feet of the project site. Any identified species shall be flagged for avoidance.

C. An appropriately trained biologist shall monitor the proposed development for disturbance to sensitive species or habitat area. At minimum, monitoring shall occur once a week during the breeding season, and once every two weeks during the non-breeding season, during any week in which construction occurs. Daily monitoring shall occur during development which could significantly impact biological resources such as construction that could result in disturbances to sensitive species. Based on field

observations, the biologist shall advise the applicant regarding methods to avoid significant impacts which could occur to sensitive species or habitat areas.

6. Eelgrass Survey(s).

A. Pre Construction Eelgrass Survey. A valid pre-construction eelgrass (*Zostera marina*) survey shall be completed during the period of active growth of eelgrass (typically March through October). The pre-construction survey shall be completed prior to the beginning of construction and shall be valid until the next period of active growth. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The applicant shall submit the eelgrass survey for the review and approval of the Executive Director within five (5) business days of completion of each eelgrass survey and in any event no later than fifteen (15) business days prior to commencement of any development. If the eelgrass survey identifies any eelgrass within the project area which would be impacted by the proposed project, the development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit.

B. Post Construction Eelgrass Survey. If any eelgrass is identified in the project area by the survey required in subsection A of this condition above, within one month after the conclusion of construction, the applicant shall survey the project site to determine if any eelgrass was adversely impacted. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The applicant shall submit the post-construction eelgrass survey for the review and approval of the Executive Director within thirty (30) days after completion of the survey. If any eelgrass has been impacted, the applicant shall replace the impacted eelgrass at a minimum 1.2:1 ratio on-site, or at another location, in accordance with the Southern California Eelgrass Mitigation Policy. All impacts to eelgrass habitat shall be mitigated at a minimum ratio of 1.2:1 (mitigation:impact). The exceptions to the required 1.2:1 mitigation ratio found within SCEMP shall not apply. Implementation of mitigation shall require an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.

7. Pre-construction *Caulerpa Taxifolia* Survey.

A. Not earlier than 90 days nor later than 30 days prior to commencement or re-commencement of any development authorized under this coastal development permit (the "project"), the applicant shall undertake a survey of the project area and a buffer area at least 10 meters beyond the project area to determine the presence of the invasive alga *Caulerpa taxifolia*. The survey shall include a visual examination of the substrate.

B. The survey protocol shall be prepared in consultation with the Regional Water Quality Control Board, the California Department of Fish and Game, and the National Marine Fisheries Service.

C. Within five (5) business days of completion of the survey, the applicant shall submit the survey:
   (1) for the review and approval of the Executive Director; and
   (2) to the Surveillance Subcommittee of the Southern California Caulerpa Action Team (SCCAT). The SCCAT Surveillance Subcommittee may be contacted through William Paznokas, California Department of Fish & Game (858/467-4218) or Robert Hoffman, National Marine Fisheries Service (562/980-4043), or their successors.

D. If *Caulerpa taxifolia* is found within the project or buffer areas, the applicant shall not proceed with the project until 1) the applicant provides evidence to the Executive Director that all *C. taxifolia* discovered within the project and buffer area has been eliminated in a manner that complies with all applicable governmental approval requirements, including but not limited to those of the California Coastal Act, or 2) the applicant has revised the project to avoid any contact with *C. taxifolia*. No revisions to the project shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

8. Construction Best Management Practices (BMPs). The permittees shall comply with the following construction-related requirements:

A. No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion;

B. No demolition or construction equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers;

C. Any and all debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project;

D. Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters;

E. All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day;

F. The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction;

G. Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the Coastal Zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required;

H. All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil;

I. Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems;

J. The discharge of any hazardous materials into any receiving waters shall be prohibited;

K. Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible;
L. Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity; and
M. All BMPs shall be maintained in a functional condition throughout the duration of construction activity.

9. Storm Water Pollution Prevention Plan (SWPPP). PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, two (2) full size sets of storm water pollution prevention plans (SWPPP) prepared and signed by licensed engineer that, at a minimum, meets the following:

The storm water pollution prevention plans must show that permittee is properly prepared to apply site design, source control and treatment control BMP's, appropriate for the potential stormwater pollutants at this site, in order to protect coastal waters from polluted runoff generated by construction activities to the maximum extent practicable.

The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

10. Construction Staging Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT the permittee shall submit for the review and approval of the Executive Director, two (2) full size sets of construction staging plans, which indicate that the construction staging area(s) and construction corridor(s) will minimize public access impacts to the coast.

1. The plan shall demonstrate that:

   (a) Construction equipment, materials or activity shall not occur outside the staging area and construction corridor identified on the site plan required by this condition;
   (b) Construction equipment, materials, or activity shall not be placed within any habitat area or within 100-feet of any drainages or wetlands; and
   (c) The construction staging area will gradually be reduced as less materials and equipment are necessary.

2 The plan shall include, at a minimum, the following components:

(a) A site plan that depicts:

(1) limits of the staging area(s);
(2) construction corridor(s); and
(3) construction site; and
(4) location of construction fencing and temporary job trailer(s) with respect to the Edinger Bridge and the Sunset aquatic park, public marina and leased shipyard.

The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

11. Revised Water Quality Management Plan (WQMP). PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, two (2) sets of revised water quality management plans (WQMP) for the post-construction project site, prepared and signed by a licensed water quality professional, and shall include plans, descriptions, and supporting calculations. The WQMP shall be in substantial conformance with the *Water Quality Management Plan (WQMP),* dated January 31, 2013, prepared by AECOM. The WQMP shall incorporate structural and non-structural Best Management Practices (BMP's) designed to reduce, to the maximum extent practicable, the volume, velocity and pollutant load of stormwater and dry weather flows leaving the developed site. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

1. Appropriate structural and non-structural BMP's (site design, source control and treatment control) shall be designed and implemented to minimize water quality impacts to surrounding coastal waters;
2. Impervious surfaces, especially directly connected impervious areas, shall be minimized, and alternative types of pervious pavement shall be used where feasible;
3. Irrigation and the use of fertilizers and other landscaping chemicals shall be minimized;
4. Trash, recycling and other waste containers, as necessary, shall be provided. All waste containers anywhere within the development shall be covered, watertight, and designed to resist scavenging animals;
5. All runoff from the vehicle wash station shall be collected through a wash rack and sand/oil separator and discharged only through the sewer system;
6. Runoff from all walkways, roads, driveway and parking areas shall be collected and directed through a system of structural BMP's including vegetated areas and/or gravel filter strips or other vegetated or media filter devices. The system of BMP's shall be designed to 1) trap sediment, particulates and other solids and 2) remove or mitigate contaminants (including trash, debris and vehicular fluids) through infiltration, filtration

and/or biological uptake. The drainage system shall also be designed to convey and discharge runoff from the developed site in a non-erosive manner;

7. Post-construction structural BMP's (or suites of BMP's) shall be designed to treat, infiltrate or filter the amount of stormwater runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMP's, and/or the 85th percentile, 1-hour storm event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMP's;
8. All structural and/or treatment control BMPs shall be designed, installed, and maintained for the life of the project in accordance with well-recognized and accepted design principles and guidelines, such as those contained in the California Stormwater Quality Association Best Management Practice Manuals;
9. All BMP traps/separators and/or filters shall be, at a minimum, inspected and cleaned/repaired or otherwise maintained in accordance with the following schedule: (1) prior to the start of the winter storm season, no later than October 15th each year, (2) inspected monthly thereafter for the duration of the rainy season (October 15th -April 30), and cleaned/maintained as necessary based on inspection and, (3) inspected and maintained where needed throughout the dry season;
10. Debris and other water pollutants removed from structural BMP's during clean-out shall be contained and disposed of in a proper manner;
11. It is the permittee's responsibility to maintain the drainage system and the associated structures and BMP's according to manufacturer's specifications; and
12. Any new catch basins/street drain inlets will be required to include trash racks or bars, and grease and oil separators to filter runoff.

The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

12. Native Landscaping, Drought Tolerant Non-Invasive Plants. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and written approval of the Executive Director, two (2) full size sets of revised landscaping plans for the area located along Edinger Avenue and Countess Drive (Sea Breeze Townhomes) prepared by a qualified licensed professional. The plan shall include the following:

1. Vegetated landscaped areas shall consist of native plants or non-native drought tolerant plants, which are non-invasive. No plant species listed as problematic and/or invasive by the California Native Plant Society (http://www.CNPS.org/), the California Invasive Plant Council (formerly the California Exotic Pest Plant Council) (http://www.cal-ipc.org/), or as

may be identified from time to time by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a "noxious weed" by the State of California or the U.S. Federal Government shall be utilized within the property. All plants shall be low water use plants as identified by California Department of Water Resources (See: http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf).

2. A map showing the types, size, and locations of all plant materials that will be on the site, the temporary irrigation system, topography of the developed site, and all other landscape features;
3. A schedule for installation of native plants/removal of non-native plants; and
4. The site shall be stabilized immediately with jute matting or other BMPs after any grading occurs to minimize erosion during the raining season (November 1 to March 31) if plantings have not been fully established; and
5. Use of reclaimed water for irrigation is encouraged. If using potable water for irrigation, only drip or microspray irrigation systems may be used. Other water conservation measures shall be considered, such as weather based irrigation controllers.

The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

13. Assumption of Risk, Waiver of Liability and Indemnity Agreement Applicable to Applicant

A. By acceptance of this permit, the applicant, the County of Orange, acknowledges and agrees (i) that the site may be subject to hazards from wave and tidal action, flooding, erosion, sea level rise, geologic instability, or liquefaction; (ii) to assume the risks to the applicant, the County of Orange, and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

B. Prior to any conveyance of the property interest(s) that is/are the subject of this Coastal Development Permit, the landowner shall execute and record an easement restriction or other restriction depending on the property interest involved in the conveyance, in a form and content acceptable to the Executive Director incorporating all of the above terms of subsection (A) of this condition. The restriction shall include a legal description of the applicant's entire parcel. The easement restriction or other restriction depending on the property interest involved in the conveyance shall run with the land, binding all

successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This easement restriction or other restriction depending on the property interest involved in the conveyance shall not be removed or changed without a Commission amendment to this Coastal Development Permit.

C. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the County of Orange, as applicant, shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

14. Access Detour Plans. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, two (2) full size sets of access detour plans that demonstrate the following:

1. Every effort shall be made to minimize the duration of sidewalk, bike and road lane closures so that impacts upon public access are minimized;
2 The sidewalk, bicycle and road lanes should be opened; and available for use to the maximum extent feasible during construction; and
3 A detour plan to re-route pedestrian and bicycle traffic shall be identified for those periods when the sidewalk and/or bicycle lane is closed for public safety purposes within the project area.

The permittee shall undertake development in accordance with the approved plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

IV. FINDINGS AND DECLARATIONS:

A. PROJECT LOCATION AND DESCRIPTION

The project site is the Edinger Avenue Bridge, which spans the approximately 260-foot wide Bolsa Chica Channel, a trapezoidal, soft-bottom, man-made channel with rock riprap on some sections of its west bank, that includes areas subject to tidal influence, between the Cities of Huntington Beach and Seal Beach (**Exhibit No. 1**). The bridge is within County of Orange right-of-way that traverses the Bolsa Chica Channel. The wooden timber bridge was originally constructed in 1968 and provides the only public access (vehicular, bicycle and pedestrian) to the County-owned Sunset aquatic park, public marina and leased shipyard. The park and marina is a regional recreational facility that includes a 276-slip marina, a public boat launch ramp with multiple lanes, boat and trailer parking, car parking areas, a boat repair yard, public picnic areas and the Orange County Sheriff's Department Harbor Patrol Office. The bridge was meant to be a temporary structure when first constructed but was never replaced. The bridge is a 15-span structure measuring 30-feet in width and 300-feet in length (one travel lane in each direction). The bridge is supported on one-hundred and sixty, 13" diameter wooden piles timber piles in the Bolsa Chica Channel. The bridge is surrounded by Sunset Way East and the County-owned Sunset aquatic park, public marina and leased shipyard to the west; a Dry Extended Detention

Basin owned by the County of Orange to the northwest; open space and the Seal Beach Naval Weapons National Wildlife Refuge (Wildlife Refuge) to the north; and Countess Drive, Huntington Harbor, residential development (Sea Bridge Townhomes) to the south and east of the bridge (**Exhibit No. 1**). The project does not extend or adjoin any beach or Public Trust Lands.

