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# W11a

## Addendum

March 7, 2016

To: Commissioners and Interested Persons

From: California Coastal Commission San Diego Staff

Subject: Addendum to **Item W11a, Amendment No. PWP-6-NCC-16-0001-1 to the North Coast Corridor Public Works Plan and Transportation and Resource Enhancement Program No. PWP-6-NCC-13-0203-1**, for the Commission Meeting of March 9, 2016

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The purpose of this addendum is to attach a letter from the co-applicants – California Department of Transportation (Caltrans) and San Diego Association of Governments (SANDAG) – to the above-referenced staff report dated February 26, 2016, and respond to one point within that letter.

The attached letter is added as Exhibit No. 8 to the staff report. Commission staff recognizes that the letter recommends a clarification to Page 9 of the staff report. Commission staff understands the recommendation to be the removal of the following sentence from Page 9 of the staff report:

"Following approval of the subject PWP amendment, the PWP, as amended herein, will provide the standard of review for NOIDs submitted for PWP specific projects."

The comment letter suggests that this statement is confusing in the context of a report that deals solely with the amendment of the NCC PWP/TREP, and which therefore is not reviewing any NOIDs or authorizing the actual improvements. However, Commission staff believes the sentence is accurate, clear, and appropriate. It is clear because both this statement and the surrounding statements explain the types of reviews to which the different standards apply. It is appropriate because it explains the implications of amending the NCC PWP/TREP for future reviews of actual proposed improvements. Therefore, Commission staff does not recommend any changes to its proposed findings.

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March 4, 2016

Kanani Brown
California Coastal Commission
San Diego District Office
7575 Metropolitan Drive, Suite 103
San Diego, CA 92108

**SUBJECT:** North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program Amendment No. PWP-6-NCC-16-0001-1 - Response to Staff Report Recommendation for Item W11a

Dear Ms. Brown:

The San Diego Association of Governments (SANDAG) and the California Department of Transportation (Caltrans), as the applicants for the North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program (PWP/TREP) Amendment No. PWP-6-NCC-16-0001-1, have received and reviewed the Staff Report recommendation, findings and declarations for item W11a, dated February 26, 2016, to be heard on Wednesday, March 9, 2016. SANDAG and Caltrans thank you for your time and assistance to get us to an expeditious hearing and positive recommendation.

The North Coast Corridor PWP/TREP amendment includes minor clarifications and corrections to the document, as approved on August 13, 2014, regarding proposed public access and recreation project components, including clarifying the location of the coastal rail trail and parking locations for rail stations, as well as clarifications of the description of community enhancements in Solana Beach to describe a new rail undercrossing at San Elijo Lagoon for trail connectivity and minor changes to the description of proposed trailhead amenities located at Solana Hills Drive. Additionally, provisions are added regarding rock slope protection requirements that may be necessary at bridge abutments due to Federal Highway standards, including monitoring and mitigation requirements. Further, existing standards regarding lagoon protections during construction equipment fueling have also been modified to ensure additional protection of water quality and biological resources. Lastly, Appendix B-1 (Lighting Standards) was added to accurately reflect Caltrans' current lighting standards and make mapping changes to reflect existing and proposed lighting throughout the corridor.

The subject North Coast Corridor PWP/TREP Amendment specifically addresses the following:

- clarification of the location of Coastal Rail Trail segments;
- clarification of the location of rail station parking improvements;
- addition of a new rail undercrossing south of San Elijo Lagoon in Solana Beach;
- minor revisions to the community enhancements at Solana Hills Drive trailhead;

- additional rock slope protection for bridge abutments and associated mitigation and monitoring requirements;
- allowance for equipment fueling near lagoons in instances when a 100 ft. setback is not feasible, with additional standards and monitoring requirements;
- modification of maps to identify the general locations of freeway lighting; and
- addition of a new appendix to incorporate specific lighting design standards.

We strongly support the recommendation for approval, as submitted, but would like to offer the following minor comment and clarification for your consideration:

- On pages 8-9, under the discussion of "Standard of Review" as it pertains to the PWP/TREP amendment, it should be clarified that it is addressing the PWP/TREP amendment only, and not the actual NCC PWP/TREP improvements. Thus, discussion of future NOIDs (or improvements subject to future NOID processes) should be removed as it is confusing and doesn't pertain directly to the policies or regulations for amendment of a PWP.

The proposed North Coast Corridor PWP/TREP Amendment represents a collaborative effort among SANDAG, Caltrans, the California Coastal Commission, and the Corridor Cities to continue development and implementation of a comprehensive multi-modal and resource enhancement program that will serve residents and visitors of the San Diego Coastal Zone area and assist in satisfying an ever increasing demand for coastal public access and recreation for years to come. On behalf of SANDAG and Caltrans, we thank you for your time and consideration and ask that the Commission commend staff for their hard work and efforts on this program, and to certify the proposed North Coast Corridor PWP/TREP Amendment, as submitted. We look forward to continued collaboration with staff that will be made possible with this action.

Sincerely,

Allan Kosup
I-5 & SR76 Corridor Director, Caltrans

Rob Rundle
Principal Regional Planner, SANDAG

cc: Gabriel Buhr, CCC
Linda Culp, SANDAG
Arturo Jacobo, Caltrans
Kim Smith, Caltrans

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# W11a

**DATE:** February 26, 2016

**TO:** Commissioners and Interested Persons

**FROM:** Sherilyn Sarb, Deputy Director, San Diego Coast District
Deborah Lee, District Manager, San Diego Coast District
Gabriel Buhr, Coastal Program Manager, San Diego Coast District
Kanani Brown, Coastal Program Analyst III, San Diego Coast District

**SUBJECT:** **Proposed Amendment No. PWP-6-NCC-16-0001-1 to the North Coast Corridor Public Works Plan and Transportation and Resource Enhancement Program No. PWP-6-NCC-13-0203-1** for Public Hearing and Commission Action at the March 9, 2016 Commission Meeting in Santa Monica

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## SYNOPSIS

The subject amendment to the North Coast Corridor Public Works Plan and Transportation and Resource Enhancement Program (NCC PWP/TREP) was jointly submitted by District 11 of the California Department of Transportation (Caltrans) and the San Diego Association of Governments (SANDAG), and filed as complete on February 5, 2016. The date by which the Commission must take action, absent an extension of the time limit, is April 5, 2016. For those jurisdictions within the North Coast Corridor (NCC) that do not have a certified Local Coastal Program (LCP), the standard of review for the subject NCC PWP/TREP amendment is the Chapter 3 policies of the Coastal Act. For those jurisdictions within the NCC that are certified, the standard of review is the relevant corridor cities' LCPs.

The proposed NCC PWP/TREP amendment is associated with Coastal Development Permit (CDP 6-15-2092) and Notice of Impending Development (NOID NCC-NOID-0005-15) applications submitted by Caltrans – which are also scheduled for Commission review at the March 9, 2016 meeting. The subject amendment includes proposed changes to the NCC PWP/TREP that must be heard and acted upon prior to consideration of the related NOID. The standard of review for the associated NOID is the NCC PWP/TREP, and without these proposed changes to the NCC PWP/TREP, the specific project as submitted could not be found consistent with the NCC PWP/TREP. The standard of review for the associated CDP is Chapter 3 of the Coastal Act with the NCC PWP/TREP, as amended, to be used as guidance.

## SUMMARY OF AMENDMENT REQUEST

The subject amendment to the NCC PWP/TREP consists of the following:

- clarification of the location of Coastal Rail Trail segments;

- clarification of the location of rail station parking improvements;
- addition of a new rail undercrossing south of San Elijo Lagoon in Solana Beach;
- minor revisions to the community enhancements at Solana Hills Drive trailhead;
- additional rock slope protection for bridge abutments and associated mitigation and monitoring requirements;
- allowance for equipment fueling near lagoons in instances when a 100 ft. setback is not feasible, with additional standards and monitoring requirements;
- modification of maps to identify the general locations of freeway lighting; and
- addition of a new appendix to incorporate specific lighting design standards.

## EXECUTIVE SUMMARY

The North Coast Corridor Public Works Plan and Transportation and Resource Enhancement Program (NCC PWP/TREP) was approved by the Commission on August 13, 2014 (PWP-6-NCC-13-0203-1). The NCC PWP/TREP, jointly prepared by Caltrans and SANDAG, is a single integrated document for comprehensively planning, reviewing, and permitting the transportation, community, and resource enhancement projects within the NCC extending from La Jolla to Oceanside along the North San Diego County coastline (Exhibit 1). The NCC PWP/TREP creates a framework within which identified projects can be analyzed and implemented over the next 40 years under a coordinated plan. The goal of this process is to optimize the suite of improvements so that transportation goals are achieved in a manner that maintains and improves public access while also maximizing protection and enhancement of the region's significant sensitive coastal resources.

The NCC PWP/TREP includes a Phasing Plan that provides an implementation schedule for a series of rail, highway, transit, bicycle, and pedestrian projects to improve and maintain mobility and access to coastal recreational resources in the NCC. The NCC PWP/TREP also includes a comprehensive restoration program designed to protect, restore, and enhance sensitive coastal resources in the NCC as one means of mitigating the potential resource impacts caused by implementation of the transportation and community enhancement projects. The framework created within the Phasing Plan creates linkages between these various project types to ensure that transportation infrastructure improvements move forward in a balanced fashion as compared with regional restoration efforts in order to protect and enhance coastal resources and to ensure that mitigation for impacts caused by the project occurs in a timely manner in relation to the associated impacts.

Chapter 5 of the NCC PWP/TREP (Coastal Development Policies and Resources) is divided into ten sections (5.1 – Energy Conservation and Emissions Reduction; 5.2 – Promotion of Public Transit and Smart Growth; 5.3 – Public Access and Recreation; 5.4 – Marine Resources; 5.5 – Environmentally Sensitive Habitat Areas and Special-Status Species; 5.6 – Archaeological and Paleontological Resources; 5.7 – Coastal Visual Resources; 5.8 – Site Stability and Management, 5.9 – Agricultural Resources, and 5.10 – Coastal Act Policy Conflict Resolution) with each section containing policies, design/development strategies, and implementation measures, specific to the relevant

issue area. The policies and design/development strategies apply to all NCC PWP/TREP improvements, while the implementation measures are project-specific and apply to NCC PWP/TREP improvements that are subject to the NOID review process.

Staff from Caltrans, SANDAG, and the Commission have had ongoing coordination meetings since the approval of the NCC PWP/TREP to review materials related to the first specific projects to be implemented under the NCC PWP/TREP. Many of the modifications proposed as part of the subject amendment were identified as planning and design progressed from preliminary stages (30% design) to the final design. This advanced level of design detail highlighted the need to amend the NCC PWP/TREP in order to address some inconsistencies between necessary components of some of the specific projects authorized by the original NCC PWP/TREP, and some of the policies, design/development strategies, and implementation measures in the NCC PWP/TREP. These same necessary components of project design will likely result in similar inconsistencies between future highway specific projects and the NCC PWP/TREP as originally approved. Thus, the primary purpose of the proposed amendment is to address both current and future issue areas.

In general, the proposed modifications to public access and recreation components of the NCC PWP/TREP, including the Coastal Rail Trail, rail station parking, Solana Hills Drive trailhead and new rail undercrossing, are relatively minor and would not diminish the benefits of, or alter the balance struck in, the NCC PWP/TREP or any of its policies, design/development strategies, or implementation measures. Similarly, the proposed modifications to equipment fueling provisions near lagoons include mitigation and monitoring requirements to ensure potential impacts to water quality from equipment leaks and spills are avoided. Thus, these proposed modifications do not have the potential to adversely impact coastal resources.

The proposed amendment would result in approximately 3.25 more acres of wetland fill by allowing additional armoring, specifically rock slope protection, for highway bridge abutments to extend into the optimized channel width. Caltrans asserts that such additional armoring will be necessary to be consistent with Federal Highway Administration (FHWA) requirements for bridge protection of which they only became aware as the specific project for the San Elijo Interstate-5 Bridge Replacement advanced to final project design. Caltrans and Commission staff have coordinated on the proposed language to ensure that any additional armoring would be minimized to avoid impacts to the maximum extent feasible, so that it is only approved where unavoidable, would be designed to minimize scour, and would have, at a minimum, an initial 2-foot thick layer of sediment covering the rock slope protection to provide a natural bottom for benthic organisms. Because the proposed amendment has the potential to result in environmental effects, a new implementation measure is proposed which requires a mitigation and monitoring program to ensure the rock slope protection is not exposed and requires mitigation for permanent impacts consistent with the provisions of the NCC PWP/TREP's Resource Enhancement and Mitigation Program (REMP).

Section 30233(a) of the Coastal Act only permits the diking, filling, or dredging of wetlands where there is no feasible less environmentally damaging alternative, where

feasible mitigation measures have been provided to minimize adverse environmental effects, and when it is limited to certain uses. The findings for approval of the original NCC PWP/TREP (PWP-6-NCC-13-0203-1) used the "conflict resolution" provision of Sections 30007.5 and 30200(b) of the Coastal Act to allow dredging and filling of wetlands despite its inconsistency with Section 30233. When the Commission identifies a conflict among Coastal Act policies, Section 30007.5 requires the Commission to resolve the conflict "in a manner which on balance is the most protective of significant coastal resources". The NCC PWP/TREP findings identified that approval of the NCC PWP/TREP would result in the fill of approximately 24 acres of wetland despite not being one of the identified allowable uses in Section 30233. However, denying the NCC PWP/TREP because of this inconsistency would have been inconsistent with mandates of other Coastal Act policies and would have resulted in significant adverse effects on public access, biological resources, water quality and air quality due to the persistence of the antiquated transportation system in the NCC. Thus, the Commission found that approval of the NCC PWP/TREP, notwithstanding its inconsistencies with Coastal Act Section 30233, was the "most protective of coastal resources" for purposes of the conflict resolution provisions of Coastal Act Sections 30007.5 and 30200(b).

The 3.25 acres of additional wetland fill proposed by the subject amendment is equivalent to a 13.5% increase over the 24 acres of wetland fill that was considered as part of the initial approval of the NCC PWP/TREP. This increase takes into account the additional armoring that would be needed to meet FHWA requirements for the replacement of Interstate-5 bridges throughout the corridor. This 13.5% increase to the scope of this one resource impact does not represent a significant new impact when considered along with all of the already approved impacts included within the NCC PWP/TREP. In addition, Caltrans conducted an Alternatives Analysis which concluded that there is no feasible less environmentally damaging alternative. Dr. Lesley Ewing, the Commission's Coastal Engineer, has reviewed and accepts the submitted Alternatives Analysis.

The Visual Resource maps in the certified NCC PWP/TREP depict areas identified as "Ingress/Egress Opening and Lighted Area" for access points to the High Occupancy Vehicle lanes; however, these maps do not identify where existing lighting is located nor where new lighting is proposed throughout the freeway corridor. Caltrans recently conducted an assessment of freeway lighting in the NCC as a component of final project design for the proposed freeway improvements. This study revealed that existing lighting does not meet current safety standards. The existing 1970s-era, unshielded lights provide substandard illumination at current traffic volumes, and more lighting would be required to meet Caltrans' safety standards. Thus, the subject amendment would update the Visual Resource maps to identify the general locations where freeway lighting is proposed throughout the corridor. In addition, a new Appendix B-1, Lighting Standards, is proposed, which would incorporate all of Caltrans' current lighting design standards considered for NCC PWP/TREP specific projects and details the lighting design review process that future specific project review must follow.

Although the proposed amendment does not identify the number of light poles proposed at each freeway interchange, Caltrans has determined that the number of light poles would need to be increased from the current number of existing light poles to be

consistent with Caltrans safety standards. Currently, the stretches of highway that cross the lagoons in North County have minimal or no overhead freeway lighting. Thus, this additional lighting has the potential to impact daytime and nighttime visual resources, especially the existing open space character of the corridor's lagoons. The proliferation of tall structures, such as new light poles, has the potential to add visual clutter to viewsheds that currently have limited lighting. Additionally, an increase in lights has the potential to contribute to greater light trespass into the night sky and impact adjacent habitat areas. Caltrans has conducted visual simulations and asserts that additional light from increased light poles would be insignificant in comparison to the light on the freeway from the headlights of vehicles traveling on the freeway both under current and future conditions.

There are existing policies and design/development strategies in the NCC PWP/TREP that protect visual resources and clearly state that lighting should be the minimum required for operations and safety and should be excluded from viewsheds containing scenic resources, including at lagoon crossings, wherever feasible. At the time of Commission action on the original NCC PWP/TREP, Caltrans represented that additional lighting across the lagoon systems would not be required. As proposed in this NCC PWP/TREP amendment, Caltrans acknowledges that it will need to consider design modifications from typical freeway lighting standards and commits to implementing such changes when designing and siting new lighting within the corridor to ensure impacts to visual and biological resources are minimized, including, where possible, being entirely avoided, especially in highly scenic and sensitive habitat areas such as lagoon crossings. The Lighting Design Process included in Appendix B-1 of this amendment requires the final lighting design to evaluate the need, location, pole spacing, number, light intensity, and spread.

To address potential impacts to visual resources, Caltrans has identified that new types of light fixtures would be utilized in highly scenic areas, including lagoon crossings. These new types of light fixtures use precise light beam angles and linear spread lenses to control the distribution of light; the light beam output distribution and shape ensures environmental protection by limiting light trespass into the sky. Not only are these lights better directed, but they are also better shielded, lower temperature of 3,000 Kelvins or less, and use energy efficient LED fixtures to minimize visual and biological impacts. This technology would be the first of its kind on Caltrans property. Also, as technological advances in lighting are realized, Caltrans has committed to retrofitting freeway lighting in scenic viewsheds in the corridor to further minimize potential coastal resource impacts.

Commission staff concurs with Caltrans's assertion that lighting is an important safety element that is necessary at freeway interchanges for motorists to assess the upcoming change in lane configuration, to see merging traffic, to aid in decision making, and to reduce accidents; however, any increase in the existing lighting should be the minimum amount necessary and future projects should be designed to avoid the need for additional lighting whenever possible. Thus, the proposed amendment to identify general areas where lighting is proposed, as necessary for safety reasons, allows the Commission to assess this additional impact; however, future project specific submittals will be required to describe the design development process and include plans that show the existing

freeway lighting, the initial lighting concept based on Caltrans' standards, and the proposed final lighting design that has been refined to maximize protection of visual and biological resources and to minimize the number of new light standards, with special consideration given for the protection of highly scenic and sensitive habitat areas such as lagoons.

While the proposed amendment would result in an increase in freeway light poles over existing conditions, the updates to freeway lighting are proposed to be sited in the same general vicinity as existing lighting and could still be visually compatible with the existing character of the I-5 freeway which is characterized by signage for way-finding and hazards, illuminated overhead signs, light poles, and vehicles with headlights. The proposed addition of light poles at interchanges, if minimized, would not obstruct existing views to and along the ocean or lagoons. Further, with the inclusion of a design process as part of future project-specific review that will carefully design and refine final lighting design to minimize visual and biological resource impacts, the scenic and visual quality of the corridor and habitat values would be protected. Finally, the provisions in the proposed Appendix B-1 require Caltrans to study and retrofit existing lighting in the corridor as advancements in lighting technology are made, which would result in the restoration of the visual quality and protection of ecological resources of highly scenic and sensitive habitat areas.

In this case, the proposed NCC PWP/TREP amendment is consistent with the Chapter 3 policies of the Coastal Act as well as the corridor cities' certified LCPs, which includes the Cities of San Diego, Encinitas, Carlsbad, and Oceanside. Therefore, staff is recommending that the Commission **approve** NCC PWP/TREP Amendment No. PWP-6-NCC-16-0001-1, as submitted.

The appropriate resolution and motion begin on Page 10. The findings for approval of the NCC PWP/TREP Amendment as submitted begin on Page 10.

## ADDITIONAL INFORMATION

Further information on the NCC PWP/TREP amendment may be obtained from Kanani Brown or Gabriel Buhr at (619) 767-2370.

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## APPENDICES



## EXHIBITS

# I. PROCEDURAL ISSUES

## PUBLIC WORKS PLAN BACKGROUND AND HISTORY

Section 30114 of the Coastal Act defines public works to include, among other things, the following:

> *(b) All public transportation facilities, including streets, roads, highways, public parking lots and structures, ports, harbors, airports, railroads, and mass transit facilities and stations, bridges, trolley wires, and other related facilities. (…)*
>
> *(c) All publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any development by a special district.*

Section 30605 of the Coastal Act states, in part:

> *To promote greater efficiency for the planning of any public works (…) and as an alternative to project-by-project review, plans for public works (…) may be submitted to the commission for review in the same manner prescribed for the review of local coastal programs set forth in Chapter 6 (commencing with Section 30500).*

A Public Works Plan is one of the alternatives available to the Commission and project proponents for Commission review of large or phased public works projects and remains under the authority of the Commission irrespective of coastal permit jurisdictional boundaries. A PWP is an alternative to project-by-project review for public works (which, in this situation would require multiple coastal development permits, in multiple jurisdictions). PWPs must be sufficiently detailed regarding the size, kind, intensity, and location of development to allow the Commission to determine its consistency with the Chapter 3 policies of the Coastal Act (pre-LCP certification) or the certified LCP (post-LCP certification). Once the Commission approves a PWP, no coastal development permit is required for a specific project described within it; rather, before commencing each specific project, the project proponent would need to submit notice in the form of a Notice of Impending Development, which would require the Commission to determine whether it is covered by the PWP, and if so, whether the submitted project is consistent with the standards within the PWP, or if conditions are necessary to make it consistent.

## STANDARD OF REVIEW

Section 30605 of the Coastal Act states in part:

> *If any plan for public works (…) is submitted prior to certification of the local coastal programs for the jurisdictions affected by the proposed public works, the commission shall certify whether the proposed plan is consistent with Chapter 3 (commencing with Section 30200) (…) If any such plan for public*

> *works is submitted after the certification of local coastal programs, any such plan shall be approved by the commission only if it finds, after full consultation with the affected local governments, that the proposed plan for public works is in conformity with certified local coastal programs in jurisdictions affected by the proposed public works.*

Section 30605 of the Coastal Act and Section 13356 of Title 14 of the California Code of Regulations provide that where a PWP is submitted prior to certification of the LCP for the jurisdiction affected by the PWP, the standard of review for certification of the PWP is the Chapter 3 policies of the Coastal Act. Section 30605 of the Coastal Act and Section 13357 of Title 14 of the Code of Regulations then also state that where a PWP is submitted after the certification of an LCP for the jurisdiction affected by the PWP, the PWP shall be approved by the Commission only if it finds, after full consultation with the affected local government(s), that it is in conformity with the certified LCP. Section 13371 of the Coastal Act provides that the standard of review for PWP amendments shall be the same as provided for the review of PWPs.

Within the corridor, there are four cities with fully certified LCPs: San Diego, Encinitas, Carlsbad, and Oceanside (the NCC PWP/TREP specific projects will not be located in any portion of the City of Del Mar covered by the City's certified LCP, and Solana Beach has a certified Land Use Plan but does not currently have a certified Local Implementation Plan, and as such does not yet have a fully certified LCP). Therefore, pursuant to Section 30605 of the Coastal Act, the standard of review for portions of the NCC PWP/TREP improvements occurring in San Diego, Encinitas, Carlsbad, and Oceanside, is that those portions of the NCC PWP/TREP amendment are in conformance with the certified LCP of each respective city. Following approval of the subject NCC PWP/TREP amendment, the NCC PWP/TREP, as amended herein, will provide the standard of review for NOIDs submitted for NCC PWP/TREP specific projects. The standard of review for those portions of the NCC PWP/TREP improvements occurring in the City of Solana Beach, the City of Del Mar, or areas of the Commission's retained jurisdiction are the Chapter 3 policies of the Coastal Act. For any rail projects that may be subject to federal consistency review only, and projects located in the Commission's retained permit jurisdiction, the standard of review is also the Chapter 3 policies of the Coastal Act.

## PUBLIC PARTICIPATION

The draft amendment was first released to the public in December 2015. On January 26, 2016, Caltrans held a public hearing to solicit feedback and answer questions from the public. This local hearing was duly noticed to the public and all known interested parties. The amendment was formally submitted to the Commission on February 5, 2016, and Coastal staff has continued to accept public comment throughout this review process.

## STAKEHOLDER PARTICIPATION

Staff from Caltrans, SANDAG, and the Commission have had ongoing coordination meetings with the corridor cities since the approval of the NCC PWP/TREP in August 2014 to discuss the preliminary NCC PWP/TREP projects as well as the subject NCC PWP/TREP amendment. Most recently, on February 11, 2016, Commission staff consulted with staff from the affected corridor cities, including the cities of San Diego, Encinitas, Carlsbad, and Oceanside, to discuss the proposed amendment's conformity with the cities' certified LCPs. The City of Solana Beach, which, again, does not have a fully certified LCP, was also in attendance.

# II. MOTION AND RESOLUTION

Following a public hearing, staff recommends the Commission adopt the following resolution and findings. The appropriate motion to introduce the resolution and a staff recommendation are provided below.

**MOTION**: ***I move that the Commission certify the North Coast Corridor Public Works Plan and Transportation and Resource Enhancement Program Amendment No. PWP-6-NCC-16-0001-1, as submitted.***

**STAFF RECOMMENDATION TO CERTIFY**:

Staff recommends a **YES** vote. Passage of this motion will result in certification of the Public Works Plan amendment as submitted and adoption of the following resolution and findings. The motion to certify passes only by affirmative vote of a majority of the appointed Commissioners.

**RESOLUTION TO CERTIFY NCC PWP/TREP AMENDMENT AS SUBMITTED:**

The Commission hereby certifies the North Coast Corridor Public Works Plan and Transportation and Resource Enhancement Program Amendment No. PWP-6-NCC-16-0001-1, as submitted, and adopts the findings stated below on the grounds that the amendment, as submitted, conforms with the Chapter 3 policies of the Coastal Act and with the provisions of the Cities of San Diego, Encinitas, Carlsbad and Oceanside Local Coastal Programs, as applicable. Certification of the Plan as submitted 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 Plan on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the Plan on the environment.

# III. FINDINGS AND DECLARATIONS

## A. PUBLIC WORKS PLAN AMENDMENT DESCRIPTION

The subject NCC PWP/TREP amendment includes the following components:

- clarification of the location of Coastal Rail Trail segments;
- clarification of the location of rail station parking improvements;
- addition of a new rail undercrossing south of San Elijo Lagoon in Solana Beach;
- minor revisions to the community enhancements at Solana Hills Drive trailhead;
- additional rock slope protection for bridge abutments and associated mitigation and monitoring requirements;
- allowance for equipment fueling near lagoons in instances when a 100 ft. setback is not feasible, with additional standards and monitoring requirements; and
- modification of maps to identify the general locations of freeway lighting; addition of a new appendix to incorporate specific lighting design standards.

These proposed modifications to the NCC PWP/TREP are described in greater detail below.

### Coastal Rail Trail

The Coastal Rail Trail is an approved bicycle and pedestrian facility with most segments located within or directly adjacent to the Los Angeles-San Diego-San Luis Obispo (LOSSAN) railroad right-of-way. Text within the certified NCC PWP/TREP identifies that the Coastal Rail Trail segments included in the NCC PWP/TREP would be located entirely within the LOSSAN rail right-of-way; however, this text is inconsistent with approved NCC PWP/TREP maps that depict portions of the Coastal Rail Trail outside of the LOSSAN right-of-way. To correct this inconsistency between the text and maps, the proposed amendment would add language to Section 4.4.1, Coastal Rail Trail, clarifying that it is the intent for Coastal Rail Trail segments included for permitting in the NCC PWP/TREP to be located within or immediately adjacent to the LOSSAN right-of-way – except in areas where there are environmental, safety, or physical constraints. The proposed language also acknowledges that in those instances where there are constraints, the Coastal Rail Trail would not be located any farther than 150 feet from the right-of-way. Finally, it clarifies that Figures 5.3 1A-1E reflect the general alignment of the Coastal Rail Trail. These proposed changes would allow for future flexibility in project design while still maintaining the intent of the approved community enhancement feature as well as connectivity for non-motorized travel through the corridor.

### Rail Station Parking

The certified NCC PWP/TREP identifies that parking areas will be expanded at the corridor's transit stations; however, the City of Encinitas has determined that due to constraints at the existing station, additional parking for the Encinitas Rail Station may need to be sited at City Hall, directly across from the rail station. To allow greater flexibility for where additional parking may be located, the proposed NCC PWP/TREP

amendment would add language to allow additional parking areas at, adjacent to, or in close proximity to the corridor's rail stations.

**New Rail Undercrossing**

The proposed amendment would modify the description of Section 4.4.3, LOSSAN Crossings, to describe a new grade-separated undercrossing. The new San Elijo Lagoon Gateway Pedestrian Undercrossing would be located directly south of the San Elijo Lagoon in the City of Solana Beach near Milepost 241. The proposed language describes that the undercrossing would allow users of the existing San Elijo Lagoon trails to cross below the railroad tracks, creating safe access to both the Gateway Open Space Preservation Site and the adjacent shoreline. It also identifies the undercrossing as Community Enhancement SB#3 and is included in the list of Community Enhancements in Section 4.4.5.

**Community Enhancements**

Caltrans and SANDAG have coordinated with the City of Solana Beach, City of Encinitas, and San Elijo Lagoon Conservancy to reduce the scope of the Solana Hills Drive community enhancements and instead, fund the purchase of the Gateway Open Space Preservation Site and construction of a new rail undercrossing, described above. The Gateway Open Space Preservation Site and new pedestrian undercrossing would provide public access and recreation benefits to a more diverse user group – visitors of the San Elijo Lagoon and adjacent beach – than the originally approved Solana Hills Drive enhancements. The description of the community enhancements (Section 4.4.5) near the Solana Hills Drive trailhead at the south entrance to the San Elijo Lagoon Ecological Reserve is proposed to be modified to delete certain components, including construction of a new trailhead, parallel parking on Solana Hills Drive for trailhead visitors, pedestrian drop off zone, street trees, street and security lighting, shade structure, picnic tables, drinking fountain, litter receptacles, pet waste station, and information board. This community enhancement feature would still include improved signage and interpretive displays to support trailhead users.

**Armoring Bridge Abutments**

The proposed amendment would add language to Section 5.8, Site Stability and Management, that would allow additional armoring, specifically rock slope protection, for bridge abutments to extend into the optimized channel width, where unavoidable. Caltrans asserts that additional armoring will likely be necessary to be consistent with FHWA requirements of which they only became aware of as the specific project for the San Elijo I-5 Bridge Replacement advanced to final project design. The proposed language specifies that any additional necessary rock slope protection would be minimized to avoid impacts to the maximum extent feasible, would be designed to minimize scour, and would have, at a minimum, an initial 2-foot thick layer of sediment covering the rock slope protection. In addition, a new Implementation Measure (IM 5.8.13) is proposed which requires CDP and NOID submittals for any armoring that extends into the optimized channel width to include a mitigation and monitoring program

to ensure the rock slope protection is not exposed. This mitigation and monitoring program is to include annual monitoring, as well as additional monitoring for one month after any 20-year or greater storm event; and required mitigation for permanent impacts consistent with the provisions of the Resource Enhancement and Mitigation Program (REMP) in the NCC PWP/TREP.

**Equipment Fueling Setback**

The certified NCC PWP/TREP requires equipment and vehicles to fuel and store equipment a minimum distance away from waterbodies to prevent adverse water quality impacts; however, both 50 feet and 100 feet are referenced as the required minimum distance in different sections. Thus, the proposed amendment would correct this inconsistency by replacing all references to 50 feet with 100 feet. In addition, where it is not feasible for large construction equipment to abide by this 100 ft. setback due to constrained sites or in-water construction activities associated with lagoon bridge replacement, additional BMPs and monitoring are proposed to ensure potential impacts to water quality and biological resources are avoided.

**Lighting**

The certified NCC PWP/TREP does not identify where existing or proposed freeway interchange lighting is located. The proposed amendment would update maps (Figures 5.7 1A-1G) in Section 5.7, Visual Resources, to identify the general locations throughout the corridor where freeway lighting is necessary, including interchange areas. A new Appendix B-1, Lighting Standards, is also proposed which will incorporate Caltrans' current lighting design standards and lighting design review process for future project specific NOID/CDP submittals.

## B. PUBLIC ACCESS AND RECREATION

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 30212(a) of the Coastal Act states:

> *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated access shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

Section 30212.5 of the Coastal Act states:

> *Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.*

Section 30213 of the Coastal Act states:

> *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. […]*

Section 30223 of the Coastal Act states:

> *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

Section 30252 of the Coastal Act states:

> *The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (…)*

Policy 2.5 in each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states, in relevant part:

> *The NCC PWP project scope and resource protection policies, design/development strategies, and implementation measures may require amendment . . . to address modified project designs, changes in available project funding and/or phasing needs, to incorporate new, high priority resource enhancement opportunities, and/or to address changed site conditions and resource protection requirements within the NCC Project Overlay area. . . . Amendment of the NCC PWP that would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program.*

Policy 3.1.1 in each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states:

> *Maximum public access to coastal and inland recreational resources in the North Coast Corridor shall be protected, and where feasible, enhanced, consistent with public safety needs and sensitive coastal resource protection policies of the NCC*

> *PWP/TREP (prepared by Caltrans/SANDAG and dated June 2014). Any future amendment of the original PWP shall not decrease the level of public access improvements guaranteed by the policies in the NCC PWP/TREP such that the project as whole would no longer be, on balance, most protective of significant coastal resources.*

Policy 5.3.1 of the certified NCC PWP/TREP states:

> *Maximum public access to and along coastal and inland recreational resources in the PWP/TREP planning area shall be protected and enhanced, consistent with public safety and sensitive coastal resource needs.*

**Coastal Rail Trail**

The Coastal Rail Trail is an approved bicycle and pedestrian facility in the NCC, with most segments in or adjacent to the LOSSAN rail right-of-way. Once fully completed, the Coastal Rail Trail would provide a continuous north-south route – mostly comprising Class I facilities – through the NCC with direct access to coastal resources and recreational facilities. Caltrans and SANDAG have identified opportunities to complete approximately 7 miles of the Coastal Rail Trail as part of the NCC PWP/TREP improvements. These segments also will contribute to the completion of the California Coastal Trail, a planned 1,200-mile public right-of-way spanning the entire California coastline. The Coastal Rail Trail segments planned in the NCC PWP/TREP – all of which are immediately adjacent to the coast – will support the development of the California Coastal Trail in the NCC by providing additional options for non-motorized travel along the coast.

As mentioned previously, the proposed amendment is necessary to correct the existing inconsistency between the text of the NCC PWP/TREP that identifies the location of the Coastal Rail Trail solely within the LOSSAN right-of-way and the maps that depict portions of it outside of the right-of-way. Based on discussions with Caltrans and SANDAG, it is the intent for the Coastal Rail Trail projects included for permitting in the NCC PWP/TREP to be located within or immediately adjacent to the LOSSAN right-of-way. The proposed language acknowledges that there may be areas where there are environmental, safety, or physical constraints which may prevent the Coastal Rail Trail from being located entirely within or immediately adjacent to the LOSSAN right-of-way; however, in those instances, it is not to be located any further than 150 feet from the right-of-way. The proposed language would provide future flexibility for project specific design while still preserving the intent of the regional community enhancement feature – creation of a continuous north-south bicycle and pedestrian trail along the rail corridor that will provide safe access to and along the coast. The amendment would not result in any significant changes to the alignment of the Coastal Rail Trail; however, it would give SANDAG the flexibility to consider alignments both east and west of the LOSSAN right-of-way in areas where the final design has yet to be completed, such as the community of Leucadia segment in the City of Encinitas. If future Coastal Rail Trail and regional planning identifies that it is appropriate to locate the Coastal Rail Trail further than 150

feet from the right-of-way, it would require a NCC PWP/TREP amendment for that segment.

Members of the public have submitted comment letters raising concerns about specific project details for the Coastal Rail Trail segments, particularly the segment in the community of Cardiff in the City of Encinitas. Members of the public in support of the Coastal Rail Trail commented on safety and public access benefits of the trail. Members of the public in opposition to the Coastal Rail Trail, in general, commented that they are opposed to a formalized (i.e., paved and fenced) Coastal Rail Trail and are concerned about potential impacts to existing informal pedestrian trails and parking, habitat and coastal bluffs, public views to the ocean, and community character. However, a project-specific proposal to develop this Coastal Rail Trail segment in Encinitas is not a component of the proposed NCC PWP/TREP amendment.

It is important to note that review and approval of the Coastal Rail Trail within the NCC already occurred as a part of the review and approval of the NCC PWP/TREP in August 2014. The subject NCC PWP/TREP amendment is only necessary to clarify that the trail will be located within or immediately adjacent to the right-of-way. However, both the public and the Commission will have the opportunity to review specific project details, such as the installation of fencing, formalization of parking and other associated components, for consistency with the NCC PWP/TREP as part of future NOID or CDP submittals. Thus, the submitted comment letters will be saved for inclusion with a future SANDAG submittal for the specific project that includes the Coastal Rail Trail segment in Cardiff. In addition, SANDAG and Commission staff will continue to coordinate with the cities and local stakeholders to address their concerns regarding the protection of coastal resources, including public access and visual resources.

In conclusion, the purpose of the proposed amendment is to clarify the location of the Coastal Rail Trail – an important lower cost visitor and recreational facility that will improve bicycle and pedestrian network connectivity to and along the coast for both residents and visitors. The proposed amendment language would not diminish or alter the important public access connectivity provided by this NCC PWP/TREP component, but rather removes policy language that in some locations could render portions of the trail unbuildable.

**Rail Station Parking**

Rail station and parking improvements at LOSSAN corridor rail stations will increase rail passenger capacity and improve rail service. The certified NCC PWP/TREP specifically describes that additional parking spaces will be constructed at the rail stations. Coordination with the City of Encinitas has identified the need for an amendment to this language to allow some flexibility regarding where additional parking for rail users may be located. The proposed language would allow additional parking at, adjacent to, or in close proximity to the corridor's rail stations. This language still requires expanded parking to be located adjacent to or near rail stations in order to be efficient and effective to the rail users who would utilize it. This language would allow the City of Encinitas to consider additional parking for the Encinitas Station at City Hall, directly across the street

(Vulcan Ave) from the rail station, and would also provide greater flexibility for other corridor cities when they consider expanded parking facilities necessary to serve the rail corridor. Again, the purpose of this amendment is to clarify the location of additional rail parking that will supplement the existing parking supply at rail stations and support access to and along nearby beaches, as well as upland recreational or visitor destinations. This would have no negative impact on public access and presents no inconsistencies with the policies listed above.

**New Rail Undercrossing**

An additional grade-separated rail undercrossing located directly southwest of the San Elijo Lagoon near Milepost 241 in the City of Solana Beach is proposed to be added to Section 4.4.3, LOSSAN Crossings. The new undercrossing would allow users of the existing San Elijo Lagoon trails as well as residents and visitors of Solana Beach to cross below the railroad tracks, creating safe access to both the Gateway Open Space Preservation Site and the shoreline. This new pedestrian and bicycle undercrossing below the rail tracks will better and more safely connect the Solana Beach community to the beach. The addition of another undercrossing to the NCC PWP/TREP would further enhance public access to the coast.

**Community Enhancements**

Some of the community enhancements originally planned at the Solana Hills trailhead located at the south entrance to San Elijo Lagoon Ecological Reserve are proposed to be deleted from the NCC PWP/TREP, including construction of a new trailhead, parallel parking on Solana Hills Drive for trailhead visitors, pedestrian drop off zone, street trees, street and security lighting, shade structure, picnic tables, drinking fountain, litter receptacles, pet waste station, and information board. However, this community enhancement feature is not proposed to be entirely eliminated, and would still include improved signage and interpretive displays to support trailhead users. Although the proposed amendment would reduce the scope of the Solana Hills Drive enhancements, the funds originally allocated for these amenities will be shifted to fund the purchase of the Gateway Open Space Preservation Site and construction of a new pedestrian undercrossing. Caltrans and SANDAG have coordinated with the City of Solana Beach, City of Encinitas, and the San Elijo Lagoon Conservancy to ensure that public access and recreation to San Elijo Lagoon is maintained and enhanced. The benefits to public access and recreation outweigh the losses to public access and recreation from the deletion of these components of the community enhancements at Solana Hills Drive to accommodate the addition of a rail undercrossing. In fact, the purchase of the Gateway Open Space Preservation Site and construction of a new undercrossing would provide enhanced public access and recreational benefits to a more diverse user group – visitors of the San Elijo Lagoon trail system and adjacent beach.

**Conclusion**

Therefore, the Commission finds that the proposed amendment is consistent with the applicable public access and recreation policies of the Coastal Act, as well as Policy 5.3.1

of the certified NCC PWP/TREP. The certified LCPs of the applicable corridor cities (San Diego, Encinitas, Carlsbad, and Oceanside) all have a North Coast Corridor PWP Overlay Zone that authorizes NCC PWP/TREP improvements in very broad terms and that specifically recognizes the likelihood that amendments to the NCC PWP/TREP's scope, policies, design/development strategies, and implementation measures will be needed for a variety of reasons. The language of those overlays was designed to minimize the need for further LCP amendments every time such a NCC PWP/TREP amendment became necessary. Accordingly, each one states that NCC PWP/TREP amendments that "would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program." The changes described above do not result in any conflict with the policies in the Overlays. As indicated above, the most relevant policy for the changes listed in this section is Policy 3.1.1, which requires protection and enhancement of maximum public access and that NCC PWP/TREP amendments not decrease the level of public access improvements guaranteed by the policies in the NCC PWP/TREP. As indicated above, the changes addressed in this section will not decrease the level of public access improvements or otherwise have any adverse impact on the public access provided by the original NCC PWP/TREP.

## C. COASTAL HAZARDS AND FILL OF OPEN COASTAL WATERS

Section 30233(a) of the Coastal Act states, in 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:*
>
> *(1) 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 channel, 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 dependent activities.*

Coastal Act Section 30236 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.*

Coastal Act Section 30253 states that 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 or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Policy 2.5 of each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states, in relevant part:

> *The NCC PWP project scope and resource protection policies, design/development strategies, and implementation measures may require amendment . . . to address modified project designs, changes in available project funding and/or phasing needs, to incorporate new, high priority resource enhancement opportunities, and/or to address changed site conditions and resource protection requirements within the NCC Project Overlay area. . . . <u>Amendment of the NCC PWP that would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program</u>.*

Policy 3.4.1 of each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states, in relevant part:

> *North Coast Corridor transportation and community enhancement projects shall be planned and designed to protect, and where feasible, enhance water quality of the North Coast Corridor's lagoons, streams, and smaller watershed drainages which support open water, wetland, and riparian habitats, consistent with the policies of the NCC PWP/TREP (prepared by Caltrans/SANDAG dated June 2014). Where otherwise approvable new development may potentially result in negative impacts to open coastal waters, wetlands, and estuaries, appropriate mitigation measures shall be required and implemented. North Coast Corridor project development in and adjacent to open water, wetland and riparian habitats shall be limited to the uses specified in Sections 30233 and 30236 of the Coastal Act, as applicable, and/or uses specifically defined within and permitted by the NCC Project Overlay. Any future amendment of the original PWP shall not decrease the level of water quality improvements or protections of wetlands guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources.*

In addition, Policy 5.8.1 of the certified NCC PWP/TREP states:

> *All highway, rail, bicycle and pedestrian projects, and community and resource enhancement improvements shall be designed and implemented to minimize risks to life and property in areas of high geologic, flood, and fire hazard, and to minimize risk associated with potential hazardous materials release or spillage. Site-specific project design shall be based on the results of detailed (design-level) engineering, geologic and geotechnical studies.*

The existing I-5 bridges over coastal lagoon systems in the NCC currently have armored abutments that protect them from scour, and the replacement of these bridges will also need to include abutment armoring to protect against potential future scour events. During development of the NCC PWP/TREP, Caltrans determined, and represented, that based on preliminary engineering and design, armoring at I-5 replacement bridge crossings would only occur on the slopes of bridge abutments and would not encroach into the proposed channel dimensions, as identified in the Lagoon Bridge Optimization Studies. The Lagoon Bridge Optimization Studies analyzed the potential effects that proposed bridge design alternatives would have on: tidal circulation flood flows and associated scour, sediment transport, sea level rise, wildlife connectivity, channel protection features, and associated impacts on wildlife habitats and federal or state jurisdictional waters/wetlands. These analyses considered the existing infrastructure constraints in the context of the optimal lagoon environment in order to identify appropriate bridge and channel dimensions that would enhance lagoon-wide function and services, including optimization of tidal and fluvial flows. Armoring within the channel was not considered necessary when these studies were conducted due to the great depths (over 100 feet) to which the piles were designed to be drilled in order to protect the bridge columns. As such, in Section 5.8 of the certified NCC PWP/TREP, Site Stability and Management, it clearly states that any necessary rock slope protection for bridge abutments would not encroach into the proposed channel dimensions.

However, as engineering and design of the replacement bridges progressed, Caltrans and FHWA identified stability requirements that would necessitate some armoring to be placed within the optimized channel width in order to provide adequate protection of the bridge structures. The federal standards for bridge protection that were used to determine the size and placement of additional armoring were based on a 200-year storm event and predicted a scour depth of -30 feet (NAVD88) at the abutments. The traditional design for a riprap revetment to protect against scour includes a full-toe design that extends down to the maximum scour depth (in this case -30 feet). Working in a marine environment at these depths is extremely difficult; Caltrans and FHWA have proposed a measure to make this construction more practical which would involve raising the construction elevation of the rock placement, while still providing enough material so that future undermining of the rock would be replaced as rock falls from the elevated perched-toe into the newly created scour trench (Exhibit 3). Thus, the proposed perched-toe design will use an equivalent amount of stone as a continuous slope, with a similar size footprint, but limits the amount of excavation required to place the stone at an elevation of only -15 feet. The rock apron for the perched toe would be placed two feet below the design depth as determined by the Bridge Optimization Studies, and would be covered with earth to maintain a natural bottom through all except the largest storms. Earthen cover is also proposed to be placed on the return sections.

Caltrans's consultant, Moffat Nichol, conducted an Alternatives Analysis to evaluate other types of scour protection, including a concrete lined bank, steel sheet piles, gabions, and natural measures (i.e., planting of scour-resistant materials). Caltrans and FHWA found these measures to be unacceptable for a number of reasons. The concrete channel would be inconsistent with an environmentally sensitive area and would have similar or greater impacts than the proposed armoring. Steel sheet piles would be impractical due to the extensive tieback system that would be necessary and would interfere with abutments and bridge foundations. Gabions would not have sufficient capacity to withstand the scour forces and would not be suitable for saltwater environments. Natural banks also would lack the capacity to withstand scour forces and would not meet required FHWA design standards. Therefore, the proposed perched-toe design was determined to be the preferred alternative for protection of bridge abutments due to: the decrease in the required amount of excavation, ability to maintain a natural bottom to recreate aquatic habitat for benthic organisms, its consistency with FHWA standards, and the ease in conducting visual inspections after extreme storm events.

Moffat Nichol also completed modeling of the 20- and 50-year storm events at San Elijo Lagoon to determine when the sediment covering the perched toe would potentially erode. Batiquitos Lagoon currently has an armored channel with a sediment cover of two feet, the flow velocities where the sediment cover is stable in Batiquitos Lagoon were applied to San Elijo Lagoon. At San Elijo Lagoon, the peak velocity within the footprint of the proposed riprap is predicted to be 2.5 to 3.0 feet per second (fps) for a 20-year storm and 2.5 to 3.5 fps for a 50-year storm. Both the 20- and 50-year storm velocities over the perched toe portion of the channel are below the peak spring tide velocities currently experienced in Batiquitos Lagoon, and under these conditions sediment remains present under the bridge in Batiquitos Lagoon. Therefore, it is predicted that the proposed perched-toe design would result in partially exposed rock only under a 50-year

storm or greater event. Additionally, the proposed widening of the channel that is associated with the bridge replacement significantly improves water movement conditions, thus reducing the likelihood of exposure during wet weather conditions. In addition, storm flows typically have an extended period of flow where any of the scour that occurred during the peak of the storm is often later filled back in by the sedimentation occurring at the tail end of the storm. Thus, it is predicted that the time period for little or no cover of the riprap would be a matter of hours. It is anticipated that during the highest storm events, the rock would be covered back up within several tidal cycles, or approximately one to two weeks. Therefore, Caltrans estimates that the earthen cover would self-regulate.

To ensure that potential adverse impacts to wetlands are avoided and minimized, a new Implementation Measure (IM 5.8.13) is proposed which would require that NOID or CDP submittals for any proposed armoring that would extend into the optimized channel width provide a mitigation and monitoring program to ensure the proposed design performs as expected. The monitoring program requires annual monitoring, as well as additional monitoring one month after any 20-year or greater storm event. The last provision of this implementation measure is the requirement of mitigation for permanent impacts, since there is the potential for the rock revetment to become exposed and remain exposed, which would be considered a permanent change in habitat. Therefore, Caltrans proposes to mitigate now for these potential impacts, and to treat them as permanent impacts as already set forth in the NCC PWP/TREP. Any mitigation shall be consistent with the requirements of the REMP. Also, the proposed modifications to the language in the Shoreline Erosion/Sea Level Rise section specify that where additional armoring is unavoidable, it would be minimized to avoid impacts to the maximum extent feasible and would be designed to minimize scour. As such, Caltrans will use the best scour protection available at the time to ensure that additional areas of disturbance are minimized and are no greater than the 3.25 acres authorized by this amendment.

Section 30233(a) of the Coastal Act only permits the diking, filling, or dredging of wetlands and open coastal waters where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. Additionally, it limits such actions to specific, enumerated purposes, or uses. Filling to support an expanded highway bridge is not one of the permitted uses within wetlands. The findings for approval of the original NCC PWP/TREP (PWP-6-NCC-13-0203-1) – specifically Section G, Wetlands, and Section M, Conflict Resolution – used the "conflict resolution" provision of Sections 30007.5 and 30200(b) of the Coastal Act to allow the dredging and filling involved in the NCC PWP/TREP despite its inconsistency with Coastal Act Section 30233. When the Commission identifies a conflict among Coastal Act policies, Section 30007.5 requires the Commission to resolve the conflict "in a manner which on balance is the most protective of significant coastal resources". The NCC PWP/TREP findings included the finding that the proposed NCC PWP/TREP raised a conflict between Chapter 3 policies on the basis that the project proposed in the NCC PWP/TREP resulted in the fill of approximately 24 acres of wetland and was not one of the identified allowable uses in Section 30233. However, denying the project because of its inconsistency with Section 30233 would have been inconsistent with mandates of other Coastal Act policies and

would have resulted in significant adverse effects on public access, biological resources, water quality and air quality due to the persistence of the existing antiquated transportation system in the NCC. Thus, the Commission invoked the conflict resolution approach authorized by Sections 30007.5 and 30200(b) and found that approval of the NCC PWP/TREP notwithstanding its inconsistencies with Coastal Act Section 30233 was the "most protective of coastal resources" for purposes of the conflict resolution provision of Coastal Act Section 30007.5.

The proposed amendment would result in approximately 3.25 additional acres of wetland fill or an increase of 13.5% over the 24 acres of wetland fill that was considered and approved as part of the NCC PWP/TREP's initial approval. This increase takes into account the additional armoring that would be needed to meet FHWA requirements for the replacement of I-5 bridges throughout the corridor, including at San Elijo Lagoon, Batiquitos Lagoon, Agua Hedionda Lagoon, and Buena Vista Lagoon. This is a new or additional inconsistency with Section 30233. However, given the scale of this project, and the associated scale of the adverse impacts and benefits that the Commission balanced in approving the NCC PWP/TREP, this 13.5% increase does not represent a significant new impact that would alter the outcome of that balancing exercise. In addition, Caltrans conducted an Alternatives Analysis which concluded that there is no feasible less environmentally damaging alternative that staff, including Dr. Lesley Ewing, the Commission's Coastal Engineer, has reviewed and accepts. Because the proposed design has the potential to result in environmental effects, a mitigation measure (IM 5.8.13) has been proposed to ensure regular monitoring occurs and mitigation of permanent impacts is required consistent with the provisions of the REMP.

In addition, Coastal Act Section 30253 states that new development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard. The impetus for the proposed additional armoring is to protect freeway bridge structures, consistent with FHWA requirements that are designed to maximize safety, even during extreme storm events like a 200-year storm event. Thus, even if the impacts of the proposed amendment were viewed in isolation, the proposed development that will generate those impacts presents its own conflict among Chapter 3 policies, since denying the proposal would not assure stability or minimize the risks to life and property, which would be inconsistent with the mandates of Section 30253. Because of the significant impairment of coastal resources involved in rebuilding these bridges in an unsafe manner, the Commission finds that the proposed project is, on balance, most protective of coastal resources.

Therefore, the Commission finds that, notwithstanding the inconsistencies of the proposed amendment with Coastal Act Section 30233, the NCC PWP/TREP, as modified by the proposed amendment, would remain, on balance, most protective of significant coastal resources for purposes of the conflict resolution provisions of Coastal Act Section 30007.5 and as consistent as possible with the applicable policies, as well as Policy 5.8.1 of the certified NCC PWP/TREP. The certified LCPs of the applicable corridor cities (San Diego, Encinitas, Carlsbad, and Oceanside) all have a North Coast Corridor NCC PWP/TREP Overlay Zone that authorizes NCC PWP/TREP improvements in very broad terms and that specifically recognizes the likelihood that amendments to the NCC PWP/TREP's scope, policies, design/development strategies, and implementation

measures will be needed for a variety of reasons. The language of those overlays was designed to minimize the need for further LCP amendments every time such a NCC PWP/TREP amendment became necessary. Accordingly, each one states that NCC PWP/TREP amendments that "would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program." The changes described above do not result in any conflict with the policies in the Overlays. As indicated above, the most relevant policy for the changes listed in this section is Policy 3.4.1, and although that policy limits the allowable uses for development in open waters, included among those allowable uses are "uses specifically defined within and permitted by the NCC Project Overlay." The overlay allows for these bridges and bridge abutments, including the associated work necessary to make them safe.

Policy 3.4.1 also requires that NCC PWP/TREP amendments not decrease the level of water quality improvements or protections of wetlands guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources. With the included new implementation measure to the NCC PWP/TREP, the proposed abutment armoring improvements will not result in decreased water quality or wetland protections as otherwise provided for by the NCC PWP/TREP and would still on balance be most protective of significant coastal resources.

## 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.*

Policy 2.5 of each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states, in relevant part:

> *The NCC PWP project scope and resource protection policies, design/development strategies, and implementation measures may require amendment . . . to address modified project designs, changes in available project funding and/or phasing needs, to incorporate new, high priority resource enhancement opportunities, and/or to address changed site conditions and resource protection requirements within the NCC Project Overlay area. . . .*

*Amendment of the NCC PWP that would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program.*

Policy 3.8.1 of each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states:

*North Coast Corridor project development shall be sited and designed in a manner that avoids and minimizes negative impacts to visual resources and protects, to the extent feasible, scenic public views to significant coastal resources, including views of the ocean and coastline, coastal lagoons and river valleys, and significant open space areas. North Coast Corridor project development shall be sited and designed to be compatible with existing development and surrounding areas such that potential impacts of grading, operational activities, community enhancement improvements and direct lighting on public views outside of the transportation facilities are limited to the greatest extent feasible. North Coast Corridor project development shall be planned to be consistent with the visual resource protection policies of the NCC PWP/TREP (as prepared by Caltrans/SANDAG and dated June 2014). Any future amendment of the original PWP shall not decrease the level of protection of coastal visual resources guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources.*

Policy 5.7.1 of the certified NCC PWP/TREP states:

*Development of NCC transportation facility and community enhancement projects shall be sited and designed in a manner that protects, to the maximum extent feasible, public views to significant coastal resources, including views of the ocean and coastline, coastal lagoons and river valleys, and significant open space areas. New development shall be sited and designed to be compatible with existing development and surrounding areas such that the impacts of grading, operational activities and direct lighting on public views outside of the transportation facilities and community enhancement improvements are limited to the maximum extent feasible.*

Design/Development Strategy #5 in Section 5.7.3 of the NCC PWP/TREP states, in part:

*Night lighting shall be the minimum required for operations and safety and shall be excluded from viewsheds containing scenic resources, including at lagoon crossings, wherever feasible. All lights shall be shielded and directed downward to the target area to minimize spill-over. All lights shall be of appropriate Kelvin temperatures that will minimize biological impacts in adjacent natural areas. New and replacement facility lighting shall use updated, energy efficient lighting that is better directed to avoid or minimize visual impacts and nighttime glare.*

The Visual Resource maps (Figures 5.7 1A-1G) in the certified NCC PWP/TREP depict areas identified as "Ingress/Egress Opening and Lighted Area" for access points to the HOV lanes approved as part of the NCC PWP/TREP; however, these maps do not identify where existing lighting is located nor where new lighting is proposed throughout the freeway corridor, including necessary lighting at freeway interchanges. Caltrans recently conducted an assessment of freeway lighting in the NCC as a component of final project design for the proposed freeway improvements. This study revealed that existing lighting along I-5 does not meet current safety standards, and therefore, the lighting as depicted in the original NCC PWP/TREP did not account for this deficiency. The existing 1970s-era, unshielded lighting fixtures provide substandard illumination at current traffic volumes, and more lighting would be required to meet Caltrans safety standards. Thus, the subject amendment would update the Visual Resource maps in the NCC PWP/TREP to identify the general locations where additional freeway lighting is proposed throughout the corridor, including interchanges, to be consistent with Caltrans safety standards. In addition, a new Appendix B-1, Lighting Standards, is also proposed which would incorporate Caltrans' current lighting design standards and the lighting design review process that would be specific to NCC PWP/TREP projects.

Although the proposed amendment does not identify the number of light poles proposed at each freeway interchange, Caltrans has determined that the number of light poles would need to be increased from the current number of existing light poles in order to be consistent with Caltrans safety standards. Currently, the stretches of highway crossing the lagoons have minimal or no overhead freeway lighting. Thus, this increase has the potential to impact both daytime and nighttime visual resources, especially the existing open space character of the corridor's lagoons. The proliferation of tall structures, including new light poles, has the potential to add visual clutter to viewsheds that currently have limited freeway lighting. Additionally, at night, an increase in the number of lights has the potential to contribute to greater light trespass into the night sky and impact adjacent habitat areas. Caltrans has conducted visual simulations and asserts that additional light from increased light poles would be insignificant in comparison to the light on the freeway from the headlights of vehicles traveling on the freeway both under current and future conditions.

There are existing NCC PWP/TREP policies and design/development strategies that protect visual resources and clearly state that lighting should be the minimum required for operations and safety and would be excluded from viewsheds containing scenic resources, including at lagoon crossings, wherever feasible. At the time of Commission approval of the original NCC PWP/TREP, Caltrans represented that additional lighting across the lagoon systems would not be required. As proposed in this NCC PWP/TREP amendment, Caltrans acknowledges that it will need to consider design modifications from typical freeway lighting standards and commits to implementing such changes when designing and siting new lighting within the corridor to ensure impacts to visual resources are avoided and minimized, especially in highly scenic and sensitive habitat areas such as lagoon crossings. The Lighting Design Process, included in Appendix B-1, requires the final lighting design to evaluate the need, location, pole spacing and number, and light intensity and spread. For example, during this design process, there may be opportunities to eliminate some light poles at wide gore areas, or adjust pole locations to

concentrate the light spread on the paving. In addition, regulatory signage may use reflective lettering instead of overhead signage illumination. Also, lighting standards can change and future projects can be designed to minimize the need for additional lighting.

To address potential impacts to visual resources in scenic viewsheds such as lagoon crossings, Caltrans has identified that new types of light fixtures would be utilized in highly scenic or sensitive resource areas. These new light fixtures use precise light beam angles and linear spread lenses to control the distribution of light; the light beam output distribution and shape ensures environmental protection by limiting light trespass into the sky. These lights use updated, better directed, low temperature, energy efficient LED fixtures to minimize visual and biological impacts. This technology would be the first of its kind on Caltrans property and would minimize potential impacts to coastal resources. As technological advances in lighting are realized in the future, Caltrans has committed to retrofitting freeway lighting in these areas to further minimize potential coastal resource impacts.

Specifically, future improved technologies related to lighting within the corridor will be evaluated as part of the performance measure reports prepared every 4-5 years for the Transportation Report Package. Language within Appendix B-1 provides that Caltrans shall study and retrofit lighting along sensitive viewsheds (i.e., lagoon crossings), as improved technologies become available. Retrofits for lighting fixtures in sensitive viewsheds with minor improvements (a change to more advanced light bulb with lower Kelvin temperatures, etc.) would occur within one year from release of the Transportation Report Package. When improved lighting technology is identified that would require more extensive retrofits (lagoon bridge barrier lighting, etc.), retrofitting would occur prior to release of the next Transportation Report Package.

The Commission concurs with Caltrans's assertion that lighting is an important safety element that is necessary at freeway ramps for motorists to assess the upcoming change in lane configuration, to see merging traffic, to aid in decision making, and to reduce accidents. Thus, the subject amendment to identify general areas for proposed lighting is necessary for safety reasons; however, future project specific submittals (NOID or CDP) will be required to describe the design development process and include plans that show the existing freeway lighting, the initial lighting concept based on Caltrans' standards, and the proposed final lighting design that has been refined to maximize protection of visual resources by limiting any expansion of lighting to the minimum amount feasible when compared to existing lighting, with special consideration given for the protection of highly scenic and sensitive resource areas such as lagoons. Evaluation of the need for, number, pole spacing, and light intensity/spread will be part of this future project specific review and will be designed to minimize the number of these elements necessary to achieve safe levels of illumination for continued freeway operations.

In conclusion, while there is a likelihood the proposed amendment would result in an increase in freeway lighting over existing conditions particularly at interchanges, the updates to freeway lighting are proposed to be sited in the same general vicinity as existing lighting and, if minimized, could still be visually compatible with the existing character of the I-5 freeway. The existing I-5 freeway is a major transportation facility

characterized by signage for way-finding and hazards, overhead signs that are illuminated, light poles, and vehicle traffic. The proposed addition of light poles at interchanges would not obstruct existing views to and along the ocean or lagoons. Further, with the inclusion of a design process as part of future project-specific review that will carefully design and refine final lighting design to avoid and minimize visual resource impacts, the scenic and visual quality of the corridor would be protected. Finally, provisions in the proposed Appendix B-1 require Caltrans to study and retrofit existing lighting in the corridor as advancements in lighting technology are made, which would result in the restoration of the visual quality of highly scenic and sensitive habitat areas.

Therefore, the Commission finds that the proposed amendment is consistent with Section 30251 of the Coastal Act, as well as Policy 5.7.1 of the certified NCC PWP/TREP. The certified LCPs of the applicable corridor cities (San Diego, Encinitas, Carlsbad, and Oceanside) all have a North Coast Corridor PWP Overlay Zone that authorizes NCC PWP/TREP improvements in very broad terms and that specifically recognizes the likelihood that amendments to the NCC PWP/TREP's scope, policies, strategies, and implementation measures will be needed for a variety of reasons. The language of those overlays was designed to minimize the need for further LCP amendments every time such a NCC PWP/TREP amendment became necessary. Accordingly, each one states that NCC PWP/TREP amendments that "would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program." The changes described above do not result in any conflict with the policies in the Overlays. As indicated above, the most relevant policy for the changes listed in this section is Policy 3.8.1, which generally mirrors the language of Coastal Act section 30251 and is no more stringent. Policy 3.8.1 also requires that NCC PWP/TREP amendments not decrease the level of protection of coastal visual resources guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources. Again, as discussed above, the proposed changes would not decrease the level of protection of coastal visual resources guaranteed by Policy 3.8.1.

## E. BIOLOGICAL RESOURCES

Section 30240 of the Coastal Act states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
> *(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 30107.5 of the Coastal Act states:

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

Policy 2.5 in each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states, in relevant part:

> *The NCC PWP project scope and resource protection policies, design/development strategies, and implementation measures may require amendment . . . to address modified project designs, changes in available project funding and/or phasing needs, to incorporate new, high priority resource enhancement opportunities, and/or to address changed site conditions and resource protection requirements within the NCC Project Overlay area. . . . Amendment of the NCC PWP that would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program.*

Policy 3.5.1 in each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states:

> *North Coast Corridor transportation and community enhancement projects shall be sited and designed to ensure that ESHAs are protected against any significant disruption of habitat values, and development in areas adjacent to ESHAs shall be sited and designed to prevent impacts that would significantly degrade those areas, and be compatible with the continuance of those habitat and recreation areas, consistent with the policies of the NCC PWP/TREP (prepared by Caltrans/SANDAG dated June 2014). Where otherwise approvable new development may potentially result in negative impacts to ESHAs and other sensitive coastal habitats, appropriate mitigation measures shall be required and implemented. North Coast Corridor project development in and adjacent to ESHAs shall be limited to the uses specified in Section 30240 of the Coastal Act and/or uses specifically defined within and permitted by the NCC Project Overlay. Any future amendment of the original PWP shall not decrease the level of protection of ESHA guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources.*

Policy 5.5.1 of the certified NCC PWP/TREP states:

> *Development of NCC transportation facility and community enhancement projects shall be sited and designed to ensure that ESHAs are protected against any significant disruption of habitat values. Development in areas adjacent to ESHAs shall be sited and designed to prevent impacts that would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

There are several environmentally sensitive habitat areas (ESHAs) that occur or have the potential to occur within the NCC, including habitat areas located within coastal lagoons, coastal and inland waterways, smaller drainages supporting wetland/riparian habitats, isolated riparian/wetland habitats, and upland habitats, some of which support sensitive or special-status animal and plant species and provide wildlife corridors. More specifically, the following native upland habitat types are found within the corridor and may be found to constitute ESHA: coastal sage scrub, coastal bluff scrub, southern maritime chaparral, coastal sage-chaparral scrub, coast live oak woodland, Torrey pine forest, southern dune scrub, southern foredunes, and native grassland. Additionally, designated critical habitat occurs within the corridor for the following: least Bell's vireo, western snowy plover, southwestern willow flycatcher, coastal California gnatcatcher, tidewater goby, Riverside fairy shrimp, San Diego fairy shrimp, spreading navarretia, and Essential Fish Habitat (EFH) for Pacific salmon, Pacific groundfish, coastal pelagic species, and highly migratory species.

The proposed amendment would modify Visual Resource maps (Figures 5.7 1A-1G) in the certified PWP to identify where new freeway lighting is proposed throughout the corridor, including necessary lighting at freeway interchanges that are located within or adjacent to coastal lagoons, which contain habitat areas that are potential ESHAs. The introduction of additional night lighting in close proximity to the lagoons and on freeway bridges that cross the lagoons has the potential to adversely impact biological resources. Artificial lighting at night could alter or disrupt feeding, roosting, breeding, foraging, migrating, and nesting of wildlife and special-status species. Additional light poles over and adjacent to the lagoons would also increase the risk of predation by raptors that use light poles as perches to hunt for wildlife in the lagoon, including special-status species.

To avoid and minimize potential adverse impacts to sensitive biological resources, night lighting would be the minimum required for operations and safety and would be excluded from viewsheds containing scenic resources, including at lagoon crossings, wherever feasible. As mentioned previously, Caltrans proposes to use new light fixtures that use precise light beam angles and linear spread lenses to control the distribution of light; the light beam output distribution and shape ensures environmental protection by limiting light trespass into the sky. These lights use updated, better directed, low temperature of 3,000 Kelvins or less, energy efficient LED fixtures to minimize visual and biological impacts. Additionally, new light poles will have bird spikes to prevent them from being used as predator perches. The REMP Working Group was consulted on the proposed amendment on February 11, 2016, and none of the resource agencies have raised concerns regarding the proposed lighting due to the inclusion of the aforementioned mitigation measures, as well as a comprehensive lighting design review process that would occur for each specific project. With the project design components as described above, the proposed lighting would not result in significant impacts to ESHAs in adjacent habitat areas.

Therefore, the Commission finds that the proposed amendment is consistent with Section 30240 of the Coastal Act, as well as Policy 5.5.1 of the certified NCC PWP/TREP. The certified LCPs of the applicable corridor cities (San Diego, Encinitas, Carlsbad, and

Oceanside) all have a North Coast Corridor PWP Overlay Zone that authorizes NCC PWP/TREP improvements in very broad terms and that specifically recognizes the likelihood that amendments to the NCC PWP/TREP's scope, policies, strategies, and implementation measures will be needed for a variety of reasons. The language of those overlays was designed to minimize the need for further LCP amendments every time such a NCC PWP/TREP amendment became necessary. Accordingly, each one states that NCC PWP/TREP amendments that "would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program." The changes described above do not result in any conflict with the policies in the Overlays. As indicated above, the most relevant policy for the changes listed in this section is Policy 3.5.1, which generally mirrors the language of Coastal Act section 30240. Although that policy limits the allowable uses for development in and adjacent to ESHAs, included among those allowable uses are "uses specifically defined within and permitted by the NCC Project Overlay." Policy 3.5.1 also requires that NCC PWP/TREP amendments not decrease the level of protection of ESHA guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources. Again, as discussed above, the proposed changes would not decrease the level of protection of ESHA guaranteed by Policy 3.5.1.

## F. 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 water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Policy 2.5 in each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states, in relevant part:

> *The NCC PWP project scope and resource protection policies, design/development strategies, and implementation measures may require amendment . . . to address modified project designs, changes in available project funding and/or phasing needs, to incorporate new, high priority resource enhancement opportunities, and/or to address changed site conditions and resource protection requirements within the NCC Project Overlay area. . . . Amendment of the NCC PWP that would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program.*

Policy 3.4.1 in each of the relevant corridor cities' (San Diego, Encinitas, Carlsbad, and Oceanside) North Coast Corridor PWP Overlay within the certified LCP states:

> *North Coast Corridor transportation and community enhancement projects shall be sited and designed such that marine resources are maintained, enhanced, and, where feasible, restored. North Coast Corridor water quality shall be restored by minimizing wastewater discharges, controlling runoff, preventing depletion of groundwater supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas, and minimizing alteration of natural watercourses, where feasible. North Coast Corridor transportation and community enhancement projects shall be planned and designed to protect and, where feasible, enhance water quality of the North Coast Corridor's lagoons, streams, and smaller watershed drainages which support open water, wetland, and riparian habitats, consistent with the policies of the NCC PWP/TREP (prepared by Caltrans/SANDAG dated June 2014). Where otherwise approvable new development may potentially result in negative impacts to open coastal waters, wetlands, and estuaries, appropriate mitigation measures shall be required and implemented. North Coast Corridor project development in and adjacent to open water, wetland and riparian habitats shall be limited to the uses specified in Sections 30233 and 30236 of the Coastal Act, as applicable, and/or uses specifically defined within and permitted by the NCC Project Overlay. Any future amendment of the original PWP shall not decrease the level of water quality improvements or protection of wetlands guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources.*

Policy 5.4.1 of the certified NCC PWP/TREP states:

> *NCC transportation facility and community enhancement projects shall be sited and designed so that marine resources are maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance.*

Policy 5.4.2 of the certified NCC PWP/TREP states:

> *Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Policy 5.4.3 of the certified NCC PWP/TREP states:

> *Coastal water quality shall be restored by minimizing wastewater discharges, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural watercourses.*

Both 50 feet and 100 feet are referenced in different sections of the NCC PWP/TREP as the minimum required distance from waterbodies for fueling and storing construction equipment; however, the proposed amendment would correct this inconsistency by replacing all references to 50 feet with 100 feet to clarify that the larger buffer is necessary to provide the most protection for sensitive coastal waterbodies, including the corridor's five lagoons. The proposed language does acknowledge, however, that equipment fueling within the 100 ft. setback is allowed where i) in-water construction activities for lagoon bridge replacement are required and it would be impractical to transport large equipment to an upland location for each refueling, and ii) where there are site constraints (such as ESHA or existing infrastructure) adjacent to waterbodies.

In order to allow equipment fueling within the 100 ft. setback, staff from Caltrans and Commission have coordinated and developed language that also includes additional mitigation and monitoring measures. Where it is not feasible to abide by the 100 ft. buffer, the amendment language clarifies that the maximum setback possible shall be provided given the site constraints and additional BMPs shall be implemented. Furthermore, for any in-water fueling, fueling shall take place in a location that has been dewatered and all refueling activities shall be monitored by appropriate personnel identified by the contractor. If any leaks are detected or impacts to water quality occur, the Site Management Program/Contingency Plan prepared pursuant to Implementation Measure 5.8.11 shall specify notification requirements and an emergency protocol for spill containment and clean up. With the inclusion of these mitigation and monitoring requirements, potential impacts to water quality from equipment leaks and spills would be avoided.

Therefore, the Commission finds that the proposed amendment is consistent with Section 30230 and Section 30231 of the Coastal Act, as well as Policies 5.4.1, 5.4.2, and 5.4.3 of the certified NCC PWP/TREP. The certified LCPs of the applicable corridor cities (San Diego, Encinitas, Carlsbad, and Oceanside) all have a North Coast Corridor PWP Overlay Zone that authorizes NCC PWP/TREP improvements in very broad terms and

that specifically recognizes the likelihood that amendments to the NCC PWP/TREP's scope, policies, strategies, and implementation measures will be needed for a variety of reasons. The language of those overlays was designed to minimize the need for further LCP amendments every time such a NCC PWP/TREP amendment became necessary. Accordingly, each one states that NCC PWP/TREP amendments that "would not result in conflicts with the policies contained within the NCC Project Overlay would not require future amendment to the City's Local Coastal Program." The changes described above do not result in any conflict with the policies in the Overlays. As indicated above, the most relevant policy for the changes listed in this section is Policy 3.4.1, which generally mirrors the language of Coastal Act Sections 30230 and 30231. Policy 3.4.1 also requires that NCC PWP/TREP amendments not decrease the level of water quality improvements or protections of wetlands guaranteed by the policies in the NCC PWP/TREP such that the project as a whole would no longer be, on balance, most protective of significant coastal resources. Again, as discussed above, the proposed changes would not decrease the level of protection of ESHA guaranteed by Policy 3.4.1.

## F. CONSISTENCY ANALYSIS OF PWP AMENDMENT WITH LCPS

There are four cities within the corridor that have certified LCPs affected by the scope of transportation improvements within the NCC PWP/TREP: San Diego, Encinitas, Carlsbad, and Oceanside. On August 13, 2014, the Commission approved LCP amendments for San Diego (LCP-6-SAN-14-0813-1), Encinitas (LCP-6-ENC-14-0814-1), Carlsbad (LCP-6-CAR-14-0815-1), and Oceanside (LCP-6-OCN-14-0816-1) to resolve any potential policy conflicts between the cities' LCPs and the NCC PWP/TREP. The LCPs were amended to create narrowly defined overlay zones that identify specific rail, highway, transit, bicycle, pedestrian, community and resource enhancement projects envisioned to occur within each city's jurisdictional boundaries. The overlays include general policy language that mirrors the policy language in the NCC PWP/TREP, but defer more specific project development standards to the language within the NCC PWP/TREP. The overlays also identify that their provisions take precedence over other existing LCP provisions in the event of a conflict. The relationship between the LCPs and the NCC PWP/TREP was crafted in this manner to provide assurance for the local affected jurisdictions that they will have future control in the event that significant changes to the content or scope of the NCC PWP/TREP occur that would create inconsistency with the LCP overlay and therefore would require an additional future LCP amendment(s). The relationship was also crafted in this manner to allow for more minor changes to the NCC PWP/TREP requiring NCC PWP/TREP amendments to occur without requiring amendments to the LCPs, so long as these changes are still consistent with the broader policy language included within the overlay.

In this case, the changes proposed by the subject NCC PWP/TREP amendment are consistent with the broader policy language included in the NCC PWP/TREP overlay within the cities' certified LCPs, and no LCP amendments are necessary. Thus, the Commission finds that, due to the way that the overlay is structured within the cities' LCPs, resulting in such a close connection between the NCC PWP/TREP policies and the overlay policies in the LCPs, and because the amendment is not introducing any major new elements to the NCC PWP/TREP or changing the scope in a manner inconsistent

with the LCPs, the more specific provisions of the NCC PWP/TREP (design and development strategies, and implementation measures) as amended herein are consistent with the LCP policies in the NCC Project Overlay. Therefore, the Commission finds that the proposed NCC PWP/TREP amendment is consistent with the LCPs of the Cities of San Diego, Encinitas, Carlsbad, and Oceanside.

## G. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to Public Resources Code Section 21067 and Sections 15050 and 15051 of Title 14 of the California Code of Regulations, Caltrans is the lead agency for purposes of the California Environmental Quality Act ("CEQA"), as it is the public agency with principal responsibility for carrying out the I-5 related improvements and the larger NCC PWP/TREP. As the lead agency under CEQA, Caltrans certified a Final Environmental Impact Report addressing the I-5 related components of the subject plan in November 2013.[1] Caltrans is also the state-designated lead agency under CEQA for the rail component of the plan and released the LOSSAN FINAL Program EIR/EIS in September 2007, with the Record of Decision issued on March 18, 2009

As an agency with a certified regulatory program under CEQA Section 21080.5, the Commission must consider alternatives and mitigation measures that would substantially lessen any significant adverse environmental effects that the proposal would otherwise have on the environment. Sections 13371 and 13356(b)(2) of Title 14 of the California Code of Regulations require that the Commission not approve or adopt a PWP unless it can find that: "…there are no feasible alternatives, or feasible mitigation measures,…available which would substantially lessen any significant adverse impact that the development…may have on the environment."

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the proposed amendment that were received prior to preparation of the staff report. For the reasons discussed in this report, the proposed amendment to the NCC PWP/TREP is consistent with Coastal Act requirements. There are no other feasible alternatives or mitigation measures available that would further lessen any significant adverse effect that the development would have on the environment.

[1] The certification of that EIR is the subject of ongoing litigation in San Diego Superior Court. According to Caltrans, the matter has been fully briefed and a hearing date has been set for May 20, 2016. However, at this point, no relief has been granted that would affect the status of this EIR. Moreover, for the reasons stated in the Commission's findings in support of its original certification of the NCC PWP/TREP (see July 24, 2014 staff report at pages 26-28), which are incorporated herein by reference, that litigation does not prevent the Commission from taking the instant action on the subject NCC PWP/TREP amendment.

## APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- Public Works Plan No. PWP-6-NCC-13-0203-1
- Coastal Development Permit No. 6-15-2092
- Notice of Impending Development No. NCC-NOID-0005-15
- City of San Diego LCP Amendment No. LCP-6-SAN-14-0813-1
- City of Encinitas LCP Amendment No. LCP-6-ENC-14-0814-1
- City of Carlsbad LCP Amendment No. LCP-6-CAR-14-0815-1
- City of Oceanside LCP Amendment No. LCP-6-OCN-14-0816-1

Camp Pendleton Marine Corps Base

I-5 NCC Corridor Alignment

LOSSAN Corridor Alignment

San Luis Rey River

Oceanside Harbor

City of Oceanside

Buena Vista Lagoon

Agua Hedionda Lagoon

City of Carlsbad

Batiquitos Lagoon

City of Encinitas

San Elijo Lagoon

City of Solana Beach

San Dieguito River

City of Del Mar

Los Penasquitos Lagoon

City of San Diego

City of Vista

City of San Marcos

Pacific Ocean

Orange County

Riverside County

San Diego County

MEXICO

NORTH

0 5 10 Miles

North Coast Corridor Travel Shed
Coastal Zone Boundary
City Boundary
I-5 NCC Project Area
LOSSAN Proposed Track
LOSSAN Existing Track
Interstate
State Route
Major Arterial

DATA SOURCES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, Imagery: DigitalGlobe March 2008



North Coast Corridor PWP/TREP

FINAL: JUNE 2014

EXHIBIT NO. 1

**Regional & NCC Map**

PWPA #PWP-6-NCC-16-0001-1

California Coastal Commission

## FIGURE 6A-3: PUBLIC WORKS PLAN AMENDMENT PROCESS

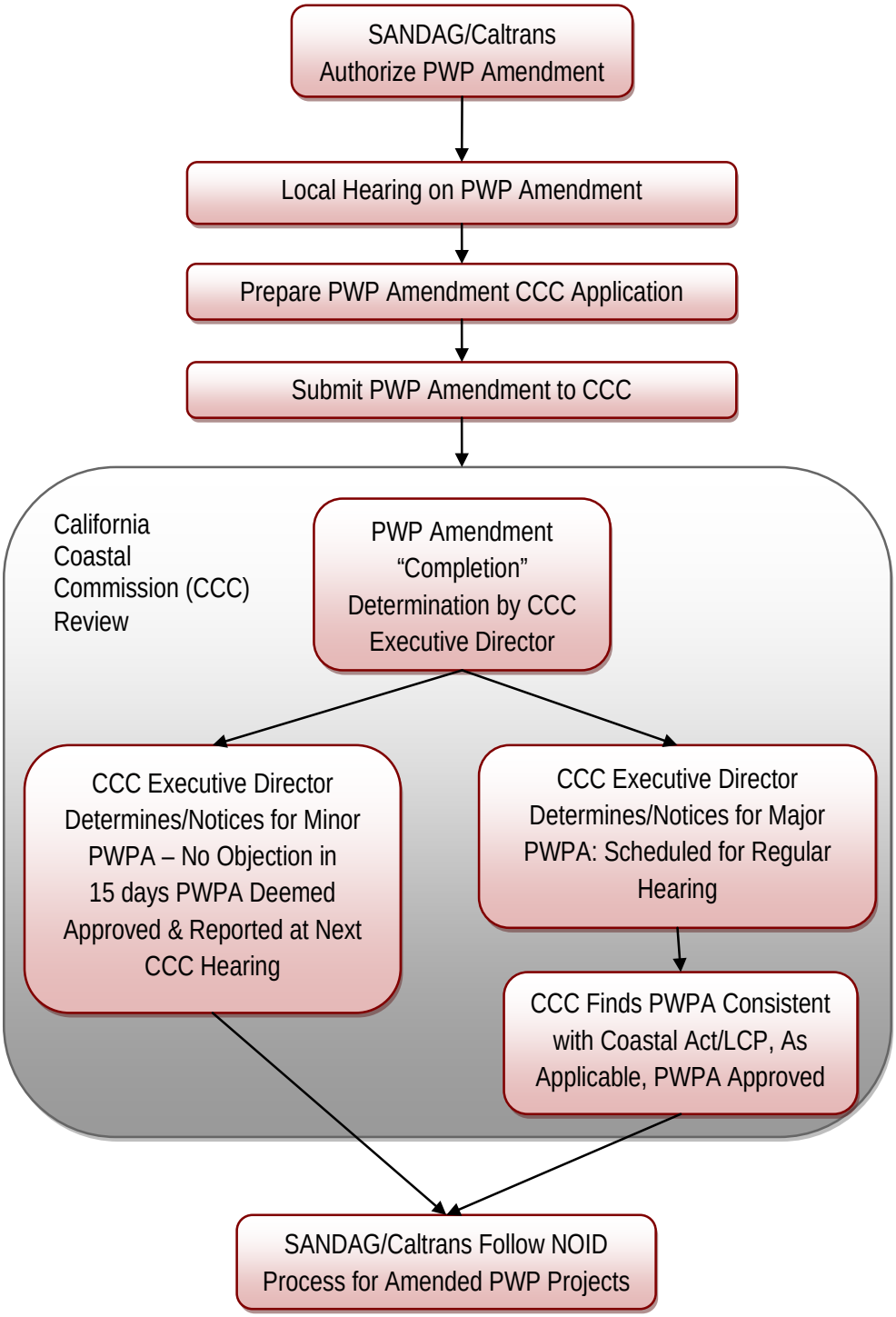
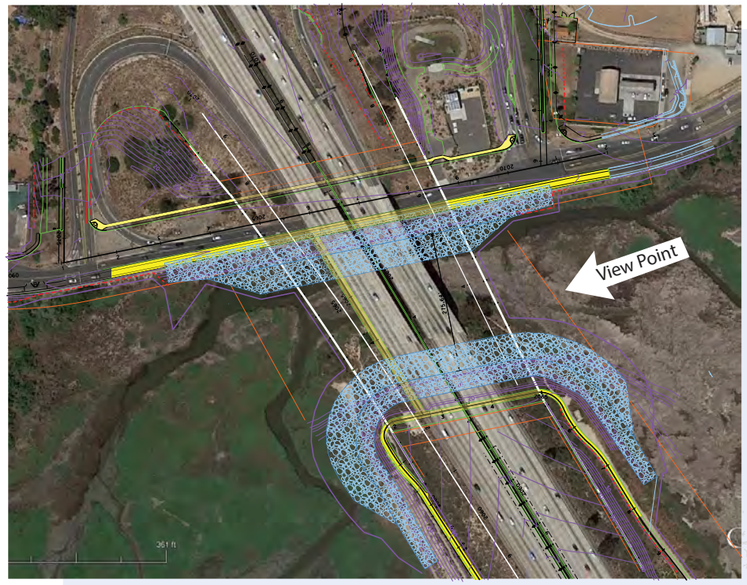





EXHIBIT NO. 2
**PWP Amendment Process**
PWPA #PWP-6-NCC-16-0001-1
California Coastal Commission




Original Ground

Proposed Ground

Proposed Rip Rap

**To Manchester Ave**

**Proposed San Elijo Lagoon Bridge**

Suspender Cables Spaced at 12.5 ft., Staggered

**Begin Bridge**

15.5 ft. Minimum Vertical Clearance

12 ft.