The Bolsa Chica Channel conveys storm water westerly and southwesterly into Huntington Harbor and Anaheim Bay, where waters are discharged into the Pacific Ocean. During high tides, the channel receives tidal inundation where seawater flows into the channel.

The bridge is currently classified as "Structurally Deficient" with a Sufficiency Rating (SR) of 27.6 by the California Department of Transportation (Caltrans) due to ongoing scour activity and the presence of marine borers in the Bolsa Chica Channel that are affecting its structural integrity. This designation and rating made this bridge eligible for replacement under the Federal Highway Bridge Program (HBP). A Coastal Emergency Permit (No. G-5-15-0011-(Orange County, Public Works) was issued on March 17, 2015due to safety concerns and the potential closure of the bridge. If the existing bridge were to fail, there will be no vehicle or pedestrian access to the park and marina.

The proposed project will remove the existing bridge and replace it with a new bridge that will provide safety and operational improvements for access to the park and marina (**Exhibit No. 2**). The project more specifically consists of the following:

• The existing 15-span timber bridge supported by one-hundred and sixty existing 13" diameter wooden piles (one-hundred forty piles within Bolsa Chica Channel and twenty piles within the abutments) will be removed and replaced with a 4-span precast concrete bridge measuring 48.5-feet in width and 340-feet in length supported by twelve, 4' diameter concrete piles at the bents in the Bolsa Chica Channel and eight, 4' diameter concrete piles at the abutments. The bridge piles would be constructed using a cast-in-steel shell (CISS) installation system. The CISS installation system is proposed because it (1) eliminates instability issues associated with potential soil cave-ins; (2) minimizes the amount of soil to be excavated and disposed; (3) minimizes or eliminates the volume of groundwater that would be encountered; and (4) allows the placement of concrete and reinforcing steel in a dry condition.

• The bridge width will be increased from approximately 30-feet to approximately 48.5-feet to accommodate the current standard width for lanes, shoulders, and sidewalk. The bridge will provide two 12-foot-wide vehicular lanes (one lane in each direction consistent with the existing bridge) and two 8-foot-wide shoulders (one on each side of the bridge where there are currently no shoulders). The width of the existing sidewalk and undesignated bicycle pathway on the south side of the bridge will be increased from 4-feet to 5-feet to accommodate light standards.

• The bridge will include railing on both sides of the bridge that are approximately 4-feet height. In addition, four, approximately 14-feet high light standards (curved light pole with a modern lamp shield) will be installed on the south railing, approximately 80-feet apart.

• The bridge profile will be raised to provide clearance for projected flood water elevations in the Bolsa Chica Channel. The replacement bridge will be approximately 5.9-feet higher than the existing bridge. Due to different existing elevations at the touch down locations at Sunset Way East and Edinger Avenue (Edinger Avenue is at a lower elevation than Sunset Way East), the height of the replacement bridge will not significantly increase near Sunset Way East. The length of the bridge span will increase from approximately 300-feet to 340-feet across Bolsa Chica Channel to accommodate the proposed bridge profile.

• Edinger Avenue, Countess Drive, and Sunset Way East will have minor street improvements. The roadway approaches will taper outwards from the bridge to match the existing approach roadway widths. The modifications will be provided between Bravata Drive to the east of the bridge on Edinger Avenue and to the west of the end of the bridge on Sunset Way East. Improvements will include sewer line relocation onto the new bridge; reconstruction of curbs, gutters, and sidewalks; pavement tapering; and the potential replacement, if required, of a segment of the existing landscape wall at the Sea Bridge Townhomes with landscaped retaining walls.

• A drainage inlet will be added near the existing bridge on the west side and drainage improvements will be provided at the Countess Drive and Edinger Avenue intersection.

• No landscaping is proposed for the bridge itself, but landscaping within the Sea Breeze Townhomes located along Edinger Avenue and Countess Drive is proposed to replace removed ornamental vegetation.

• Portions of the Bolsa Chica Channel walls will be reconstructed/modified with rock slope protection (riprap) to provide scour protection at the bridge abutments. The riprap will be installed approximately 50-feet upstream and 50-feet downstream of the bridge on both sides of the channel. In addition, a scour hole located within the channel will be filled with ungrouted riprap and covered with approximately 3,450 square feet of material similar to the soft bottom material currently existing (**Exhibit No. 1 and No. 3**).

• The installation of the new piles, abutments, rock slope protection (riprap) and scour hole fill will result in 0.3704 acres of permanent wetland impacts (Southern Coastal Salt Marsh habitat). The installation of temporary trestle piles on the north and south side of the bridge during construction will result in 0.1308 acres of temporary wetland impacts (Southern Coastal Salt Marsh habitat).

• The permanent impacts to Southern Coastal Salt Marsh habitat will be mitigated through the creation/restoration of 1.26 acres of non-tidal Southern Coastal Salt Marsh habitat at a 3:1 ratio within a County-owned portion of the Talbert Nature Preserve South adjacent to the Santa Ana River (Orange County) discussed in the *Habitat Mitigation and Monitoring Plan (HMMP) for the Edinger Bridge Replacement Project,* dated June 2014, prepared by Dudek (**Exhibit No. 4**). In addition, this plan outlines mitigation and monitoring measures for temporary on-site impacts from shading caused by the temporary trestle piles.

• Grading will consist of 1,840 cubic yards of cut, 2,345 cubic yards of fill and 505 cubic yards of import.

• The project is proposed to be implemented over a period of approximately of 2 years, which will occur in two phases with each phase lasting approximately one year.

B. PRIOR COMMISSION PERMIT ACTIONS

On February 10, 2012, the Commission approved De Minimis Waiver No. 5-11-244-(County of Orange, Department of Public Works)-W for the following development: Drilling of four geotechnical boreholes (8-inch diameter bore down to bedrock) and three soil samplings (two 4-inch diameter soil samples, 1- to 2-feet deep), some of which were located in the waters of the Bolsa Chica channel. The proposed work was necessary in developing an appropriate design for the current proposal to replace a structurally deficient bridge across the Bolsa Chica channel that provides access to the Sunset aquatic park, public marina and leased shipyard.

On March 17, 2015, the Commission issued Emergency Permit No. G-5-15-0011-(Orange County, Public Works) for the following development: Bridge pile repair consisting of ten (10), seventy-five (75) foot long steel H-piles driven into the channel floor. Eight of the piles were driven through the bridge deck and two piles were driven adjacent to the bridge on the north side. Piles were lifted by crane and inserted through holes cut into the bridge deck and driven into the ground. Pile caps consisting of long pieces of steel were slid into place from the side of the bridge and structurally connected to the existing 12-inch by 12-inch wood beam along the top of the existing wood piles. The piles were embedded approximately 50-feet into the channel floor for stability with any excess pile cut off at the required length. The piles are temporary in that they will be removed during the construction of a new bridge expected to be constructed shortly after the interim bridge repair. The proposal also included temporary closure of the bridge to both pedestrian and vehicle traffic until repairs are complete. The emergency permit was approved since it was determined that an unexpected occurrence in the form of missing and significantly deteriorated timber piles that provided necessary support for a public bridge structure required immediate action to prevent or mitigate loss or damage to life, health, property or essential public services (14 Cal. Admin. Code Section 13009). Fifteen (15) Special Conditions were imposed regarding: 1) signing of permit; 2) development authorized; 3) development completion date; 4) submittal for a regular Coastal Development Permit (CDP) of amending application No. 5-15-0148; 5) use of silt curtains; 6) minimization of disturbance to bay bottom and intertidal area; 7) prohibition of machinery or construction materials in the subtidal or intertidal zones; 8) construction staging activities and equipment and material storage; 9) pre-construction biology survey; 10) post-construction biology survey; 11) biology monitoring; 12) public access; 13) public rights; 14) indemnification of the California Coastal Commission; and 15) permits from the California State Lands Commission (CSLC), California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (MNFS), and/or the U.S. Army Corps of Engineers (ACOE).

C. MARINE RESOURCES/WATER QUALITY

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232 of the Coastal Act states:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Section 30233 of the Coastal Act states (in relevant part):

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
> *(l) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
> *(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
> *(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
> *(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
(6) Restoration purposes.
(7) Nature study, aquaculture, or similar resource dependent activities.

Section 30236 of the Coastal Act states:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Section 30240(b) of the Coastal Act states:

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30230 of the Coastal Act requires that marine resources including biological productivity be protected. Section 30231 of the Coastal Act requires that the biological productivity of coastal waters be maintained, and where feasible, restored. Section 30232 of the Coastal Act requires protection against the spillage of crude oil, gas, petroleum products, or hazardous materials in relation to any development. Section 30233 of the Coastal Act limits the fill of open coastal waters to certain allowable purposes and also requires that any project which results in fill of open coastal waters provide adequate mitigation. One purpose for which fill is allowed is incidental public service purposes. Section 30236 of the Coastal Act states that channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to projects including: necessary water supply projects, flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or developments where the primary function is the improvement of fish and wildlife habitat.

Section 30240(b) of the Coastal Act requires that development adjacent to sensitive habitat areas shall be sited and designed to prevent impacts which would significantly degrade those areas.

The proposed project will occur within a wetland resource located in the Bolsa Chica Channel. The project involves installation of new piles, abutments, rock slope protection (riprap) and scour hole fill within a Southern Coastal Salt Marsh habitat area.

Project plans were submitted with the application. However, the submitted plans were not the completed final plans. Thus, the Commission imposes **Special Condition No. 1**, which requires the permittee to submit a Final Project Plan for the Executive Director's review and approval.

1. Wetland Fill

The proposed bridge replacement project will result in fill within areas of the Bolsa Chica Channel defined as wetland resources (Southern Coastal Salt Marsh) pursuant to Section 30121 of the Coastal Act. The fill is necessary to provide bridge columns (piles), abutments, and scour protection (rock slope protection and scour hole fill) from seasonal storm flows in the channel.

In the area of the existing bridge, the Bolsa Chica Channel was designed with a base width of 94-feet, 3:1 side slopes, and a design depth of 11- to 13-feet. The channel has a very flat design slope of approximately 0.05 percent. A sparsely vegetated bench is located on the south side of the channel and has a width that varies from 30- to 40-feet. Upstream of the bridge, the channel is approximately 16- to 17-feet deep, which is approximately 6-feet lower than the original bottom design of the channel (i.e., channel invert). At the bridge, the channel is approximately 26 feet deep, which is approximately 13-feet lower than the original design invert. The increased depth is due to a scour hole located at the west end of the existing bridge. Downstream of the bridge, the depth is approximately 15-feet, which is approximately 4-feet lower than the original design invert. A deep scour hole has developed near the bridge's northwest section. This scour hole is as deep as 17-feet, which is approximately 8-feet deeper than the channel invert. The scour hole extends approximately 500-feet upstream and 300-feet downstream of the bridge. At its widest point (at the bridge), it is approximately 70-feet with an average width of approximately 40 feet. The scour hole has been caused by local scour at the western bridge piers from higher channel velocities at the outside of the bridge bend. As a part of the proposed project, the scour hole will be filled to an elevation of approximately -12 feet to provide protection to the proposed bridge abutments and obtain a level channel bottom. The scour hole will be filled with ungrouted riprap (rocks) and covered with similar soft bottom material to prevent the scour hole from reoccurring and adversely impacting the bridge. Rock slope protection will also be provided in areas currently with and without rock slope protection to protect the channel banks near the bridge abutments from erosion. The slope protection would be comprised of an approximate 3.3-foot-thick layer of ¼-ton rock with a backing layer of approximately 1.8-feet of 75-pound rock with a fabric liner. The riprap is proposed to be embedded 14-feet below the channel invert to prevent bank toe scour. It would extend approximately 50-feet upstream and approximately 50-feet downstream of the proposed bridge on each bank to protect the bridge abutments.