**Multi-Use Trail**

5.1 ft.

5.6 ft.

**Wildlife Crossing**

12 ft.

2:1

Channel Bottom

2 ft. Earth Cover (Native Soil)

Rock Slope Protection Fabric

3.3 ft. Rock Slope Protection 1/4 Ton, 2 layers minimum

2 ft. Aggregate Base

20'

2:1

Approximate Environmental Footprint

**San Elijo Pedestrian/Bike Trail Suspended Bridge**

Original Ground

PROPOSED SURFACE - INVERT ELEVATION = -3.89'

Pier

**Station 2062+50**

0 25 feet 50 feet

50 45 40 35 30 25 20 15 10 5 0 -5 -10 -15 -20

50 40 30 20 10 0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140 -150 -160 -40

**View Looking West**

**I-5 NORTH COAST CORRIDOR PROJECT**
**SAN ELIJO LAGOON AREA**

**PLAN VIEW AND PROFILE VIEW OF REVETMENT DESIGN ALTERNATIVE**

EXHIBIT NO. 3

**San Elijo Bridge Cross-Section**

PWPA #PWP-6-NCC-16-0001-1

California Coastal Commission

# North Coast Corridor Public Works Plan/ Transportation and Resource Enhancement Program Amendment

*PWPA Text Changes (February 19, 2016)*

**1) COASTAL RAIL TRAIL DESCRIPTION CHANGES**

(pg. XVII)

- Constructing several missing links of the Coastal Rail Trail ~~within the LOSSAN rail corridor right-of-way~~. These projects would construct more than 7 miles of the Coastal Rail Trail in the cities of Encinitas and Carlsbad.

(pg. 2-59)

- Identified PWP/TREP improvements to address deficiencies
  - Identified PWP/TREP improvements that would correct the aforementioned gaps, barriers and other access deficiencies. These bicycle and pedestrian projects included new and improved facilities at I-5 highway and LOSSAN rail corridor crossings, implementation of segments of the Coastal Rail Trail ~~within the LOSSAN right-of-way~~, and implementation of the new north-south I-5 North Coast Bike Trail within the highway right-of-way. These PWP/TREP projects would be implemented as part of the I-5 highway and LOSSAN rail corridor transportation projects and would include such facilities as upgraded bicycle routes (e.g., rebuilding an existing Class III bicycle facility as a Class II facility on a new I-5 bridge overcrossing) and new or wider sidewalks at highway and rail over- and undercrossings.

(pg. 3B-16)

Beyond establishing better connections with the Coastal Rail Trail, the PWP/TREP improvements also include completing several segments of the Coastal Rail Trail within the NCC. Caltrans and SANDAG have identified several planned Coastal Rail Trail segments ~~within the LOSSAN rail right-of-way~~ as projects to be included in the PWP/TREP. These projects, which are discussed further in Section 4.4 and Section 5.3, would construct more than 7 miles of the Coastal Rail Trail in the cities of Encinitas and Carlsbad. Where feasible, these Coastal Rail Trail segments would be built concurrently with adjacent track projects in the LOSSAN rail right-of-way.

(pg. 3B-29)

Creating and constructing a new, corridor-long I-5 North Coast Bike Trail and constructing several missing links of the Coastal Rail Trail ~~within the LOSSAN rail corridor right-of-way~~.

(pg. 4-42)

Caltrans and SANDAG have identified opportunities to complete approximately 7 miles of the Coastal Rail Trail ~~within the LOSSAN rail right-of-way~~ as part of the PWP/TREP improvements, taking advantage of construction synergy with LOSSAN rail projects whenever possible. These segments also will contribute to the completion of the California Coastal Trail, a planned 1,200-mile publ

entire California coastline. A “braided trail” concept applies to the California Coastal Trail, meaning that it may be comprised of several adjacent and complementary trails in any given location, based upon the specific topography and land use mix of that location, as well as the types of infrastructure required to support non-motorized transportation (walking trails, bike paths, etc.).[13] The Coastal Rail Trail segments planned in the PWP/TREP—all of which are immediately adjacent to the coast—will support the development of the California Coastal Trail in the NCC by providing additional options for non-motorized travel along the coast.

It is the intent for the Coastal Rail Trail projects included for permitting in the PWP/TREP to be located within or immediately adjacent to the LOSSAN right of way - except in areas where there are environmental, safety, or physical constraints. In those instances where there are constraints, the Coastal Rail Trail shall not be located any further than 150 feet from the LOSSAN right of way. The Coastal Rail Trail projects as generally depicted on Figures 5.3-1A through 5.3-1E ~~The Coastal Rail Trail segments included for permitting in the PWP/TREP~~ are:

- **Chesterfield Drive to G Street (Encinitas):** Construct approximately 1.7 miles of dedicated bicycle facility ~~in the LOSSAN right-of-way~~. Partially overlaps with LOSSAN San Elijo Lagoon Double Track project.
- **G Street to Leucadia Boulevard (Encinitas):** Construct approximately 1.7 miles of dedicated bicycle facility ~~in the LOSSAN right-of-way~~. Partially overlaps with LOSSAN Batiquitos Lagoon Double Track project.
- **Leucadia Boulevard to La Costa Avenue (Encinitas):** Construct approximately 1.3 miles of dedicated bicycle facility ~~in the LOSSAN right-of-way~~. Overlaps with LOSSAN Batiquitos Lagoon Double Track project.
- **Poinsettia Station to Palomar Airport Road (Carlsbad):** Construct approximately 0.9 mile of dedicated bicycle facility ~~in the LOSSAN right-of-way~~.
- **Palomar Airport Road to Cannon Road (Carlsbad):** Construct approximately 0.5 mile of dedicated bicycle facility ~~in the LOSSAN right-of-way~~. However, as shown in Figure 4-2E, a small portion of this segment lies outside the rail right-of-way, and therefore its implementation would require further coordination with the city.
- **Cannon Road to Tamarack Avenue (Carlsbad):** Construct approximately 1.2 miles of dedicated bicycle facility ~~in the LOSSAN right-of-way~~.

(pg. 5.1-44)

Additionally, the corridor vision for bicycle and pedestrian routes and trails includes an extensive network that provides access to the beaches, lagoons, open spaces, and coastal communities of the NCC. Local roads cross I-5 at several locations within the corridor, and many of these crossings are narrow and unaccommodating for bicycles and pedestrians, inhibiting their access to coastal resources. These limited crossings also reduce bicycle and pedestrian access to the Coastal Rail Trail, a separated facility ~~adjacent to the LOSSAN rail corridor~~ that is being developed throughout the NCC.

(pg. 5.3-4)

Once fully completed, the Coastal Rail Trail will be a continuous north-south route adjacent to the LOSSAN rail corridor, providing access to and along coastal facilities. This bikeway serves many users: short segments support commuter access between adjoining communities; longer segments accommodate recreational users as well as some commuters; while the full length of the bikeway within San Diego County serves regional and interregional users. Significant portions of the Coastal Rail Trail have been completed in Solana Beach, Carlsbad, Oceanside, and San Diego, but several gaps still exist in the corridor. Beyond the planned improvements ~~within the LOSSAN rail right-of-way~~ that are included in the PWP/TREP (described in Section 5.3.3.1), the completion of other unfinished segments of the Coastal Rail Trail is being pursued concurrently by several local jurisdictions.

(pg. 5.3-13)

- Identified PWP/TREP improvements to address deficiencies

    - Identified PWP/TREP improvements that would correct the aforementioned gaps, barriers and other access deficiencies. These bicycle and pedestrian projects included new and improved facilities at I-5 highway and LOSSAN rail corridor crossings, implementation of segments of the Coastal Rail Trail ~~within the LOSSAN right-of-way~~, and implementation of the new north-south I-5 North Coast Bike Trail within the highway right-of-way. These PWP/TREP projects would be implemented as part of the I-5 highway and LOSSAN rail corridor transportation projects and would include such facilities as upgraded bicycle routes (e.g., rebuilding an existing Class III bicycle facility as a Class II facility on a new I-5 bridge overcrossing) and new or wider sidewalks at highway and rail over- and undercrossings.

…

Caltrans and SANDAG have identified opportunities to complete approximately 7 miles of the Coastal Rail Trail ~~within the LOSSAN rail right-of-way~~ as part of the PWP/TREP improvements, taking advantage of construction synergy with LOSSAN rail projects whenever possible. These segments also will contribute to the completion of the California Coastal Trail, a planned 1,200-mile public right-of-way spanning the entire California coastline. A “braided trail” concept applies to the California Coastal Trail, meaning that it may be comprised of several adjacent and complementary trails in any given location, based upon the specific topography and land use mix of that location, as well as the types of infrastructure required to support non-motorized transportation (walking trails, bike paths, etc.).[15] The Coastal Rail Trail segments planned in the PWP/TREP—all of which are immediately adjacent to the coast—will support the development of the California Coastal Trail in the NCC by providing additional options for non-motorized travel along the coast.

(pg. 5.3-14)

Beyond the Coastal Rail Trail segments ~~within the LOSSAN rail and I-5 highway rights-of-way~~ that are planned in the PWP/TREP, the region’s local jurisdictions are also working with SANDAG to identify funding for the design and construction of several other segments ~~located outside these rights-of-way~~. The SANDAG Regional Bicycle Plan Early Action Program (EAP)—described in more detail later in this section with the other projects permitted separately from the PWP/TREP—includes several projects that will largely complete the Coastal Rail Trail in the NCC. In addition, the EAP includes the construction of many segments in San Diego that are located outside the NCC, such as University Towne Center, Rose Canyon, and Pacific Highway. Taken together, these combined efforts on the Coastal Rail Trail from SANDAG and local cities demonstrate the region’s intention to complete this important facility.

(pg. 5.10-5)

In addition, bicycle and pedestrian routes that are incomplete, not built to current standards or plans, or not available for access to coastal areas in the NCC would be upgraded and/or connected. Facilitating and encouraging non-automobile transportation with new and improved multimodal options will provide access to the coast and recreation areas with alternative modes of transportation (trails, bike paths, and transit). The PWP/TREP projects will add and improve sidewalks and bicycle lanes at I-5 highway and LOSSAN rail crossings throughout NCC communities, providing access to coastal amenities including Coast Highway, the Coastal Rail Trail, and the California Coastal Trail. The proposed improvements would improve not only travel choices, but also substantially enhance recreational opportunities in the corridor by completing linkages among communities and inland and coastal areas, and by providing access opportunities to the NCC’s regionally significant natural resource and recreation areas. The PWP/TREP improvements for bicycle and pedestrian routes and trails would enhance an extensive network that provides access to the beaches, lagoons, open spaces, and coastal communities. In addition, the PWP/TREP establishes and constructs significant portions of a new I-5 North Coast Bike Trail—a continuous, non-motorized access trail along the length of the corridor that would complement

the existing Coast Highway, Coastal Rail Trail, and the California Coastal Trail. Missing links of the long-planned Coastal Rail Trail ~~within the LOSSAN rail right-of-way~~ would also be implemented.

(pg. 5.10-8)

With regard to non-motorized transportation, the PWP/TREP incorporates a number of regional and community enhancements that would support bicycle and pedestrian activities within the corridor, including construction of a number of facilities critical to success of the I-5 North Coast Bike Trail and the Coastal Rail Trail. These facilities include smaller trail connections as well as larger trail portions intended to connect north-south trail segments. These sections ~~within Caltrans/SANDAG right-of-way~~ would only be constructed with project approval and are lynchpin elements to the overall non-motorized transportation system. Proposed improvements to pedestrian crossings across the rail and highway facilities, and new or improved corridor bike and hiking trails would provide safe, non-automobile dependent routes to and from the Coastal Zone and to coastal recreation areas.

## 2.) ROCK SLOPE PROTECTION DESCRIPTION CHANGES

### 5.8 Site Stability and Management

5.8.2.6 I-5 Highway Corridor Impact Assessment

.....

(pg. 5.8-15) Paragraph 1

To further address potential internal shoreline/bank and channel erosion and to ensure I-5 facilities are designed and constructed to minimize the alteration and channelization of shorelines and/or floodplains, Caltrans has determined that shoreline armoring at I-5 replacement bridge crossings would only occur on the slopes of bridge abutments. Where unavoidable, and to be consistent with federal standards for bridge protection Federal Highway Administration (FHWA) requirements, additional armoring extending away from the abutments and into the optimized channel width may be required. Encroachment of ~~A~~any additional necessary rock slope protection ~~would not encroach~~ into the proposed channel width ~~dimensions~~ as identified in the Lagoon Bridge Optimization Studies, as applicable, would be minimized to avoid impacts to the maximum extent feasible, would be designed to minimize scour, would be mitigated as a permanent impact, and would have, at a minimum, an initial 2-foot thick layer of sediment covering the rock slope protection. No part of any proposed armoring shall extend above the optimized channel depth as identified in the Lagoon Optimization Studies, as applicable. Rock slope protection in the form of energy dissipaters at new or replacement culverts would be installed only where culvert outlet velocities are determined to be erosive during the design phase for the facilities and would be included in the relevant drainage plans.

(pg. 5.8-23)

- **Implementation Measure 5.8.13:** NOID or Coastal Development Permit submittals for armoring that extends into the optimized channel width shall include the following information and materials:

  -A mitigation and monitoring program to be implemented after construction to ensure the rock slope protection is not exposed.

  -The monitoring program shall require, at a minimum, annual monitoring, as well as additional monitoring one month after any 20-year or greater storm event.

-Mitigation for permanent impacts shall be required as further described in the REMP.

### 3.) FUELING SETBACK CHANGES

**5.4 Marine Resources**

5.4.3.4 Implementation Measures

(pg. 5.4-54)

Implementation Measure 5.4.9: Fueling of construction equipment shall occur in designated areas at a distance no less than 100 feet from the lagoon, river, or other water bodies and associated plant communities to preclude adverse water quality impacts. A minimum 100 foot fueling setback from waterbodies shall be provided except where i) in-water construction activities for lagoon bridge replacement is required and it would be impractical to transport large equipment to an upland location for each refueling, and ii) where site constraints (such as ESHA or existing infrastructure) adjacent to waterbodies do not allow for a setback of 100 ft. Where a minimum 100 ft. setback from waterbodies for fueling is infeasible, as listed in herein, the maximum setback possible shall be provided given the site constraints and additional BMPs shall be implemented. Additionally, for any in-water fueling, fueling shall take place in a location that has been dewatered and all refueling activities shall be monitored by appropriate personnel identified by the contractor. Equipment and vehicles shall be inspected daily for fuel or fluid leaks, and leaking equipment or vehicles shall be repaired or replaced immediately. If any leaks are detected or impacts to water quality occur, the Site Management Program/Contingency Plan prepared pursuant to IM 5.8.11 shall specify notification requirements and an emergency protocol for spill containment and clean up. The contractor shall have available at each staging area adequate spill containment equipment (e.g., absorbent materials, containment booms, etc.) to respond to potential fuel or oil spills or leaks from project-related vehicles and equipment.

**5.8 Site Stability and Management**

5.8.3.4 Implementation Measures

(pg. 5.8-22)

Implementation Measure 5.8.11: A Site Management Program/Contingency Plan shall be prepared prior to construction/demolition of improvements to address known and potential hazardous material issues. All highway, rail station and pedestrian crossings, and community and resource enhancement improvement projects shall prepare and implement construction staging plans with designated areas to accommodate equipment and vehicles fueling a minimum of ~~50~~ 100 feet away from waterbodies over paved or impervious surfaces, and any fuel or petroleum products used for project equipment and vehicles shall be stored a minimum of ~~50~~ 100 feet from waterbodies and within the staging area paved or impervious surfaces. A minimum 100 foot fueling setback from waterbodies shall be provided except where i) in-water construction activities for lagoon bridge replacement is required and it would be impractical to transport large equipment to an upland location for each refueling, and ii) where site constraints (such as ESHA or existing infrastructure) adjacent to waterbodies do not allow for a setback of 100 ft. Where a minimum 100 ft. setback from waterbodies for fueling is infeasible, as listed in herein, the maximum setback possible shall be provided given the site constraints and additional BMPs shall be implemented. Additionally, for any in-water fueling, fueling shall take place in a location that has been dewatered and all

refueling activities shall be monitored by appropriate personnel identified by the contractor. Equipment and vehicles shall be inspected daily for fuel or fluid leaks, and leaking equipment or vehicles shall be repaired or replaced immediately. If any leaks are detected or impacts to water quality occur, the plan shall specify notification requirements and an emergency protocol for spill containment and clean up. The contractor shall have available at each staging area adequate spill containment equipment (e.g., absorbent materials, containment booms, etc.) to respond to potential fuel or oil spills or leaks from project-related vehicles and equipment.

5.8.4.1 Corridor Consistency Analysis

(pg. 5.8-27)

Proposed corridor improvements would be designed and developed to avoid and minimize potential impacts associated hazardous material release into the environment. Design and development strategies provide for implementation of Site Management Program/Contingency Plans, when applicable, to address known and potential hazardous material issues, which could include contaminated soil and groundwater, lead-based paint, and asbestos-containing materials. The NCC PWP/TREP includes numerous implementation measures to ensure that potential on-site hazardous materials along the improvement areas be properly identified and that plans be developed for the handling and disposal of such materials in a safe and legal manner. To avoid and minimize hazardous materials risks, soils proposed for disturbance for rail improvements would be investigated for contamination and Phase I and/ Phase II Environmental Site Assessments prepared, when necessary. Design and development strategies for future, project-specific improvements also include preparation and implementation of construction staging plans, which would require that construction refueling/staging occur in pre-designated areas away from waterbodies (a minimum of ~~50~~ 100 feet away from waterbodies where feasible) and adequate spill containment equipment (e.g., absorbent materials, containment booms, etc.) to respond to potential fuel or oil spills or leaks from project-related vehicles and equipment. In addition, the PWP/TREP requires that equipment be inspected and maintained at regular intervals, and that appropriate cleanup facilities and procedures be in place should spills accidentally occur.

**4.) RAIL PARKING DESCRIPTION CHANGES**

(pg. XII)

Beyond double-tracking, many other infrastructure enhancements are planned for the LOSSAN rail corridor. The installation of various stub tracks, layover tracks, and track crossovers would improve operations for all four rail operators (COASTER, Amtrak, Metrolink and BNSF) in the corridor. Like double-tracking, these projects would increase capacity and decrease conflicts, which would result in better reliability and shortened travel times. In addition, the program features enhanced pedestrian crossings, vehicle crossing improvements, and rail bridge replacements to improve safety and accessibility. Beyond track improvements, the LOSSAN projects also include station and parking enhancements, within, adjacent to, or in close proximity to existing stations, that will increase access to rail services for current and potential riders at each of the 6 NCC stations. There are also eight grade separations (three local roads and five bicycle/pedestrian facilities) planned that will increase the safety and performance of both the LOSSAN corridor and the facilities that cross it. Finally, a tunnel is planned that would move the rail alignment away from the fragile Del Mar bluffs, which cannot be double-tracked because of structural and environmental concerns. The planned LOSSAN rail corridor enhancements would allow for much greater capacity on the rail corridor than is needed today, ensuring that the rail infrastructure would be able to accommodate demand growth for many decades.

(pg. XVIII)

• Expanding parking areas at, adjacent to, or in close proximity to the corridor's transit stations, which would support passenger rail service and reduce the possibility of conflicts between rail passenger and coastal access parking resources on adjacent streets.

(pg. 3B-7 to 3B-8)

Beyond double-tracking, many other infrastructure enhancements are planned for the LOSSAN rail corridor. The installation of various stub tracks, layover tracks, and track crossovers would improve operations for all four rail operators (COASTER, Amtrak, Metrolink and BNSF) in the corridor. Like double-tracking, these projects would increase capacity and decrease conflicts, which would result in better reliability and shortened travel times, ultimately making the choice to take transit a more attractive option. In addition, the program features enhanced pedestrian crossings, vehicle crossing improvements, and rail bridge replacements to improve safety and accessibility. Finally, station and parking improvements at, adjacent to, or in close proximity to NCC stations would increase passenger capacity, enhance quality of service, and improve access to coastal rail services. Such improvements also serve to enhance the passenger experience, which may contribute further to increased ridership.

(pg. 3B-26)

Proposed PWP/TREP improvements for the LOSSAN corridor would contribute substantially to enhancing mobility throughout the NCC by increasing and improving rail service, providing new rail service at the Del Mar Racetrack and Fairgrounds, and supplementing parking supply at, adjacent to, or in close proximity to rail stations for new customers.

(pg. 3B-27)

The presence of adequate parking facilities in coastal areas to serve residents, commercial uses and visitors who travel by car is an important variable that influences public access and recreation opportunities in the Coastal Zone. Transit services must be supported by ample parking, walking, and bicycle facilities in order to ensure maximum accessibility of the NCC's coastal resources via alternative modes of travel. In addition, as the majority of rail stations in the NCC are located just blocks from the beach, constrained parking resources could result in overflow parking by train passengers onto adjacent streets, which could displace parking resources used by people to access the coast by automobile. However, where adequate parking supply does occur, these parking resources support access to nearby beaches and recreation areas. Proposed PWP/TREP improvements include expanding parking areas at, adjacent to, or in close proximity to the corridor's transit stations, which would support passenger rail service and reduce the possibility of conflicts between rail passenger and coastal access parking resources on adjacent streets. Furthermore, PWP/TREP improvements include construction of new and enhanced staging areas for bike and trail facilities throughout the corridor. These improvements would increase access to and use of the NCC's recreational facilities.

(pg. 4-5 to 4-6)

**4.1.2 Station and Parking Improvements**

The following station and parking improvements at LOSSAN corridor rail stations would increase passenger capacity, improve service, and enhance quality of service. (Parking improvements adjacent to I-5, such as park-and-ride lots, are listed in Section 4.2.6.) These improvements are all in the planning stage with the exception of Poinsettia Station Improvements, which are being designed.

- **Solana Beach Station Parking (Solana Beach):** Additional spaces at, adjacent to, or in close proximity to the COASTER Solana Beach Station.
- **Encinitas Station Parking (Encinitas):** Additional spaces at, adjacent to, or in close proximity to the COASTER Encinitas Station.
- **Poinsettia Station Parking (Carlsbad):** Additional spaces at, adjacent to, or in close proximity to the COASTER Carlsbad Poinsettia Station
- **Poinsettia Station Improvements (Carlsbad):** Installation of an inter-track fence and a grade-separated pedestrian crossing at Carlsbad Poinsettia Station. New station platforms would be constructed to accommodate these improvements. The project is in the design stage and requires environmental approval.
- **Carlsbad Village Station Parking (Carlsbad):** Additional spaces at, adjacent to, or in close proximity to the COASTER Carlsbad Village Station.
- **Oceanside Station Parking (Oceanside):** Additional spaces at, adjacent to, or in close proximity to the existing Oceanside Transit Center to accommodate additional riders who access the station by private automobile.

(pg.4-18 to 4-19)

Altogether, the number of park-and-ride spaces available for HOV commuters along I-5 will increase by at least 43% with implementation of these planned new and enhanced park-and-ride facilities, and could increase by even more depending on the ultimate design of each facility. Beyond the park-and ride improvements planned at I-5, improvements to the parking facilities at, adjacent to, or in close proximity to LOSSAN rail stations are also planned in the PWP/TREP. They are described in Section 4.1.2 with the other LOSSAN projects.

(pg. 5.1-34)

The LOSSAN rail corridor in the NCC includes a program of projects to expand capacity, improve performance, and enhance access. These projects are described in detail in Chapter 4 and would include the following:

- Double-track projects to reduce and eliminate single-track segments to increase capacity an reliability, and reduce travel time
- Trackwork improvements for increased operations and reliability
- Bridge replacements to improve the safety of existing services
- Expansion of parking at, adjacent to, or in close proximity to rail stations to enhance access
- Additional funded transit connections that encourage alternatives to parking at rail stations

(pg. 5.2-13)

The LOSSAN rail corridor improvements would lead to shorter travel times and improved reliability, and would enable increased frequencies for inter- and intra-city public transit in the corridor. The improvements would provide a track in each direction in nearly the entire corridor, thereby allowing for an increase to corridor capacity to over 47,000 passengers each day. Station facilities and parking improvements at, adjacent to, or in close proximity to LOSSAN rail corridor stations would further increase passenger capacity and enhance quality of service. LOSSAN rail corridor improvements would also provide enhanced inter and intra-regional access to coastal-dependent industry and recreation, coastal and upland areas supporting recreation, various tourist destinations, and visitor-serving areas. Providing higher-quality rail service in the LOSSAN rail corridor is one of the public infrastructure elements necessary to fully realize Smart Growth potential in areas around LOSSAN rail corridor stations.

(pg. 5.2-15)

Station facilities and parking improvements at, adjacent to, or in close proximity to LOSSAN rail corridor stations would increase passenger capacity and enhance quality of service. The new Del Mar Fairgrounds Special Event Platform would provide for improved nonautomobile access to coastal resources, including Cardiff State Beach, San Dieguito River Park and Lagoon, and the Del Mar Racetrack and Fairgrounds. Parking structures or significant expansions to parking facilities would be planned ~~for~~ at, adjacent to, or in close proximity to all NCC stations (Oceanside, Carlsbad Village, Carlsbad Poinsettia, Encinitas, Solana Beach, and Sorrento Valley). Parking at stations is a major capacity constraint and acts as a barrier to many potential rail corridor users. On average, all of the COASTER station parking lots (except Oceanside and Sorrento Valley) are at least 90% full on weekdays, with several exceeding 95%.11 This constraint not only limits the number of people who can access the stations by automobile, but it also creates uncertainty among potential new riders, who might wish to commute via rail but cannot rely on parking being available every day. This lack of parking capacity therefore serves as a barrier to increased ridership. Providing additional parking resources at NCC rail stations will be a critical component to supporting increased rail use in the future.

(pg. 5.2-16)

Proposed community enhancements would further support nonautomobile transportation. Bike and hiking trails, including components of the Coastal Rail Trail, pedestrian corridor crossings, adding and widening of overpass sidewalks and bike lanes, upgraded and expanded parking facilities at, adjacent to, or in close proximity to rail stations, grade separations, and other improvements would create stronger links in the corridor. Many of these new links would significantly improve non-vehicular public access to and within the Coastal Zone and to recreation areas, making access by alternative transportation modes more desirable. These enhancements are discussed in detail in Section 4.4.1.

(pg. 5.3-6)

In addition, while access to LOSSAN rail corridor stations is primarily by private automobile, constrained parking currently discourages many potential passengers from using rail. On average, all of the COASTER station parking lots except Oceanside and Sorrento Valley are at least 90% full on weekdays, with several exceeding 95%.5 This constraint not only limits the number of people who can access the stations by automobile, but it also creates uncertainty among potential new riders, who might wish to commute via rail but cannot rely on parking being available every day. This lack of parking capacity therefore serves as a barrier to increased ridership. Providing additional parking resources at, adjacent to, or in close proximity to rail stations will be a critical component to supporting increased rail use in the future.

(pg. 5.3-10)

In addition, while access to LOSSAN rail corridor stations is primarily by private automobile, constrained parking at stations currently discourages many potential passengers from using the rail corridor. As the majority of rail stations are located just blocks from the beach, constrained parking resources result in overflow parking by train passengers onto adjacent streets, which displaces parking resources that could used by people to access the coast by automobile; conversely, where ample parking supply does occur at LOSSAN stations, these excess parking resources could also be used to support access to and along nearby beaches and recreation areas. Proposed PWP/TREP improvements would include expanding parking areas at, adjacent to, or in close proximity to the corridor's transit stations, which would benefit passenger rail service and eliminate or reduce conflicts between rail passenger and coastal access parking resources on adjacent streets. Finally, adding a new platform in Del Mar would substantially improve rail service for coastal access to an area not currently served. The Del Mar platform would

provide new access opportunities to the beach, San Dieguito River Park, and Del Mar Fairgrounds and Racetrack, one of the region's most popular tourist destinations.

(pg. 5.3-42)

As the primary means for the public to reach shoreline access points and upland recreational destinations in the corridor, I-5 serves as the gateway to the entire San Diego coastal area and provides a unique scenic, recreational traveling experience. As travel demand in the I-5 highway corridor continues to increase, so does the existing coastal access impediment of traffic congestion. Proposed PWP/TREP improvements focusing on Express Lanes would give priority to ride-sharing and public transit (and when capacity allows, SOVs), while reducing overall congestion, protecting and facilitating public access, and funding transit investments. The proposed PWP/TREP program ensures that the corridor's large and varying customer base of HOVs (many of which are seeking access to and along coastal resources) would be provided with a reliable transportation corridor. In addition, rail improvements that increase capacity, reduce travel time, increase reliability, and provide new service area opportunities, such as those proposed, are readily recognized as major contributors to protecting and enhancing coastal access to and along the coast. Proposed PWP/TREP improvements would contribute substantially to enhancing multimodal access throughout the corridor by increasing rail service; providing new rail service at Del Mar Fairgrounds and Racetrack; accommodating better vehicle, pedestrian, and bicycle access to rail stations; and supplementing parking supply at, adjacent to, or in close proximity to rail stations to support access to and along nearby beaches and upland recreational areas.

(pg. 5.4-32)

**5.4.2.3 LOSSAN Rail Corridor Impact Assessment**

Proposed rail facility track improvements would not result in significant expansion of impermeable surfaces and thus would not contribute substantially to increased stormwater runoff. The majority of rail improvements would be contained within the existing right-of-way or in deep tunnels and, thus, would minimize the need for excessive grading and landform modification that could otherwise disrupt and/or interfere with surface water flow or result in increased peak flood discharge, erosion, and sedimentation to receiving waterbodies. Rail improvements include parking area expansion at, adjacent to, or in close proximity to stations and a new platform at Del Mar that would involve increased impervious surfaces and could contribute to increased runoff, erosion, and pollutant loads to receiving waterbodies; however, with the exception of the proposed platform at Del Mar, all stations now have, or are developing, vertical parking structures in already developed areas. It is expected that proposed parking resources would likely be met through additional parking levels in the existing structures; therefore, impervious surface at ground level would not increase substantially.

(pg. 5.5-13)

**5.5.2.3 LOSSAN Rail Corridor Impact Assessment**

The PWP/TREP improvements would result in unavoidable impacts to upland and wetland ESHAs as the LOSSAN rail facility is an existing north-south transportation corridor that transects the east-west lagoon systems and is adjacent to existing ESHAs. Proposed rail track improvements would be contained primarily within the existing right-of-way or in tunnels that would minimize the need for significant grading and landform modification that could otherwise disrupt or displace existing ESHAs; however, it is still possible that upland or wetland ESHAs could be located within the right-of-way. Rail improvements involving parking area expansion at, adjacent to, or in close proximity to stations would occur primarily in developed areas and are therefore not likely to result in substantial impacts to ESHAs; however,

construction of a new platform at the Del Mar Fairgrounds could involve new development in the San Dieguito River Valley area and therefore could possibly affect adjacent sensitive resources.

(pg. 5.7-19)

Station parking improvements would include adding new parking spaces and/or new parking structures ~~for~~ at, adjacent to, or in close proximity to the Oceanside, Carlsbad Village, Carlsbad Poinsettia, Encinitas, and Solana Beach stations. Parking structure improvements could increase the structural mass of the stations as viewed by passengers. In addition, a new special-event platform at Del Mar Racetrack and Fairgrounds is proposed in the San Dieguito River Valley (Figure 5.7-1B), an area generally characterized by open space and the rural and cultural features of Del Mar Racetrack and Fairgrounds. Depending on the ultimate location and design of the Del Mar platform improvements, the improvements could be visible to rail travelers.

(pg. 5.7-32)

Station parking improvements would include adding parking spaces and/or new parking structures ~~for~~ at, adjacent to, or in close proximity to the Oceanside, Carlsbad Village, Carlsbad Poinsettia, Encinitas, and Solana Beach stations. These improvements would occur at, adjacent to, or in close proximity to existing stations in developed areas inland from the coastline and therefore are not likely to obscure significant traveler or adjoining views to the shoreline. A new platform at Del Mar Fairgrounds is proposed in the San Dieguito River Valley, which, although minimal in size and scale, would introduce a new transportation facility in an area generally characterized by open space and the rural and cultural features of Del Mar Racetrack and Fairgrounds. Potential impacts to significant coastal views and area aesthetics for travelers and adjoining views would be analyzed during project-level analysis to ensure the location and design of station and platform improvements protect coastal visual resources to the extent possible and to ensure overall compatibility with the visual resources of the area.

## 5.) COMMUNITY ENHANCEMENT CLARIFICATIONS

(pg. 3B-17)

Along the LOSSAN rail corridor, the PWP/TREP includes five new grade-separated crossings for bicycles and pedestrians, plus three additional roadway grade separations that will include bicycle/pedestrian improvements. Along I-5, ~~T~~the PWP/TREP includes replacement overcrossings at 20 locations, a new overcrossing at 1 location, and widened undercrossings at 11 locations—all of which would result in improvements over existing conditions (see Section 4.4 and Section 5.3 for specific project details). Among the 40 ~~32 projects~~ locations to receive crossing improvements ~~projects~~, and accounting for bicycle and pedestrian facilities separately, the benefits include:

- ~~2 would maintain the current sidewalk facilities.~~
- 27~~4 would~~ improved sidewalks over existing conditions.
- 15~~10 would add~~ new sidewalks or pedestrian crossings where none currently exist.
- ~~17 would maintain the current bicycle facilities~~
- 16~~13 would~~ improved bicycle facilities over existing conditions.
- 61 ~~would add~~ new bicycle ~~facilities or~~ crossings where none currently exist.

(pg. 3B-17, footnote 11)

The sum of these figures exceeds ~~30~~40 because they account for crossings that contain both pedestrian and bicycle facilities, as well as crossings that provide improvements on one side of a roadway and new facilities on the other.

(pg 4-6 to pg. 4-7)

In addition to these roadway grade separations, ~~three~~ five additional grade-separated crossings of the LOSSAN rail corridor are planned exclusively for bicycle and pedestrian users. They are listed below, and discussed in greater detail in Section 4.4 with the other bicycle and pedestrian improvements:

- **Coast to Crest Trail Crossing (Del Mar)**: Also listed as Community Enhancement DM#1
- **San Elijo Lagoon Gateway Pedestrian Undercrossing (Solana Beach)**: Part of Community Enhancement SB#3
- **Hillcrest Drive Pedestrian Undercrossing (Encinitas)**
- **Chestnut Avenue LOSSAN Pedestrian Crossing (Carlsbad)**: Also listed as Community Enhancement CB#6
- **Harbor Drive LOSSAN Crossing Bicycle/Pedestrian Improvements (Oceanside)**: Also listed as Community Enhancement OC#12

(pg.4-44)

- **Coast to Crest Trail Crossing (Del Mar):** Construct a new grade-separated crossing of the LOSSAN corridor at the Coast to Crest Trail, in the general proximity of the Del Mar Fairgrounds. The Coast to Crest Trail is a 55-mile east-west trail facility that is a major feature of the San Dieguito River Park. The majority of the trail system is built, but it lacks a facility for hikers to cross the LOSSAN rail corridor to reach the coast. As part of the PWP/TREP program of improvements, this essential link would be completed, providing safer coastal access between upland recreation areas and the shoreline. This project is also designated as Community Enhancement DM#1 and is included in the list of Community Enhancements in Section 4.4.5. It does not yet have funding identified.
- **San Elijo Lagoon Gateway Pedestrian Undercrossing (Solana Beach):** Construct a new grade-separated crossing of the LOSSAN rail corridor at San Elijo Lagoon, in the general proximity of Milepost 241. This would allow users of the existing San Elijo Lagoon trails to cross the railroad tracks, creating new access to both the shoreline and the Gateway Open Space Preservation Site. This project is part of Community Enhancement SB#3 and is included in the list of Community Enhancements in Section 4.4.5.

(pg. 4-47 to 4-48)

**4.4.5.3 City of Solana Beach**

- **SB#1 Streetscape Enhancements on Ida Avenue:** Streetscape enhancements would be constructed along Ida Avenue from Academy Drive to south of Genevieve Street, including sidewalks, curbs, and landscaping. Improvements are consistent with the Eden Garden Master Streetscape Plan and Master Plan.
- **SB#2 Pedestrian ~~Trailhead~~ Amenities at Solana Hills Drive:** Construct ~~street~~ improvements along the northern end of Solana Hills Drive ~~and construct a new~~ near the trailhead at the south entrance to San Elijo Lagoon Ecological Reserve. This would include improved signs and ~~parallel~~

~~parking on Solana Hills Drive for trailhead visitors, pedestrian drop-off zone to facilitate trail access, street trees, street and security lighting, and shad structure, picnic tables, drinking fountain, litter receptacles, pet waste station,~~ interpretive displays, and ~~information board as well as other amenities~~ to support trailhead users. Better ~~parking, access, and~~ amenities would encourage public use of the San Elijo Lagoon Ecological Reserve.

- **SB#3 Gateway Open Space Preservation Site and Pedestrian Undercrossing:** Contribute to the purchase of the Gateway Open Space Preservation Site ~~parcel~~ by the San Elijo Lagoon Conservancy and construct a new grade-separated crossing of the LOSSAN rail corridor near Milepost 241. The 3.2-acre Gateway site, immediately adjacent to San Elijo Lagoon and Cardiff State Beach, will be preserved as open space. The new grade separation will allow users of the existing San Elijo Lagoon trails to cross the railroad tracks, creating new access to both the Gateway site and the shoreline.

(pg.5.3-16)

- **Coast to Crest Trail Crossing (Del Mar):** Construct a pedestrian crossing of the LOSSAN rail corridor at the western end of the Coast to Crest Trail, a 55-mile east-west recreational corridor connecting Del Mar with Volcan Mountain near Julian. The partially completed trail is a major feature of the San Dieguito River Park, but it has several gaps, including the lack of a facility for hikers to cross the LOSSAN rail corridor to reach the coast. As part of the PWP/TREP program of improvements, this essential link would be completed, enhancing safety as well as facilitating coastal access between upland recreation areas and the shoreline. This project is also designated as Community Enhancement DM#1 and is included in the list of Community Enhancements later in the section. It does not yet have funding identified.

- **San Elijo Lagoon Gateway Pedestrian Undercrossing (Solana Beach):** Construct a new grade-separated crossing of the LOSSAN rail corridor at San Elijo Lagoon, in the general proximity of Milepost 241. This would allow users of the existing San Elijo Lagoon trails to cross the railroad tracks, creating new access to both the shoreline and the Gateway Open Space Preservation Site. This project is part of Community Enhancement SB#3 and is included in the list of Community Enhancements later in this section.

(pg. 5.3-21)

- **SB#2 Pedestrian ~~Trailhead~~ Amenities at Solana Hills Drive:** Construct ~~street~~ improvements along the northern end of Solana Hills Drive, including improved signs and interpretive displays, ~~a new~~ near the trailhead ~~and parking~~ at the south entrance to San Elijo Lagoon Ecological Reserve. This would provide ~~greater access~~ improved amenities to users of the San Elijo Lagoon recreational facilities for bicycles and pedestrians~~, including those who wish to drive from farther destinations in order to utilize the reserve's many trails and recreational facilities~~. The I-5 North Coast Bike Trail would also share this facility, providing corridor-length mobility for bicycles and pedestrians.