The installation of the new piles, abutments, rock slope protection (riprap) and scour hole fill will result in 0.3704 acres of permanent wetland impacts. The installation of temporary trestle piles on the north and south side of the bridge during construction will result in 0.1308 acres of temporary wetland impacts. Therefore, these activities are considered fill of wetland resources. This fill is necessary to replace an existing bridge that provides an important public service by providing the only access between Pacific Coast Highway and inland Orange County to the Sunset aquatic park, public marina and leased shipyard, a regional recreational facility that provides coastal access. No expansion of road capacity is created by the project. Therefore, the fill is associated with an incidental public service and is therefore an allowable purpose under the Coastal Act.

Although the proposed fill is an allowable type of fill, the project can only be found consistent with the Coastal Act if it is the least environmentally damaging feasible alternative and feasible mitigation measures have been provided to minimize environmental effects. Section 30233(a)(4) of the Coastal Act allows for fill of open coastal waters for incidental public service purposes. The proposed bridge provides the only vehicle or pedestrian access to the park and marina. As proposed, the project provides for an incidental public purpose and thus the fill is allowed under the Coastal Act. The applicant considered the following alternatives in determining the least environmentally damaging alternative: 1) repair and maintenance of the existing bridge and 2) construction of a 3-span bridge. The applicant stated that continued repair and use of the existing bridge as opposed to replacement of the bridge would result in permanent load restrictions and would not eliminate the safety issues. Ongoing scour and marine borer activity would continue to compromise the structural integrity of the existing structure, which may ultimately result in the closure of the bridge. In addition, continued repairs to maintain the functionality of the bridge functional could result in greater and frequent impacts to biological and aquatic resources than replacement with a new bridge. Continued bridge repairs (e.g., timber pile repair or replacement, scour hole filling) could entail multiple channel entries and ground disturbance at frequent intervals over the foreseeable future. Thus, the applicant did not choose this option. The applicant also considered a 3-span bridge, which would have reduced the number of piles in the channel. However, this bridge design was not chosen due to connectivity issues between Edinger Avenue and Countess Drive and that a 3-span bridge would increase the bridge cost exponentially. Thus, the applicant did not choose this option as well. After a review of the alternatives, the applicant found that the proposed 4-span bridge was the only alternative that would ensure the long term stability of the bridge, and represents the least environmentally damaging alternative. The proposed project will involve the removal of one-hundred and forty wooden piles from within the channel and replacement of these piles with twelve concrete piles. The number of piles will be reduced and will thus result in less fill of the channel and improved channel circulation and aquatic wildlife movement. Also, the project proposes to fill an existing scour hole with ungrouted riprap and sand that is similar to the sandy materials found in the existing channel would be used to cover the riprap. The combination of the ungrouted riprap and sand will reduce potential scouring and subsequent damage to the new bridge. This scour hole fill will also provide benthic conditions that would promote the re-establishment of marine plants and micro-invertebrates and will provide for improved essential fish habitat within the channel.

As indicated above, continued degradation of the bridge presents a safety concern. If the bridge is not replaced, direct public access to Sunset aquatic park, public marina and leased shipyard, a regional recreational facility that provides coastal public access and recreational opportunities, would be eliminated. In addition, loss of the bridge would eliminate access to the park and marina (including the businesses and Sherriff's office located in this area) since access to these facilities is only possible by this bridge. Lastly, loss of the bridge would significantly affect police, fire, and emergency services for these facilities.

While the proposed project may be the least environmentally damaging feasible alternative, feasible mitigation measures to minimize environmental effects is still necessary. As stated previously, the proposed project results in 0.3704 acres of permanent impacts and 0.1308 acres of temporary impacts to Southern Coastal Salt Marsh habitat.

As stated previously, the proposed project results in 0.3704 acres of permanent impacts and 0.1308 acres of temporary impacts to Southern Coastal Salt Marsh habitat. To mitigate for these impacts, the applicant has proposed a Habitat Management and Maintenance Plan (HMMP), to be discussed on the following page of the staff report, that states that 0.42 acres of permanent impacts to Southern Coastal Salt Marsh habitat will be mitigated. The reason for the larger amount of mitigation in the HMMP is that the largest jurisdictional impact was to area under the jurisdiction of the California Department of Fish and Wildlife (CDFW). Thus, mitigation for that larger amount, which would also cover the impact to CCC jurisdictional resources, was chosen.

A California Rapid Assessment Method (CRAM) assessment was performed within the project area (Bolsa Chica Channel) that indicates that habitat values within the channel and buffer areas are moderately to extremely low. Thus, the CRAM assessment concluded that the habitat value of the Southern Coastal Salt Marsh habitat is very low and the disturbed conditions within Bolsa Chica Channel and the disturbed and developed conditions in areas in the immediate vicinity of the project are extremely low. Thus, due to the low value of the Coastal Salt Marsh habitat, a lesser mitigation ratio of 3:1 was used instead of the typical 4:1.

Typically the Commission prefers on-site mitigation to off-site mitigation. Also for the loss of Southern Coastal Salt Marsh habitat, the Commission typically requires that mitigation be done at a 4:1 ratio. However, the Commission has approved mitigation at a lower ratio when the impacted habitat is degraded or of low habitat value. Additionally, the applicant must be fully responsible for undertaking the mitigation. In this way, the Commission is assured that the mitigation will occur and it is clear who is responsible for undertaking and managing the mitigation.

The applicant has stated that on-site mitigation is not feasible or practicable given the fact that Bolsa Chica Channel is an existing deficient flood-channel that does not meet the County's 100-year flood conveyance policy, which means that the installation of any mitigation within the Bolsa Chica Channel would ultimately conflict with future 100-year flood-control improvements.

Originally, the applicant stated that these impacts would be mitigated though a one-time payment for the enhancement of 0.54 acres of Southern Coastal Salt Marsh habitat within the Zedler Marsh located within the Los Cerritos Wetlands in Long beach (Los Angeles County), approximately 3 miles northwest of the project. Zedler Marsh is located immediately adjacent to the San Gabriel River south of 2nd Street between the San Gabriel River and the Southern California Edison Haynes Electrical Generation Station cooling canal/channel. Zedler Marsh is part of a larger marsh complex which is owned and operated by the Los Cerritos Wetlands Authority (LCWA). However, the applicant decided against this mitigation proposal. Instead, the 0.42 acres of permanent impacts to Southern Coastal Salt Marsh habitat will be mitigated through the creation/restoration of 1.26 acres of non-tidal Southern Coastal Salt Marsh habitat (3:1 ratio) within a County-owned portion of the Talbert Nature Preserve South adjacent to the Santa Ana River (Orange County) as discussed in the *Habitat Mitigation and Monitoring Plan (HMMP) for the Edinger Bridge Replacement Project,* dated June 2014, prepared by Dudek. Mitigation activities would consist of: (1) removal of existing non-native ruderal vegetation within the mitigation site; (2) topographic modification of the mitigation site; (3) installation and

establishment of 1.26 acre of non-tidal native saltmarsh and appropriate halophytic brackish marsh plant species; and (4) implementation of a five-year maintenance program and five-year monitoring program. In addition, this plan outlines mitigation and monitoring measures for temporary on-site impacts from shading caused by the temporary trestle piles. The applicant Orange County Public Works would be responsible for the successful implementation of the HMMP.

To address the permanent and temporary impacts to wetland habitat consisting of Coastal Salt Marsh Habitat, the applicant has prepared a HMMP. The Commission Staff Biologist has reviewed the HMMP and agrees with the proposed plan. Since the application submittal, potential changes to habitat being impacted or the plan may have occurred. To ensure that the HMMP is consistent and up to date, **Special Condition No. 2**, requires the applicant to submit a Final Habitat Monitoring and Mitigation Plan for the review and approval of the Executive Director.

The Talbert Nature Preserve South, on a plot of land that is currently vegetated with ruderal non-native vegetation, dominated by mustard (*Brassica* spp.). Soil testing from the general area indicates elevated soil salinity, suitable for establishment of native halophytes. The mitigation site will be revegetated with a diverse mix of native saltmarsh and salt tolerant brackish marsh transitional species. Replacing the non-native ruderal vegetation on the mitigation site with native species will improve ecological functions and services, reestablishing contiguous native habitat connections to adjacent preserve land, thereby increasing ecological functions and services above what was impacted.

In addition to the 0.42 acre of permanent impacts, 1.11 acres of temporary impacts from the shading caused by the trestle piles are anticipated to occur to jurisdictional resources (USACOE, CDFW, RWQCB, United States Fish and Wildlife Service (USFWS) & CCC). The HMMP plan states that the since vegetation or soil disturbance will occur in these areas of temporary impact, that there is a high probability that these impact areas will passively revegetate after the structures are removed and sunlight is allowed to access the temporary impact area. However, the plan still outlines mitigation and monitoring measures for these temporary on-site impacts from shading caused by the temporary trestle piles.

2. Channel Alteration

Under the proposed project, approximately 11,860 square feet of rock slope protection would be installed along the banks and bottom of flood control channel where the channel makes a sharp turn south before discharging into Anaheim bay. Section 30236 limits this type of stream channelization or substantial alteration to necessary water supply projects and cases where there is no other method for protecting existing structures in the floodplain and where protection is needed for public safety or where the primary function of the channelization is the improvement of fish and wildlife habitat.

The applicant has submitted an analysis that demonstrates that the velocities of the channel flow at the turn in the channel, during high flow events, are high enough to erode the banks and channel bottom in this area if they were soil alone. Such erosion would threaten the stability of the roads and the nearby flood control basins in the vicinity of the channel, including the stability

of the proposed replacement bridge. If fact, such erosion did impact the stability of the existing bridge, which required emergency stabilization. Thus, the proposed stream channelization/substantial alteration is necessary to protect existing structures in the flood plain and to ensure public safety. The applicant is proposing the use of rock slope protection that will provide 'hard' protection from high-flow scour events, but will also allow sediment to cover the bottom during lower flow conditions. Alternative types of 'softer' bank protection (e.g. brush mat bank protection) would not be appropriate in this area. The Commission's engineer reviewed the proposed stream/channel bank stabilization design and determined that the proposed type and quantity of stabilization are the minimum necessary and the most appropriate at this location.

The proposed stream channelization/substantial alteration is necessary to protect and is the only method of protecting existing development in the floodplain and assuring public safety. Therefore, the Commission finds the proposed development consistent with Section 30236 of the Coastal Act.

3. Lighting

According to the applicant, lighting for the safety of pedestrians and bicyclists is necessary. The proposed project includes the installation of four, approximately 14-feet high light standards (curved light pole with a modern lamp shield) on the south railing of the bridge, approximately 80-feet apart. Lighting that is not controlled could have adverse effects upon the adjacent habitat. The applicant has stated that lighting will be directed only on to the bridge and not spill onto adjacent properties or onto the water. However, a lighting plan indicating other additional measures is necessary to make sure that the lighting will not have any adverse impacts to habitat. For example, low intensity lighting should be used and skyward-casting lighting should be prohibited. To ensure that the proposed lighting does not impact habitat, such as wetland resources, the Commission imposes **Special Condition No. 3**, which requires the applicant to submit a Lighting Plan for the Executive Director's review and approval.

There is significant potential for adverse impacts to habitat as a result of any potential changes to the proposed project, such as a change in the bridge design. Thus, to assure that future development is consistent with the Chapter 3 policies of the Coastal Act, the Commission imposes **Special Condition No. 4**, which is a future improvements special condition.

To avoid/minimize any additional impacts to habitat, the applicant has proposed measures such as: use of bubble and turbidity curtains prior to pile driving in the channel; having a biological monitor present during vegetation removal; construction activity limited to, etc.

The Commission finds that the proposed project involves wetland fill that is allowable as an incidental public service purpose, the proposed fill is the least environmentally damaging feasible alternative, and that mitigation measures, in the form of a net reduction in wetland fill, has been provided to minimize adverse environmental effects. Therefore, the proposed project, as conditioned, can be found consistent with Section 30233 of the Coastal Act.

4. Avian Species

The project site is located in an area of state or federally listed rare, threatened, or endangered species. Focused surveys for special status bird species were conducted in spring/summer 2012. The Federally and State-listed Endangered California Least Tern (*Sternula [Sterna] antillarum browni*), and State-listed Endangered Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*) were observed foraging in the vicinity of the project site, the California Least Tern in the open water of Bolsa Chica Channel and the Belding's Savanna Sparrow in the Southern Coastal Salt Marsh upstream of the project site. No suitable nesting habitat for these two species was determined to occur within or adjacent to the project site. The Federal and State-listed Endangered Light-Footed Clapper Rail (*Rallus longirostris levipes*) was not observed during focused surveys.

There is potential for the project to impact special status bird species. Therefore, the Commission imposes **Special Condition No. 5**, which requires a) pre-construction surveys for nesting birds and avoidance of nesting sites during nesting; b) pre-construction surveys for sensitive species; and c) a requirement for monitoring of the site during construction to ensure that construction activities do not result in impacts to sensitive species. Furthermore, the proposed project includes an approximate 4-foot high bridge railing on both sides of the bridge. There is no tall fence or bird diversion devices, such as Sebastian Poles, proposed at this time and no discussion in any of the environmental documents indicated a need for any bird protection measures. Any future changes to the bridge railing that is inconsistent with the approved project will require an amendment to this permit (**Special Condition No. 4).**

5. Eelgrass (*Zostera marina*)

An eelgrass (*Zostera marina*) survey took place in August 2012 and eelgrass was found approximately 130 feet downstream from the south edge of the bridge approximately in the middle of the Bolsa Chica Channel. The applicant states that it is not expected to be impacted by the proposed project. Eelgrass surveys completed during the active growth phase of eelgrass (typically March through October) are valid for 60-days with the exception of surveys completed in August-October. A survey completed in August - October is valid until the resumption of active growth (i.e., March 1). The project is agendized for the July 2015 Coastal Commission Hearing so the existing eelgrass survey will no longer be valid by the time of construction. Therefore, a subsequent eelgrass survey will be required prior to beginning any construction. Therefore, the Commission imposes **Special Condition No. 6**, which requires a new eelgrass survey and identifies the procedures necessary to be completed prior to beginning construction, in case the new survey also expires prior to commencement of construction. In addition, the special condition identifies post-construction eelgrass procedures. These conditions will ensure that should impacts to eelgrass occur (though none are expected), the impacts will be identified and appropriate mitigation required. Therefore, as conditioned, the Commission finds that the proposed development will not result in significant impacts to eelgrass.

6. *Caulerpa Taxifolia*

In 1999, a non-native and invasive aquatic plant species, *Caulerpa Taxifolia*, was discovered in parts of Huntington Harbor (Emergency Coastal Development Permits 5-00-403-G and 5-00-463-G). *Caulerpa Taxifolia* is a type of seaweed which has been identified as a threat to California's coastal marine environment because it has the ability to displace native aquatic plant species and habitats. Information available from the National Marine Fisheries Service indicates that Caulerpa Taxifolia can grow in large monotypic stands within which no native aquatic plant species can co-exist. Therefore, native seaweeds, seagrasses, and kelp forests can be displaced by the invasive *Caulerpa Taxifolia*. This displacement of native aquatic plant species can adversely impact marine biodiversity with associated impacts upon fishing, recreational diving, and tourism. *Caulerpa Taxifolia* is known to grow on rock, sand, or mud substrates in both shallow and deep water areas. Since eelgrass grows within the general project vicinity, Caulerpa Taxifolia, if present, could displace eelgrass in the channels.

A *Caulerpa Taxifolia* survey was completed in August 2012 and none was found. *Caulerpa Taxifolia* surveys are valid for 90 days. The project is agendized for the July 2015 Coastal Commission Hearing and by this time the Caulerpa Taxifolia survey would not continue to be valid since 90-days have passed since the survey was completed. Thus, an up-to-date *Caulerpa Taxifolia* survey must be conducted prior to commencement of the project. In order to ensure that the proposed project does not cause the dispersal of *Caulerpa Taxilfolia*, the Commission imposes **Special Condition No. 7**, which requires the applicant, prior to commencement of development, to survey the project area for the presence of *Caulerpa Taxilfolia*. If *Caulerpa Taxilfolia* is present in the project area, no work may commence and the applicant shall seek an amendment or a new permit to address impacts related to the presence of the *Caulerpa Taxilfolia*, unless the Executive Director determines that no amendment or new permit is legally required.

7. Construction Impacts to Water Quality

Construction will occur directly over and in coastal waters. As such, there is a possibility that construction phase activities could result in adverse water quality impacts. In addition, there is a possibility that improper staging and storage of equipment could have impacts on both water quality and nearby wetland habitat. Wetlands and other sensitive habitat are located within the footprint of the project and in the project vicinity.

Potential construction phase impacts include improper storage or placement of construction materials, debris, or waste in a location subject to erosion and dispersion or in a manner which allows such materials to be discharged into the Bolsa Chica Channel and coastal waters via rain or urban runoff. These actions would result in adverse impacts upon the marine environment that would reduce the biological productivity of coastal waters. For instance, construction debris entering coastal waters may cover and displace soft bottom habitat. In addition, the use of machinery in coastal waters not designed for such use may result in the release of lubricants or oils that are toxic to marine life. Sediment discharged into coastal waters may cause turbidity, which can shade and reduce the productivity of foraging avian and marine species ability to see food in the water column.

The applicant is proposing Best Management Practices (BMPs) for reducing or eliminating construction-related impacts to water quality during construction, such as: prohibition of discharge of any hazardous materials into the Bolsa Chica Channel, turbidity curtains during pile removal, disposal of trash in suitable containers on land or on work barges at the end of the construction day, etc.

In order to assure that the proposed project does not result in any accidental or unanticipated discharges, spills or other activities that could harm marine resources and water quality, and to assure the applicant is aware of their responsibility to provide a debris catching device under this coastal development permit, the Commission imposes **Special Condition No. 8**, which requires the applicant to implement construction Best Management Practices (BMPs) to protect water quality.

Besides adhering to the construction Best Management Practices (BMPs) as required by **Special Condition No. 8** above, a Storm Water Pollution Prevention Plan (SWPPP) should be prepared for the proposed project that would specifically deal with water quality on site during construction. The applicant acknowledges that a SWPPP needs to be development for the project site, but such a plan has not yet been development. Therefore, it is necessary to impose **Special Condition No. 9**, which requires the applicant to submit a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the Executive Director.

The applicant has indicated that the construction staging area will be in an area immediately adjacent to the north side of Countess Drive that is currently being used by the County of Orange for maintenance of the existing bridge and Bolsa Chica Channel. However, plans have not been submitted for the construction staging site. Two Dry Extended Detention Basin owned by the County of Orange are located northwest of the bridge and the Seal Beach National Wildlife Refuge that supports sensitive habitat and species, including Coastal Salt Marsh habitat is located north of the bridge. With the proximity of the staging areas to these areas, as well as the Bolsa Chica Channel, there is potential for adverse impacts to habitat areas from the construction staging areas since the specific location of the site and plans for it have not been identified. Thus, the Commission finds that it is necessary to impose **Special Condition No. 10**, which requires the applicant to submit a Construction Staging Plan for the Executive Director's review and approval. The condition requires the construction staging area(s) and construction corridor(s) to avoid impacts to nearby wetland areas. It ensures that construction equipment, materials, or activity shall not be placed within 100 feet of any wetland areas or sensitive habitat.

8. Post-Construction Impacts to Water Quality

The proposed development will result in urban runoff entering the storm water system. Pollutants such as sediments or toxic substances such as grease, motor oil, heavy metals, pesticides and fertilizers are often contained within urban runoff entering the storm water system. In this case, the site drains a bridge and roadways. Therefore, the primary post-construction water quality concerns associated with the proposed project include, grease, motor oil, heavy metals and trash. The proposed development would result in the discharge of storm water into the storm water conveyance system that would discharge into the Bolsa Chica Channel, wetlands and into coastal waters. Therefore, the project has the potential to affect the water quality of the coastal waters in Huntington Beach and Seal Beach.

The proposed project is considered development and there is an opportunity to improve water quality. Much of the pollutants entering the ocean come from land-based development. The Commission finds that it is necessary to minimize to the extent feasible within its jurisdiction the cumulative adverse impacts on water quality resulting from the proposed project.

In order to deal with these post construction water quality impacts, the applicant has submitted a *Water Quality Management Plan (WQMP),* dated January 31, 2013, prepared by AECOM. Currently on the west side of the bridge, the street is situated at a crest. As there is no curb on the north side of the street, instead of flowing westerly, the street surface runoff flows toward the existing Dry Extended Detention Basin owned by the County of Orange. The existing basin consists of two bays, a forebay and a detention basin, that will allow for sediment filtering and peak flow detaining purposes. Whenever there are larger storm events that cause the water surface elevation within the forebay to rise to Elevation 8.5, stormwater will overflow westerly to the detention bay. Some degree of infiltration will take place until the underground soil is saturated, then any excessive runoff will overflow westerly to the existing wetland before discharging to Anaheim Bay. On the east side of the bridge, runoff currently flows southeasterly along the curb and gutter on Edinger Avenue, then continues to flow southwesterly along Countess Drive. The gutter flow is then intercepted by an existing catch basin, which is located at the west side of Countess Drive. The captured flow will directly discharge into Bolsa Chica Channel via a storm drain lateral and outlet to Pacific Ocean – Anaheim Bay.

The proposed WQMP states that post construction drainage on the west side of the bridge post construction will flow southwesterly along the proposed curb and gutter on the bridge and then will be collected by a proposed catch basin with an 18-inch reinforced concrete pipe (RCP) outlet. The new storm drain will carry the flow to an existing Dry Extended Detention Basin located northwest of the bridge crossing and the stormwater will drain in the same manner within the basin as described above. Drainage on the east side of the bridge will remain the same and be directed to a catch basin located on the west side of Countess Drive. While the submitted WQMP does indicate that the proposed bridge will include a new catch basin, it does not indicate if trash racks/face plates or grease and oil separators to filter runoff will be installed within this new catch basin. Therefore, an additional measure needs to be included into the WQMP to further protect from adverse impacts to water quality, which requires that any new or relocated/modified catch basins/street drain inlets will be required to include trash racks or bars, and grease and oil separators to filter runoff and all structural and non-structural BMP's shall be maintained. Therefore, it is necessary to impose **Special Condition No. 11**, which requires the applicant to submit a Revised Water Quality Management Plan (WQMP) for the Executive Director's review and approval.

The applicant has stated that no landscaping is proposed for the bridge itself, but that landscaping within the Sea Breeze TownHomes located along Edinger Avenue and Countess Drive is proposed to replace removed ornamental vegetation. However, no landscape plans have been submitted. The placement of any vegetation that is considered to be invasive which could supplant native vegetation should not be allowed. Invasive plants have the potential to overcome native plants and spread quickly. Invasive plants are generally those identified by the California Invasive Plant Council (http://www.cal-ipc.org/) and California Native Plant Society

(www.CNPS.org) in their publications. Furthermore, any plants in the landscape plan should only be drought tolerant to minimize the use of water (and preferably native to coastal Orange County). The term drought tolerant is equivalent to the terms 'low water use' and 'ultra low water use' as defined and used by "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California" prepared by University of California Cooperative Extension and the California Department of Water Resources dated August 2000 available at http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf). Thus, the Commission imposes **Special Condition No. 12**, which requires the applicant to submit a Landscape Plan that only consists of native plants or non-native drought tolerant plants, which are non-invasive for the Executive Director's review and approval.