- **SB#3 Gateway Open Space Preservation Site and Pedestrian Undercrossing:** Contribute to the purchase of the Gateway Open Space Preservation Site ~~parcel~~ by the San Elijo Lagoon Conservancy and construct a new grade-separated crossing of the LOSSAN rail corridor near Milepost 241. The 3.2-acre Gateway site, immediately adjacent to San Elijo Lagoon and Cardiff State Beach, will be preserved as open space. The new grade separation will allow users of the existing San Elijo Lagoon trails to cross the railroad tracks, creating new access to both the Gateway site and the shoreline.

Table 6A-1 (pg. 6A-3)

**Highway Adjacent**

- EN#1 Bike/Ped Trail on Both Sides of I-5 at San Elijo
- EN#5A Encinitas Blvd Bike/Ped Enhancements
- EN#2B Villa Cardiff & MacKinnon Bridge Enhancements
- EN#8 Manchester Avenue Trail to Nature Center
- SB#3 Gateway Open Space Preservation Site & Pedestrian Undercrossing

Table 6A-1 (pg. 6A-4)

- SD#3 Bike/Ped Trail & Bridge on W Side of I-5 at San Dieguito
- SD#4 Ped Overpass Connection N of Del Mar Heights Rd
- SB#1 Streetscape Enhancements on Ida Ave
- SB#2 Ped Trailhead Amenities at Solana Hills Dr

(pg.6A-7 and pg. 6A-9))

- Edits to Figures 6A-1A and 6A-1B

## 6.) CHANGES TO UPDATE VISUAL RESOURCES INFORMATION

(pg. 5.7-3 through pg. 5.7-15)

- Edits in Section 5.7 (Visual Resources) to Figures 5.7-1A thru 5.7-1G

(Appendix B)

- Add new “Appendix B-1” Lighting Standards

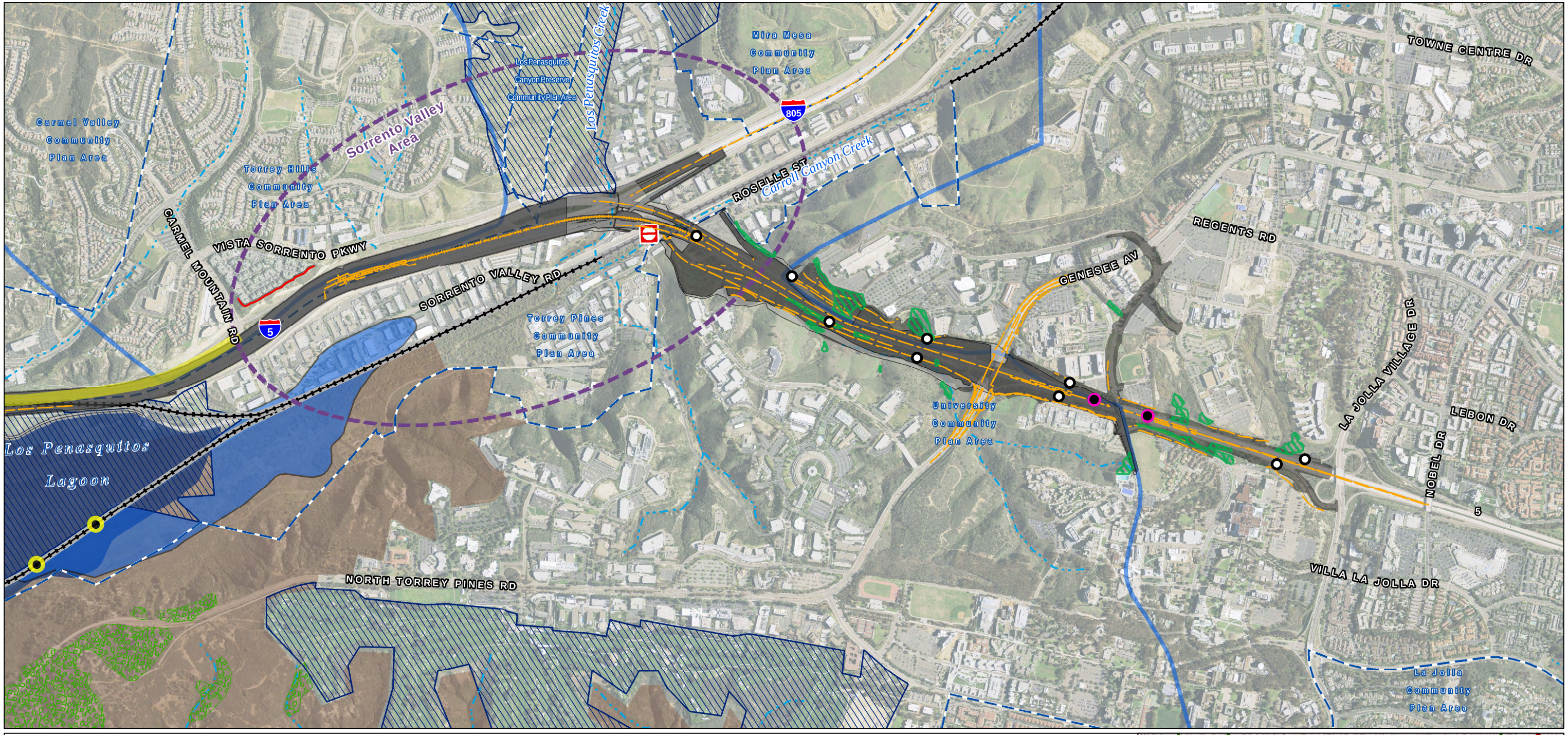
## 7.) CHANGES TO REPORTING REQUIREMENTS/PERFORMANCE MEASURES

(pg.6A-22)

Table 6A-2 NORTH COAST CORRIDOR TRANSPORTATION AND ENVIRONMENTAL PERFORMANCE MEASURES

| Performance Measure | Definition |
|---|---|
| Improving Efficiency and Managing Demand | |
| Transportation Demand Management Programs/Activities | Implementation of TDM programs and activities that support NCC mobility, access and education. |

| | |
|---|---|
| Transportation System Management Operations/Infrastructure | Implementation of TSM operational and infrastructure improvements that support NCC mobility, ~~and~~ access, and safety (including new technologies to minimize adverse visual and environmental impacts from lighting, signage, and miscellaneous highway appurtenances). |
| Improvements Made Outside NCC that Improve Conditions within NCC | Infrastructure and operational investments and improvements that support NCC mobility and access. |
| Coordinated Project Construction to Avoid/Minimize Impacts | Description of coordinated project construction activities that avoid/minimize impacts. |




I-5 NCC Project Overlay
- Permanent Impact Area
- Temporary Impact Area
- LOSSAN Proposed Track
- LOSSAN Existing Track
- LOSSAN Non-Track Proposed Project
- LOSSAN Rail Station
- City Boundary

Caltrans Proposed Projects
- Retaining Wall/Concrete Barrier
- Sound Wall
- Community Enhancement Projects
- DAR Lighting Area
- Freeway Lighting Area

Coastal Visual Resources
- Stream/River
- Lagoon
- Torrey Pine Forest
- Torrey Pines State Reserve
- Non-Native Woodland (Caltrans)
- Northbound Ocean View
- Southbound Ocean View

- I-5 Scenic Community

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Elements
- Coastal Zone Boundary

1,000 2,000 Feet

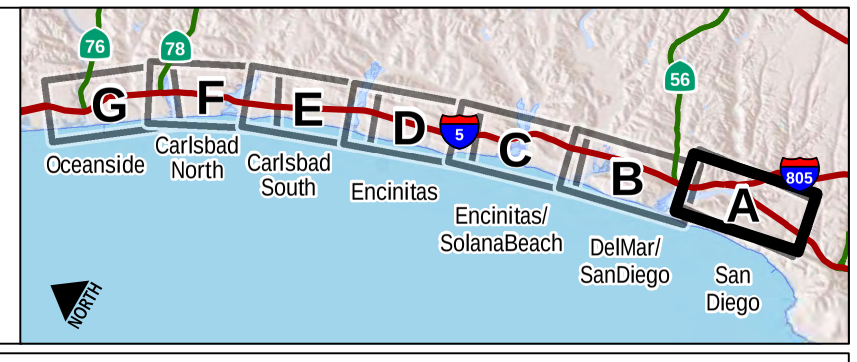



EXHIBIT NO. 5

Visual Resource Maps (pg 1 of 7)

PWPA #PWP-6-NCC-16-0001-1

California Coastal Commission

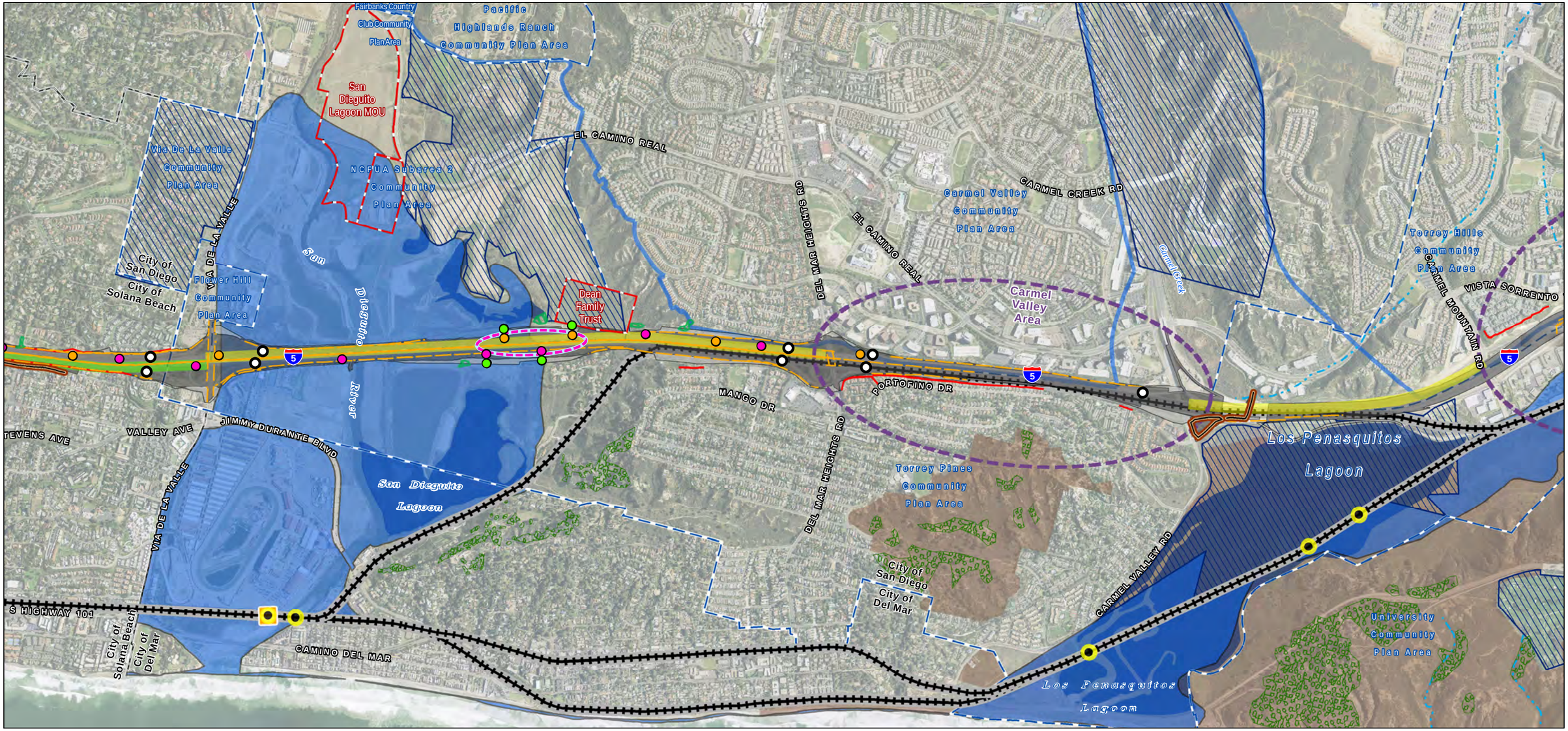
CES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, USGS NHD, Imagery: DigitalGlobe March 2008

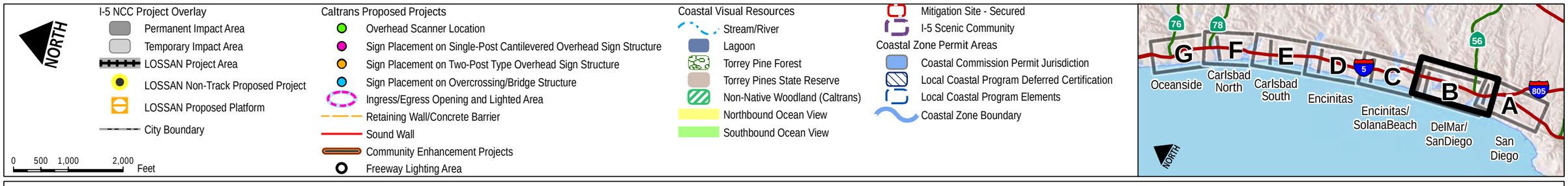
boundary, jurisdiction and Local Coastal Program data in this map are for planning and engineering study purposes only. Data are derived from multiple sources. The digital Coastal Zone boundary, jurisdiction Program data in this map have not been adopted by the Coastal Commission, and do not supersede the official versions certified by the Coastal Commission as may be amended from time to time.
ate of California makes no representations or warranties regarding the accuracy or completeness of the files or the data from which they were derived. The State shall not be liable under any circumstances for any direct, cidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of these Coastal Zone boundary, jurisdiction and Local Coastal Program files or the data from erived. Because the Coastal Zone boundary, jurisdiction and Local Coastal Program data files are merely representational, they and the data from which they were derived are not binding and may be revised at any time.

**FIGURE 5.7-1A**

## Visual Resources (City of San Diego)

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program




DATA SOURCES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, USGS NHD, Imagery: DigitalGlobe March 2008



**FIGURE 5.7-1B**

# Visual Resources (City of Del Mar / San Diego)

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program


NORTH

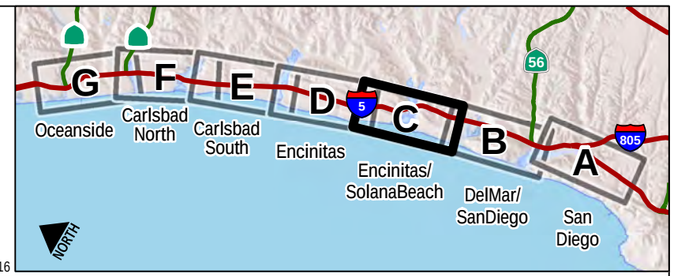
**I-5 NCC Project Overlay**
- Permanent Impact Area
- Temporary Impact Area
- LOSSAN Project Area
- LOSSAN Non-Track Proposed Project
- LOSSAN Rail Station
- City Boundary

0 500 1,000 2,000 Feet

**Caltrans Proposed Projects**
- Overhead Scanner Location
- Sign Placement on Single-Post Cantilevered Overhead Sign Structure
- Sign Placement on Two-Post Type Overhead Sign Structure
- Sign Placement on Overcrossing/Bridge Structure
- Ingress/Egress Opening and Lighted Area
- Retaining Wall/Concrete Barrier
- Sound Wall
- Community Enhancement Projects
- Freeway Lighting Area

**Coastal Visual Resources**
- Stream/River
- Lagoon
- Non-Native Woodland (Caltrans)
- Northbound Ocean View
- Southbound Ocean View

**Coastal Zone Permit Areas**
- Coastal Commission Permit Jurisdiction
- Coastal Zone Boundary




Revised 2/12/2016

DATA SOURCES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, USGS NHD, Imagery: DigitalGlobe March 2008



**FIGURE 5.7-1C**

# Visual Resources (City of Encinitas / Solana Beach)

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program


DATA SOURCES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, USGS NHD, Imagery: DigitalGlobe March 2008



**FIGURE 5.7-1D**

## Visual Resources (City of Encinitas)

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program


NORTH

I-5 NCC Project Overlay
- Permanent Impact Area
- Temporary Impact Area
- LOSSAN Project Area
- LOSSAN Non-Track Proposed Project
- LOSSAN Rail Station
- City Boundary

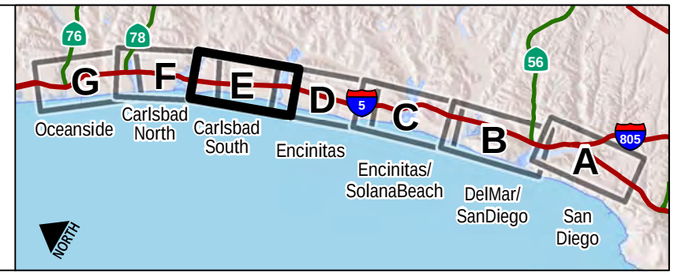
0 500 1,000 2,000 Feet

Caltrans Proposed Projects
- Overhead Scanner Location
- Sign Placement on Single-Post Cantilevered Overhead Sign Structure
- Sign Placement on Two-Post Type Overhead Sign Structure
- Sign Placement on Overcrossing/Bridge Structure
- Ingress/Egress Opening and Lighted Area
- Retaining Wall/Concrete Barrier
- Sound Wall
- Community Enhancement Projects
- Freeway Lighting Area

Coastal Visual Resources
- Stream/River
- Lagoon
- Non-Native Woodland (Caltrans)
- Northbound Ocean View
- Southbound Ocean View

- Mitigation Site - Secured

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Elements
- Coastal Zone Boundary



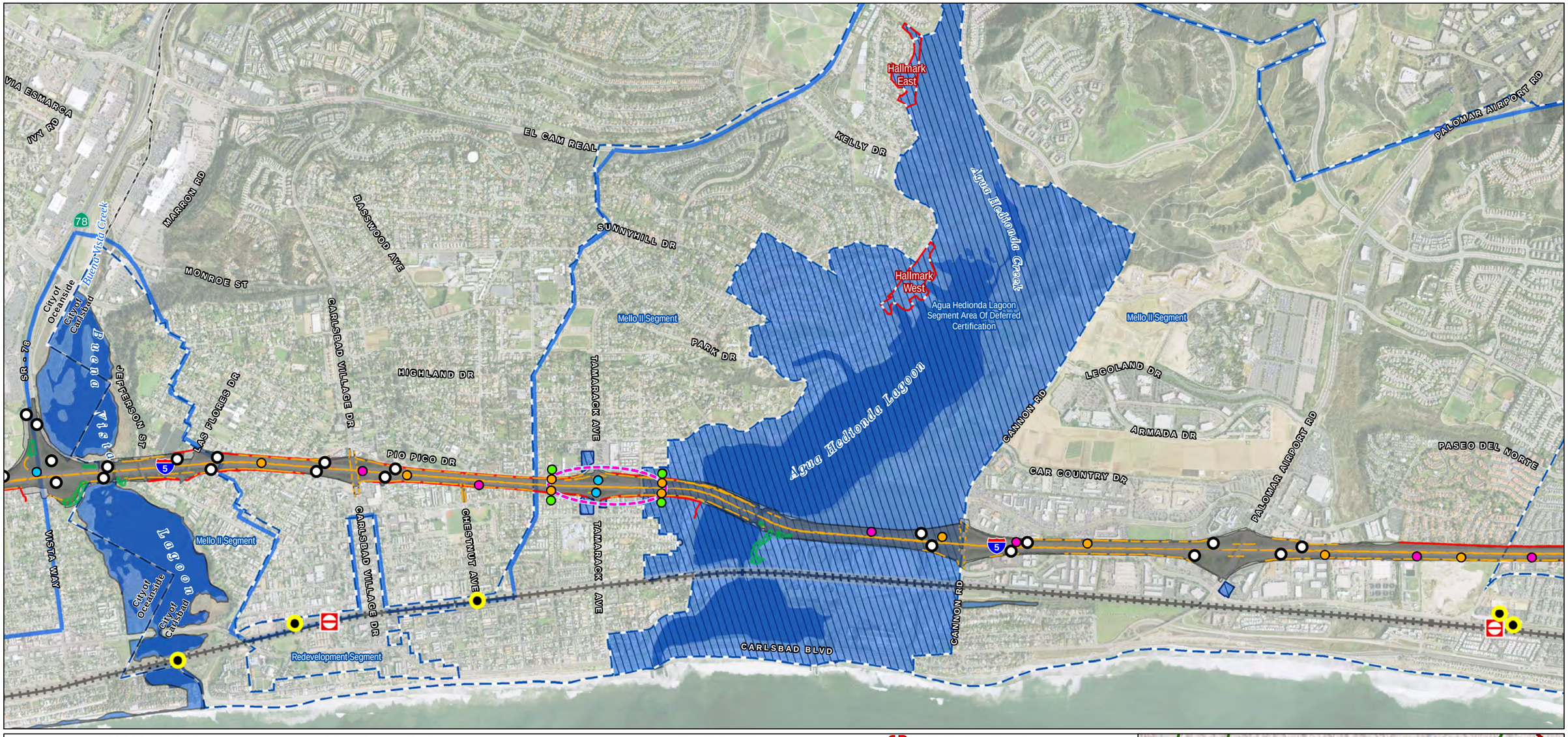

DATA SOURCES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, USGS NHD, Imagery: DigitalGlobe March 2008



**FIGURE 5.7-1E**

## Visual Resources (City of Carlsbad [South])

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program




NORTH

I-5 NCC Project Overlay
- Permanent Impact Area
- Temporary Impact Area
- LOSSAN Project Area
- LOSSAN Non-Track Proposed Project
- LOSSAN Rail Station
- City Boundary

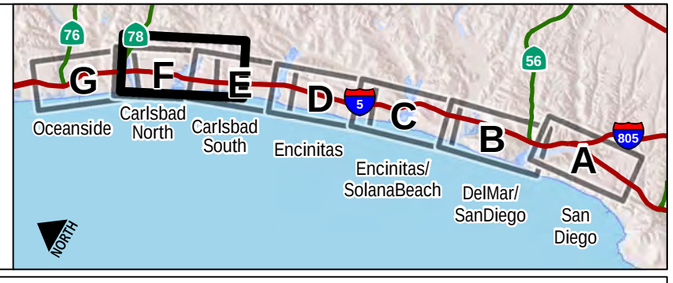
0 500 1,000 2,000 Feet

Caltrans Proposed Projects
- Overhead Scanner Location
- Sign Placement on Single-Post Cantilevered Overhead Sign Structure
- Sign Placement on Two-Post Type Overhead Sign Structure
- Sign Placement on Overcrossing/Bridge Structure
- Ingress/Egress Opening and Lighted Area
- Retaining Wall/Concrete Barrier
- Sound Wall
- Community Enhancement Projects
- Freeway Lighting Area

Coastal Visual Resources
- Stream/River
- Lagoon
- Non-Native Woodland (Caltrans)

- Mitigation Site - Secured

Coastal Zone Permit Areas
- Coastal Commission Permit Jurisdiction
- Local Coastal Program Deferred Certification
- Local Coastal Program Elements
- Coastal Zone Boundary



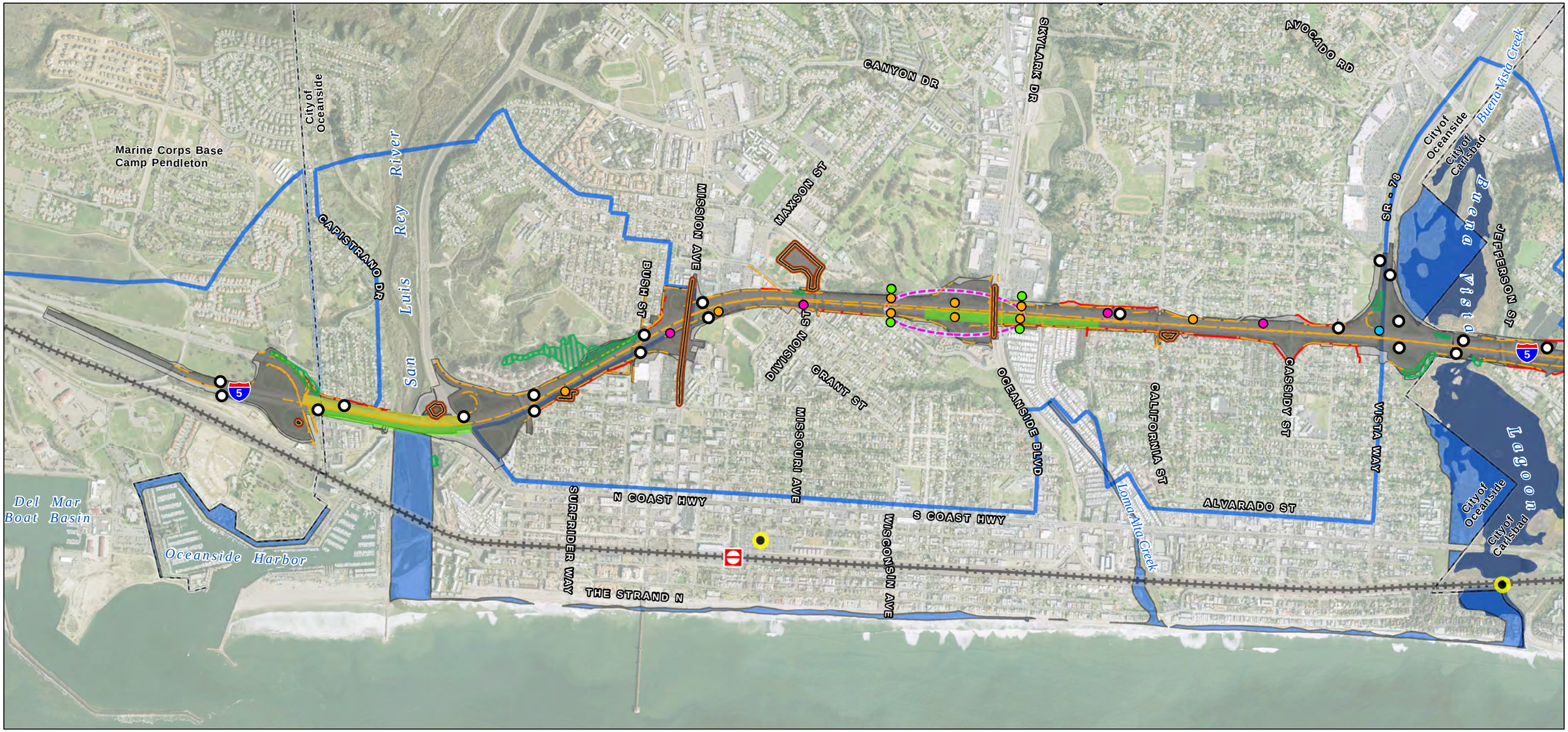

DATA SOURCES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, USGS NHD, Imagery: DigitalGlobe March 2008



**FIGURE 5.7-1F**

# Visual Resources (City of Carlsbad [North])

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program




NORTH

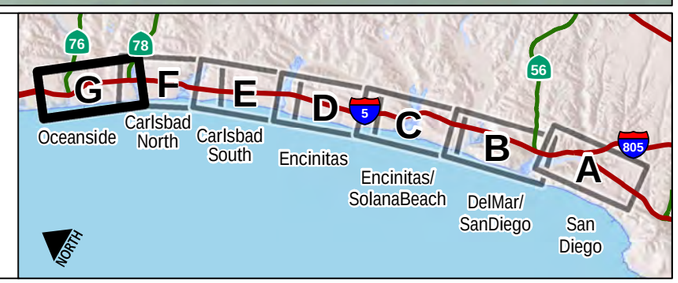
0 500 1,000 2,000 Feet

**I-5 NCC Project Overlay**
- Permanent Impact Area
- Temporary Impact Area
- LOSSAN Project Area
- LOSSAN Non-Track Proposed Project
- LOSSAN Rail Station
- City Boundary

**Caltrans Proposed Projects**
- Overhead Scanner Location
- Sign Placement on Single-Post Cantilevered Overhead Sign Structure
- Sign Placement on Two-Post Type Overhead Sign Structure
- Sign Placement on Overcrossing/Bridge Structure
- Ingress/Egress Opening and Lighted Area
- Retaining Wall/Concrete Barrier
- Sound Wall
- Community Enhancement Projects
- Freeway Lighting Area

**Coastal Visual Resources**
- Stream/River
- Lagoon
- Non-Native Woodland (Caltrans)
- Northbound Ocean View
- Southbound Ocean View

**Coastal Zone Permit Areas**
- Coastal Commission Permit Jurisdiction
- Coastal Zone Boundary




DATA SOURCES: Caltrans, California Coastal Commission, Local Jurisdictions, SanGIS, SANDAG, USGS NHD, Imagery: DigitalGlobe March 2008



**FIGURE 5.7-1G**

# Visual Resources (City of Oceanside)

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program

## LIGHTING STANDARDS (APPENDIX B-1)

**PURPOSE:** The purpose of Appendix B is to define the lighting design standards and describe the lighting design process used to implement the visual mitigation measures contained in the I-5 North Coast Corridor PWP/TREP. These guidelines are intended to guide engineers, architects and landscape architects who will design the physical lighting elements of the corridor improvements. Development of future project specific NOID submittals for transportation lighting will incorporate this guidance.

**VISUAL MITIGATION MEASURES**: The visual mitigation implementation measures require transportation lighting to be sited and designed such that the impacts from direct light on public views outside of the transportation facilities are limited to the maximum extent feasible by limiting, shielding and directing lights to only that required for operations and safety. Night lighting shall be the minimum required for operations and safety and shall be excluded from viewsheds containing scenic resources, including at lagoon crossings, wherever feasible.

**LIGHTING DESIGN STANDARDS:** The Lighting Design Standards contain Caltrans policy and procedures regarding issues such as safety, operations, and maintenance. Lighting Design Standards provide guidance used to determine the type, quantity and layout of lighting fixtures. Lighting designers use these standards to evaluate the site specific conditions that influence the ultimate lighting design. The following Lighting Design Standards will be used for specific NOID transportation submittals:

- **MASTER LIGHTING TABLE**: The Master List is intended to be a basis for corridor light equipment selection. It is not feasible to include every potential lighting type and available fixture to the lighting designer. Future standards, improved technologies and project specific requirements may amend the list for project specific NOID submittals, therefore the list of lighting types and fixtures identified in the Master Lighting Table is subject to change. These unlisted fixtures may be used where appropriate as suggested by Caltrans Electrical Design, Caltrans Landscape Architecture or local jurisdictions with the concurrence of the California Coastal Commission.
- **2010 STANDARD PLAN LIGHTING DETAILS**: These details correspond with the Master Lighting Table and represent current standards. Future technologies related to lighting, signage, and miscellaneous highway appurtenances may result in changes to the standard details. These updated details would be incorporated within future project specific NOID submittals.
- **CHAPTER 9- TRAFFIC SIGNAL AND LIGHTING (TRAFFIC MANUAL)**: The purpose of highway safety lighting is to promote the safe and orderly movement of traffic by illuminating certain permanent features or conditions which are unusual, which require additional care and alertness to negotiate, and which, if illuminated, may be more readily comprehended and so compensated for by the motorist. The Traffic Manual describes Highway Safety Lighting Design Standards for freeway interchanges, ramps, connections, freeway ramp-surface street intersections and local streets.
- **STATE OF CA •DEPT OF TRANSPORTATION TRAFFIC OPERATIONS POLICY DIRECTIVE TR-0011 (REV 0812009):** The California DOT "2003 High Occupancy Vehicle Guidelines for Planning, Design, and Operations" (HOV Guidelines) and the content of this Policy Directive shall be applied during the planning and development of freeway managed lane projects, including conversions of existing managed lanes to incorporate tolling or utilize continuous access.

 **Lighting shall be provided for each access opening to facilitate decision making and lane changing maneuvers during hours of darkness. Deviations from this**

**the Traffic Liaison.** Lighting will alert drivers that they are approaching left side weaving sections where lane changing and turbulence may be concentrated. Lighting should also be considered for freeway segments located between an access opening and a freeway-to-freeway interchange when the access serves that interchange. This is due to the higher weaving volumes and higher number of lane changes expected in these areas. Contact the district Electrical Design office for information on lighting requirements and assistance in the location and design of all lighting systems.

Attachment 1 **Updating signing and lighting of limited-access designs**
Express Lane signing is new to the industry, was just added to the 2009 edition of the federal MUTCD and in May 2010 was accepted by the California Traffic Control Devices Committee for addition to the next (2011) edition of the CA MUTCD. In addition, the Department's freeway safety team (comprised of district and headquarters traffic safety staff and the Traffic Liaisons) recommended the use of lighting along all limited-access openings. This was based on research and the collision studies performed in support of the Strategic Highway Safety Program Challenge Area 5 Action Plan. Speeds, weaving volumes and density are high and headlight glare prevail especially during the critical periods just prior to the morning peak period, and just beyond the evening peak period. Overhead lighting will mitigate the impact of adverse infrastructure and operating conditions (headlight glare, narrow shoulders, and speed differential) on HOV and Express Lane drivers attempting to execute the complex weaving maneuvers required.

**LIGHTING DESIGN PROCESS:** The design development process begins by assessing the existing freeway lighting; proposing an initial design for the freeway improvements by analyzing ramp geometrics, potential conflict areas, and freeway volume; and then refining this design to minimize visual impacts. The future project specific NOID submittals will describe the design development process and include figures to show the existing freeway lighting, initial lighting concept and proposed final lighting design. The final design will evaluate the need, location, and spacing of each light pole with consideration of safety and to limit direct light on public views outside of the freeway footprint. Coordination with the Executive Director of the Coastal Commission shall occur during this iterative lighting design process, including review and approval of the Final Lighting Design.

- **Existing Lighting Design**: The assessment of existing freeway lighting reveals that lighting usually does not meet current safety standards. The 1970 era, unshielded fixtures provide substandard illumination at current traffic volumes. More light poles would typically be required to meet current safety standards at the existing freeway facility.
- **Initial Freeway Lighting Concept**: Safety lighting is provided to increase the comfort level for drivers, reduce accidents and thereby reduce traffic. The lighting designer evaluates the proposed freeway improvements and applies the Lighting Design Standards. Lighting is proposed at ramps and at potential conflict areas where major weaving would occur. The designer then adjusts the number of lights and their location in response to the site conditions. The design goal is to provide just enough light for the driver to assess the traffic, but not too much so that the driver's vision is impaired. The lighting designer considers different combinations of light intensity, spread and spacing with the goal of minimizing the number of poles, shielding unwanted light and providing adequate safety lighting for the driver.
- **Final Lighting Design**: The designer considers modifications to minimize visual impacts to coastal visual resources by assessing each light location, pole spacing and number, and light intensity and spread. There may be opportunities to eliminate some light poles at wide gore areas, or adjust pole locations to concentrate the light spread on the paving. Overhead signage illumination would be assessed. HOV

signage would always be illuminated, but regulatory signage may use reflective lettering. The goal is to limit direct light on public views outside of the freeway footprint with consideration of safety.

**PERFORMANCE MEASURE REPORTING:** Future improved technologies related to lighting within the corridor will be evaluated as part of the performance measure reports prepared every 4-5 years for the Transportation Report Package (Chapter 6A). Caltrans shall study and retrofit lighting along sensitive viewsheds within the corridor (i.e., lagoon crossings), as improved technologies become available, in order to minimize visual and environmental impacts within the corridor. Retrofits for lighting fixtures in sensitive viewsheds with minor improvements (a change to a more advanced light bulb with lower Kelvin temperatures, etc.) shall occur within one year from release of the next Transportation Report Package. When improved lighting technology is identified that would require more extensive retrofits (such as lagoon bridge barrier lighting, etc.), retrofitting shall occur prior to release of the next Transportation Report Package.