9. Resource Agency Approval

The applicant has received an approved Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB) dated July 17, 2014. The applicant also has a draft California Fish and Game Code Section 1602 Stream or Lakebed Alteration Agreement (SAA) from the California Department of Fish and Wildlife (CDFW) and is in the process of finalizing that agreement. Additionally, the U.S. Army Corps of Engineers (USACOE) Rivers and Harbors Act Section 10 Permit is pending.

Conclusion

Thus, as conditioned, the Commission finds that the proposed project is consistent with Sections 30230, 30231, 30232, 30233, 30236 and 30240(b) of the Coastal Act.

D. VISUAL RESOURCES

Section 30251 of the Coastal Act states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Section 30251 of the Coastal requires the protection of scenic views, and where feasible, restoration of visual qualities in visually degraded areas.

The project site is located in a highly scenic area surrounded primarily by open space and recreational and residential uses. Sea Bridge Townhomes, an existing residential community, is located south and east of the bridge; the Sunset aquatic park, public marina and leased shipyard is located to the west; open space and the Seal Beach Naval Weapons National Wildlife Refuge (Wildlife Refuge) are located to the north; and the Bolsa Chica Channel (over which the bridge spans and outlets into Huntington Harbor) is located to the south. Views of these areas are available from the bridge and views of the bridge are available from these off-site uses as well.

At its highest point, the proposed bridge would be approximately 5.9-feet higher in elevation than the existing bridge and the proposed bridge would also be 18.5 feet wider and 40-feet longer than the existing bridge. The increase in height is due to the different existing elevations at the touch down locations at Sunset Way East and Edinger Avenue (Edinger Avenue is at a lower elevation than Sunset Way East). The increases in width and length are to provide clearance for projected flood water elevations and to comply with Caltrans minimum roadway standards. Although the new bridge would be 40 feet longer and approximately 5.9 feet taller at its highest point, it would still retain its low profile and the project improvements would not substantially modify the visual character of the project site or the immediate surroundings. Views from the bridge would not be blocked or obscured, nor would the bridge block any public views.

The applicant proposes lighting for the safety of pedestrians and bicyclists. The proposed project includes the installation of a bridge railing on both sides of the bridge that are approximately 4-feet height. In addition, four, approximately 14-feet high light standards (curved light pole with a modern lamp shield) will be installed on the south railing, approximately 80-feet apart. Lighting will be directed only on to the bridge and not spill onto adjacent properties or onto the water. Currently there is no lighting on the bridge; however, there are existing light standards along both Edinger Avenue and Countess Drive, including at the intersection of the two roadways. All construction activities associated with the proposed bridge replacement would occur during daylight hours; no nighttime lighting would be used during construction. The project does not include a tall fence or bird diversion devices, such as Sebastian Poles and no discussion in any of the environmental documents indicated a need for any bird protection measures. Thus, the proposed project does not result in any additional adverse visual impacts.

Conclusion

As conditioned, the Commission finds that the proposed project is consistent with Section 30251 of the Coastal Act.

E. HAZARDS

Section 30253 of the Coastal Act states:

> *New development shall do all of the following:*
> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area…*

Section 30253 of the Coastal Act states that new development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard.

Rock slope protection require occasional repair and maintenance due to: the natural settling or subsidence of the rock structure over time and the inadvertent loss of rock material due to tidal erosion dislodging rock from the structure. The rock slope protection placed at the toe of the existing bridge supports has degraded, resulting in erosion of the banks of the channel and

undermining of the bridge abutments and weakening of the bridge substructure. Without protection, the channel banks would continue to erode, the supports for the bridge would be undermined, and the stability of the structure would be threatened. In this case, the bridge is being completely replaced and the proposed riprap work and scour fill would be for protection of the new bridge that provides an important public service by providing the only access between Pacific Coast Highway and inland Orange County to the Sunset aquatic park, public marina and leased shipyard, a regional recreational facility that provides coastal access. Therefore, the fill is associated with an incidental public service and is therefore an allowable purpose under the Coastal Act.

The Edinger Avenue Bridge spans the Bolsa Chica Channel, which is a trapezoidal, soft-bottom, man-made channel with existing rock riprap on some sections of its west and north bank. The proposed project includes the installation of rock slope protection (riprap) in areas currently with and without rock slope to protect the channel banks near the bridge abutments to prevent bank toe scour. Existing riprap in the area has failed and the channel bank has eroded. The slope protection would be comprised of an approximate 3.3-foot-thick layer of ¼-ton rock with a backing layer of approximately 1.8-feet of 75-pound rock with a fabric liner and would extend approximately 50-feet upstream and approximately 50-feet downstream of the proposed bridge on each bank to protect the bridge abutments. The proposed rock slope protection is the minimum width necessary to protect the bridge abutments, and has been placed as far landward as possible.

The proposed project also includes filling of a deep scour hole near the bridge's northwest section caused by local scour at the western bridge piers from higher channel velocities at the outside of the bridge bend. This scour hole is as deep as 17-feet, which is approximately 8-feet deeper than the channel invert. The scour hole extends approximately 500-feet upstream and 300-feet downstream of the bridge. At its widest point (at the bridge), it is approximately 70-feet with an average width of approximately 40 feet. The scour hole will be filled to an elevation of approximately -12 feet to provide protection to the proposed bridge abutments and obtain a level channel bottom resulting in fill of wetlands. The scour hole will be filled with ungrouted riprap (rocks) and covered with similar soft bottom material to prevent the scour hole from reoccurring and adversely impacting the bridge. The proposed scour fill is the minimum work necessary to fill the hole to protect the bridge abutments.

The proposed rock slope protection is not expected to have adverse impacts to the shoreline sand supply. The project is covering an embankment that was previously protected and was not contributing to the shoreline sand supply. Areas where additional protection would be added have been minimized, and are not expected to have contributed significantly to sediment supplies. Additionally, the project is located inside a bay, and is therefore not expected to directly impact the lateral flow of sand along the ocean. Therefore, the project would not have a significant adverse impact to the shoreline sand supply, consistent with the requirements of Coastal Act Section 30235.

The proposed bridge will continue to be subject to tidal action from Bolsa Chica Channel and development at such a location is inherently risky. Therefore, the Commission imposes **Special Condition No. 13**, requiring the applicant to assume the risk for the development. As

conditioned, the applicant is notified that the project is being built in an area that is potentially subject to wave and tidal action, flooding, erosion, sea level rise, geologic instability, or liquefaction that can damage the applicant's property. The applicant is also notified that the Commission is not liable for such damage as a result of approving the permit for development and is required to indemnify the Commission in the event of a lawsuit against it. Finally, the condition ensures that future owners of the property will be informed of the risks and the Commission's immunity from liability.

Conclusion

As conditioned, the Commission finds that the proposed project is consistent with Section 30253 of the Coastal Act

F. PUBLIC ACCESS

Section 30210 of the Coastal Act states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse*.

Section 30211 of the Coastal Act states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Section 30210 of the Coastal act states that maximum access and recreational opportunities shall be provided. Section 30211 of the Coastal Act protects the public's right of access to the sea.

The Edinger Avenue Bridge provides coastal access for recreational boating as part of the Sunset aquatic park, public marina and leased shipyard and is the only vehicular, bicycle and pedestrian access to those uses. To ensure that public access is protected and disruptions are minimized during construction, a Construction Staging Plan and Access Detour Plan are required. Construction Staging Plans should indicate the construction staging area and construction corridors and how they will minimize public access impacts to the nearby coast during construction, such as indicating the limits of the staging area; that construction equipment and material storage and activity shall not occur outside of the staging area and corridor; etc. Access Detour Plans should indicate how traffic will be managed during construction so that any potential impacts to access to the coast are minimized, such as indicating that every effort shall be made to minimize disruption to sidewalk, bicycle and lane closures; that sidewalk, bicycle and lane shall be open and available for use to the maximum extent feasible during construction or alternate routes provided and clearly marked, etc. The applicant has indicated that the staging area will be in a disturbed area immediately adjacent to the north side of Countess Drive that is currently being used by the County of Orange for maintenance of the existing bridge and Bolsa

Chica Channel. The applicant has also stated that access to the park and marina will be maintained at all times during the construction of the bridge replacement project. Furthermore, the applicant states that one travel lane would remain open while the other lane is demolished and replaced. However, the applicant has not submitted plans for neither the Construction Staging area nor the Access Detour. Thus, the Commission finds that it is necessary to impose **Special Condition No. 10**, which requires the applicant to submit a Construction Staging Plan and **Special Condition No. 14**, which requires the applicant to submit an Access Detour Plan for the Executive Director's review and approval.

Conclusion

As conditioned, the Commission finds that the proposed project is consistent with Section 30210 and 30211 of the Coastal Act.

G. GROWTH INDUCING DEVELOPMENT

Section 30254 of the Coastal Act states:

> *New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route l in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.*

The proposed project is to replace a deteriorating bridge that provides the only public access (vehicular, bicycle and pedestrian) to the County-owned Sunset aquatic park, public marina and leased shipyard. The bridge width will be increased from approximately 30-feet to approximately 48.5-feet to accommodate state standard width for lanes, shoulders, sidewalk and bicycle lanes. The bridge will provide two 12-foot-wide vehicular lanes (one lane in each direction consistent with the existing bridge) and two 8-foot-wide shoulders (one on each side of the bridge where there are currently no shoulders). The additional width is also to accommodate designated bicycle lanes and pedestrian walkways to meet state standards. The width of the existing sidewalk and undesignated bicycle pathway on the south side of the bridge will be increased from 4-feet to 5-feet to accommodate and provide overhead light standards on the bridge. While the width of the bridge is being increased, it is being done so to provide and improve access to a recreational facility and not designed to accommodate future growth. Thus, the proposed project is not growth inducing.

Conclusion

Based on the foregoing the Commission finds that the proposed project, as conditioned to deal with marine resources, water quality, visual resources, hazards, and public access issues as detailed above, is consistent with Section 30254 of the Coastal Act.

H. LOCAL COASTAL PROGRAM (LCP)

Coastal Act section 30604(a) states that, prior to certification of a Local Coastal Program ("LCP"), a coastal development permit can only be issued upon a finding that the proposed development is in conformity with Chapter 3 of the Act and that the permitted development will not prejudice the ability of the local government to prepare an LCP that is in conformity with Chapter 3. The City of Seal Beach does not have a certified LCP, while the City of Huntington Beach has an LCP that was effectively certified in March 1985. However, the proposed development is occurring within an area of the Commission's original permit jurisdiction, due to the project location seaward of the mean high tide line. Consequently, the standard of review is the Coastal Act and the City's LCP is used only as guidance. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act and with the certified LCP for the area.

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The County of Orange is the lead agency for purposes of CEQA compliance. A Mitigated Negative Declaration was approved for this project in July 2013 pursuant to the provisions of CEQA. Mitigation measures included a measure to minimize any impacts to biological resources and hydrology and water quality.

The proposed project is located in an urban area. Infrastructure necessary to serve the project exists in the area. The proposed project has been conditioned in order to be found consistent with the resource protection policies of the Coastal Act. As conditioned, the proposed project has been found consistent with the public access and water quality policies of the Coastal Act.

As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse effect which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified effects, is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX 1

SUBSTANTIVE FILE DOCUMENTS: Coastal Development Permit No. 5-05-428-(County of Orange, Department of Public Works); Coastal Development Permit De Minimis Waiver No. 5-11-244-(County of Orange, Department of Public Works); Emergency Permit No. G-5-15-0011-(Orange County, Public Works); *Habitat Mitigation and Monitoring Plan (HMMP) for the Edinger Bridge Replacement Project,* dated June 2014, prepared by Dudek; City of Huntington Beach Planning Department Approval-In-Concept dated October 16, 2013; City of Seal Beach Planning Department Approval-In-Concept dated October 17, 2013; Letter from Commission staff to the applicant dated August 2, 2013; Letter from the applicant to Commission staff dated June 26, 2014; Letter from the applicant to Commission staff dated February 5, 2015; Water Quality Management Plan (WQMP), dated January 31, 2013, prepared by AECOM; Coastal Hazards Assessment dated March 6, 2015 prepared by AECOM; and Updated Sea Level Rise Analysis dated March 6, 2015 prepared by CH2MHILL.