# Appendix B-1 Lighting Table and Standard Details

| Lighting Type | Pole Type | Luminaire | Standard Plans | Pole and Fixture Mounting Heights | Remarks |
|---|---|---|---|---|---|
| **Freeway Lighting** | Type 21 | LED, Roadway 3 | ES-6A | 35' and Varies | Barrier Rail Mounted |
| | Type 30 | LED, Roadway 3 | ES-6E | 35' and 39'-6" | |
| | Type 31 | LED, Roadway 3 | ES-6E | 35' and 37' | |
| | Type 32 | LED, Roadway 3 | ES-6G | 35' and 40' | |
| **OH Sign Illumination** | TRUSS | LED | ES-15A | See OH Sign Plans | Single Post Type |
| | Tubular | LED | ES-15A | See OH Sign Plans | Single Post Type |
| **Ramp Meter Lighting** | Type 15TS | LED, Roadway 1 | ES-7A | 30' and 34'-3" | At Entrance Ramp |
| | Type 61 | LED, Roadway 1 | ES-7H | 30' and 34'-3" | |
| **Intersection Lighting** | Type 15 | LED, Roadway 1 | ES-6A | 30' and 34'-3" | |
| | Type 15TS | LED, Roadway 1 | ES-7A, ES-7R, Detail D | 30' and 34-3" | Lighting and CCTV Combo |
| | Type 17 | LED, Roadway 1 | ES-7E | 30' and 34'-3" | |
| | Type 19 | LED, Roadway 1 | ES-7F | 30' and 34'-3" | |
| | Type 24 | LED, Roadway 1 | ES-7F | 30' and 34'-3" | |
| | Type 26 | LED, Roadway 1 | ES-7F | 30' and 34'-3" | |
| **Advance Warning Flashing Beacon** | Type 1-A | Flashing LED Signal Module | ES-7J | 10' | Ramp Meter |
| | Type 15-FBS | Flashing LED Signal Module | ES-7J | 18' | |
| **CCTV** | Type VDS 40 (MOD) | | ES-16D and Structure Plans | 40' | Cantilevered Arm for Dual CCTV |
| | Type CCTV 35 | | ES-16B | 35' | |
| **Bike Path** | Bollard LED | LED | See Attachment | 8" Dia x 45" Height | |
| | Parking Lot Lighting | LED | Special Design | 12'-15' | At Bikenodes |
| **Parking Lot** | Parking Lot Lighting | LED | Special Design | 12'-15' | |
| **Street and Driveway** | Type 15 | LED, Roadway 1 | ES-6A | 30' and 34'-3" | |
| **Structures (Bridges and Walls)** | | Ped Bridge Handrail Strip LED Light(Insert) | See Structure Plans | | Mounted Below Bottom Rail |
| | | Soffit LED | See Structure Plans | | Pendant |
| | | Soffit LED | See Electrical Detail Plans | | |
| | | Step Light LED | See Electrical Detail Plans | | Recessed Wall Mounted |
| **City Street** | City Lighting | LED, Roadway 1 | San Diego Regional Standard | 25' to 28' | Concrete Pole |

**I-5 NORTH COAST CORRIDOR PWP/TREP**
**APPENDIX B-1**
**MASTER LIGHTING TABLE**

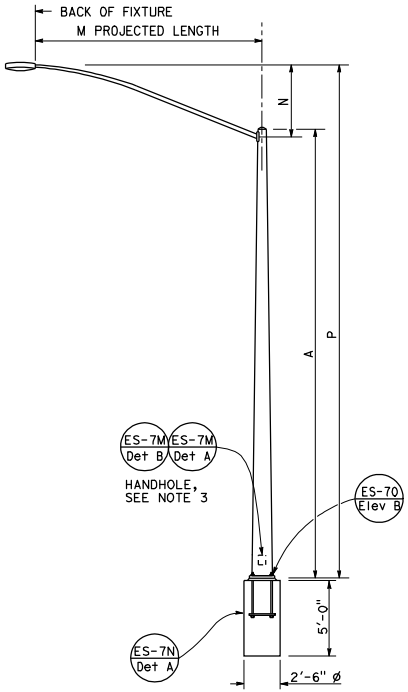
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

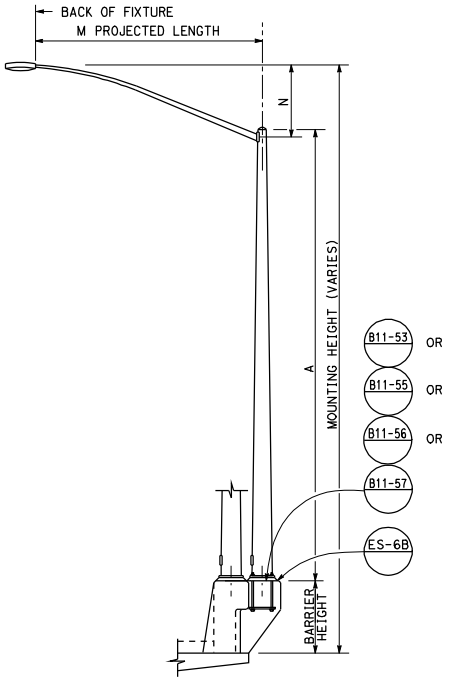
May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Stanley P. Johnson — No. C57793 — Exp. 3-31-12 — CIVIL — STATE OF CALIFORNIA

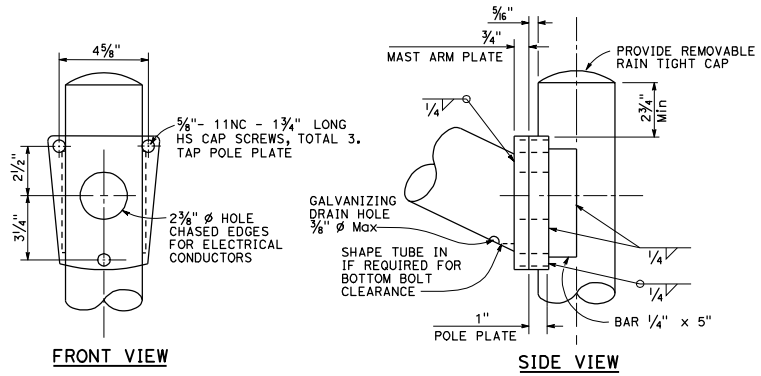





## TYPE 15 AND TYPE 21
ELEVATION A




## TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED
ELEVATION B

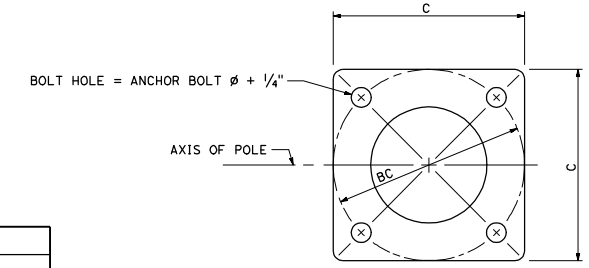



## LUMINAIRE MAST ARM CONNECTION
DETAIL R

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | |
|---|---|---|---|---|---|---|---|---|
| | A HEIGHT | Min OD BASE | Min OD TOP | WALL THICKNESS | C | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE |
| 15 | 30'-0" | 8" | 3 11/16" | 0.1196" | 1'-0" | 1'-0" | 2" | 1" ø x 3'-0" * |
| 21 | 35'-0" | 8 5/8" | 3 3/16" | 0.1793" | | | | 1¼" ø x 3'-0" * |

* FOR BARRIER RAIL BOLTS, SEE STANDARD PLAN ES-6B.

| LUMINAIRE MAST ARM DATA | | | | | |
|---|---|---|---|---|---|
| M PROJECTED LENGTH | N RISE | Min OD AT POLE | NOMINAL THICKNESS | P TYPE 15 | P TYPE 21 |
| 6'-0" | 2'-0"± | 3¼" | 0.1196" | 31'-6"± | 36'-6"± |
| 8'-0" | 2'-6"± | 3½" | | 32'-0"± | 37'-0"± |
| 10'-0" | 3'-3"± | 3⅜" | | 32'-9"± | 37'-9"± |
| 12'-0" | 4'-3"± | | | 33'-9"± | 38'-9"± |
| 15'-0" | 4'-9"± | 4¼" | | 34'-3"± | 39'-3"± |




## BASE PLATE
DETAIL A

**NOTES:**

1. ☐ Indicates mast arm length to be used unless otherwise noted on the plans.
2. For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Standard Plan ES-6F.
3. Handhole shall be located on the downstream side of traffic.
4. For additional notes and details, see Standard Plans ES-7M and ES-7N.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (LIGHTING STANDARD, TYPES 15 AND 21)

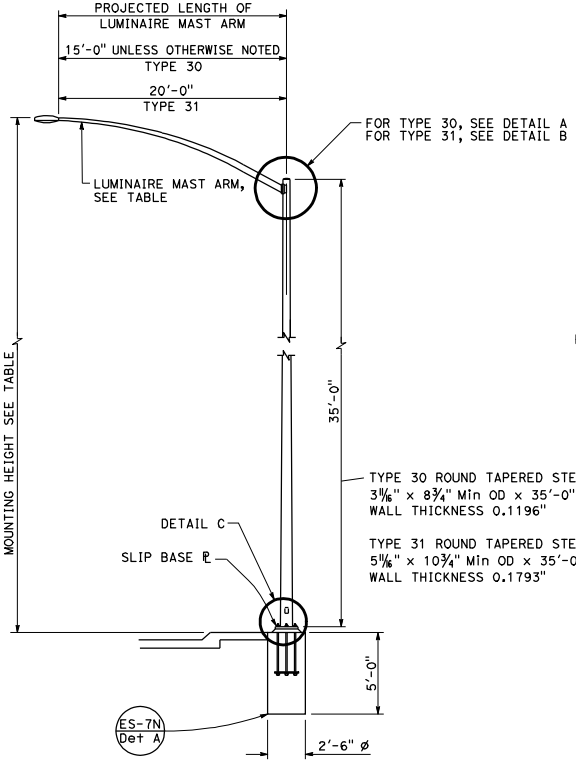
NO SCALE

**ES-6A**

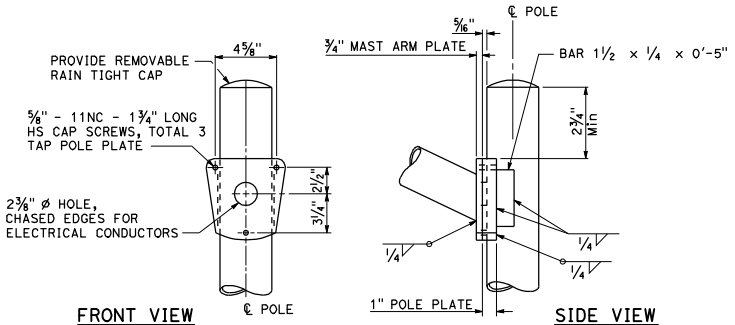
11-1-10

| LUMINAIRE MAST ARM DATA | | | |
|---|---|---|---|
| PROJECTED LENGTH | THICKNESS | MINIMUM OD AT POLE | MOUNTING HEIGHT |
| * 6'-0" | 0.1196" | 3¼" | 36'-9"± |
| * 8'-0" | | 3½" | 37'-3"± |
| * 10'-0" | | 3¾" | 38'-0"± |
| * 12'-0" | | | 39'-0"± |
| * 15'-0" | | 4¼" | 39'-6"± |
| ** 20'-0" | 0.1793" | 5" | 37'-0"± |

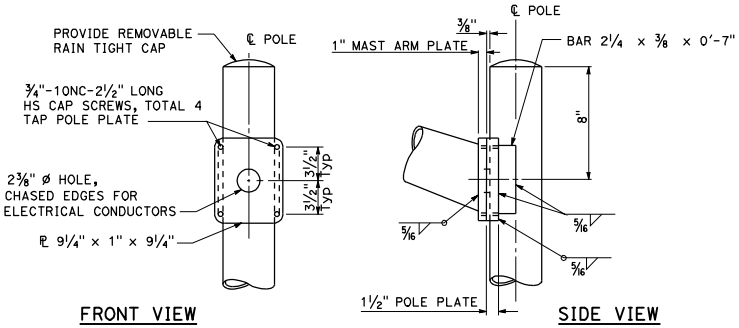
* TYPE 30
** TYPE 31



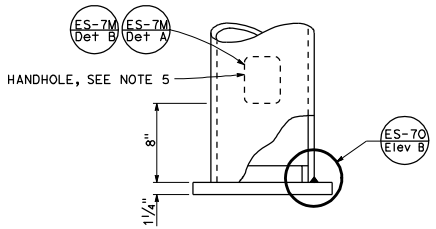

ELEVATION A




TYPE 30
DETAIL A



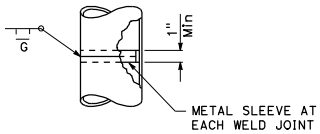

TYPE 31
DETAIL B




DETAIL C

NOTES:

1. Sheet steel shall have a minimum yield of 48,000 psi.
2. For slip base details see Standard Plan ES-6F.
3. For Type 30 fixed base use Type 15 base plate and foundation shown on Standard Plan ES-6A. Use 1¼" Dia x 3'-6" anchor bolts.
4. For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Standard Plan ES-6G.
5. Handhole shall be located on the downstream side of traffic.
6. For additional notes and details, see Standard Plans ES-7M and ES-7N.




POLE SPLICE

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

Stanley P. Johnson
No. C57793
Exp. 3-31-12
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (LIGHTING STANDARD, TYPES 30 AND 31)

NO SCALE

ES-6E

8-4-10

2010 STANDARD PLAN ES-6E

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Stanley P. Johnson
No. C57793
Exp. 3-31-12
CIVIL
STATE OF CALIFORNIA

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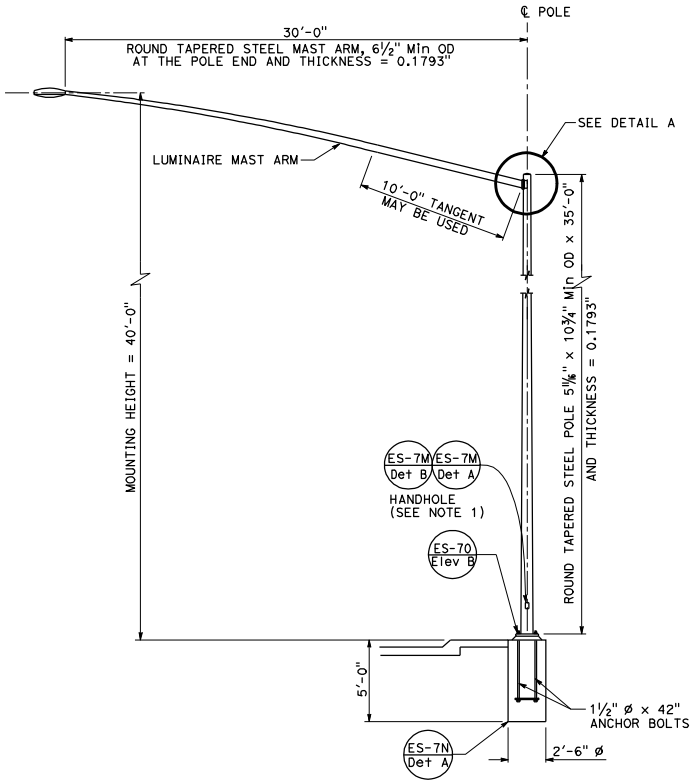
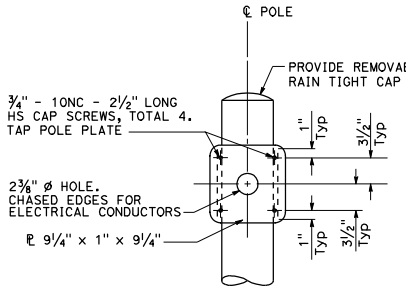
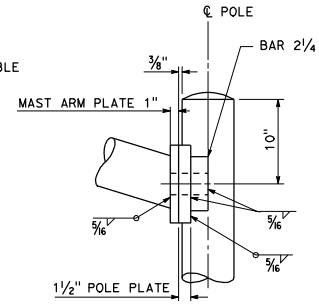



ELEVATION A

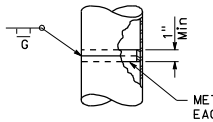



FRONT VIEW

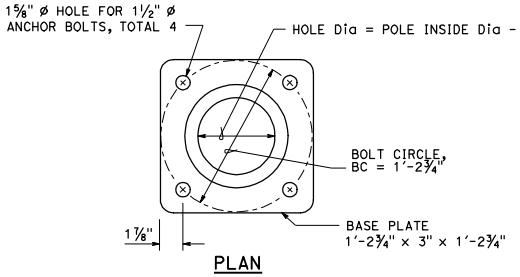



SIDE VIEW

DETAIL A




POLE SPLICE
DETAIL B




PLAN

BASE PLATE DETAIL
DETAIL C

**NOTES:**

1. Handhole shall be located on the downstream side of traffic.
2. For additional notes and details, see Standard Plans ES-7M and ES-7N.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (LIGHTING STANDARD, TYPE 32)

NO SCALE

ES-6G

8-9-10

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Stanley P. Johnson
No. C57793
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

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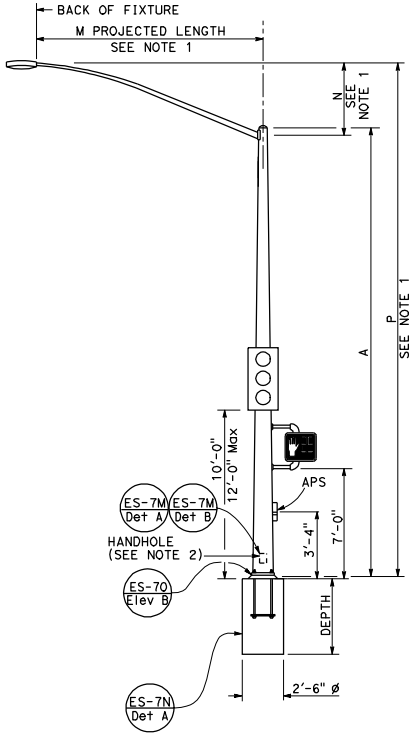
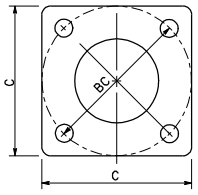
TO ACCOMPANY PLANS DATED _____

**NOTES:**

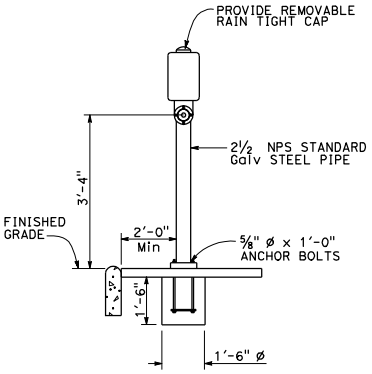
1. For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
2. Handhole shall be located on the downstream side of traffic.



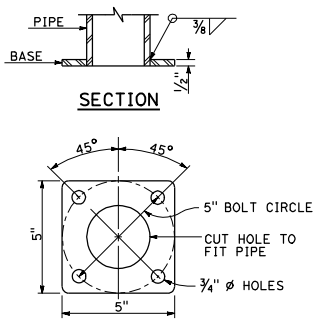

TYPE 15TS AND 21TS STANDARD
ELEVATION A
(See Note 1)




BASE PLATE
TYPE 15TS AND 21TS
DETAIL A

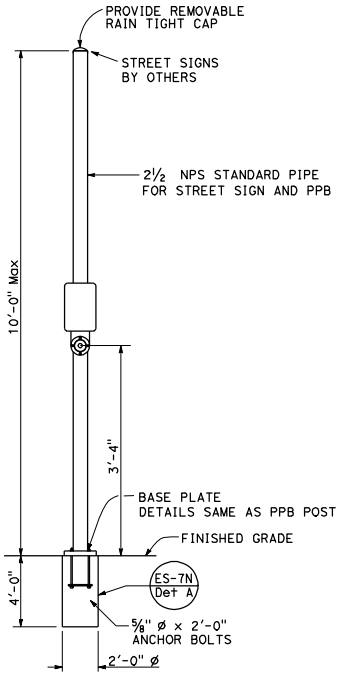



ELEVATION




BASE PLATE
PBA POST

PUSH BUTTON ASSEMBLY POST
DETAIL B




COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | CIDH |
|---|---|---|---|---|---|---|---|---|---|
| | A HEIGHT | Min OD BASE | Min OD TOP | WALL THICKNESS | C | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | DEPTH |
| 15TS | 30'-0" | 8" | 3 11/16" | 0.1793" | 1'-1½" | 1'-0" | 2" | 1½" ø x 42" | 7'-6" |
| 21TS | 35'-0" | 9 3/8" | 3 3/16" | | 1'-3" | 1'-2" | | | 8'-6" |

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, TYPE TS, AND PUSH BUTTON ASSEMBLY POST)

NO SCALE

RSP ES-7A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7A DATED MAY 20, 2011 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-7A**

2010 REVISED STANDARD PLAN RSP ES-7A

6-18-13

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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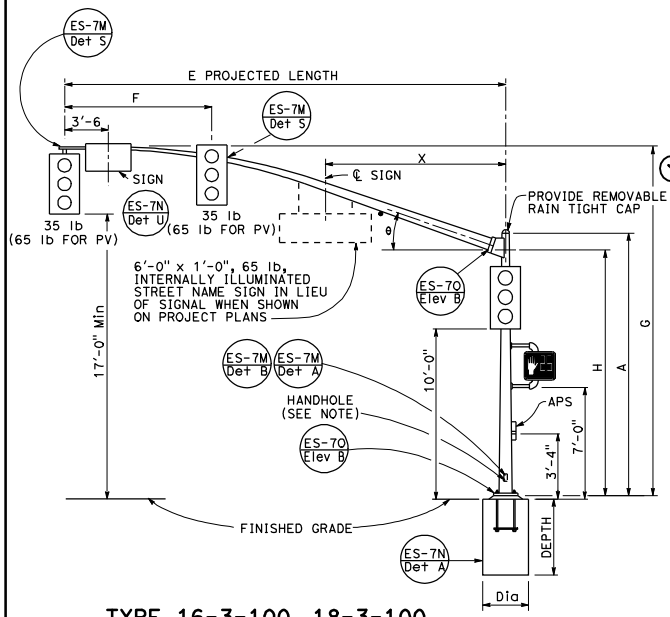
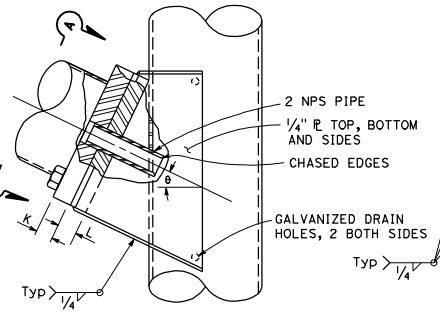
REGISTERED PROFESSIONAL ENGINEER — Stanley P. Johnson — No. C57793 — Exp. 3-31-14 CIVIL — STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

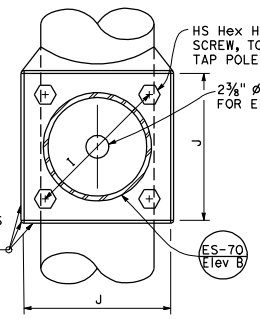
**NOTE:** Handhole shall be located on the downstream side of traffic.




## TYPE 16-3-100, 18-3-100, 23-3-100, 27-3-100
ELEVATION A

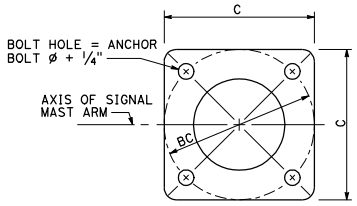



ELEVATION C

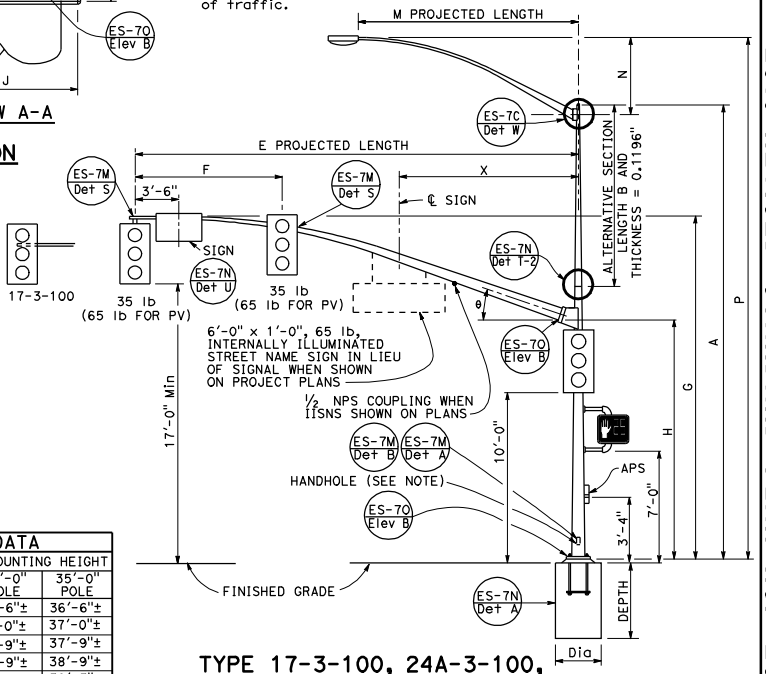



VIEW A-A

## SIGNAL MAST ARM CONNECTION
DETAIL A




BASE PLATE
DETAIL B




## TYPE 17-3-100, 24A-3-100, 19-3-100, 26-3-100, 19A-3-100, 26A-3-100, 24-3-100
ELEVATION B

### SIGNAL MAST ARM DATA

| E PROJECTED LENGTH | F Min SPACING | G MOUNTING HEIGHT | H | Min OD AT POLE | THICKNESS | I BOLT CIRCLE | HS CAP SCREWS | J PLATE SIZE | K MAST ARM ℙ THICKNESS | L POLE ℙ THICKNESS | θ | X Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15'-0" | 8'-0" | 21'-8"± | 17'-6" | 7 3/8" | 0.1793" | 12" | 1 1/4"-7NC-3" | 1'-0" | 1 1/4" | 1 1/2" | 23° | - |
| 20'-0" | | 21'-8"± | | 7 3/8" | | | | | | | | |
| 25'-0" | 12'-0" | 22'-8"± | | 7 3/8" | | | | | | | | 10'-6" |
| 30'-0" | | | | 8" | | | | | | | | |
| 35'-0" | 14'-0" | 23'-0"± | 16'-0" | 8 3/4" | 0.2391" | 13" | | 1'-1" | 1 1/2" | 1 3/4" | 21° | |
| 40'-0" | 15'-0" | | | 9 3/8" | | | | | | | 15° | 13'-0" |
| 45'-0" | | 23'-8"± | | 10 1/16" | | | | | | | | |

### LUMINAIRE MAST ARM DATA

| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT 30'-0" POLE | P MOUNTING HEIGHT 35'-0" POLE |
|---|---|---|---|---|---|
| 6'-0" | 2'-0"± | 3 1/4" | 0.1196" | 31'-6"± | 36'-6"± |
| 8'-0" | 2'-6"± | 3 1/2" | | 32'-0"± | 37'-0"± |
| 10'-0" | 3'-3"± | 3 5/8" | | 32'-9"± | 37'-9"± |
| 12'-0" | 4'-3"± | | | 33'-9"± | 38'-9"± |
| 15'-0" | 4'-9"± | 4 1/4" | | 34'-3"± | 39'-3"± |

| POLE TYPE | LOAD CASE | WIND VELOCITY (mph) | POLE DATA A HEIGHT | Min OD BASE | Min OD TOP | THICKNESS | ALTERNATIVE SECTION B LENGTH | ALTERNATIVE SECTION BOTTOM | ALTERNATIVE SECTION TOP | BASE PLATE DATA C | BC = BOLT CIRCLE | THICKNESS | ANCHOR BOLT SIZE | LUMINAIRE MAST ARM | SIGNAL MAST ARM | CIDH PILE FOUNDATION DIAMETER | DEPTH | REINFORCED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16-3-100 | 3 | 100 | 18'-6" | 10 3/4" | 8 1/16" | 0.1793" | NONE | | | 1'-5 1/2" | 1'-5 1/2" | 3" | 1 1/2" ø x 42" | NONE | 15'-0", 20'-0" | 3'-0" | 8'-6" | YES |
| 17-3-100 | | | 30'-0" | | 6 7/16" | | 10'-0" | 7 7/8" | 6 7/16" | | | | | 6'-15' 12'-0" | | | | |
| 18-3-100 | | | 17'-0" | 1'-0" | 8 5/16" | 0.2391" | NONE | | | 1'-7" | | | 2" ø x 42" | NONE | 25'-0", 30'-0" | | 9'-6" | |
| 19-3-100 | | | 30'-0" | | 7 1/16" | | 10'-0" | 9 1/8" | 7 1/16" | | | | | 6'-15' 12'-0" | | | 11'-0" | |
| 19A-3-100 | | | 35'-0" | | 6 15/16" | | 15'-0" | | 6 15/16" | | | | | 6'-15' 15'-0" | | | | |
| 23-3-100 | | | 17'-0" | | 9 9/16" | | NONE | | | | | | | NONE | 35'-0" | | | |
| 24-3-100 | | | 30'-0" | | 7 1/16" | | 10'-0" | 9 1/8" | 7 1/16" | | | | | 6'-15' 12'-0" | | | | |
| 24A-3-100 | | | 35'-0" | | 6 15/16" | | 15'-0" | | 6 15/16" | | | | | 6'-15' 15'-0" | | | | |
| 26-3-100 | | | 30'-0" | 1'-2" | 7 15/16" | 0.3125" | 10'-0" | 9 1/4" | 7 15/16" | 1'-11" | 1'-9" | | 2 1/2" ø x 42" | 6'-15' 12'-0" | 40'-0", 45'-0" | 3'-6" | 12'-0" | |
| 26A-3-100 | | | 35'-0" | | 7 1/16" | | 15'-0" | | 7 1/16" | | | | | 6'-15' 15'-0" | | | | |
| 27-3-100 | | | 17'-0" | | 9 1/16" | | NONE | | | | | | | NONE | | | | |

▭ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 3 SIGNAL MAST ARM LOADING, WIND VELOCITY=100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 45')

NO SCALE

RSP 7E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN 7E
DATED MAY 20, 2011 - PAGE 466 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-7E**

2010 REVISED STANDARD PLAN RSP ES-7E

6-17-13

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

July 19, 2013

PLANS APPROVAL DATE

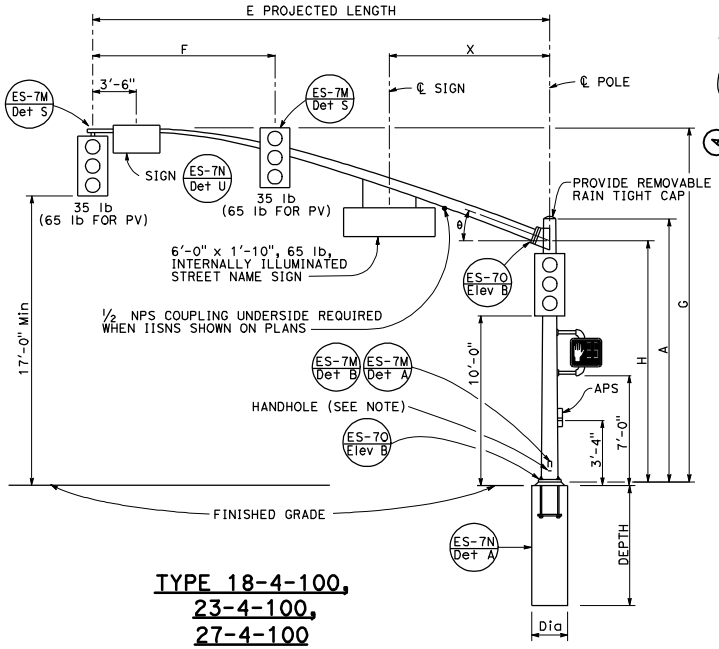
REGISTERED PROFESSIONAL ENGINEER — Stanley P. Johnson — No. C57793 — Exp. 3-31-14 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

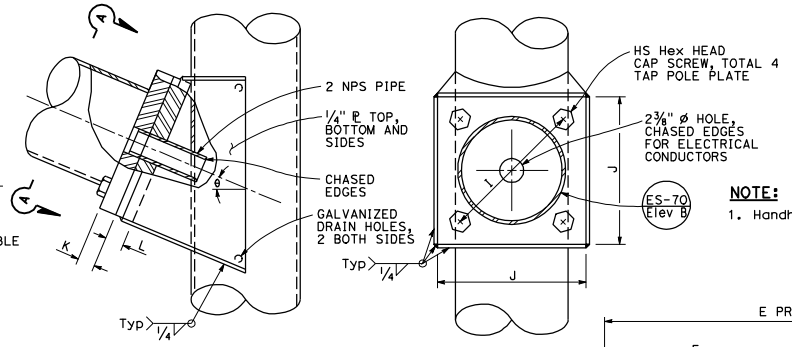
TO ACCOMPANY PLANS DATED _____

**NOTE:**

1. Handhole shall be located on the downstream side of traffic.

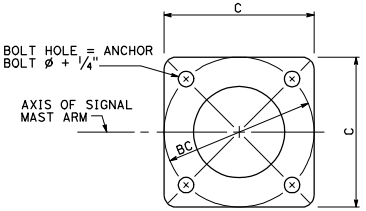



**TYPE 18-4-100, 23-4-100, 27-4-100**
ELEVATION A

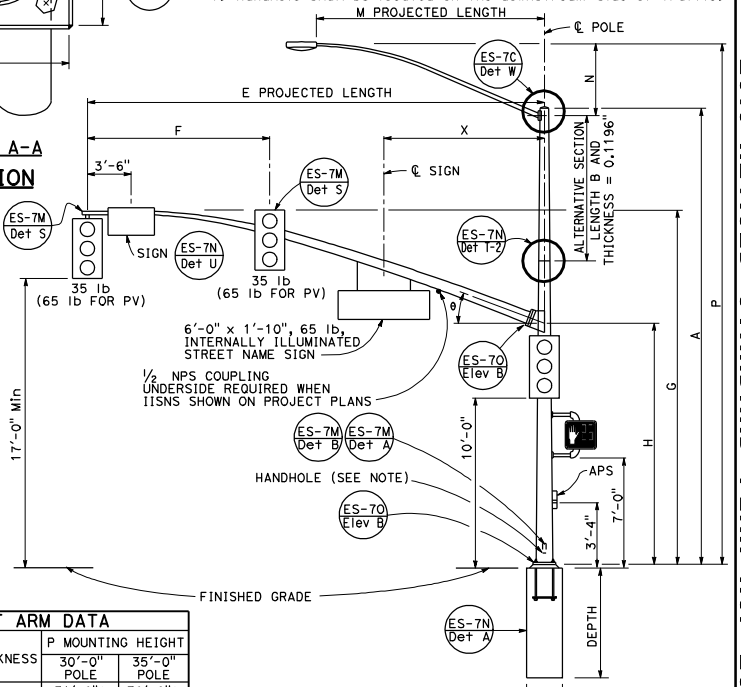



ELEVATION C VIEW A-A

**SIGNAL MAST ARM CONNECTION**
DETAIL A




**BASE PLATE**
DETAIL B




**TYPE 19-4-100, 19A-4-100, 24-4-100, 24A-4-100, 26-4-100, 26A-4-100**
ELEVATION B

**SIGNAL MAST ARM DATA**

| E PROJECTED LENGTH | F Min SPACING | G MOUNTING HEIGHT | H | Min OD AT POLE | THICKNESS | I BOLT CIRCLE | HS CAP SCREWS | J PLATE SIZE | K MAST ARM ℙ THICKNESS | L POLE ℙ THICKNESS | θ | X Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25'-0" | 10'-0" | 22'-8"± | 16'-0" | 7⅜" | 0.2391" | 12" | 1¼"-7NC-3" | 1'-0" | 1¼" | 1½" | 23° | 10'-6" |
| 30'-0" | 12'-0" | 23'-0"± | | 8" | | 13½" | | 1'-1½" | 1½" | 1¾" | 21° | 13'-0" |
| 35'-0" | 14'-0" | | | 8Ⅺ⁄₁₆" | | | | | | | | |
| 40'-0" | 15'-0" | | | 9⅜" | | | | | | | 15° | |
| 45'-0" | | 23'-8"± | | 10¼" | | | | | | | | |

**LUMINAIRE MAST ARM DATA**

| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT 30'-0" POLE | P MOUNTING HEIGHT 35'-0" POLE |
|---|---|---|---|---|---|
| 6'-0" | 2'-0"± | 3¼" | 0.1196" | 31'-6"± | 36'-6"± |
| 8'-0" | 2'-6"± | 3½" | | 32'-0"± | 37'-0"± |
| 10'-0" | 3'-3"± | 3⅞" | | 32'-9"± | 37'-9"± |
| 12'-0" | 4'-3"± | | | 33'-9"± | 38'-9"± |
| 15'-0" | 4'-9"± | 4¼" | | 34'-3"± | 39'-3"± |

| POLE TYPE | LOAD CASE | WIND VELOCITY (mph) | POLE DATA A HEIGHT | Min OD BASE | Min OD TOP | POLE DATA THICKNESS | ALTERNATIVE SECTION B LENGTH | ALTERNATIVE SECTION BOTTOM | ALTERNATIVE SECTION TOP | BASE PLATE DATA C | BC = BOLT CIRCLE | BASE PLATE THICKNESS | ANCHOR BOLT SIZE | LUMINAIRE MAST ARM | SIGNAL MAST ARM | CIDH PILE FOUNDATION Dia | DEPTH | REINFORCED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18-4-100 | 4 | 100 | 17'-0" | 12⅛" | 9⅜" | 0.3125" | NONE | 9⅛" | 7Ⅺ⁄₁₆" | 1'-7" | 1'-5½" | 3" | 2" ø x 42" | NONE | 25'-0", 30'-0" | 3'-0" | 11'-0" | YES |
| 19-4-100 | | | 30'-0" | | 7Ⅺ⁄₁₆" | | 10'-0" | | | | | | | 6'-15' 12'-0" | | | | |
| 19A-4-100 | | | 35'-0" | | 6⅝" | | 15'-0' | | 6⅝" | | | | | 6'-15' 15'-0" | | | | |
| 23-4-100 | | | 17'-0" | | 9⅜" | | NONE | | | | | | | NONE | 35'-0" | | | |
| 24-4-100 | | | 30'-0" | | 7Ⅺ⁄₁₆" | | 10'-0" | 9⅛" | 7Ⅺ⁄₁₆" | | | | | 6'-15' 12'-0" | | | | |
| 24A-4-100 | | | 35'-0" | | 6⅝" | | 15'-0" | | 6⅝" | | | | | 6'-15' 15'-0" | | | | |
| 26-4-100 | | | 30'-0" | 14" | 8⅜" | | 10'-0" | 9⅝" | 8⅜" | 23" | 21" | | 2½" ø x 42" | 6'-15' 12'-0" | 40'-0", 45'-0" | 3'-6" | 12'-0" | |
| 26A-4-100 | | | 35'-0" | | 7⅛" | | 15'-0" | | 7⅛" | | | | | 6'-15' 15'-0" | | | | |
| 27-4-100 | | | 17'-0" | | 10⅛" | | NONE | | | | | | | NONE | | | | |

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 4 SIGNAL MAST ARM LOADING, WIND VELOCITY=100 MPH AND SIGNAL MAST ARM LENGTHS 25' TO 45')

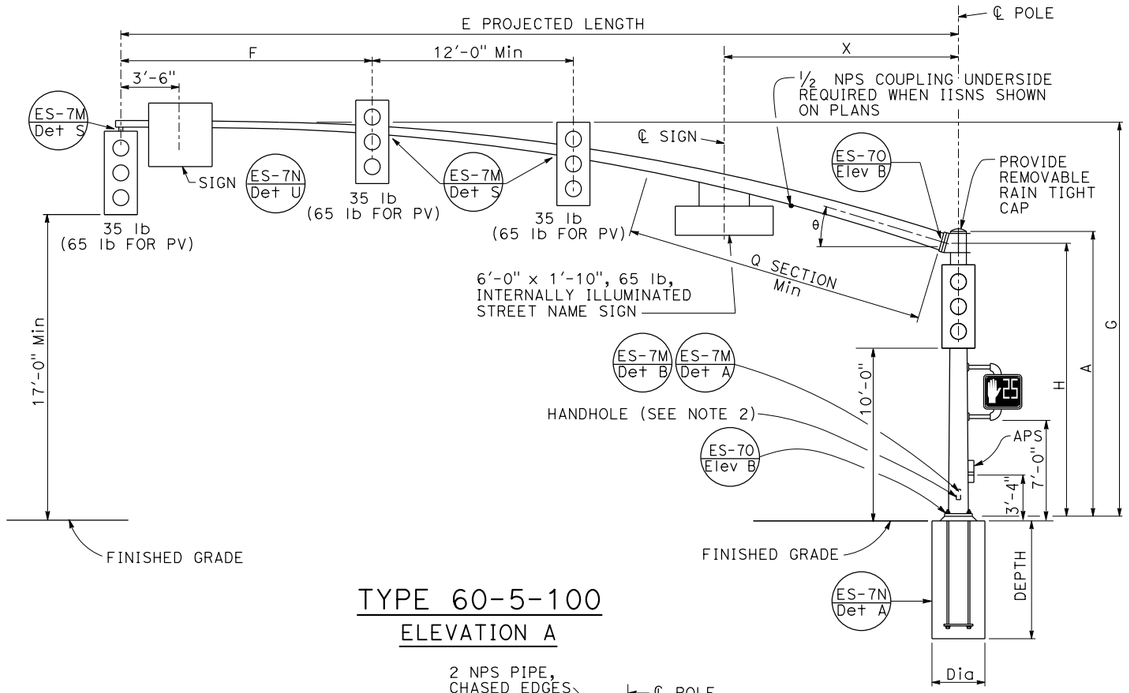
NO SCALE

RSP ES-7F DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7F
DATED MAY 20, 2011 - PAGE 467 OF THE STANDARD PLANS BOOK DATED 2010.