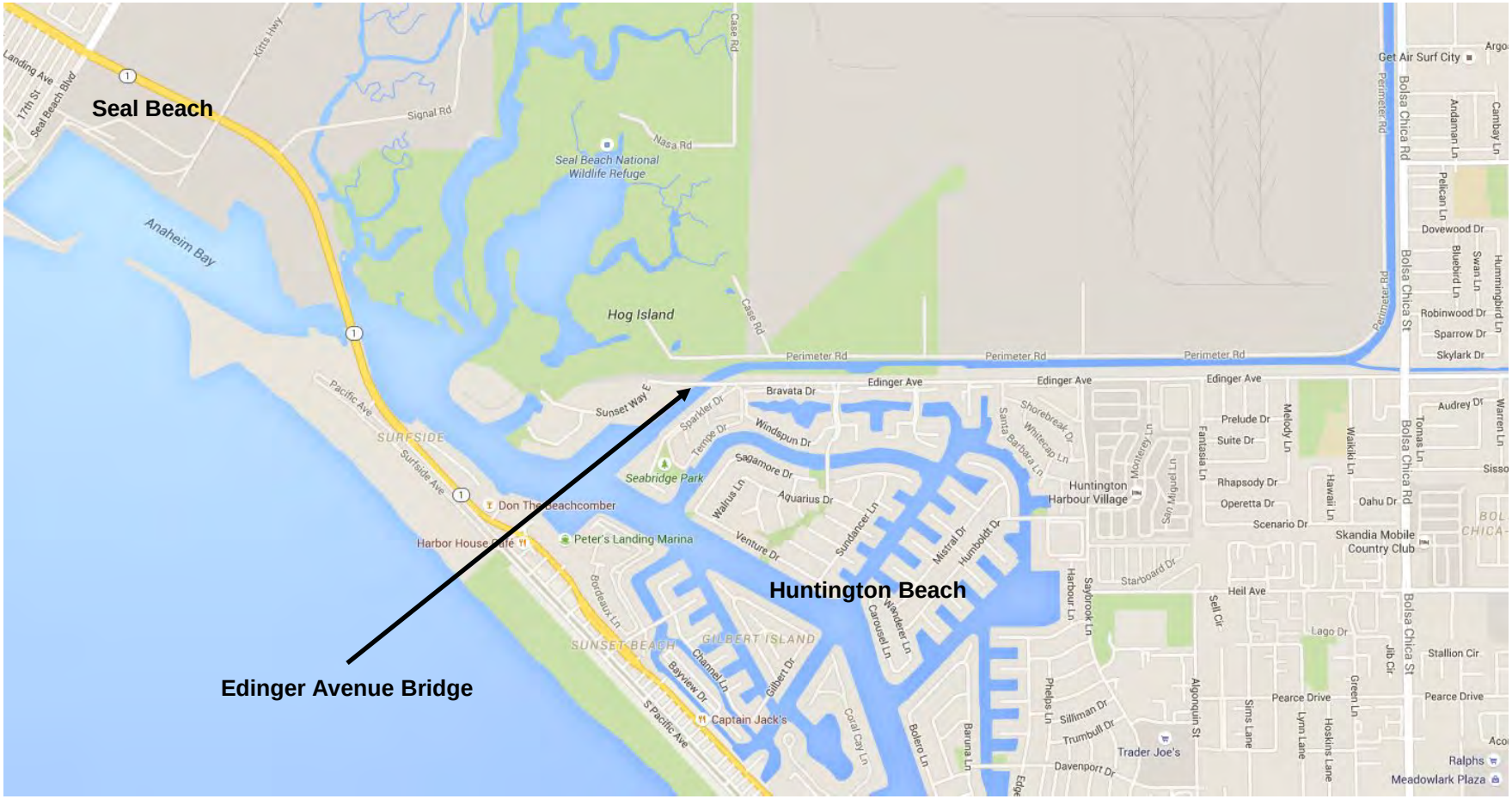
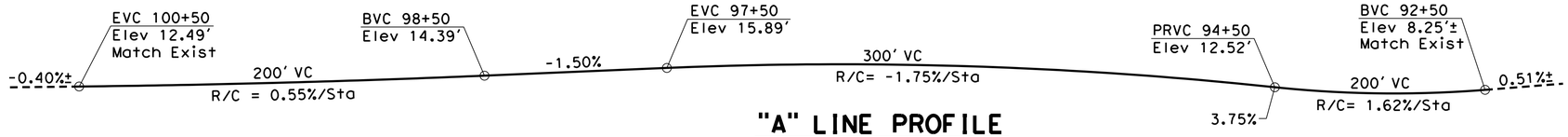
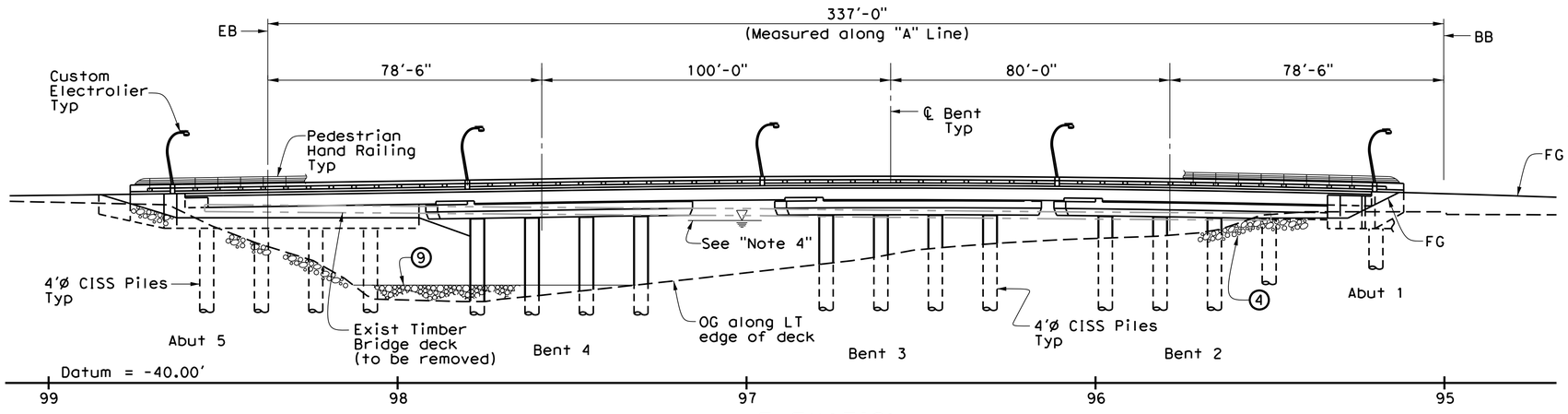


Exhibit No. 1
Page 1 of 1



"A" LINE PROFILE

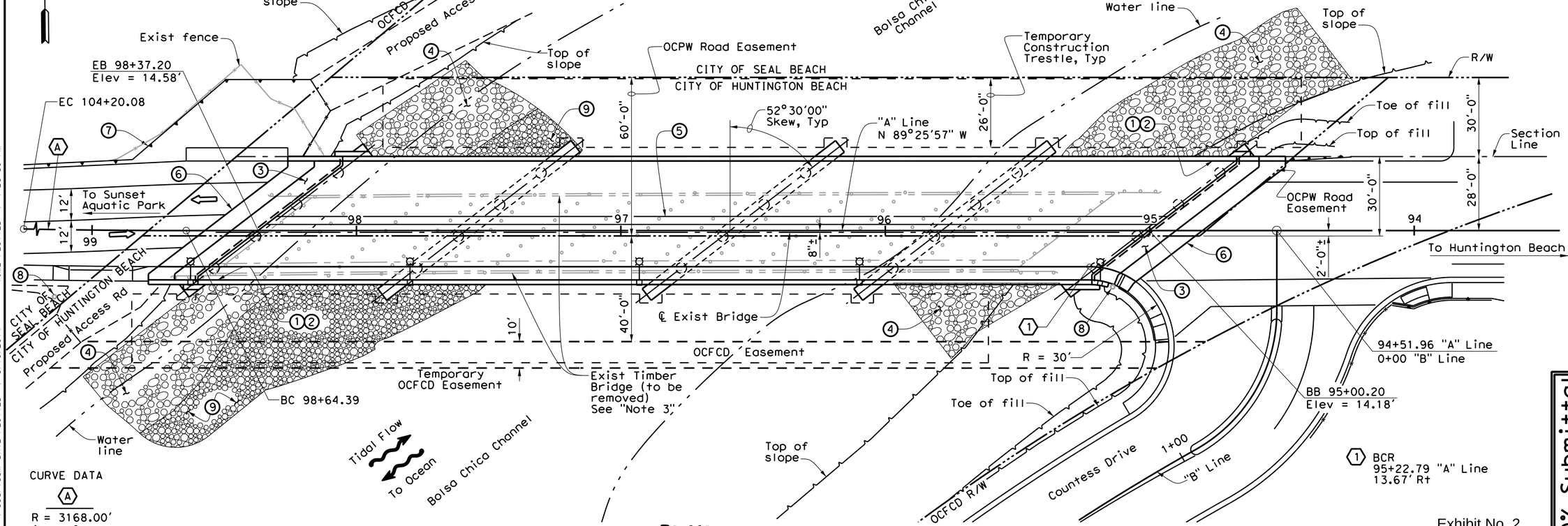
No Scale



ELEVATION

1" = 20'

Note:
Existing timber bents/piles to be removed not shown.



CURVE DATA

(A)

R = 3168.00'
Δ = 10°03'01"
T = 278.56'
L = 555.70'

PLAN

1" = 20'

LEGEND

1. Paint "Br. No. 55C0400"
2. Paint "Edinger Avenue Bridge at Bolsa Chica Channel"
3. Structure Approach Type EQ(10)(Modified)
4. Rock Slope Protection, see "Road Plans"
5. Closure Pour
6. 10' Sleeper Slab
7. Retaining Wall, See "Road Plans"
8. Existing Utility Pole (to remain), protect in place
9. Rock Slope Protection for scour hole, see "Road Plans"

---- Indicates existing structure

Notes:

1. For Typical Section & Index To Plans, see "General Plan No. 2" sheet.
2. For General Notes & Quantities, see "General Notes" sheet.
3. For Stage Construction and Bridge Removal details, see "Demolition Details" & "Construction Staging Schematic" sheets.
4. For Hydrologic & Hydraulic Data Summary and Pile Data Table, see "Foundation Plan" sheet.

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF: REGISTERED PROFESSIONAL ENGINEER AHILAN SELLADURAI No. C77011 Exp. 12/31/14 CIVIL STATE OF CALIFORNIA — DATE

DESIGNED BY: A. SELLADURAI/R. PRICE
DRAWN BY: R. ANDRASEK
CHECKED BY: M. STILLER
DRAWING CODE: FO6-0D-7
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2500

EDINGER AVENUE BRIDGE AT BOLSA CHICA CHANNEL REPLACEMENT PROJECT
BR. NO. 55C-0400

GENERAL PLAN NO. 1

Sheet Reference Number

ST-01

Sheet 38 of 74

100% Submittal

Exhibit No. 2
Page 1 of 4

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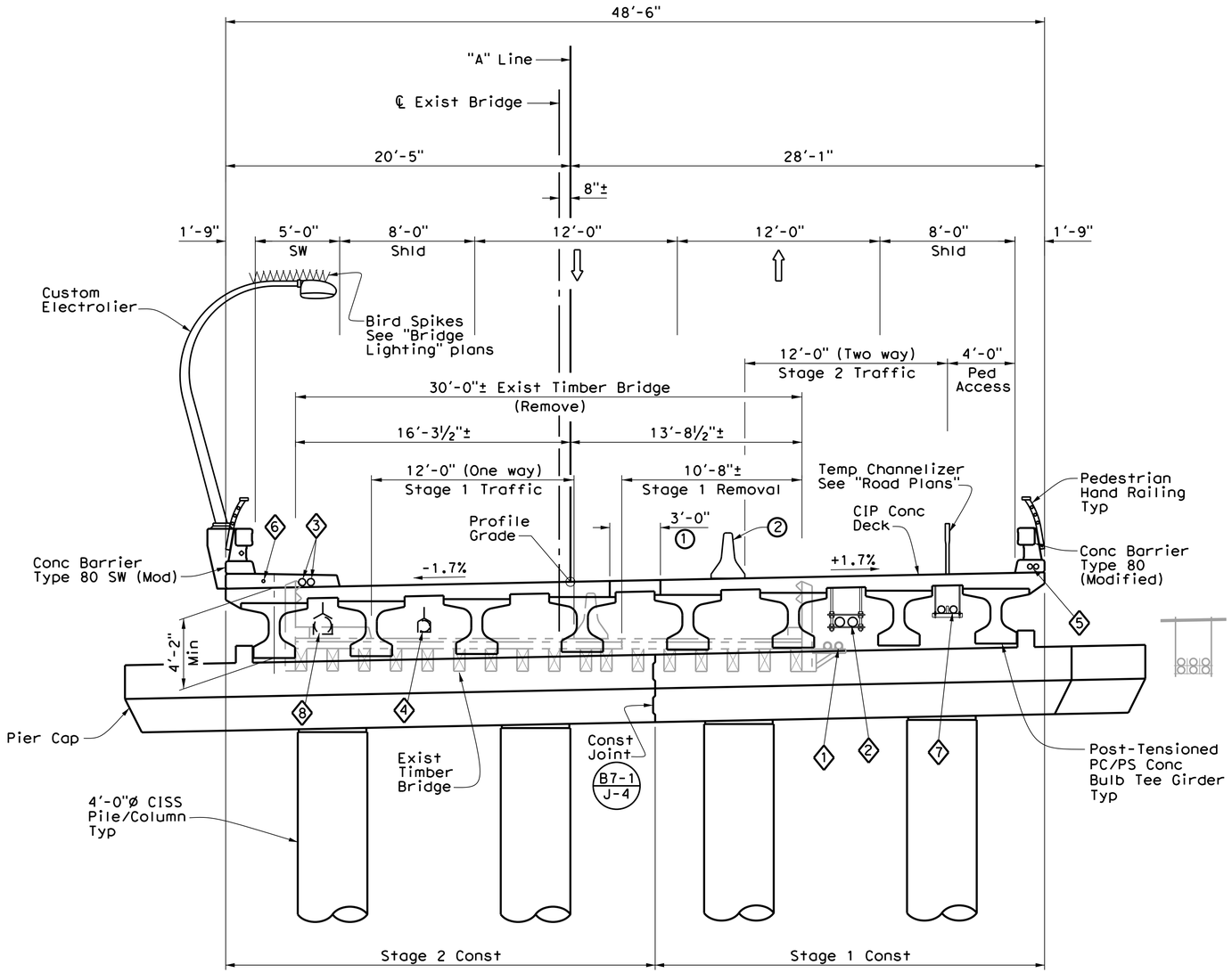


TYPICAL SECTION

¼" = 1'-0"
(Looking West)

INDEX TO PLANS (STRUCTURE)

UTILITY LEGEND

1. Existing 2- 2"ø PVC Sewer force mains in 2- 4"ø steel casings (City of Seal Beach)
2. Relocated 2- 2"ø PVC Sewer force mains (City of Seal Beach), see "Sewer Force Main Plans"
3. 2- 5"ø Openings for future utilities
4. Future 4"ø Force Main (City of Seal Beach)
5. 2- 3½"ø XS Steel Pipe Telecommunication conduits (Verizon)
6. 2" Electrical conduit, see "Bridge Lighting Plans"
7. 2- 5"ø Electrical conduits (SCE) (to be installed by SCE Contractor)
8. Future 12"ø Water Line (City of Seal Beach)

NOTES:

1. Closure Pour
2. Temporary Railing, Type K

—·—·— Indicates existing structure

For Stage Construction details, see "Stage Construction Schematic" sheet.

Exhibit No. 2
Page 2 of 4

100% Submittal

COUNTY OF ORANGE CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
REGISTERED PROFESSIONAL ENGINEER AHILAN SELLADURAI No. C77011 Exp. 12/31/13 CIVIL STATE OF CALIFORNIA
AHILAN SELLADURAI — DATE

DESIGNED BY: A. SELLADURAI/R. PRICE
DRAWN BY: R. ANDRASEK
CHECKED BY: M. STILLER
DRAWING CODE: FO6-00-7
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

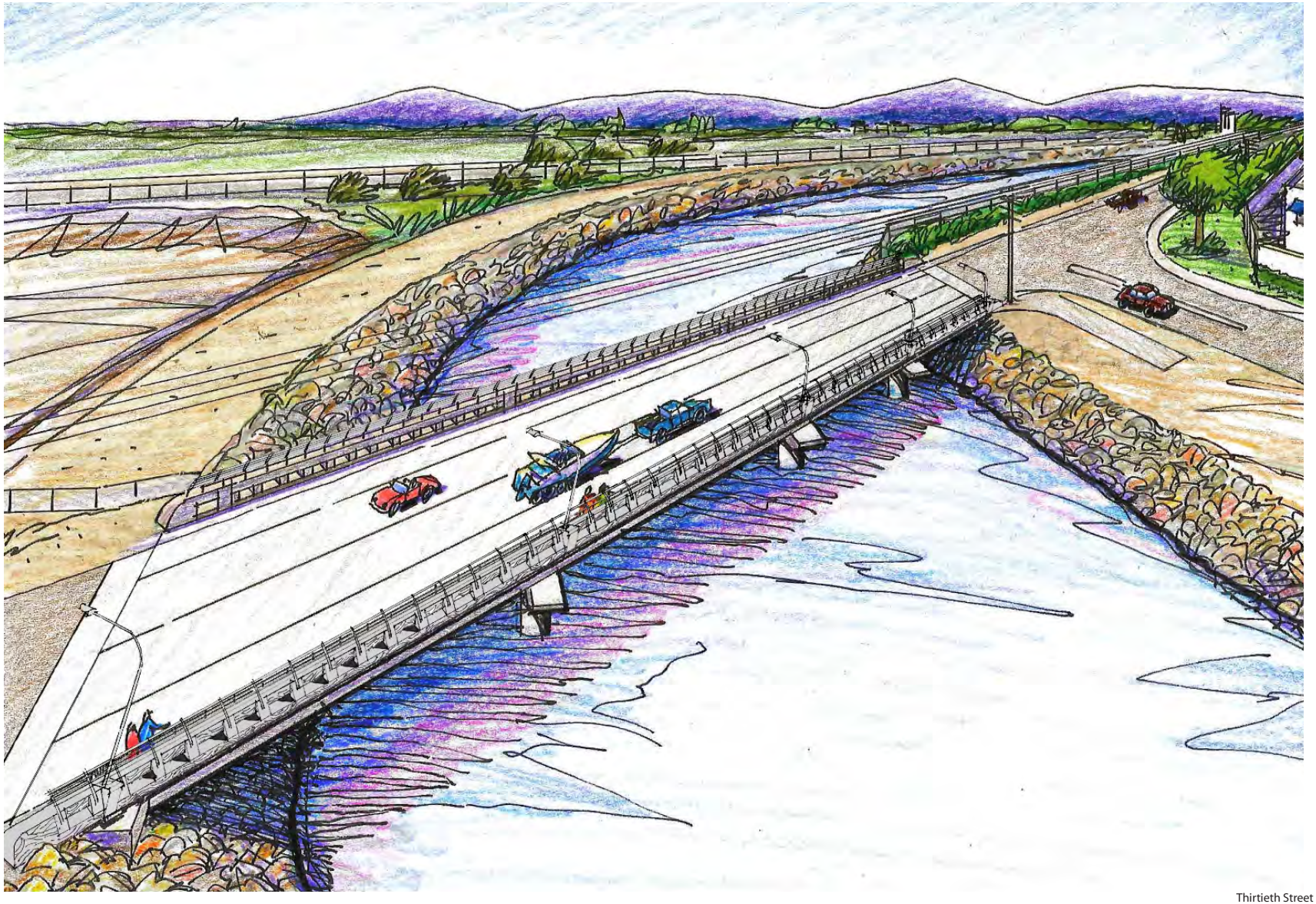
EDINGER AVENUE BRIDGE AT
BOLSA CHICA CHANNEL
REPLACEMENT PROJECT
BR. NO. 55C-0400

GENERAL PLAN NO. 2

Sheet Reference Number

ST-02

Sheet 39 of 74



Thirtieth Street Architects, Inc. 2012

Conceptual Bridge Rendering–Aerial View

Exhibit 5–4

Edinger Avenue Bridge Over Bolsa Chica Channel Replacement Project

(10/22/2012 JAZ) R:\Projects\AECOM\J002\Graphics\ISMND\ex5-4_ConceptualBridgeRenderingAerialView.PDF

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Thirtieth Street Architects, Inc. 2012

Conceptual Bridge Rendering–View Looking East

Exhibit 5–5

Edinger Avenue Bridge Over Bolsa Chica Channel Replacement Project

Exhibit No. 2
Page 4 of 4

(10/22/2012 JAZ) R:\Projects\AECOM\J002\Graphics\ISMND\ex5-5_ConceptualBridgeRenderingViewLookingEast.pdf

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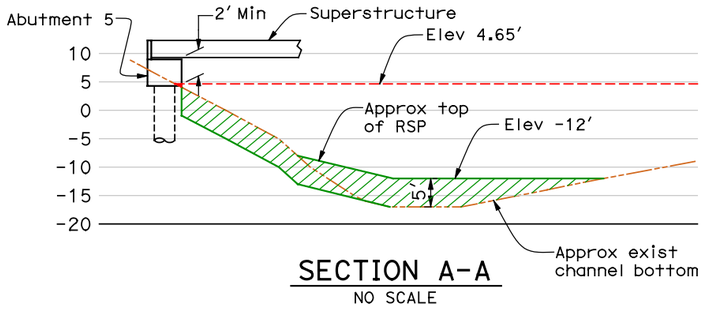

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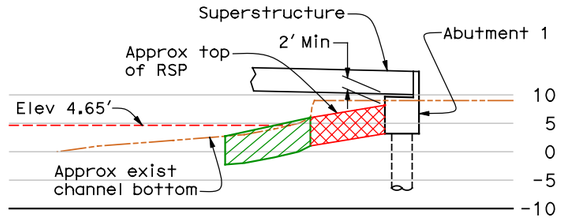