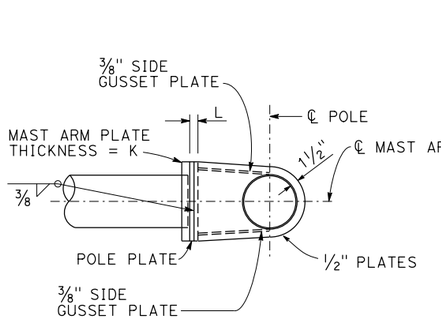
**REVISED STANDARD PLAN RSP ES-7F**

**2010 REVISED STANDARD PLAN RSP ES-7F**

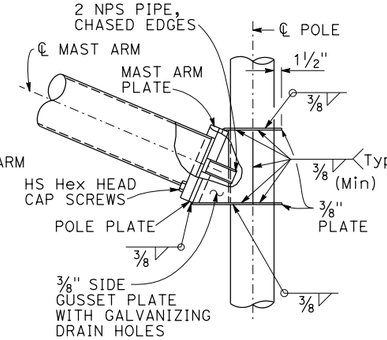
6-18-13



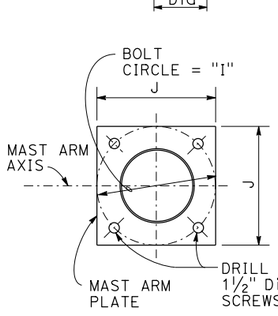

## TYPE 60-5-100
### ELEVATION A




PLAN

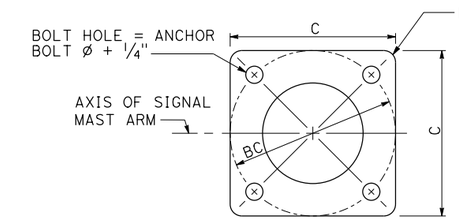



ELEVATION
(See Note 1)



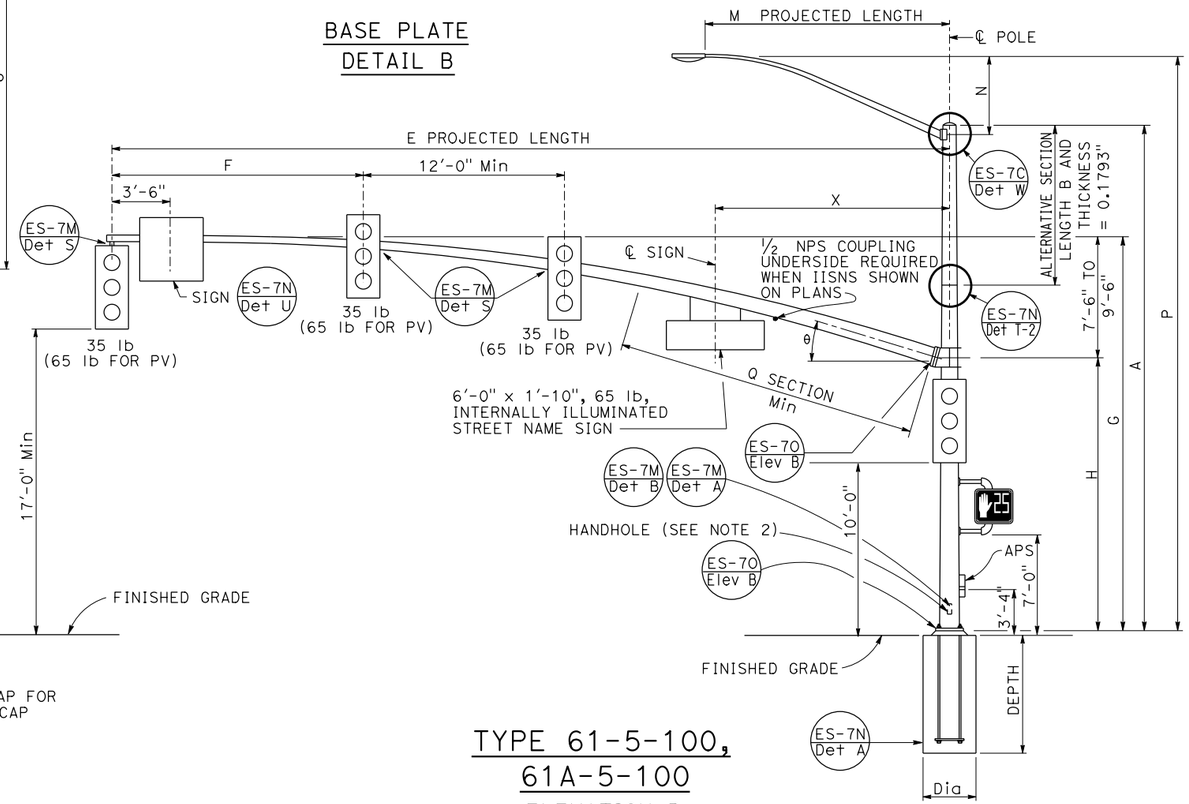

MAST ARM PLATE

## SIGNAL MAST ARM CONNECTION
### DETAIL A




BASE PLATE
DETAIL B




## TYPE 61-5-100, 61A-5-100
### ELEVATION B

### SIGNAL MAST ARM DATA

| E PROJECTED LENGTH | F Min SPACING | G MOUNTING HEIGHT | H | Min OD AT POLE | THICKNESS | I BOLT CIRCLE | HS CAP SCREWS | J PLATE SIZE | K MAST ARM ℄ THICKNESS | L POLE ℄ THICKNESS | θ | Q SECTION LENGTH | Q SECTION THICKNESS | X Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60'-0" | 15'-0" | 23'-7" TO 25'-7" | 16'-0" | 1'-1½" | 0.1793" | 20" | 1½"-6NC-4" | 1'-8" | 2" | 2" | 15° | 24'-0" | 0.2391" | 14'-0" |
| 65'-0" | | | | | 0.2391" | | | | | | | 29'-0" | 0.3125" | |

### LUMINAIRE MAST ARM DATA

| M PROJECTED LENGTH | N RISE | Min OD AT POLE | THICKNESS | P MOUNTING HEIGHT 30'-0" POLE | P MOUNTING HEIGHT 35'-0" POLE |
|---|---|---|---|---|---|
| 6'-0" | 2'-0"± | 3¼" | 0.1196" | 31'-6"± | 36'-6"± |
| 8'-0" | 2'-6"± | 3½" | | 32'-0"± | 37'-0"± |
| 10'-0" | 3'-3"± | 3⅞" | | 32'-9"± | 37'-9"± |
| 12'-0" | 4'-3"± | | | 33'-9"± | 38'-9"± |
| 15'-0" | 4'-9"± | 4¼" | | 34'-3"± | 39'-3"± |

### POLE DATA / BASE PLATE DATA / CIDH PILE FOUNDATION

| POLE TYPE | LOAD CASE | WIND VELOCITY (mph) | POLE DATA: A HEIGHT | POLE DATA: Min OD BASE | POLE DATA: Min OD TOP | POLE DATA: THICKNESS | BASE PLATE DATA: C | BASE PLATE DATA: BC = BOLT CIRCLE | BASE PLATE DATA: THICKNESS | BASE PLATE DATA: ANCHOR BOLT SIZE | LUMINAIRE MAST ARM | SIGNAL MAST ARM | CIDH PILE FOUNDATION: DIAMETER | CIDH PILE FOUNDATION: DEPTH | CIDH PILE FOUNDATION: REINFORCED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60-5-100 | 5 | 100 | 17'-0" | 16" | 1'-1 3/16" | 0.3125" | 2'-0" | 1'-11" | 3" | 2½" ø x 60" | NONE | 60'-0", 65'-0" | 3'-6" | 13'-0" | YES |
| 61-5-100 | | | 30'-0" | | 11 11/16" | | | | | | 6'-15' 15'-0" | | | | |
| 61A-5-100 | | | 35'-0" | | 10 15/16" | | | | | | | | | | |

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

NOTES:

1. The radial separation between the face of the pole and the adjacent insides of the top and bottom gusset plates shall not exceed 3/16". Fillet weld size to be increased by amount of gap.
2. Handhole shall be located on the downstream side of traffic.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 5 SIGNAL MAST ARM LOADING, WIND VELOCITY=100 MPH AND SIGNAL MAST ARM LENGTHS 60' TO 65')

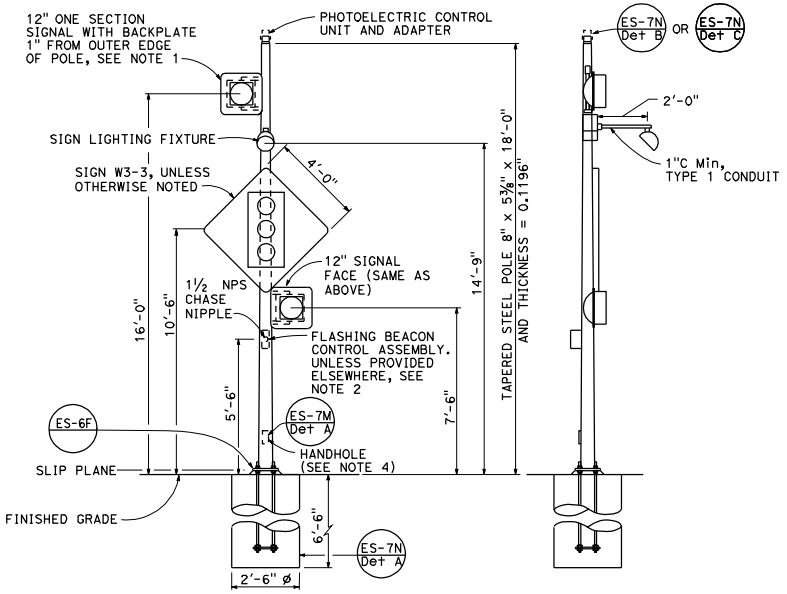
NO SCALE

RSP ES-7H DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7H
DATED MAY 20, 2011 - PAGE 469 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-7H**

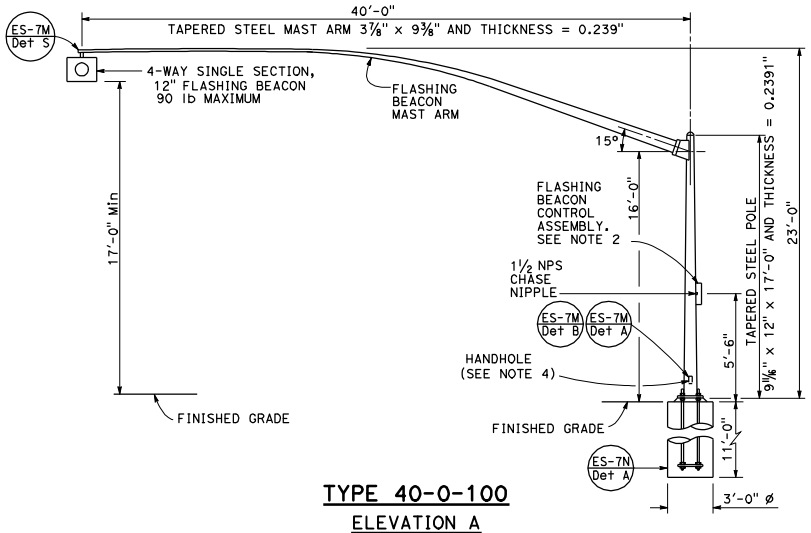
**2010 REVISED STANDARD PLAN RSP ES-7H**

6-18-13

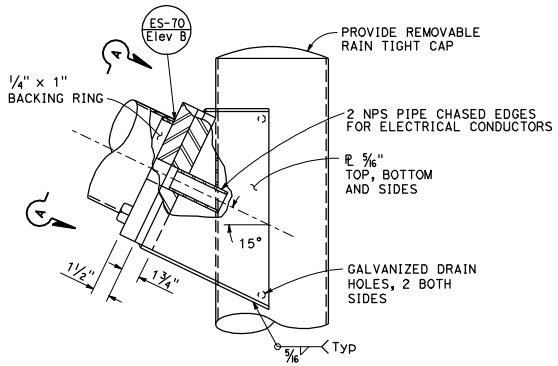



FRONT VIEW SIDE VIEW

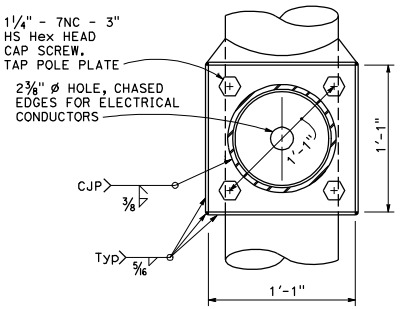
## TYPE 15-FBS
## ADVANCE FLASHING BEACON WITH SLIP BASE INSTALLATION
### DETAIL A




## TYPE 40-0-100
### ELEVATION A

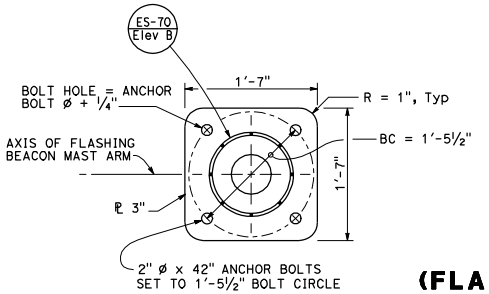



ELEVATION B



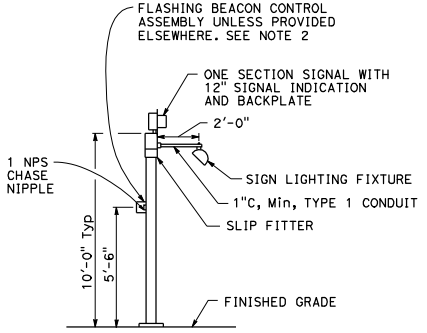

VIEW A-A

## FLASHING BEACON MAST ARM CONNECTION DETAIL
### DETAIL B




BASE PLATE

### DETAIL C




## TYPE 1-A, 1-B, 1-C AND 1-D
### ADVANCE FLASHING BEACON INSTALLATION
### DETAIL D
See Note 5

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Stanley P. Johnson No. C57793 Exp. 3-31-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____

**NOTES:**

1. See Revised Standard Plan RSP ES-4A and Standard Plan ES-4D for attachment fitting details.
2. For wiring diagram, see Standard Plan ES-14B.
3. For additional notes and details, see Standard Plans ES-7M and ES-7N.
4. Handhole shall be located on the downstream side of traffic.
5. See project plans for type of standard to be installed.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS
# (FLASHING BEACON ON A TYPE 1, TYPE 15-FBS AND TYPE 40 STANDARD)

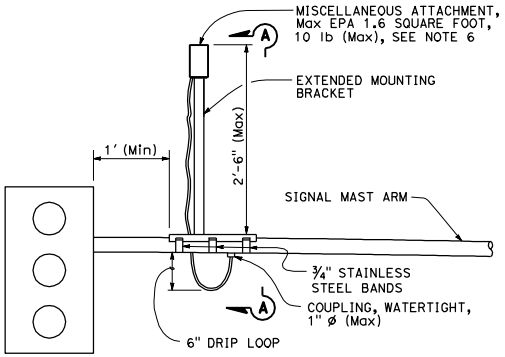
NO SCALE

RSP ES-7J DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7J
DATED MAY 20, 2011 - PAGE 471 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-7J**

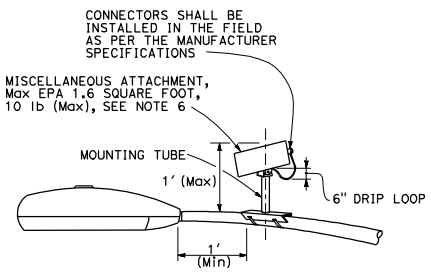
6-26-13

2010 REVISED STANDARD PLAN RSP ES-7J



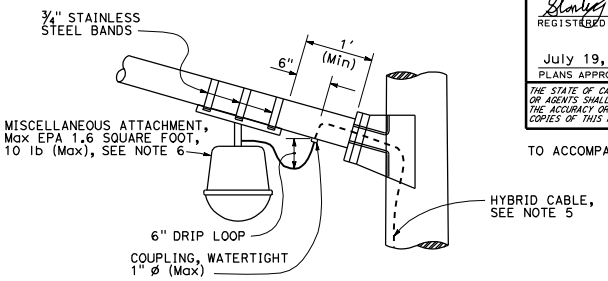

SIGNAL MAST ARM MOUNT

DETAIL A



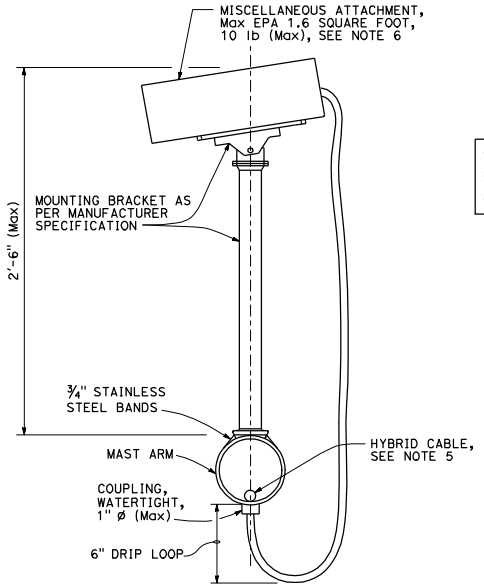

LUMINAIRE MAST ARM MOUNT

DETAIL B

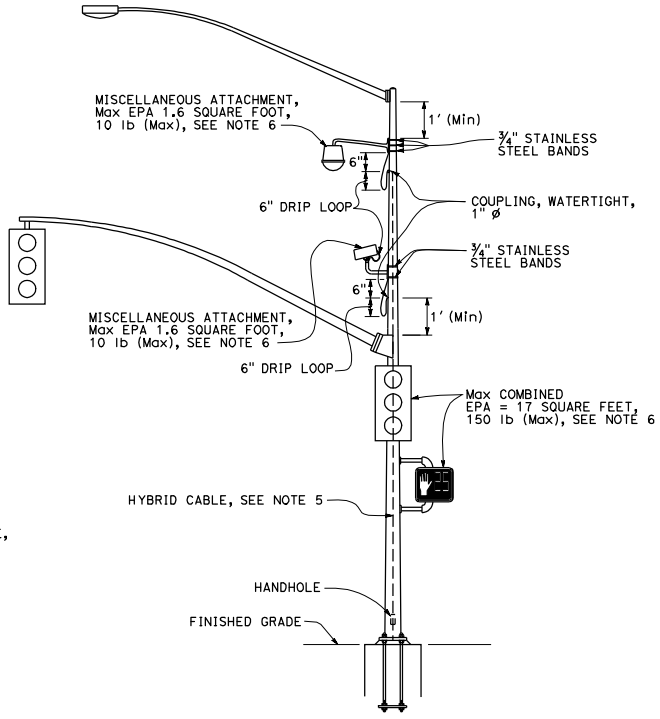



LUMINAIRE MAST ARM MOUNT

DETAIL C




SECTION A-A




SIGNAL POLE MOUNT

DETAIL D

**NOTES:**

1. Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
2. Location of cable entrances on signal pole shall be a minimum of 1′ from any flange or base plate.
3. Hybrid cable entrances on signal pole shall be drilled for weathertight coupling as required.
4. Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
5. A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
6. Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet.
7. Maximum of two miscellaneous attachments per traffic signal structure.
8. Maximum of one miscellaneous attachment per mast arm.
9. Miscellaneous attachment shall be mounted using clamping devices.

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

July 19, 2013

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Stanley P. Johnson — No. C57793 — Exp. 3-31-14 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING, MISCELLANEOUS ATTACHMENT)

NO SCALE

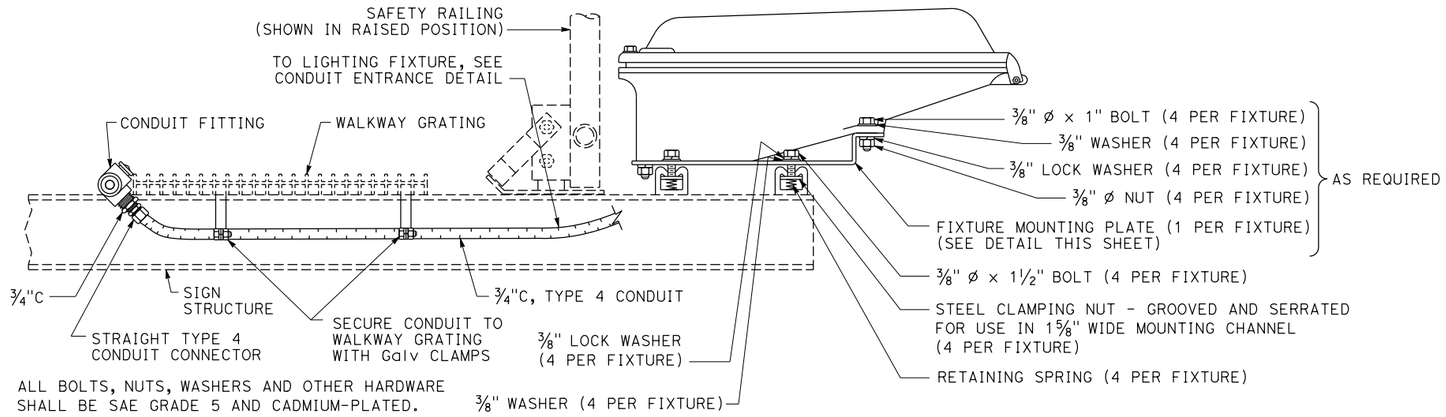
RSP ES-7R DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7R
DATED MAY 20, 2011 - PAGE 479 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-7R**

2010 REVISED STANDARD PLAN RSP ES-7R

6-17-13

| LENGTH OF PANEL | NUMBER OF FIXTURES (EACH) | FIXTURE SPACING SEE NOTES |
|---|---|---|
| 5′-0" | 1 | 2′-6" |
| 6′-0" | | 3′-0" |
| 7′-0" | | 3′-6" |
| 8′-0" | | 4′-0" |
| 9′-0" | | 4′-6" |
| 10′-0" | | 5′-0" |
| 11′-0" | | 5′-6" |
| 12′-0" | | 6′-0" |
| 13′-0" | | 6′-6" |
| 14′-0" | | 7′-0" |
| 15′-0" | | 7′-6" |
| 16′-0" | | 8′-0" |
| 17′-0" | 2 | 4′-3":8′-6" |
| 18′-0" | | 4′-6":9′-0" |
| 19′-0" | | 4′-9":9′-6" |
| 20′-0" | | 5′-0":10′-0" |
| 21′-0" | | 5′-3":10′-6" |
| 22′-0" | | 5′-6":11′-0" |
| 23′-0" | | 5′-9":11′-6" |
| 24′-0" | | 6′-0":12′-0" |
| 25′-0" | | 6′-3":12′-6" |
| 26′-0" | | 6′-6":13′-0" |
| 27′-0" | | 6′-9":13′-6" |
| 28′-0" | | 7′-0":14′-0" |
| 29′-0" | | 7′-3":14′-6" |
| 30′-0" | | 7′-6":15′-0" |
| 31′-0" | | 7′-9":15′-6" |
| 32′-0" | | 8′-0":16′-0" |
| 33′-0" | 3 | 5′-6":11′-0" |
| 34′-0" | | 5′-8":11′-4" |
| 35′-0" | | 5′-10":11′-8" |
| 36′-0" | | 6′-0":12′-0" |
| 37′-0" | | 6′-2":12′-4" |
| 38′-0" | | 6′-4":12′-8" |
| 39′-0" | | 6′-6":13′-0" |
| 40′-0" | | 6′-8":13′-4" |
| 41′-0" | | 6′-10":13′-8" |
| 42′-0" | | 7′-0":14′-0" |
| 43′-0" | | 7′-2":14′-4" |
| 44′-0" | | 7′-4":14′-8" |
| 45′-0" | | 7′-6":15′-0" |
| 46′-0" | | 7′-8":15′-4" |
| 47′-0" | | 7′-10":15′-8" |
| 48′-0" | | 8′-0"-16′-0" |
| 49′-0" | 4 | 6′-1½":12′-3" |
| 50′-0" | | 6′-3":12′-6" |
| 51′-0" | | 6′-4½":12′-9" |
| 52′-0" | | 6′-6":13′-0" |
| 53′-0" | | 6′-7½":13′-3" |
| 54′-0" | | 6′-9":13′-6" |
| 55′-0" | | 6′-10½":13′-9" |
| 56′-0" | | 7′-0":14′-0" |
| 57′-0" | | 7′-1½":14′-3" |
| 58′-0" | | 7′-3":14′-6" |
| 59′-0" | | 7′-4½":14′-9" |
| 60′-0" | | 7′-6":15′-0" |
| 61′-0" | | 7′-7½":15′-3" |
| 62′-0" | | 7′-9":15′-6" |
| 63′-0" | | 7′-10½":15′-9" |
| 64′-0" | | 8′-0":16′-0" |

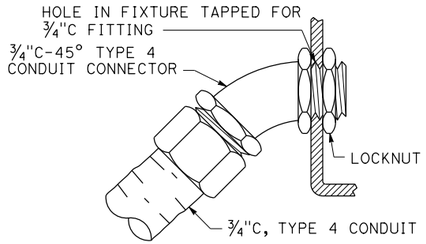



## LIGHTING FIXTURE MOUNTING DETAIL (TYPICAL)

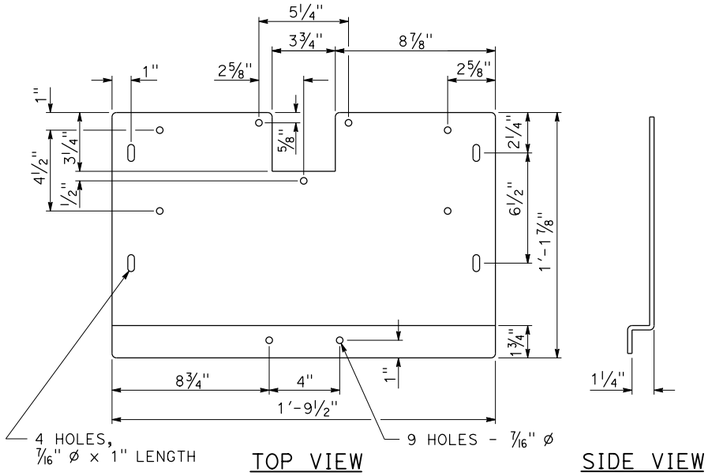


NOTES:

1. The first number listed is the dimension from the edge of the sign panel to the center of the end-most fixture. The second number listed is the dimension between centers of successive fixtures.
2. Where adjacent sign panels are spaced 1′-0" or less the combination of these panels (and spaces) shall be considered a single panel.
3. Physical configuration and mounting details may vary from what is shown.



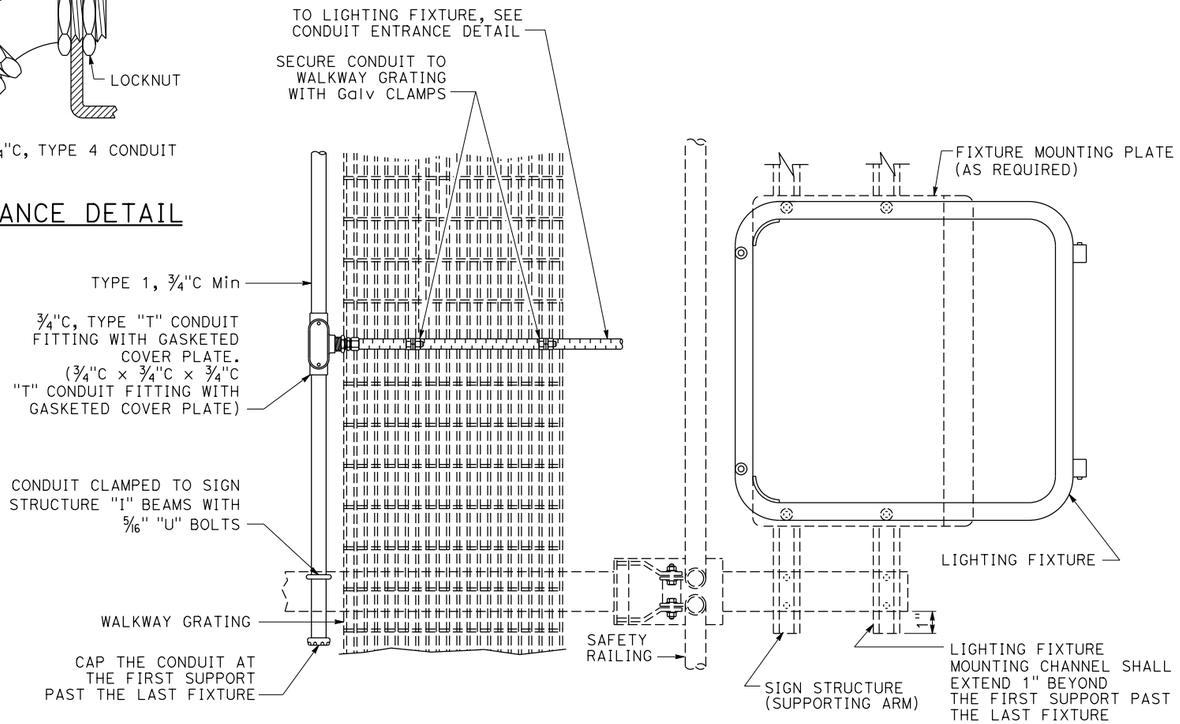

## CONDUIT ENTRANCE DETAIL




## SIGN ILLUMINATION FIXTURE MOUNTING PLATE (TYPICAL)

NOTES:

1. Material: 0.135" hot-dip galvanized sheet steel after fabrication.
2. Left side is symmetrical with right side.




STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

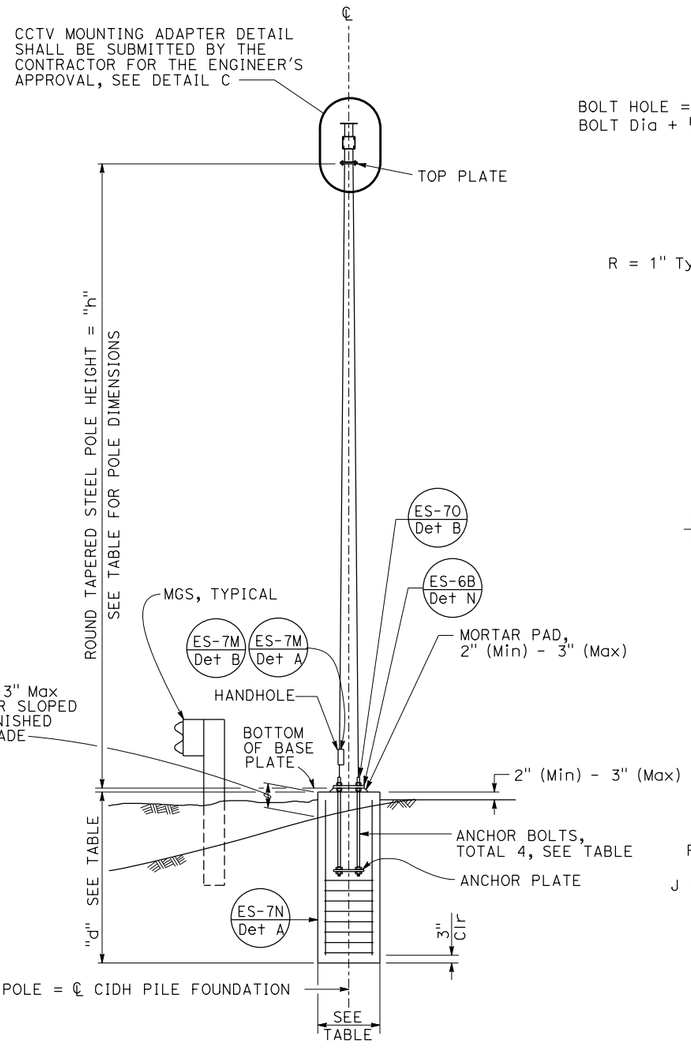
# ELECTRICAL SYSTEMS (SIGN ILLUMINATION EQUIPMENT)

NO SCALE

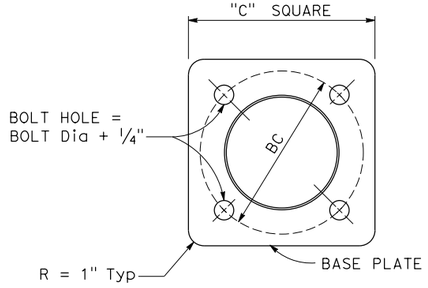
**ES-15A**

10-5-09

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | CIDH | |
|---|---|---|---|---|---|---|---|---|---|---|
| | HEIGHT "h" | Min OD | | THICKNESS | "C" | THICKNESS | ANCHOR BOLT SIZE | BC = BOLT CIRCLE | Dia | "d" |
| | | BASE | TOP | | | | | | | |
| CCTV 25 | 25′ | 7⅜" | 3¾" | 0.1793" | 1′-1" | 1" | 1½" ø x 36" | 11½" | 2′-6" | 7′-0" |
| CCTV 30 | 30′ | 8" | | | 1′-1½" | | | 1′-0" | | 7′-6" |
| CCTV 35 | 35′ | 8⅝" | | | 1′-2" | | | 1′-1" | | 8′-0" |
| CCTV 40 | 40′ | 9⅜" | | | 1′-3" | | | 1′-1½" | | 8′-6" |
| CCTV 45 | 45′ | 10" | | | | | | 1′-2" | | |

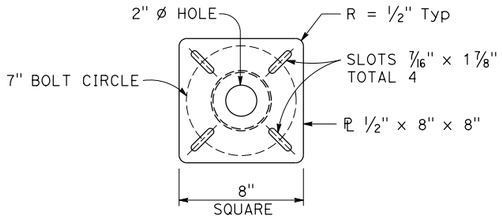



ELEVATION A



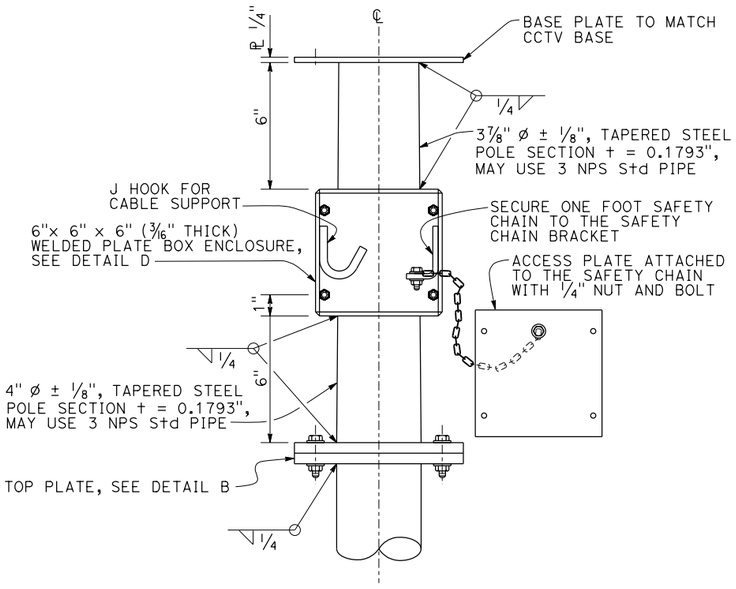

BASE PLATE

DETAIL A



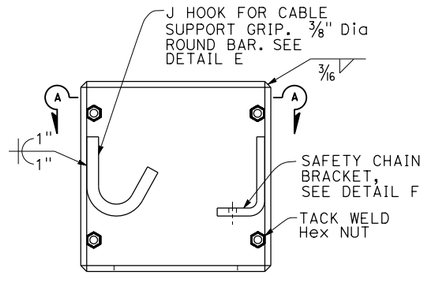

TOP PLATE

DETAIL B



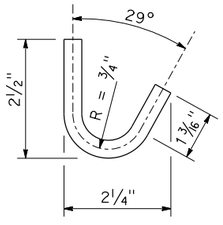

CLOSED CIRCUIT TELEVISION MOUNTING ADAPTER

DETAIL C



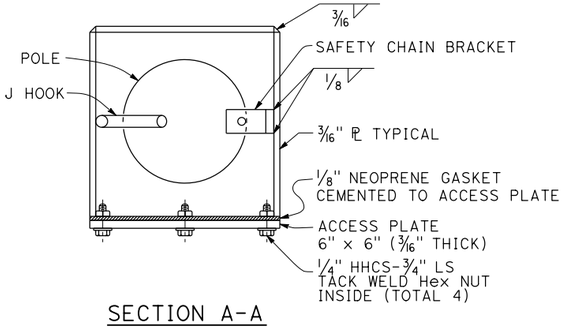

BOX ENCLOSURE

DETAIL D

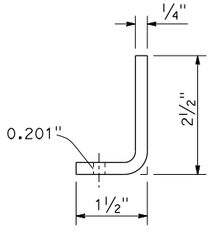



J HOOK

DETAIL E




SECTION A-A




SAFETY CHAIN BRACKET

DETAIL F

NOTES:

1. The Contractor shall verify controlling field dimensions before ordering or fabricating any material.
2. During pole installation, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
3. Wind Loadings (3-second gust): 100 mph
4. Unit Stresses (Structural Steel):
   a. fy = 55,000 psi (tapered steel tube and anchor bolts)
   b. fy = 50,000 psi (unless otherwise noted)
5. Unit Stresses (Reinforced Concrete):
   a. f′c = 3,625 psi
   b. fy = 60,000 psi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (CLOSED CIRCUIT TELEVISION, 25' TO 45' POLE)

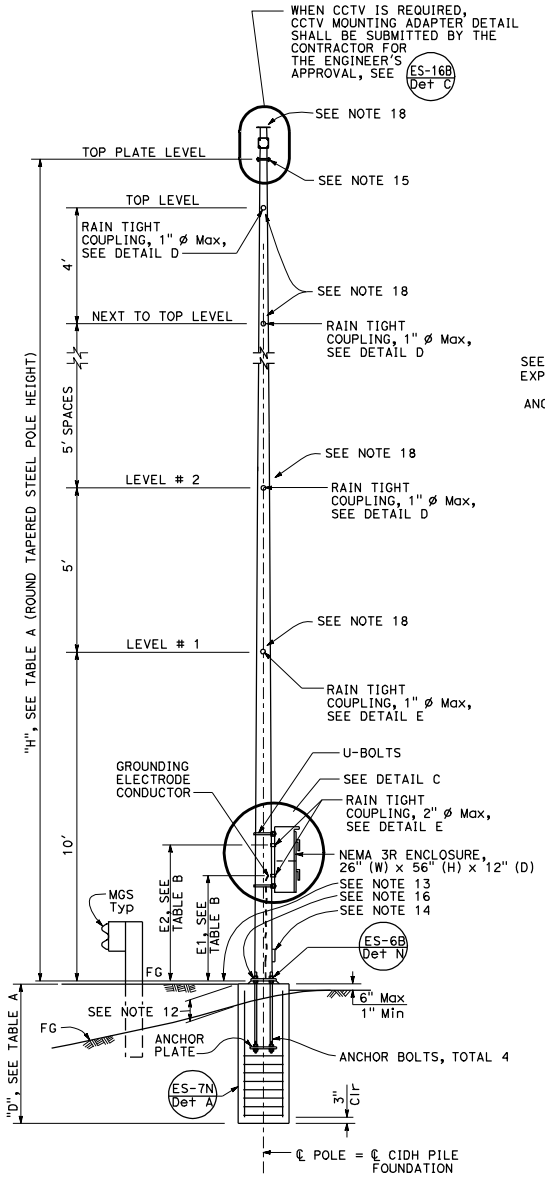
NO SCALE

RSP ES-16B DATED NOVEMBER 15, 2013 SUPERSEDES STANDARD PLAN ES-16B DATED MAY 20, 2011 - PAGE 501 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-16B**

**2010 REVISED STANDARD PLAN RSP ES-16B**

10-4-13

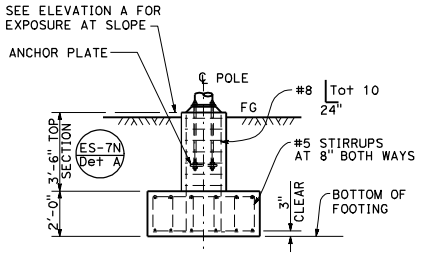



ELEVATION A

| TABLE A | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | | "D" 2'-6" ø CIDH Pile | |
| | HEIGHT "H" | Min OD BASE | Min OD TOP | THICKNESS | "C" | THICKNESS | ANCHOR BOLTS SIZE | BC = BOLT CIRCLE | LEVEL GROUND | UP TO 2:1 |
| VDS 30 | 30' | 8" | 3⅜" | 0.1793" | 1'-1½" | 1½" | 1½" ø x 3'-0" | 1'-1½" | 11'-0" | 13'-0" |
| VDS 35 | 35' | 8⅝" | | | 1'-2" | | | 1'-2" | 11'-0" | |
| VDS 40 | 40' | 9⅜" | | | 1'-3" | | | 1'-3" | 12'-0" | 14'-0" |

| TABLE B | |
|---|---|
| POLE TYPE | COUPLING E1(Max) | COUPLING E2(Max) |
| VDS 30 | 3'-6" | 4'-9" |
| VDS 35 | | |
| VDS 40 | | |

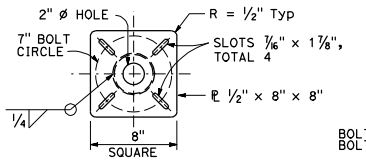
| TABLE C | | |
|---|---|---|
| SPREAD FOOTING | | |
| GROUND | FOOTING SIZE (LENGTH x WIDTH x DEPTH) | REINFORCEMENT TOP & BOTTOM |
| LEVEL | 8'-6" x 8'-6" x 2'-0" | 12 - #5 EW |
| UP TO 2:1 | 10'-0" x 10'-0" x 2'-0" | 15 - #5 EW |



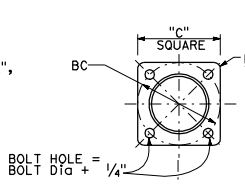

ALTERNATIVE FOOTING
ELEVATION B

| TABLE D - LIMITATION ON ATTACHMENTS * | | |
|---|---|---|
| LOCATION | MAXIMUM TOTAL EPA PER LEVEL (SQUARE FEET) | MAXIMUM TOTAL WEIGHT (lb) |
| LEVEL #1 | 14 | 200 |
| LEVEL #2 | | |
| LEVEL #3 | 10 *** | |
| LEVEL #4 (VDS 35 AND VDS 40 ONLY) | 2.5 | 50 |
| LEVEL #5 (VDS 40 ONLY) | | |
| NEXT TO TOP LEVEL | | |
| TOP LEVEL | | |
| ON TOP PLATE LEVEL ** | | |

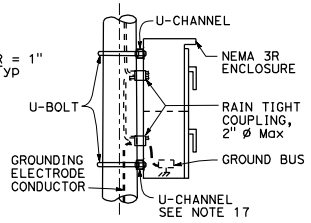
* MAXIMUM HORIZONTAL EXTENT BEYOND POLE FACE IS 4 FEET.
** MAXIMUM EXTENT ABOVE TOP PLATE IS 3 FEET.
*** 14 IF LEVEL #1 IS ZERO.



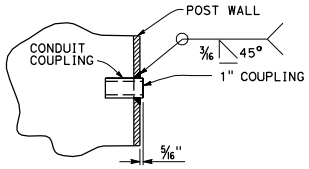

TOP PLATE
DETAIL A



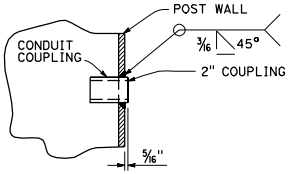

BASE PLATE
DETAIL B




DETAIL C




1" COUPLING
DETAIL D




2" COUPLING
DETAIL E

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Stanley P. Johnson
No. C57793
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____

**NOTES:**

1. All steel shall be galvanized after fabrication.
2. During pole installation the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
3. The foundation shall be treated as level ground condition if the slope inclination is flatter than 4 : 1 (Horizontal : Vertical)
4. For devices mounted and mounting heights, see TABLE B.
5. Design Specification: AASHTO Standard Specification for structural support for highway signs, luminaires and traffic signal dated 2001.
6. Wind Loadings: 100 mph (3-second gust)
7. Unit Stresses (Structural Steel):
   a. fy = 55,000 psi (tapered steel tube)
   b. fy = 50,000 psi (unless otherwise noted)
8. Anchor bolts: fy = 55,000 psi
9. Unit Stresses (Reinforced Concrete):
   a. f'c = 3,600 psi
   b. fy = 60,000 psi
10. The Contractor shall verify all controlling field dimensions before ordering of fabricating any material.
11. When no barriers are used, the NEMA 3R enclosure shall be located on the downstream side and perpendicular to the roadway.
12. 1'-3" (Max) for sloped finished grade.
13. Bottom of base plate.
14. Handhole. ES-7M Det B / ES-7M Det A
15. Top plate.
    Install a blank flange on the top plate when closed circuit television is not used.
16. ES-7O Elev B
17. U-channel with bracket.
18. Use the manufacturer's Effective Projected Area (EPA) for attachments. Assign attachments to nearest level and sum each level, see Table D for limitations.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

# ELECTRICAL SYSTEMS (CLOSED CIRCUIT TELEVISION WITH VEHICLE DETECTION SYSTEM, 30' TO 40' POLE)

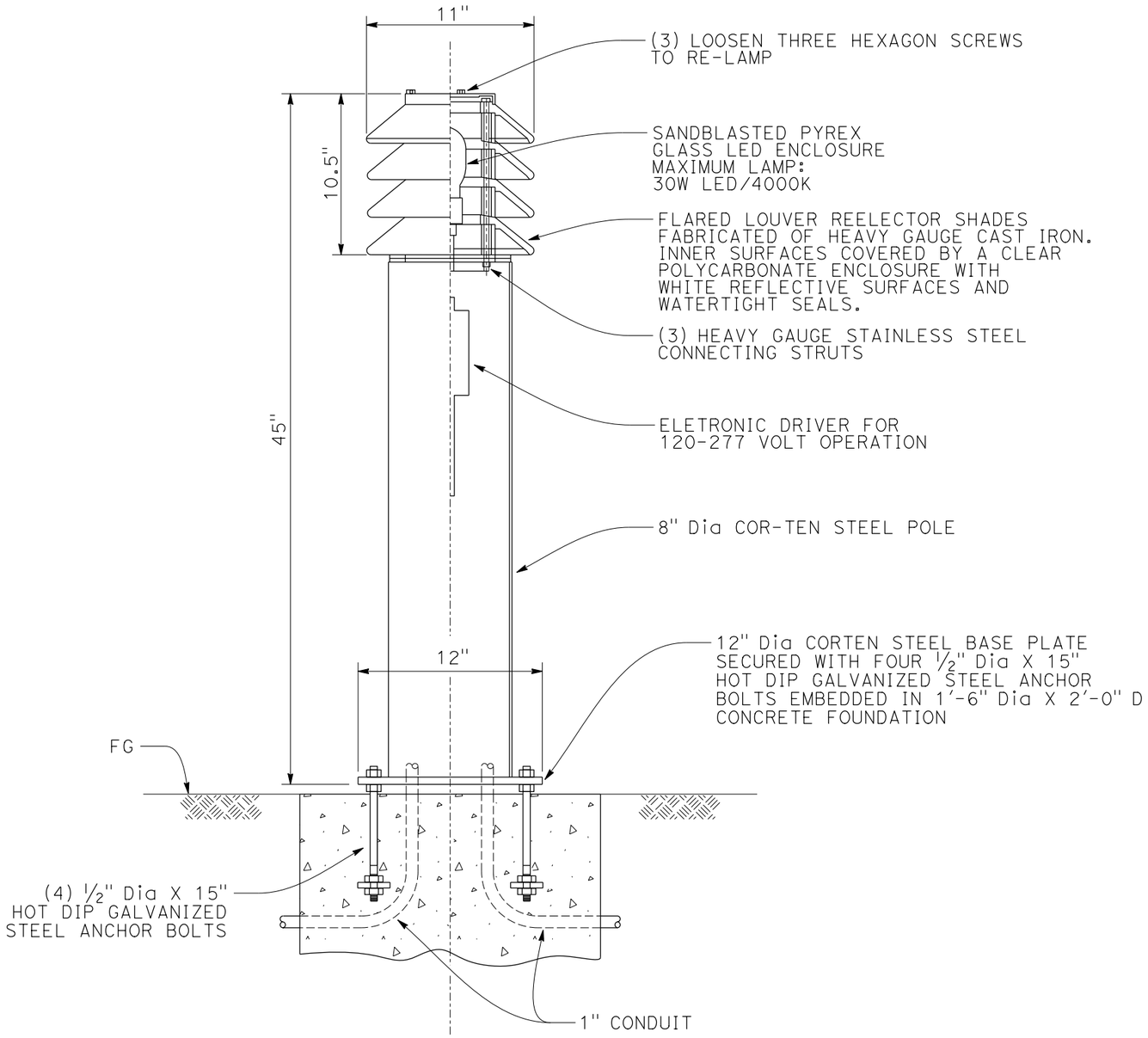
NO SCALE

RSP ES-16D DATED NOVEMBER 15, 2013 SUPERSEDES RSP ES-16D DATED JULY 19, 2013 AND STANDARD PLAN ES-16D DATED MAY 20, 2011 - PAGE 503 OF THE STANDARD PLANS BOOK DATED 2010.

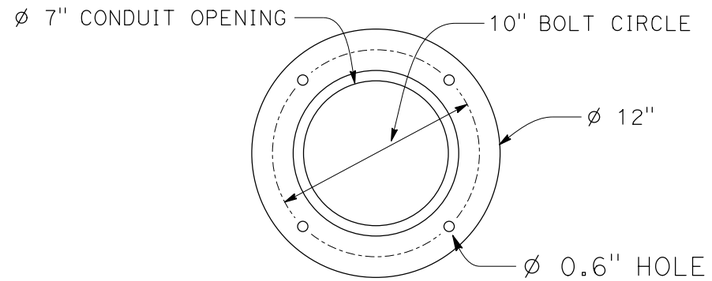
**REVISED STANDARD PLAN RSP ES-16D**

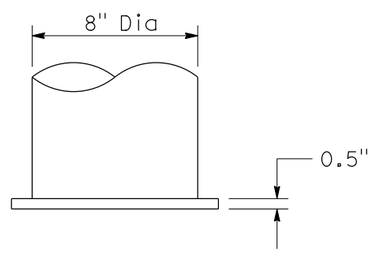
10-4-13

**2010 REVISED STANDARD PLAN RSP ES-16D**




BOLLARD LIGHT DETAIL




BASE PLATE DETAILS

# BOLLARD LIGHT

NO SCALE

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 5 | 37.5/39.6 | | |

REGISTERED CIVIL ENGINEER DATE

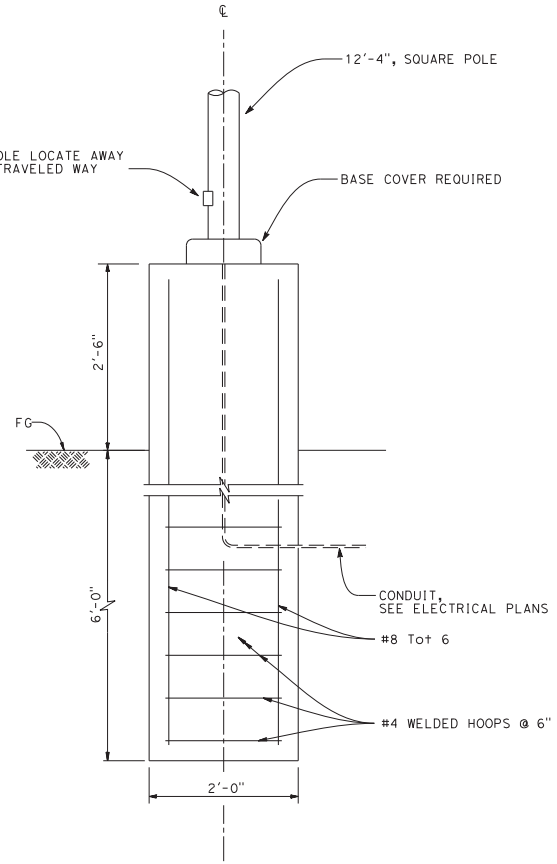
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — NO. — EXP. CIVIL — STATE OF CALIFORNIA

*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.*

SAN DIEGO ASSOCIATION OF GOVERNMENTS
401 B STREET
SAN DIEGO, CA 92101

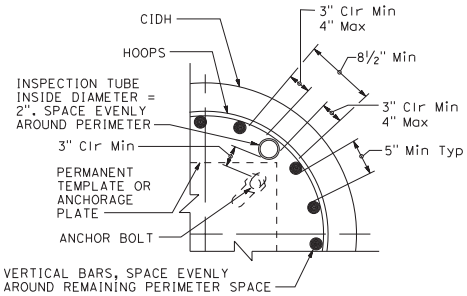
T.Y. LIN INTERNATIONAL
404 CAMINO DEL RIO SOUTH, SUITE 700
SAN DIEGO, CA 92108



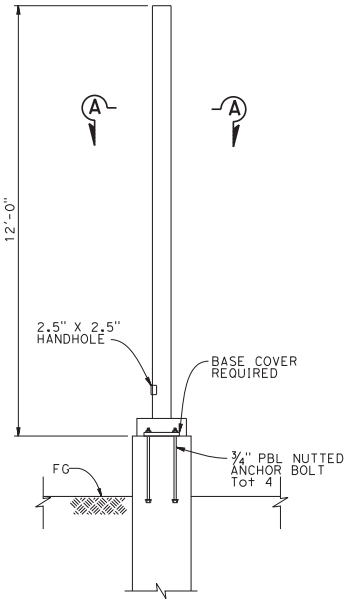

## ELEVATION B
PARKING LOT LIGHT

**NOTES:**

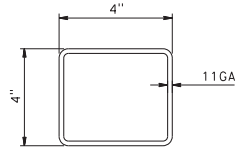
1. ANCHOR BOLTS TO BE ASTMF1554 Gr55 GALVANIZED THREAD.
2. IF GROUNDWATER IS ENCOUNTERED TWO INSPECTION TUBES SHALL BE PLACED IN FOUNDATION PER "INSPECTION TUBE PLACEMENT" DETAIL.
3. SEE LIGHTING DETAILS FOR LIGHT ON POLE.
4. POLE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.



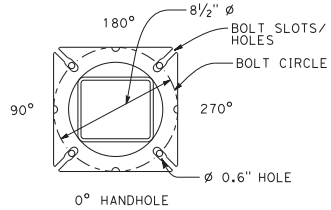

## INSPECTION TUBE PLACEMENT




## POLE DETAIL
No Scale




## SECTION A-A




## BASE PLATE DETAIL

DRAFT PS&E

USERNAME => ocolcol DATE PLOTTED => 10/23/2015 TIME PLOTTED => 12:00:38 PM

| | | | | | |
|---|---|---|---|---|---|
| DESIGN OVERSIGHT | | DESIGN | BY Bobby Sokolowski | CHECKED | PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION |
| SIGN OFF DATE | | DETAILS | BY | CHECKED | Jeremy LaHaye PROJECT ENGINEER |
| | | QUANTITIES | BY | CHECKED | BRIDGE NO. N/A; POST MILES Various |

**ELECTRICAL DETAILS**
**PARKING LOT LIGHT POLE DETAILS**

DESIGN DETAIL SHEET (ENGLISH) (REV. 03/14/12)

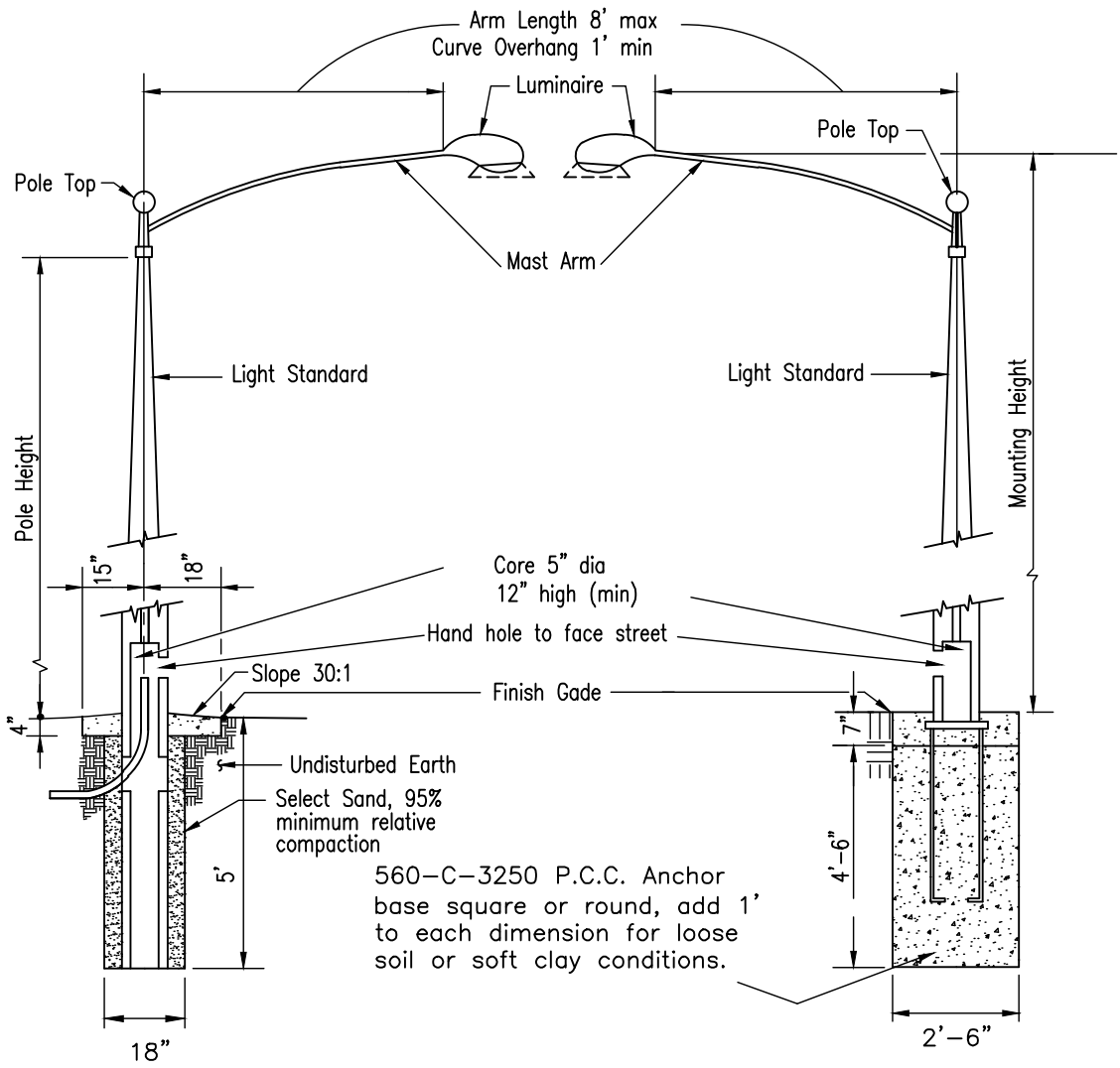
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2783
PROJECT NUMBER & PHASE: 1100020362 CONTRACT NO.: 5001906

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

| REVISION DATES | | | SHEET | OF |
|---|---|---|---|---|
| 09/30/15 | | | | |

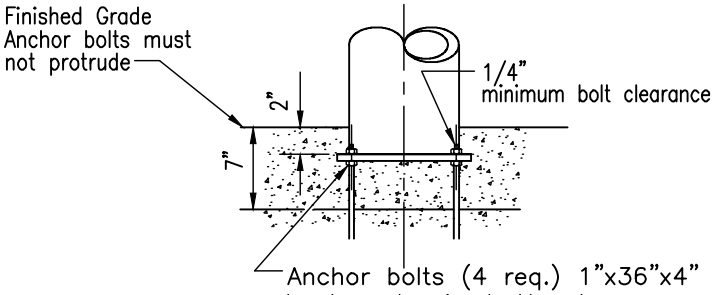
FILE => T:\SanDiego\Legacy\prj_file\1150\1170_SANDAG On-Call_CN 5001906\1170.09_TO 09_Manchester Final Design\500_Design\520_Structures\523_Calculations\523.02 Design Calcs\07. Electrical Structures\




## DIRECT BURIAL FOUNDATION

| POLE HEIGHT | MOUNTING HEIGHT | LAMP SIZE (WATTS) |
|---|---|---|
| 25' ±2' | 27' ±1' | 170 M.V.<br>100 H.P.S.<br>90 L.P.S. |
| 28' ±2' | 30' ±1' | 400 M.V.<br>250 H.P.S.<br>180 L.P.S. |
| 23' -0" | 26' -9" | 70 H.P.S. |
| 26' -6" | 30' -0" | 150 H.P.S. |

## ANCHOR BASE FOUNDATION




| Revision | By | Approved | Date |
|---|---|---|---|
| ORIGINAL | | Kercheval | 12/75 |
| Add Table | | M. Bahmanian | 05/86 |
| Add Metric | | T. Stanton | 03/03 |
| Reviewed | | T. Stanton | 04/06 |
| Delete Metric | | D. Gerschoffer | 06/12 |

**SAN DIEGO REGIONAL STANDARD DRAWING**

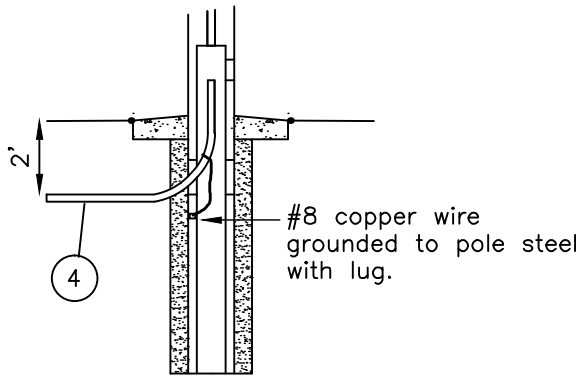
# STREET LIGHTING STANDARD

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

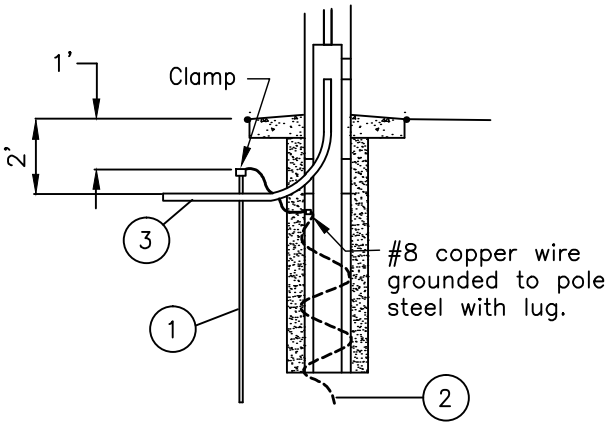
7/26/2012

Chairperson R.C.E. 19246 Date

DRAWING NUMBER **E-1**

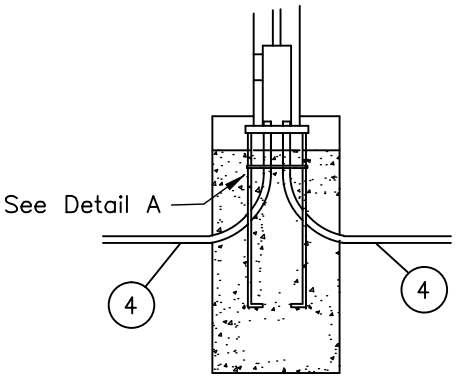



STEEL CONDUIT

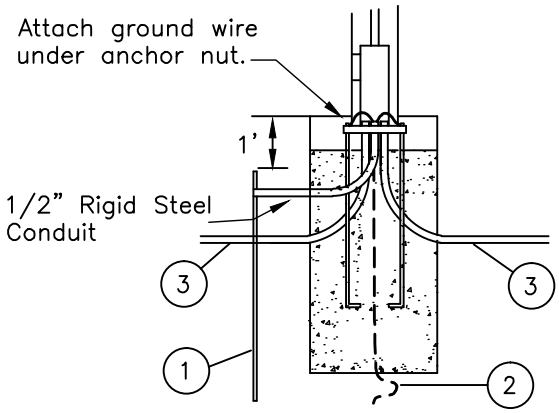



NON–METALLIC CONDUIT

DIRECT BURIAL FOUNDATION




STEEL CONDUIT




NON–METALLIC CONDUIT

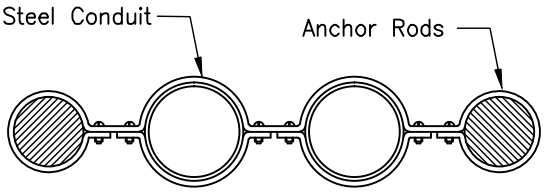
ANCHOR BASE FOUNDATION

(1) 3/4" x 8' copper covered steel ground rod.

(2) Alternate Ground: 15' no. 4 stranded copper wire, coiled.

(3) Approved non–metallic conduit.

(4) Steel conduit.




DETAIL A

| Revision | By | Approved | Date |
|---|---|---|---|
| ORIGINAL | | Kercheval | 12/75 |
| Add Metric | | T. Stanton | 03/03 |
| Reformatted | | T. Stanton | 04/06 |
| Delete Metric | | D. Gerschoffer | 06/12 |
| | | | |

**SAN DIEGO REGIONAL STANDARD DRAWING**

# GROUNDING OF CONCRETE LIGHTING STANDARDS

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

7/26/2012

Chairperson R.C.E. 19246 Date

DRAWING NUMBER **E-2**

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

# TRAFFIC OPERATIONS POLICY DIRECTIVE

TR-0011 (REV 08/2009)

| ROBERT COPP, DIVISION CHIEF (Signature) | NUMBER 11-02 | PAGE 1 OF 12 |
|---|---|---|
| SUBJECT: Updated Managed Lane Design | DATE ISSUED 3/23/2011 | EFFECTIVE DATE 4/7/2011 |
| | DISTRIBUTION<br>☒ All District Directors<br>☒ All Deputy District Directors - Traffic Operations<br>☒ All Deputy District Directors - Maintenance<br>☒ All Deputy District Directors - Construction<br>☒ All Deputy District Directors - Design<br>☒ All Deputy District Directors - Transportation Planning<br>☒ Chief, Division of Engineering Services<br>☒ Chief Counsel, Legal Division<br>☒ Publications (California MUTCD Website)<br>http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd.htm<br>☒ Headquarters Division Chiefs for:<br>Design, Project Management, Planning | |
| DOES THIS DIRECTIVE AFFECT OR SUPERSEDE ANOTHER DOCUMENT? ☒YES ☐NO | IF YES, DESCRIBE<br>High Occupancy Vehicle Guidelines for Planning, Design, and Operations | |
| WILL THIS DIRECTIVE BE INCORPORATED IN THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD) ☒YES ☐NO | IF YES, DESCRIBE<br>Chapters on preferential lane signing and pavement markings to be included in the next edition of the CA MUTCD | |

## DIRECTIVE

In California, managed lanes include high occupancy vehicle (HOV) lanes, high occupancy/toll (HOT) lanes, and express toll lanes. The latter two are referred to generally as "Express Lanes".

**The California Department of Transportation (Department) "2003 High Occupancy Vehicle Guidelines for Planning, Design, and Operations" (HOV Guidelines) and the content of this Policy Directive (Directive) shall be applied during the planning and development of freeway managed lane projects, including conversions of existing managed lanes to incorporate tolling or utilize continuous access. It shall be considered during the planning and development of all other freeway improvement projects (e.g. pavement rehabilitation projects) and during the course of traffic investigations that are addressing operational and safety performance deficiencies.**

**For ongoing projects, changes to the project design pursuant to this Directive shall be determined by the project manager and project engineer in consultation with the Headquarters' Traffic Operations Liaison (Traffic Liaison) and the district HOV program coordinator.** The decision to implement the requirements of this directive will be based on the potential benefits and impacts to the project scope, cost and schedule. **The consultation and recommendations shall be documented in the form of a memorandum for the project files with the signature of the Traffic Liaison indicating concurrence.**

Retrofitting of existing facilities will not be required unless physical conditions for that facility change, such as a change in access type or an HOV-Express Lane conversion.

The technical content of this Directive represents best engineering practices and requirements that will be incorporated into the next edition of the HOV Guidelines. This Directive also incorporates material from the most recent (2009) edition of the federal Manual on Uniform Traffic Control Devices (federal MUTCD). This material will be incorporated into the next edition of the CA MUTCD.

The following principles are expected to guide decision-making on the development and/or operations of managed lanes:

- Employ a systems management approach; managed lane strategies can affect the performance of the entire freeway system. The focus should not just be on the operation of the managed lane and its mobility benefits.
- Balance system performance and overarching goals, including safety, mobility, delivery, stewardship, and customer service when selecting and analyzing project alternatives and key features.
- Consider increasing occupancy requirements if HOV lanes are experiencing severe congestion.
- Consider planning for two managed lanes in each direction of travel if analysis determines it to be practical and beneficial.
- Consider implementing congestion pricing to utilize the full capacity of under-utilized HOV lanes if analysis determines it to be practical and beneficial.
- Ensure uniformity and consistency in the appearance of facilities within a region as much as possible; unique conditions and situations may require unconventional treatment(s).
- Ensure enforcement considerations are taken into account. Consult the California Highway Patrol (CHP) during project development.
- Consult with the Traffic Liaison to ensure that emerging best practices and recent "lessons learned" from collision analysis and research are fully considered and implemented.

MANAGED LANES ACCESS

Managed lanes in California utilize either:

- Limited-access designs (via physical barriers or barrier striping within a buffer space) which may include intermediate access openings.
- Continuous-access designs (contiguous/non-separated).

When planning managed lanes, consideration should be given to both access types. The choice of access type is based on a general evaluation of the performance and management benefits for the entire freeway as well as the capital costs of building and operating the facility. See Attachment 2 for a summary of design, cost and performance considerations for the two types of access designs. Various research and engineering studies on managed lane facilities have found that the highway features that can have the greatest affect on performance, including safety and throughput, are:

- The frequency, location, type and design of intermediate access openings on limited-access facilities.
- Shoulder widths.
- Traffic control and safety devices that provide positive guidance (usually related to access points and driver decision-making, such as overhead signing, striping, and lighting).

For additional information and reference material, see the Background section of this Directive and Attachment 1.

Managed lanes may also utilize drop ramps to and from local streets and direct connectors to and from managed lanes on other freeways. These provide system connectivity with the least potential for adverse performance impacts by allowing traffic to directly exit or enter the managed lanes without weaving across adjacent general-purpose lanes. Drop ramps and direct connectors should be considered where substantial congestion in the general-purpose lanes exists or is expected and there is a significant local demand for access to or from the managed lanes. Refer to Sections 3.7 and 3.8 of the HOV Guidelines for more information.

MANAGED LANES ENGINEERING STUDY REQUIREMENTS

Section 149 of the Streets and Highways Code requires that competent engineering estimates be made of the effects of a managed lane on safety, congestion, and highway capacity prior to constructing such lanes. **A traffic study shall be performed for all managed lane projects. This study shall be composed of an operational analysis and a safety analysis.** This traffic study replaces the "HOV Report" located in Appendix B of the HOV Guidelines. The objective of the study is to determine if, and to what extent, the design of the managed lane will meet the performance thresholds and guidance provided in this Directive, as well as any other thresholds the district or project sponsor may establish. **For new projects, the traffic study shall be conducted as early as reasonable during project development.** Ideally the study is conducted during development of the project initiation document (PID) to confidently establish an accurate cost, scope and schedule for the project. Alternatively, a more general assessment or technical evaluation may be adequate during the PID phase in order to:

- Identify potential performance problems for further study.

- Identify the scope of (and resources need for) a formal traffic study to be performed at the start of the Project Approval and Environmental Document phase.

**The following information and assumptions shall be identified and utilized as part of the traffic study:**

- **Design year peak-hour volumes for the managed lane(s), general-purpose lanes, and adjacent general-purpose ramps. The design year shall be 20 years from the date when the project is scheduled to be completed and opened to traffic as per Highway Design Manual (HDM) Index 103.2.**
- **The design year peak-hour volume of vehicles expected to use access locations.**
- **The types of vehicles expected to use the freeway facility (e.g., transit or trucks).**
- **Geometric constraints on the managed lanes and general purpose lanes, including known and expected bottlenecks and associated queues.**

The operational analysis is to be performed using a methodology that is acceptable to the district and the project sponsor. **The operational analysis shall:**

- **Evaluate the characteristics of the entire freeway facility, including both the managed lane(s) and the adjacent general purpose lanes.**
- **Include a merge/diverge analysis of any drop ramps or direct connectors that may be utilized on the managed lane.**
- **Evaluate the operational impacts of intermediate access openings on a limited-access facility.** Section 4.3 of the HOV Guidelines states that the operation of weaving sections at access openings needs to be considered. See the section on limited-access managed lanes design and performance considerations for more details.

**The traffic safety analysis shall be performed by or approved by the district traffic safety office.** This analysis will focus on the safety impact of the proposed improvements on operating conditions and collision potential by utilizing traffic and collision data and analytical tools and processes. This is especially important when the project proposes a change in the type of access. This safety analysis is independent of the broader safety review process that is required per HDM Index 110.8.

GENERAL MANAGED LANE DESIGN AND PERFORMANCE REQUIREMENTS

**Geometric design of managed lane projects, including lane and shoulder widths, shall conform to the HDM. Deviations from the requirements of the HDM shall be evaluated and approved on a case-by-case basis in the manner prescribed in HDM Index 82.2.** Section 3.10 of the HOV Guidelines provides a priority listing for reductions in cross-sectional elements for various managed lane geometric configurations. **This priority listing shall be utilized in the development of managed lane projects where reductions to cross-sectional elements are deemed necessary.**

State law mandates that HOT lanes operate at a Level of Service (LOS) of "C" or better (LOS "D" may be used if the Department and the operator agree). In addition, federal law mandates that HOT lanes and HOV lanes that are used by non-carpool decaled clean-air vehicles operate at a minimum speed of 45 miles per hour during the peak hour no less than 90 percent of the time over a 180-day period. **These performance thresholds shall be taken into consideration when designing a managed lane project.**

LIMITED ACCESS MANAGED LANES DESIGN AND PERFORMANCE REQUIREMENTS

Limited access operation can be implemented with the use of physical barriers or "barrier" striping to separate the managed lane from the adjacent general purpose lanes. A buffer space is typically provided to accommodate barrier striping and other traffic control devices or features (e.g. reflective markers or channelizing devices). The recommended buffer width is 4 ft (ft). However, this width may be reduced as outlined in the priority listing in Section 3.10 of the HOV Guidelines.

Limited access may be used for Express Lanes in order to designate access/tolling points and minimize toll evasions.

Access to and from a limited-access managed lane is primarily provided through at-grade access openings. At-grade access openings also referred to as at-grade ingress and egress, allow vehicles to move into the managed lane from the adjacent general-purpose lanes and vice versa. The different types of at-grade access openings (see Attachment 3) include:

- "Weave Zone": Combined ingress and egress created by short breaks in the barrier striping at carefully selected locations.
- "Weave Lane": Combined ingress and egress, which is facilitated by a weave or speed, change lane. The inclusion of a weave lane minimizes the potential for unstable flow or turbulence along the "crown" weave due to the speed differential between the managed lane and mixed flow lanes.
- "Merge Lane": Separated ingress and egress utilizing dedicated merge lanes. This design separates operational maneuvers and provides drivers with a better opportunity to adjust their speed to match that of the traffic stream into which they are merging. This further reduces the potential for unstable flow.

Any one or all three of these types of at-grade access openings may be adequate for a given location. The type of access opening used in a corridor should be consistent to better satisfy driver expectations. Site-specific operating conditions may warrant the use of a different type. Variations will typically require mitigation in the form of additional signing, enhanced pavement markings, lighting, and/or other traffic control, management, or safety systems.

Existing interchange spacing is the primary consideration for determining the location of access openings. An equally important consideration is the existing and expected location of mainline operational bottlenecks and geometric constraints that produce recurrent congestion and queuing along the general purpose lanes. Access openings should be located and designed such that they will perform at Level of Service (LOS) "C" or "D", as per HDM Index 504.7. They should not produce adverse impacts to managed lane and general purpose lane performance, nor should they be placed where recurrent general purpose lane congestion is expected. This avoids the potential for undesirable conditions that result in operational and safety deficiencies. If the mainline queuing at a proposed access location is limited to a small portion of the overall peak period, then a "weave lane" or "merge lane" configuration might need to be evaluated and provided if it will eliminate or minimize adverse impacts.

Access openings should have a minimum length of 2000 feet (ft). A minimum of 800 ft per lane change should be provided between the opening and the nearest freeway entrance or exit ramp. These lengths should also be utilized at the beginning and ending of managed lanes. These changes supersede the measurements shown in Figure 4.2 of the HOV Guidelines. A figure showing the new measurements for access openings is provided in Attachment 3.

**The type and location of proposed access openings shall be determined by the operational analysis.** It is expected that an iterative process would be used. For example, an access opening using the simplest design and minimum lengths might be evaluated first. If the analysis supports this concept, then no further analysis of that location is necessary. Otherwise, the process would continue until an appropriate concept is identified, or all concepts are exhausted. The iterative process may require consideration of the following modifications or features (not necessarily in this order):

- Increased weaving lengths.
- Alternative types of access.
- A second managed lane in the vicinity of the opening.
- Relocation of the access opening.
- The addition of auxiliary lanes connecting ramps on the general purpose lanes.
- The use of drop or direct connector ramps.

**Proposed access openings that are estimated to operate below the performance thresholds or use less than the minimum lengths or spacing shall be subject to the review and written concurrence of the Traffic Liaison.** Approval will be considered when the need for the opening is justified by traffic data and the safety analysis and if traffic impact mitigation is incorporated. Approval may also require specific system monitoring to identify and correct potential performance deficiencies.

**Lighting shall be provided for each access opening to facilitate decision making and lane changing maneuvers during hours of darkness. Deviations from this requirement shall be approved by the Traffic Liaison.** Lighting will alert drivers that they are approaching left side weaving sections where lane changing and turbulence may be concentrated. Lighting should also be considered for freeway segments located between an access opening and a freeway-to-freeway interchange when the access serves that interchange. This is due to the higher weaving volumes and higher number of lane changes expected in these areas. Contact the district Electrical Design office for information on lighting requirements and assistance in the location and design of all lighting systems.

CONTINUOUS-ACCESS MANAGED LANES DESIGN AND PERFORMANCE REQUIREMENTS

Continuous-access managed lane facilities are designed to allow vehicles to enter or leave at any point. No specific ingress/egress locations are designated. Instead, vehicles move into and out of the managed lane at any point in the same way, they would change lanes in the general-purpose lanes.

Traditionally, continuous-access facilities have only been employed in areas with shorter durations of directional congestion during peak commute traffic periods. However, continuous-access operation may be utilized whether the managed lane operates full-time or part-time. Detail M-2 in the HOV Guidelines shows an option for full-time continuous-access managed lanes.

A limited-access facility may be converted to a continuous-access facility if the conversion is funded by the project sponsor requesting the change. **A traffic study, as described in this directive, shall be required for any conversion project.**

**If a new or conversion project is on a route where Express Lanes are planned within the next five years, and there is an intent to operate the Express Lane with continuous access, joint consultation shall be conducted between the project**

**sponsor, the Department and the CHP to identify strategies in limiting violations. Final recommendations from each entity shall be documented in the project file.** Frequent toll readers, visible manual enforcement, and other innovative strategies are expected to be considered.

MANAGED LANES STRIPING AND PAVEMENT MARKINGS REQUIREMENTS

**When physical barriers are used to limit access, the facility shall be striped in accordance with Section 3B.23 of the CA MUTCD.**

**When barrier striping is used to limit access, the facility shall be striped in accordance with the requirements of Chapter 5 of the HOV Guidelines.** Paint, rather than thermoplastic, should be used. The 2009 edition of the federal MUTCD requires the use of parallel wide solid white stripes on limited access managed lanes to prohibit and restrict lane changing. The Department is in the process of adopting this standard, pending an amendment to the California Vehicle Code. Using paint for the barrier striping will allow for easier conversion to the federal standard once it is adopted.

**Continuous-access facilities shall be striped in accordance with the requirements of Section 3B.23 of the CA MUTCD.** The 2009 edition of the federal MUTCD provides several different options for continuous access striping. The Department is performing engineering studies that will lead toward the selection and adoption of one of these options.

**The diamond symbol pavement marking shall only be used on HOV lanes. An "HOV LANE" pavement marking shall be used on HOV lanes; the "CAR POOL LANE" pavement marking shall not be utilized. For other types of managed lanes, the appropriate pavement marking, such as "BUSES ONLY", "FASTRAK ONLY" (when all users must have an electronic toll collection transponder) or "FASTRAK OR HOV ONLY" (when only vehicles not meeting the occupancy requirement must have a transponder), shall be used**. Markings should be placed along the managed lane as shown in Chapter 5 of the HOV Guidelines.

**Deviations from these requirements shall require the concurrence of the Traffic Liaison.** The Traffic Liaison should be consulted prior to finalizing striping plans for a managed lane in order to receive the latest guidance and direction.

MANAGED LANE SIGNING REQUIREMENTS

**Overhead advance guide signs shall be provided at least 0.5 mile prior to the beginning of limited-access HOV facilities. Overhead guide signs shall be provided at the beginning of and at subsequent at-grade access openings to limited-access HOV facilities. These signs shall conform to the E8-3 and E8-2 signs shown in Figures 2G-5 and 2G-6 of the 2009 edition of the federal MUTCD.** An overhead advanced guide sign may also be used in advance of at-grade access openings. **The R87-1(CA) overhead sign shall be placed at the beginning of the buffer or barrier separation.** These requirements amend the figures shown in Details M-1 and M-4 of the HOV Guidelines. The additional guide signs and the adjustment of the regulatory signs are expected to help facilitate driver decision making by more clearly identifying access openings, especially for drivers who are eligible to use the HOV lane and have just entered the freeway.

**The R86(CA), R86-2(CA) or R86-3(CA) and R93-2(CA) signs shall be repeated as a package at half-mile intervals along the length of a facility and shall be placed just downstream of where drop ramps or direct connectors merge into the facility.** This requirement amends the figures shown in Details M-1 through M-4 of the HOV Guidelines.

Signing for managed lanes that utilize pricing (Express Lanes) should comply with Sections 2G.16 through 2G.18 of the 2009 edition of the federal MUTCD until the adoption of the next edition of the CA MUTCD.

**Deviations from these requirements shall require the concurrence of the Traffic Liaison.** The Traffic Liaison should be consulted prior to finalizing signing plans for any managed lane in order to receive the latest guidance and direction.

MANAGED LANE ENFORCEMENT REQUIREMENTS

**Enforcement strategies and features shall be considered during the planning, design, and operational phases of all managed lane projects.** Enforcement of managed lanes is important to maintain flow, safety, and system management capabilities. Violators could impact flow rates and impact the ability of the operating agency to manage accordingly. With any access type, enforcement requires some investment and strategy for zones, systems, and personnel. Due to the personnel cost and traffic impacts of comprehensive manual enforcement, automated enforcement technology may be used once it is demonstrated to have an acceptable degree of accuracy. Until then, occupancy verification requires manual observation, which can be complex given tinted windows and obscured viewing into vehicles.

Section 6.4 of the HOV Guidelines provides guidance for enforcement area configurations utilizing the median shoulder. **Median shoulder enforcement areas shall only be used when the managed lanes are separated from the general purpose lanes by a physical barrier (such as vertical pylons or a concrete wall).** CHP policy only allows enforcement stops in the median shoulder under these conditions.

Observation areas should be used on the median shoulders of facilities that do not utilize physical separation. They may be used on facilities that utilize physical separation. **The provisions in Section 6.4 of the HOV Guidelines related to the placement of median shoulder enforcement areas shall be applicable to observation areas.** Observation areas should be placed downstream of intermediate access points on limited-access facilities and downstream of drop ramps and direct connectors. The recommended dimensions for an observation area are a width of 14 ft and a length of 100 ft, preceded by a 15:1 taper and followed by a 50:1 taper.

**Enforcement plans for Express Lane operations shall be developed jointly between the CHP, the Department, and the project sponsor.**

## DELEGATION

No new delegations of authority are created under this policy.

## BACKGROUND

Managed lanes are lanes that are proactively managed in response to changing conditions and are increasingly used nationwide to deal with the increasing congestion and limited resources. The term "managed lanes" may refer to:

- HOV lanes: Buses, vans, and cars with more than one person use these lanes.
- Express Lanes: Managed lanes that utilize congestion pricing:
  - HOT lanes: An HOV lane that allows vehicles with lower occupancy to have access to the lane by paying a toll. The lanes are kept free-flowing by dynamic and congestion-based tolling, a strategy supported by the Department and the Federal Highway Administration. Tolls may change based on real-time conditions (dynamic) or according to a schedule (static).
  - Express toll lanes: Facilities in which all users are required to pay a toll, although HOVs may be offered a discount. They also utilize electronic tolling and congestion pricing. The 91 Express Toll Lanes are the only such facility in California.

Strategic goals of managed lane projects are:

- Decrease congestion duration and reduce congested locations.
- Increase person-throughput on a corridor by increasing vehicle occupancy, whether through carpooling, vanpooling or transit.
- Decrease per-person air quality impacts.
- Increase congestion avoidance choices for the public.
- Increase predictability of travel by reducing variations in delay.
- For Express Lanes, generate revenue for corridor transportation improvements that include transit and closing gaps in the managed lane network.

The type of managed lane facility utilized will be generally based on regional needs, physical and geographic setting, and unique fiscal circumstances. Due to tolling authority laws in California, Express Lanes are typically initiated by, and jointly operated with, regional transportation agencies. This relationship requires policies and standards that can be applied consistently statewide yet be flexible enough for local needs.

The Division of Traffic Operations is participating in a statewide effort to enhance California's network of managed lanes through improved performance management, partnerships, and design/operation strategies. Regional Transportation Plans contain Express Lanes as congestion management and greenhouse-gas reduction strategies. Regional partners are developing managed lanes projects for imminent use in the San Francisco Bay, Inland Empire and Los Angeles areas. The updated guidance is expected to:

- Improve the performance of managed lanes in a cost effective manner.
- Ensure a system management approach that will include all lanes.

- Mitigate the driver performance impacts resulting from the increased complexity of freeways with managed lanes.
- Provide flexibility for regional decisions.
- Provide needed compliance with federal standards.
- Provide consistent methodology statewide.

While many sections of the HOV Guidelines remain valid, some additions and revisions are needed to communicate updated knowledge and policy to internal and external partners. This Directive addresses only the most-urgently needed guidance updates. Further updates and broader topics will be updated during 2011 and 2012. This effort has been supported by the findings and recommendations of a parallel initiative (Strategic Highway Safety Program Challenge Area 5) which is focused on the impacts of our evolving and increasingly complex metropolitan freeway infrastructure and operating conditions on driver performance and safety outcomes. See Attachment 1 for a summary of this background knowledge.

This Directive is a result of the following developments.

- Increasing congestion has led to a need to coordinate strategies, use all available freeway capacity and resources, and maximize performance of corridors.
- Research and corridor specific engineering studies concerned with performance deficiencies have expanded our understanding of the design, operational and safety features that affect managed lane and freeway system performance.
- Safety research has produced findings that supersede previously established knowledge and practices regarding managed lanes. See Attachment 1 for a summary of findings and recommendations from the 2009 report, "A Comparative Safety Study of Limited versus Continuous-Access High Occupancy Vehicle (HOV) Facilities", and the research team's collaboration with the Department's traffic safety engineering practitioners and specialists.
- Lessons have been learned from managed lane access conversion projects in southern California.
- The Department has committed to updating technical guidance and increasing statewide consistency and flexibility in managed lane operations.
- The 2009 edition of the federal MUTCD contains new managed lane signing and striping policies. There is a more stringent requirement for California to be in substantial conformance with those policies.
- There is intensifying interest in implementing Express Lanes immediately in many urban areas of the state.
- Express Lanes are relatively new to the nation and California's project development process, and as such little policy guidance exists.
- Lessons have been learned from implementation of Express Lanes in other states in the last three years.