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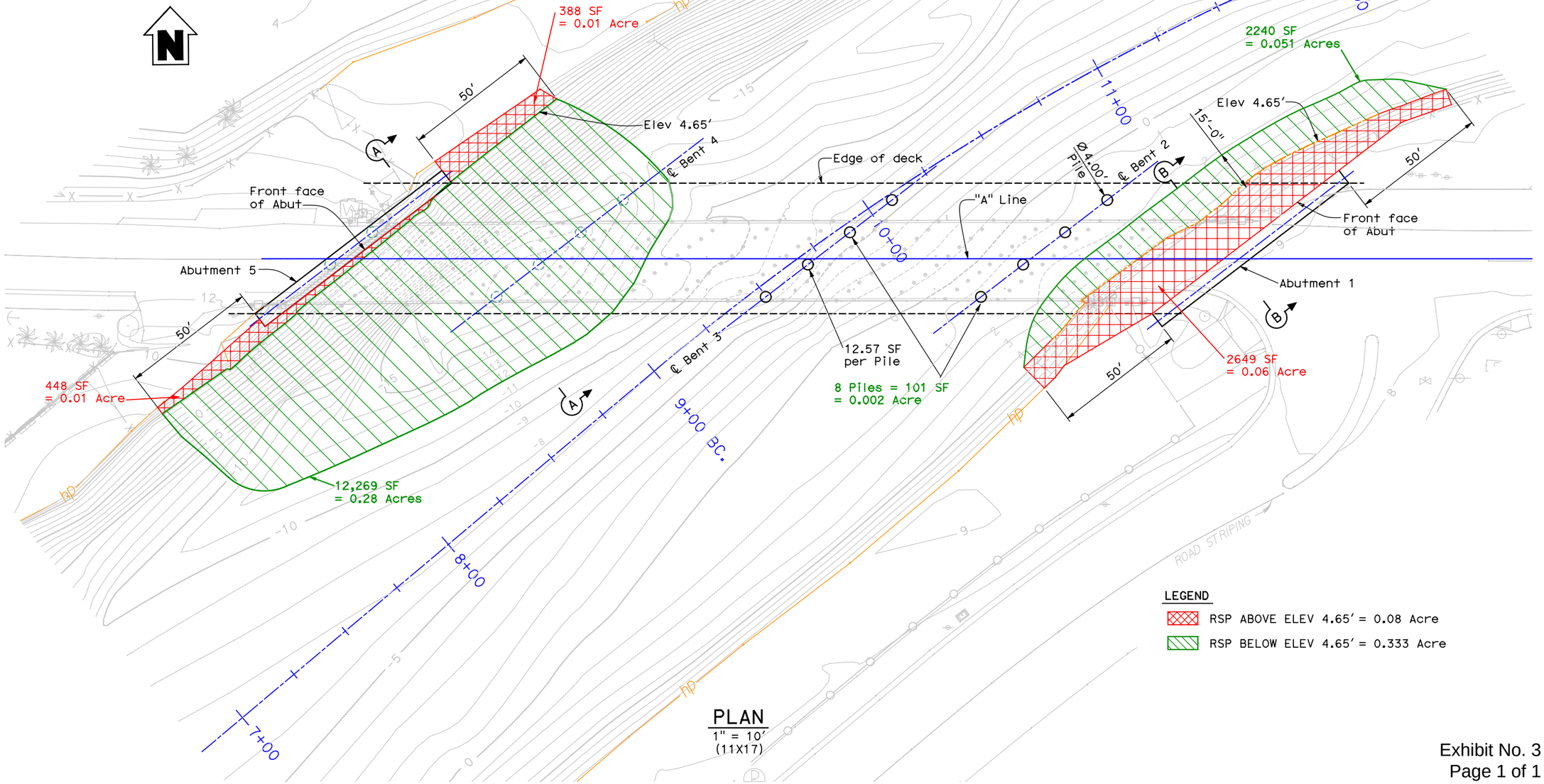

LEGEND

RSP ABOVE ELEV 4.65' = 0.08 Acre

RSP BELOW ELEV 4.65' = 0.333 Acre

PLAN
1" = 10'
(11X17)

Exhibit No. 3
Page 1 of 1

COUNTY OF ORANGE
CALIFORNIA

MARK	DESCRIPTION	DATE	APPR.

PREPARED UNDER THE RESPONSIBLE CHARGE OF:
ROBERT A. PRICE
REGISTERED PROFESSIONAL ENGINEER
No. 56855
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA
DATE
ROBERT A. PRICE

DESIGNED BY: R. PRICE
DRAWN BY: R. ANDRASEK
CHECKED BY: T. DUDLEY
DRAWING CODE: F06-10-7
FILE NAME:
PLOT DATE:
SCALE: AS SHOWN

COUNTY OF ORANGE
OC PUBLIC WORKS

PREPARED BY:
AECOM
999 W. Town & Country Road
Orange, CA 92868
(714) 567-2501

EDINGER AVENUE BRIDGE AT
BOLSA CHICA CHANNEL
REPLACEMENT PROJECT
BR. NO. 55C-0400

Sheet Reference Number

Figure 2
Riprap Limits

Sheet _ of _

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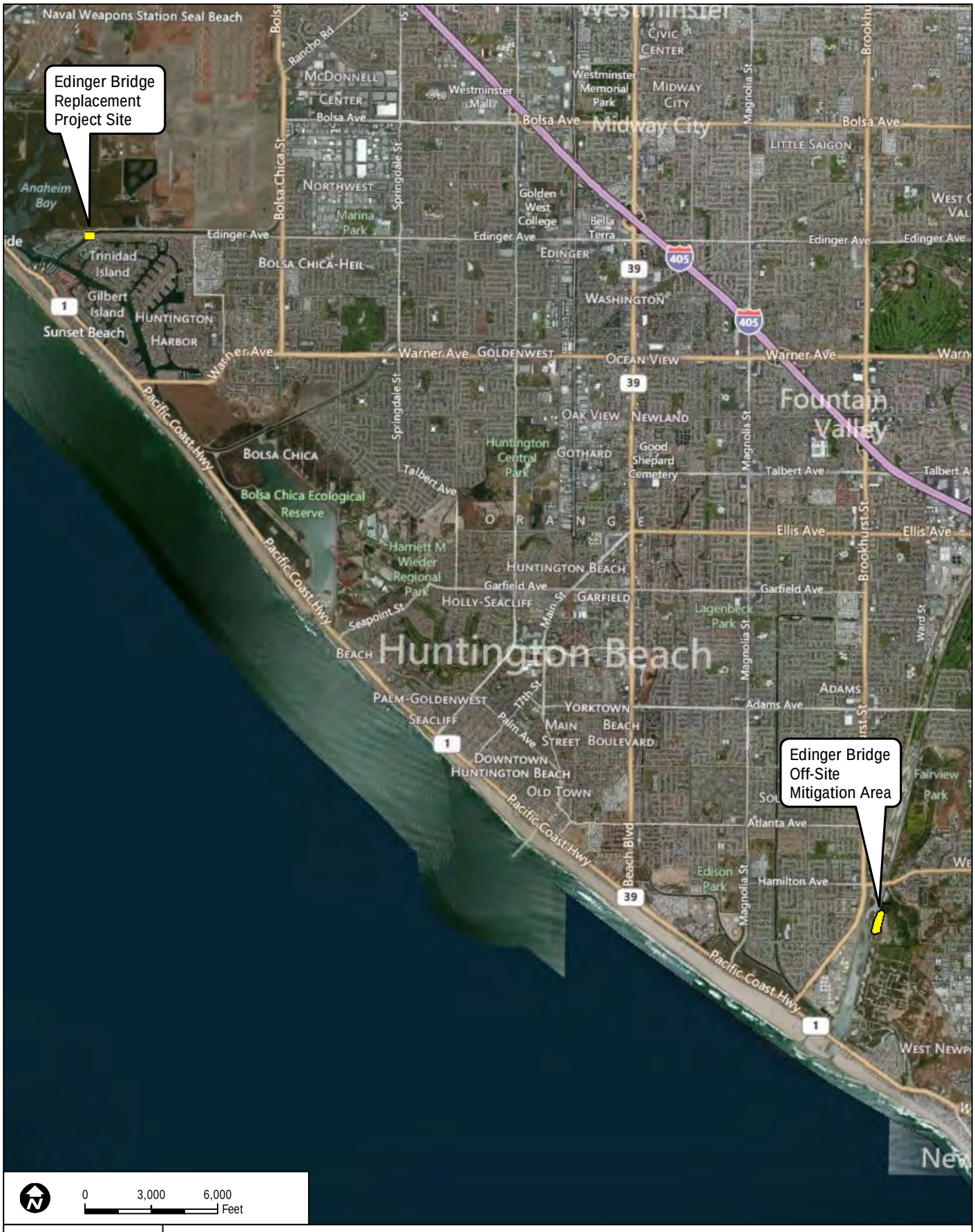

DUDEK

AERIAL SOURCE: BING MAPPING SERVICE

FIGURE 2
Vicinity Map

7360-10

Habitat Minigation and Monitoring Plan for the Edinger Bridge Replacement Project

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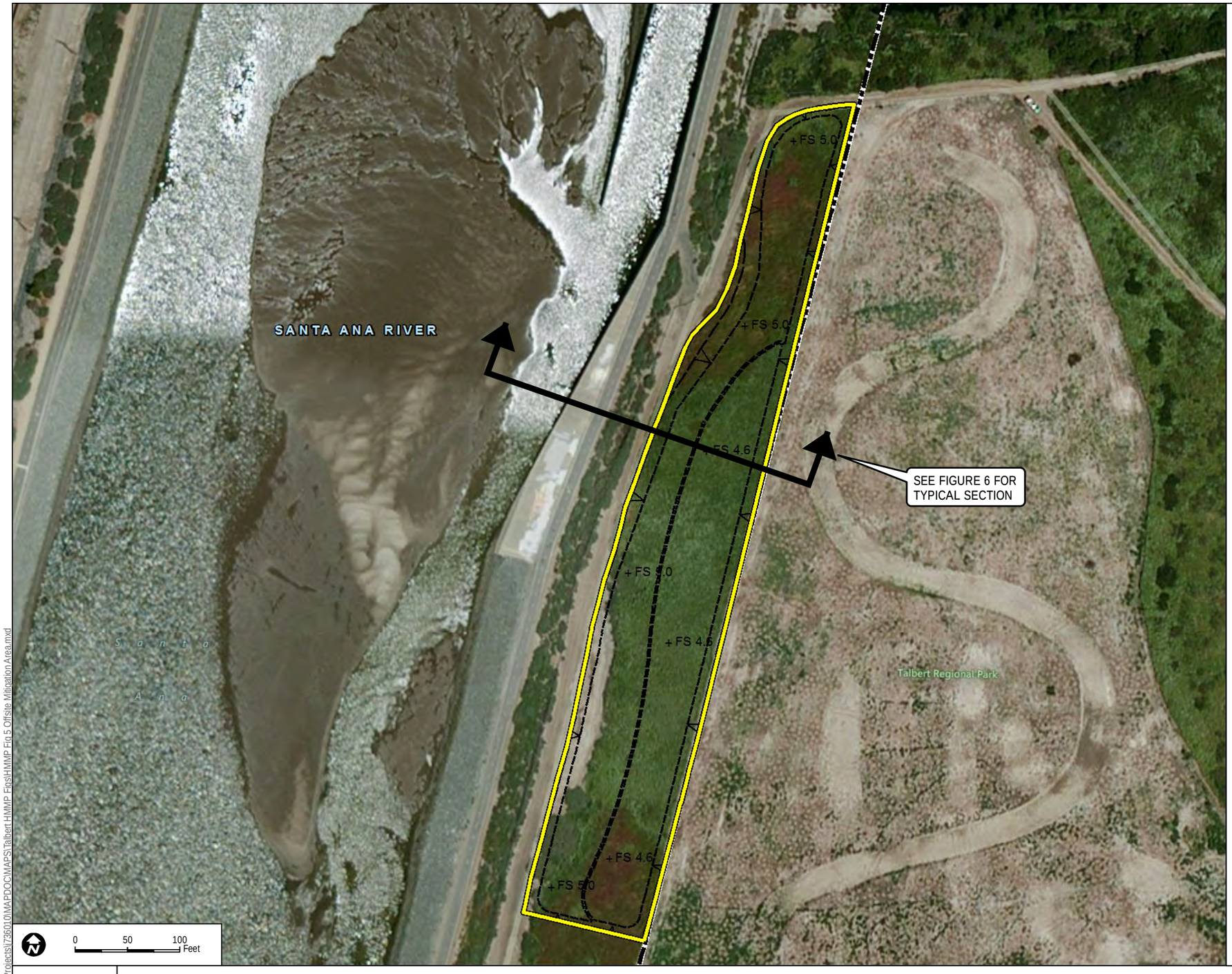

Legend

- Edinger Bridge Off-Site Mitigation Area and Fence Line
- Talbert Preserve Parcel Lines
- Proposed Slope
- + FS 4.5 Proposed Spot Elevation

AERIAL SOURCE: BING

DUDEK

7360-10

FIGURE 5

Edinger Bridge Off-Site Mitigation Area

Habitat Minigation and Monitoring Plan for the Edinger Bridge Replacement Project

Document Path: Z:\Projects\7360\10\MAPDOC\MAPS\Talbert HMMP Figs\HMMP Fig 5 Offsite Mitigation Area.mxd