## DEFINITIONS

When used in this Traffic Operations Policy Directive, the text shall be defined as follows:

1) **Standard:** A statement of required, mandatory or specifically prohibited practice. All standards text appears in **bold** type. The verb **shall** is typically used. Standards are sometimes modified by Options.

2) Guidance: A statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements text appears in underline type. The verb "should" is typically used. Guidance statements are sometime modified by Options.

3) Option: A statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a **Standard** or Guidance. All Option statements text appears in normal type. The verb "may" is typically used.

4) Support: An informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements text appears in normal type. The verbs "shall", "should", and "may" are not used in Support statements.

## ATTACHMENTS

## Summary of Background Knowledge

### Updating perspective on the performance of freeways with continuous-access HOV lane operation

In 2009, a University of California at Berkeley / Partners for Advanced Transit and Highways research team completed a comprehensive study of California freeways with HOV lanes. The research team compared collision data analyses for large samples of freeway facilities with continuous-access and limited-access HOV lanes. Contrary to the technical opinions presented in the current HOV Guidelines, the research team found that HOV facilities with limited access operation offer no safety advantages over those with continuous-access operation. A higher percentage of collisions were concentrated on the sample set of limited-access HOV lanes, which also had higher collision rates compared to the sample set of continuous-access HOV facilities.

The research team and the Department's traffic safety practitioners then identified the various design, operational, and safety features that affect the performance of freeways with limited access operation. The most prominent of these features include: access configurations, weaving sections (i.e. the type and length as determined by the location, spacing, and design of access openings), lighting, shoulder width, overhead signing, and pavement delineation.

Similar studies by the Texas Transportation Institute support these findings. The Department adopted a policy in 2008 that allows for the conversion of limited-access facilities to continuous access and continues to support continuous access as a HOV lane design that provides safety and throughput performance in a more cost-effective manner.

### Updating design criteria for the length and location of access openings for limited-access HOV facilities

During the last several years of evaluating safety and mobility performance issues associated with HOV lane access points, substantial changes to access opening location, spacing and geometry have become clearly necessary. Bottlenecks and collision concentrations stem from the complex weaving action of vehicles at these access points, and across all freeway lanes between freeway entrances/exits and the HOV lane access points. As volumes increase, the impact of this weaving activity on freeway and driver performance becomes more intense, and eventually requires remediation through infrastructure adjustments and enhancements:

- General collision studies in California support increasing the weaving length at and between access openings beyond the current practices found in the HOV Guidelines.
- Nationally recognized research findings and products recommend longer openings and longer distances for the weaving along and between successive access openings. Prior and current national practice allows for a 1000-foot minimum access opening, and (two-sided) weaving lengths that are based on providing 500-800 ft per lane change.
- Based on the above research findings, and years of experience managing location-specific operational and safety problems, the Department's freeway operations and traffic safety engineering practitioners recommend the following changes to our standard practices:
  - increase the minimum access opening length from 1300 ft to 2000 ft, and
  - increase the "per-lane change" distance from 650 ft to 800 ft in order to avoid pushing drivers to make consecutive lane change maneuvers across the entire freeway
- Enhancements will include the expanded use of lighting, pavement delineation, and overhead signing (see next section).

While the updated criteria are substantiated, flexibility is needed when applying the criteria at the project level. The aforementioned engineering practitioners should use analytical tools, consult with the Department technical reviewers and specialists, and then exercise engineering judgment to determine the site-specific best fit. This will often be an iterative process.

**Updating signing and lighting of limited-access designs**

Express Lane signing is new to the industry, was just added to the 2009 edition of the federal MUTCD and in May 2010 was accepted by the California Traffic Control Devices Committee for addition to the next (2011) edition of the CA MUTCD. In addition, the Department's freeway safety team (comprised of district and headquarters traffic safety staff and the Traffic Liaisons) recommended the use of lighting along all limited-access openings. This was based on research and the collision studies performed in support of the Strategic Highway Safety Program Challenge Area 5 Action Plan. Speeds, weaving volumes and density are high and headlight glare prevail especially during the critical periods just prior to the morning peak period, and just beyond the evening peak period. Overhead lighting will mitigate the impact of adverse infrastructure and operating conditions (headlight glare, narrow shoulders, and speed differential) on HOV and Express Lane drivers attempting to execute the complex weaving maneuvers required.

A selection of references:

1. A Comparative Safety Study of Limited Versus Continuous Access High Occupancy Vehicle (HOV) Facilities, University of California at Berkeley UCB-ITS-PRR-2009-22, 2009
2. Assessment and Validations of Managed Lanes Weaving and Access Guidelines, University of Texas at Arlington, 2010, http://www.uta.edu/ce/faculty/williams/report0-5578-1.pdf
3. Managed Lane Ramp and Roadway Design Issues, Texas Transportation Institute, 2003, http://tti.tamu.edu/documents/4160-10.pdf
4. Managed Lanes - Traffic Modeling, Texas Transportation Institute, 2002, http://tti.tamu.edu/documents/4160-4.pdf

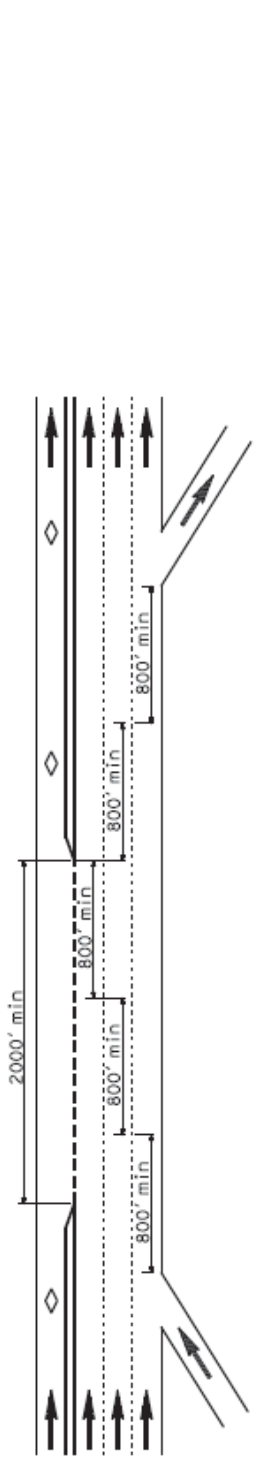
## Summary of Design, Cost and Performance Considerations for Continuous and Limited-Access* Facilities

Research and engineering studies show no significant generalized differences in safety and throughput performance between limited and continuous access. The design decision will more appropriately be based on the site-specific types and patterns of traffic and the ability to manage this traffic using the access most appropriate and cost-effective for the corridor.

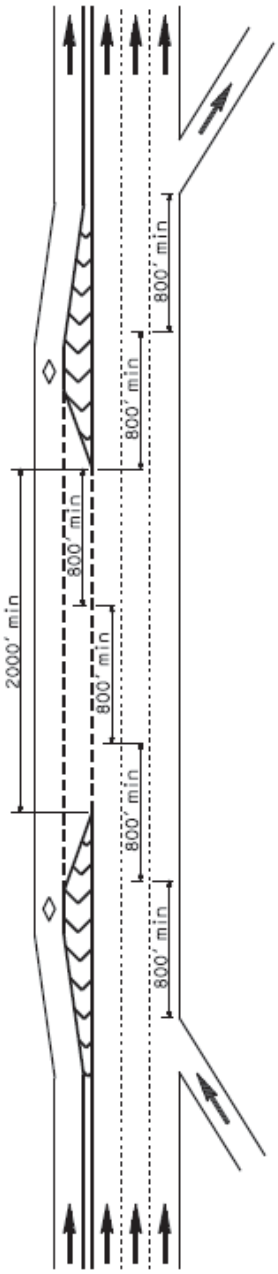
| Criterion | Limited-Access | Continuous-Access |
|---|---|---|
| Cost | • Detailed operational analysis and an iterative design process is needed for best placement of access points<br>• May require more roadway width to accommodate the buffer and access openings<br>• Additional pavement markings and overhead signing are required<br>• Investment in monitoring and adjustment of "hot spots" near access points may be needed | • Lower cost for design, analysis, construction, operation, and maintenance<br>• Require less engineering resources to make adjustments |
| Mobility, Safety and Performance | • Access points can become initial source of unstable flow and queuing in the managed lane, which can trigger the onset of congestion among all lanes<br>• Left-side access openings intensify weaving in the form of concentrated flows and consecutive lane changing across all freeway lanes which may present difficulties for all drivers during periods of congestion.<br>• Drivers are unable to access the managed lane when the need is greatest; this could induce violation of the barrier striping, which may be unexpected by drivers in the managed lane<br>• Can be used to restrict lane changing where demand has produced or may produce a performance deficiency<br>• Accommodates longer-distance trips by discouraging short-term use of lane<br>• Smooth flow, higher speeds can result from limited merging<br>• Greater separation to accommodate lane closure activities in the lane or adjacent lanes<br>• Access to some general purpose ramps is not as convenient | • Users must focus on potential for vehicles to enter or exit the managed lane at any point; this may reduce speeds<br>• Allows last-minute lane changing to reach freeway exit ramps<br>• No concentrated weaving; lane changing occurs along entire corridor when gaps appear<br>• Users can readily access all general purpose ramps<br>• Less complex decision-making by drivers<br>• Easily utilized during off-peak (for part-time facilities)<br>• Less separation to accommodate lane closures<br>• Drivers will not worry about violating barrier striping when managed lane is closed for construction, maintenance, or incidents |
| Enforcement | • Potentially lower toll evasion and occupancy violation<br>• Ease of enforcement<br>• Express Lane toll collection is simplified due to need for fewer readers | • Greater investment in enforcement activity, systems, and zones to produce the lower violation rates expected with limited-access designs<br>• Potentially higher toll evasion and occupancy violation<br>• Increased cost for Express Lane toll collection due to need for additional readers |

*This summary document does not apply to limited-access designs in which managed lane access is provided only via direct ramps to a local or other state highway or freeway

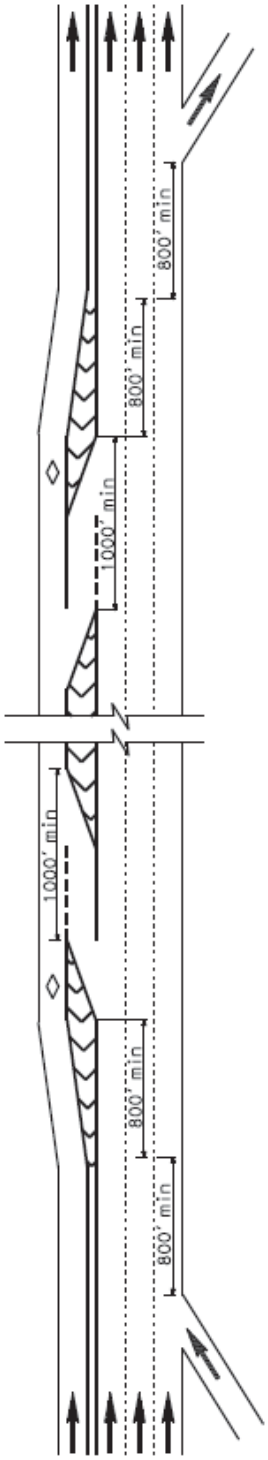
**Access Types with Minimum Recommended Opening Lengths and Weaving Distances**




COMBINED INGRESS-EGRESS
WEAVE ZONE
(not to scale)




COMBINED INGRESS-EGRESS
WEAVE LANE
(not to scale)




SEPARATED INGRESS-EGRESS
MERGE LANE
(not to scale)

**Traffic Manual**

## Chapter 9 - Traffic Signals and Lighting

### Section 9-06 - Highway Safety Lighting

**9-06.1 Introduction** The purpose of highway safety lighting is to promote the safe and orderly movement of traffic by illuminating certain permanent features or conditions which are unusual, which require additional care and alertness to negotiate, and which, if illuminated, may be more readily comprehended and so compensated for by the motorist.

## Section 9-07 - Freeway Lighting

**9-07.1 General** On freeways, highway safety lighting should be installed at particular points in interchange areas. This lighting serves to illuminate areas of potential vehicle conflict and to delineate exit ramps, entrance ramps, and island noses. Except where required by unusual freeway geometrics, lighting should not be installed unless the traffic volumes shown in Section 9-07.2 are met. The high standard of signing, markings, and delineation now being provided makes it possible in such situations to defer the installation of lighting facilities until required by increased traffic. The use of high mast lighting systems may be considered where conventional lighting standards are difficult to maintain.

**9- 07.2 Warrants**

1. Definitions.

   a. Urban, Suburban and Rural Conditions. Urban conditions are considered to exist in those areas so designated on maps approved by the FHWA. Suburban conditions are considered to exist in those areas contiguous to the designated urban areas. Rural conditions exist in all other areas.

   b. ADT is the average daily traffic for up to five years after the freeway is opened to traffic.

   c. A surface street is any street other than a freeway. A local street is a surface street under the control of a local agency.

2. Freeway Interchange Safety Lighting.

Freeway Interchange safety lighting is considered to be warranted under either of the following conditions:

a. Where the total sum of the ADT ramp traffic entering and leaving the freeway within the interchange area exceeds 5,000 under urban conditions, 3,000 under suburban conditions and 1,000 under rural conditions. The above figures refer to the total sum of the ADT for the normal four ramps at an interchange. Where the number of ramps

connecting with the freeway is less than four, the above total sum of ADT may be reduced proportionately.

b. Where the ADT on the freeway exceeds 25,000 for urban conditions, 20,000 for suburban conditions and 10,000 for rural conditions.

3. Freeway Ramp-Surface Street Intersection Safety Lighting.

Safety lighting at the intersection of a freeway ramp and a surface street is considered warranted if either of the conditions in 2a or 2b above are satisfied.

4. Lighting of Existing Local Streets within the Limits of the Freeway Project.

Lighting of existing local streets within the limits of a freeway project, including lighting on local streets over or under the freeway, is considered warranted if:

a. The local street is lighted to modern standards up to the freeway right of way and the local agency agrees to assume ownership and cost of maintenance; orb. The local street is not lighted to modern standards and the local agency agrees to assume ownership and all costs of installation and maintenance.

If a local agency indicates that it proposes to install lighting on the local street within five years after construction is completed, the following should be installed on the project at 100% State expense:

a. Conduit and other equipment in and under paved areas.
b. Provisions for future structure lighting as stated in (7) below:

5. Lighting of New Local Streets within the Limits of the Freeway Project..

The installation of lighting on new local streets, including new frontage roads that are constructed on new alignment for a local agency shall be governed by the following:

a. Lighting may be installed when requested by the local agency, only if there is existing lighting in the area and if that lighting is owned by the local agency. The lighting design and financing shall follow the guidelines in Section 9-09.7.
b. Where the existing lighting is owned by a private utility, only equipment that will be in or under paved areas shall be installed by the State. See Section 9-09.7.

c. If no lighting exists in the area, new lighting shall be installed only if the local agency agrees to finance the installation and to assume the cost of ownership and maintenance.

6. Lighting for Exclusive Pedestrian Facilities.

The lighting for exclusive pedestrian facilities within the freeway project is considered warranted at the following locations:

a. Separated walkways (not sidewalks) and crosswalks within the interchange areas.
b. Bicycle paths at roadway crossings and at underpasses.
c. Bus stops within the interchange areas.
d. Pedestrian overcrossings and undercrossings.

Lighting shall be provided on pedestrian overcrossings and undercrossings where the local agency agrees to assume ownership and cost of maintenance. Pedestrian undercrossings shall be provided with adequate daytime as well as nighttime illumination.

7. Freeway Structures Lighting.

Lighting on or under a freeway structure is considered warranted if:

a. The lighting is for the purpose of illuminating acceleration lanes, deceleration lanes, weaving areas or walkways.

b. It is a part of local street lighting as stated in (4) or (5) above.

Provision for future lighting may be installed in structures for freeway illumination only if there is a definite requirement to install lighting as warranted above in the future. Provision for future lighting consists of conduit, pull boxes, anchor bolts and flush soffit luminaires.

8. Replacement of Lighting Owned by Other Agencies.

See Section 9-09.7

9. Lighting for Ramps at Rest Areas and Truck Inspection Stations.

Lighting on freeway acceleration and deceleration lanes at rest areas and truck weight and inspection stations shall be considered in the same manner as interchange ramps.

## Section 9-09 - Highway Safety Lighting Development Procedures

### 9-09.7 Reconstruction of Existing Facilities

1. Freeways

   When affected by State freeway construction, existing street lighting facilities owned by a local agency shall be replaced in kind, as nearly as possible, at 100% State expense using salvaged material where feasible. In the event the local agency desires to have the relocated local agency owned lighting system reconstructed to an improved standard as part of a State contract, the difference in cost between replacement in kind and the construction requested shall be estimated and the agency shall agree to reimburse the State for the additional cost. The reconstruction of existing street lighting facilities owned by a private utility is the responsibility of the utility and will be handled by the Division of Right of Way. See Section 9-07.2(5b).

## Section 9-10 - Highway Safety Lighting Design Standards

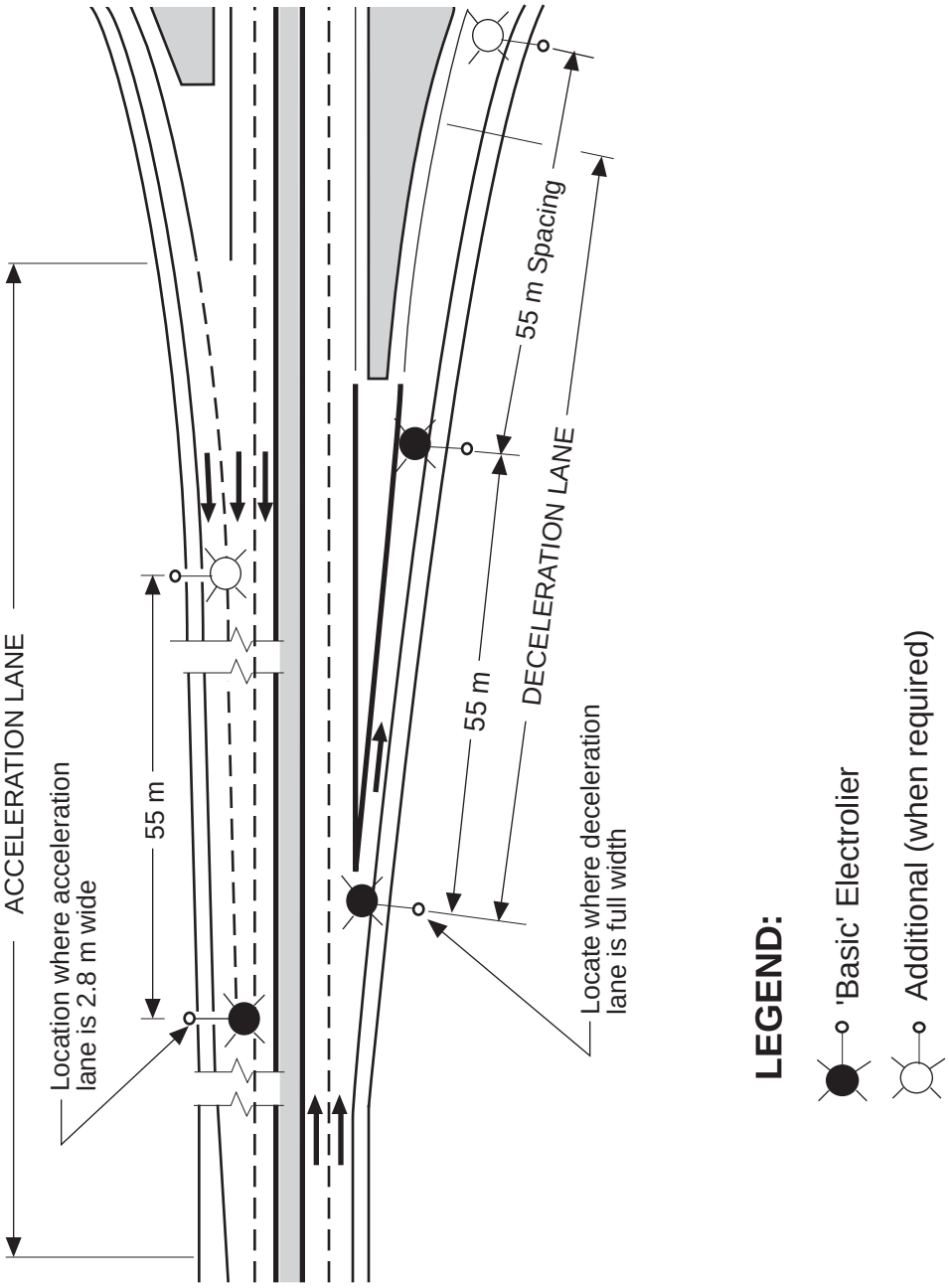
**9-10.1 General** The design of highway safety lighting by the California Department of Transportation (Caltrans) is based upon the following publications:

1. Traffic Manual (Caltrans)
2. Standard Specifications (Caltrans)
3. Standard Plans (Caltrans)
4. Signal and Lighting Design Guide (Caltrans)

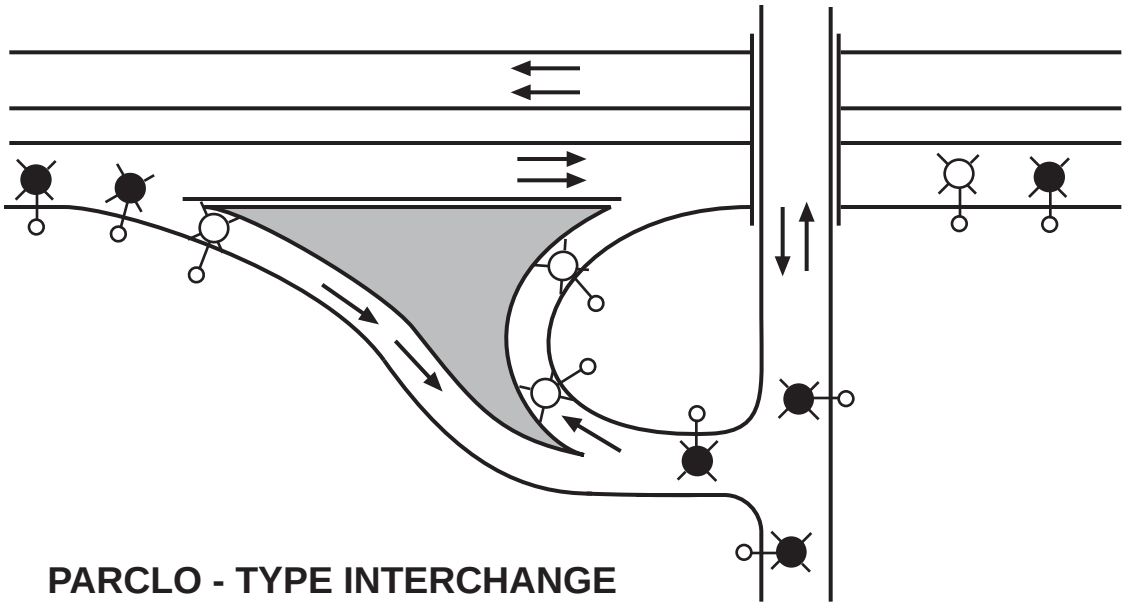
**9-10.2 Freeway Ramps and Connections** A minimum of two luminaires should be placed at each freeway exit ramp and one luminaire at each freeway entrance ramp. Typical locations are shown in Figures 9-25 and 9-26. Typical locations for luminaires at the intersections of freeway ramps and surface streets are shown in Figure 9-26.One or more additional luminaires may be installed when justified by geometrics, traffic patterns, background ambient lighting and/or freeway ramp traffic volumes. Additional lighting may be installed if ramp traffic meets the following volumes during one hour of darkness:

| *Freeway ADT* | *Exit Ramp Volume* | *Exit Ramp Ltg.* | *Entrance Ramp Volume* | *Entrance Ramp Ltg.* |
|---|---|---|---|---|
| >75,000 | >300 vph | +1 | >300 vph | +1 |
| >150,000 | >700 vph | +2 | >700 vph | +2 |

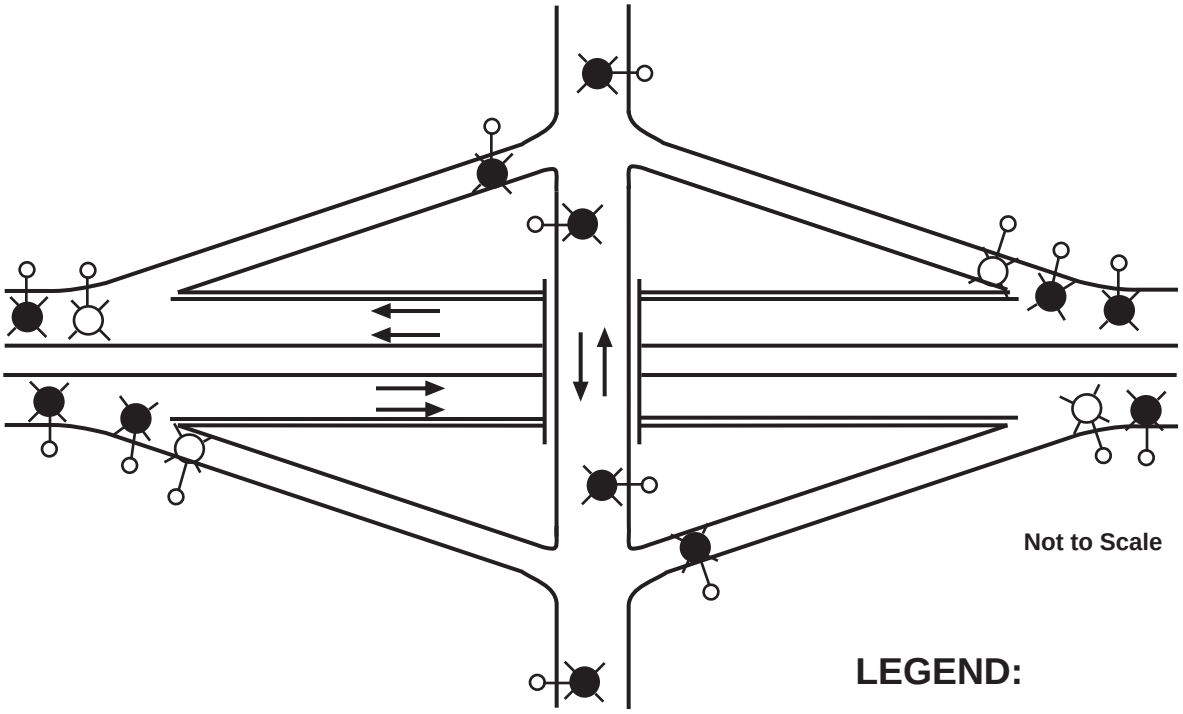
**Figure 9-25**
**FREEWAY LIGHTING**



## Figure 9-26
## FREEWAY LIGHTING



**PARCLO - TYPE INTERCHANGE**



Not to Scale

**LEGEND:**

'Basic' Electrolier

Additional (when required)

**DIAMOND INTERCHANGE**

## PWP/TREP Amendment: Public Comment & Interested Parties List

*February 3, 2016*

### Summary

40 Number of unique commenters
83 Number of requests to be added to Interested Parties e-mail list

### Topic Areas Addressed

*NOTE: The sum of topic areas is greater than the number of unique commenters because many comments addressed multiple topics. In these cases, the comment is split into multiple parts, with a different letter assigned to each topic (1A, 1B, etc.).*

**Transportation Improvements**

| | |
|---|---|
| 35 | Coastal Rail Trail-Oppose |
| 3 | Coastal Rail Trail-Support |
| 3 | Active Transportation (except Coastal Rail Trail) |
| 1 | Transit/Rail |
| 1 | Roadway |
| 1 | Airport Access |

**Environmental Impacts**

| | |
|---|---|
| 4 | Noise |
| 4 | Parking |
| 2 | Lighting |
| 1 | Air Quality |
| 1 | Coastal Bluffs |
| 1 | Traffic |

**General**

| | |
|---|---|
| 1 | General Program Support |
| 1 | General Program Opposition |

**Other**

| | |
|---|---|
| 38 | No Comment-Interested Party |



| Comment No. | Date of Submittal | Method of Submittal | Name | Address | Telephone | Email | Email List? | Comment | Topic Area |
|---|---|---|---|---|---|---|---|---|---|
| 1A | 1/26/2016 | Comment Slip | Ralph McKinnie | [redacted] | | | Y | I represent the Sun Valley Home Owners Association. Phase 1 enhancement and the associate amendments effects the area of our homeowners association. Please list us as an interested party. Two issues come to mind: 1) your amendment regarding the lighting negatively impacts our Dark Sky Policy. | Lighting |
| 1B | 1/26/2016 | Comment Slip | Ralph McKinnie | | | | Y | 2) your intent to pave the trails with AC is not in compliance with our community character. | Coastal Rail Trail-Oppose |
| | | Comment Slip | Tom Beckford | | | | N | The plan for the Encinitas segment of the Coastal Rail Trail for bike and pedestrians is a good thing. We should do it even if there is vocal minority opposition. Can the fence along the railroad track be like that in San Clemente? It allows good pedestrian access to the beach. | Coastal Rail Trail-Support |
| | | Comment Slip | Tom Beckford | | | | N | The Phase 1 overpass improvements planned for Encinitas Blvd and Santa Fe Drive are a good thing. The sooner the better. We needs safe routes for bikes and pedestrians. | Active Transportation (except Coastal Rail Trail) |
| | | Comment Slip | Bill Anderson | | | | Y | This rail trail and fence project is poorly designed and ill concieved. You have not listened to the actual homeowners and locals. Your plan is to fence us in and destroy the beautiful nature landscape. The fences will end up with broken sections and not stop people from crossing. The underground at Montgomery was the right way and now you're band-aiding it with an at level crossing, so increasing the noise pollution. What's the big rush? | Coastal Rail Trail-Oppose |



PRIVATE INFORMATION REDACTED

| Comment No. | Date of Submittal | Method of Submittal | Name | Address | Telephone | Email | Email List? | Comment | Topic Area |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 1/26/2016 | Comment Slip/Sign in Sheet | Craig Arnold | [redacted] | [redacted] | [redacted]com | Y | I am not in favor of this project. Walking along the existing dirt trail and not having to climb over a fence to get to the beach makes where I like in Cardiff feel special-NOT paved over and fenced off. Spend our money on something more important. | Coastal Rail Trail-Oppose |
| 5 | 1/26/2016 | Comment Slip | Karen Arnold | [redacted] | [redacted] | [redacted]com | Y | Please do not pour concrete along our beautiful coastal parts. Cardiff is beautiful for its natural beauty. We don't need fences, other than what is already there. Use the 101 bike path and walkway that is already there. | Coastal Rail Trail-Oppose |
| 6A | 1/26/2016 | Comment Slip | James Black | [redacted] | [redacted] | [redacted] | Y | I am president of the Homeowner's Association on San Elijo Ave. Our homeowners and residents object to the loss of parking on the west side of San Elijo | Parking |
| 6B | 1/26/2016 | Comment Slip | James Black | [redacted] | [redacted] | [redacted] | | I am president of the Homeowner's Association on San Elijo Ave. Our homeowners and residents object to... the destruction of the natural bluff area and to the addition of an at-grade crossing (this city should never add another at-grade crossing, they should be acting to reduce the impact of the train, not increase them) and finally, to the excess of public funds used to relocate bike and pedestrian traffic onto the east side of the railway. The rail should be used west of the 101. | Coastal Rail Trail-Oppose |
| 7 | 1/26/2016 | Comment Slip | Dana McGuire | [redacted] | [redacted] | [redacted] | Y | We do not want the rail trail in Cardiff! We love where we live as is. We have a perfectly fine walking trail that already exists west of the 101. Why are you going to destroy the last natural part of our community that we LOVE so much?! If we wanted a new walkway made of concrete and a train crossing and shared path, we would live somewhere that already has that. Listen to the community. Listen to the voters. Listen to the people who live here and walk the natural trail daily. There is NO NEED for change and wasting tax-payer dollars on this. | Coastal Rail Trail-Oppose |
| 8 | 1/26/2016 | Comment Slip/Sign in Sheet | Andrew Kelso | [redacted] | [redacted] | [redacted] | Y | I've lived in Encintas my entire life since the mid 80's and have enjoyed the natural beauty of our coastline without fences or unnecessary construction. The rail trail should simply run along the existing bike/walking area along 101. We've all enjoyed stopping along the cliff between swamis and cardiff to watch the sunset and I couldn't imagine having a fence blocking the entire view of the ocean. The natural dirt trail that runs the distance from swamis to Cardiff is perfect as is. We have enough concrete in Encinitas!! We need to preserve what's left of our natural areas. Over 95% of the people that I've spoken to are opposed to this and I don't understand why the community is not getting what it wants, especially considering it's being paid for by the community. | Coastal Rail Trail-Oppose |
| 9 | 1/26/2016 | Comment Slip | Dave Kachorek | [redacted] | [redacted] | [redacted]m | Y | The coastal rail trail proposed development of seave is an important topic to address to the community. Too many voices have not been heard. This development will benefit so few and upset so many. I have had so many memories growing up in Encinitas watching sunsets with my family and friends in one of the last untouched areas of my hometown. Please consider those that will influence the most, the locals, rather than those just passing through! The dollars that will go to ruining the enviomment on San Elijo Ave, versus reconstructing coast hwy just seems ridiculous and a poor use of money. Nearly everyone that I have spoken to, while enjoying the area, has NO idea of this proposal, and I think that is extremely unfair to the thousands that enjoy this at a recreation/leisure zone. PLEASE understand that too many people don't know about this proposed project. This means the world to me. A LOCAL. Hear our plea. | Coastal Rail Trail-Oppose |
| 10A | 1/26/2016 | Comment Slip | Karen Dean-Dancis | [redacted] Cardiff | [redacted] | [redacted] | Y | I don't feel a strong need for this project. However, if it will assist the preservation and enhancement of the San Elijo Lagoon, I would support it. It's really important to me that the lagoon remain dark at night. It is an amazing nocturnal space for animals and allows humans to enjoy the night sky in a way unlike any other urban area. I hope the bike trail is not lit at night. | Lighting |

| Comment No. | Date of Submittal | Method of Submittal | Name | Address | Telephone | Email | Email List? | Comment | Topic Area |
|---|---|---|---|---|---|---|---|---|---|
| 10B | 1/26/2016 | Comment Slip | Karen Dean-Dancis | [redacted] | | | Y | I also don't necessarily value a paved trail over a natural one. It's hard to see the iconic bridges go, but that may be necessary to improve the tidal flow. The construction period sounds miserable. Please put up soundwalls first! | Coastal Rail Trail-Oppose |
| 10C | 1/26/2016 | Comment Slip | Karen Dean-Dancis | | | | Y | It's hard to see the iconic bridges go, but that may be necessary to improve the tidal flow. The construction period sounds miserable. Please put up soundwalls first! | Noise |
| 11 | 1/26/2016 | Comment Slip | Deborah F. Tom | | | | Y | I am opposed to the proposal rail trail. I have been a Cardiff resident since 1974 and have walked on the trail, as is, for years. I love the feel of walking in a "natural" enviornment. The proposed rail trail will destroy our quiet community. We already have a "rail trail" on highway 101. With some foresight, that trail can be improved for less money to accomodate both walkers and bikers. | Coastal Rail Trail-Oppose |
| 12 | 1/26/2016 | Comment Slip | Calvin Tom | | | | Y | Rail trail in Cardiff: I do not think that the rail trail is a good idea. I walk this path at least four times a week for my daily walks. We currently have a bike/walking path through Encinitas and along the coast to Chesterfield St. and beyond to Cardiff State Beach. There is no purpose served in building another trail for the following reasons: Create another separation between the town and coast, 2. waste of money when the existing 101 bike/walking trail could be enhanced. 3. existing 101 path through old Encinitas helps the merchants. 4) Other towns have well intergrated bike/walking path through town. 5) The proposed trail is not in the character of the community - since I walk this trail a cleaned up walking trail is all that is needed. | Coastal Rail Trail-Oppose |
| 13 | 1/26/2016 | Comment Slip/Sign in Sheet | Ralph Thielicke | | | m | Y | NO rail trail east of railroad tracks. Put the trail on the 101. Do NOT pave our remaining coastal habitat east of the railroad tracks. Do NOT reduce beach access or beach parking. Save the native plants in rail corridor. | Coastal Rail Trail-Oppose |
| 13 | 1/26/2016 | Court hearing Transcript | Ralph Thielicke | | | m | Y | I just want to make it clear that I am opposed to the present alignment from San Elijo Avenue. But let me be clear, I support the rail trail concept, but it has to be on the proper alignment, which I feel is Highway 101, based on all the objective measures. What we have now is really the worst of all conditions. It costs millions more, that alignment, and it will be used by a lot fewer people than if we put it on Highway 101. And not only that, but it also destroys the remaining natural coastal area that we have along the railroad tracks. It removes beach parking and it reduces beach access for the residents of the City of Encinitas. The San Elijo alignment will serve mostly people who live close by the railroad tracks, and it discourages regional travel and biking, too, because it mixes pedestrians with bike traffic on the path. We need a better solution, and I feel that solution is Highway 101. That's it. | Coastal Rail Trail-Oppose |
| 14 | 1/26/2016 | Comment Slip | Jessica Padilla Bowen | | | n.com | Y | I love the railroad underpass (newish one) in Encinitas. Would love more - great for families! Safety is a concern for me along Encinitas Blvd and Santa Fe Drive, under freeway. I fear for pedestrian and cyclists. Support improvements for pedestrians. I also think Encinitas could use more traffic calming measures, such as signs that show motorists speed and let them know when to slow down. | Active Transportation (except Coastal Rail Trail) |
| 15 | 1/26/2016 | Comment Slip | Kelly & Roger Boyd | | | om | Y | What are plans for sound walls on the west side of I-5 between Requeza ave and Melba Rd.? Actually, in front of my residence. | Noise |

| Comment No. | Date of Submittal | Method of Submittal | Name | Address | Telephone | Email | Email List? | Comment | Topic Area |
|---|---|---|---|---|---|---|---|---|---|
| 16 | 1/26/2016 | Comment Slip | Deb Axler | [redacted] | | | Y | I was devastated to learn of the plan to pave over to coastal rail trail. This effects my every day life. Every day, I enjoy a quiet natural walk with my two dogs along this natural path. The thought of paving this over really breaks my heart and the thought of a parking lot at Montogomery Ave disgusts me. There are plenty of areas to walk and bike on paved areas...why do we need another? Please do not let this happen!!! | Coastal Rail Trail-Oppose |
| 16 | 1/26/2016 | Court hearing Transcript | Deb Axler | | | | Y | I was devastated to learn that they were going to pave over the rail trail. I think it changes the entire landscape of Cardiff, and it affects my daily life because I use that every day. I just moved down here from Manhattan Beach where there is over-congested walkers and bicyclists on the strand, and I was so excited by this trail, that is now going to be paved over and pretty much take away what made Cardiff so special and different. I am particularly disappointed to hear about the proposed parking lot at Montgomery Avenue and the rail trail. That would be such an eyesore and really just change the beauty of the place. | Coastal Rail Trail-Oppose |
| 17A | 1/26/2016 | Comment Slip | Charlotte Machado Hassett | | | hail.com | Y | 1. What is going to happen to all the cars that park for free to look at the ocean or go to the beach? They will move east to the next free parking on Summit Ave. This will seriously impact the parking situation on Summit Ave. | Parking |
| 17B | 1/26/2016 | Comment Slip/Sign in Sheet | Charlotte Machado Hassett | | | hail.com | Y | 2. We already have a perfect walking/bike path along 101. We need a rail trail from Chesterfield South to connect to Solana Beach. We could build a raised path with very little impact to the lagoon. Don't take away free parking from the beach goers and surfers. Surfers made Encinitas. Back in the 70's, they were the large contributers to the economy when Encinitas was just blossoming. | Coastal Rail Trail-Oppose |
| 18 | 1/26/2016 | Comment Slip/Sign in Sheet | Rebecca Bauer | | | x.net | Y | Please do not build rail trail between Santa Fe and Chesterfield in Cardiff. It truly breaks my heart to see all of our natural landscape to be covered by manmade structure. | Coastal Rail Trail-Oppose |
| 19 | 1/26/2016 | Comment Slip | Herschel Jones | | | com | Y | I feel the rail to trail project is an ill concieved, bad idea. It will take away from the people more than it will give back. Traffic will increase along San Elijo Ave, as well as streets close by when whatever type of parking goes in. It will impact people wanting to park, walk their dogs, watch a sunset, eat a meal, snack at lunch time. Think of all the vehicles that use San Elijo when not on the Coast HWY. It will become increasingly difficult to back out or pull in no matter what peopel come to this natural corridor to do. SANDAG said in the beginning when this rail to trail was in the "early" stage that if the existing bike path on 101 was utilized, it would come in under budget. I know a number of avid bike riders who feel it should go on the 101 and putting it by the tracks doesn't make sense for a number of reasons. Let us keep this corridor NATURAL and the way it's always been. I think there's more nays than yays. | Coastal Rail Trail-Oppose |

| Comment No. | Date of Submittal | Method of Submittal | Name | Address | Telephone | Email | Email List? | Comment | Topic Area |
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| 19 | 1/26/2016 | Court hearing Transcript | Herschel Jones | [redacted] | | | Y | First of all, I think the rail to trail is an ill-conceived, bad idea. I think there are many people in Cardiff, Encinitas, and other surrounding areas that would like to keep it open and natural, and the way it has been for quite a while. If the rail to trail goes through, it will not only change this precious, natural space of land that's just along this one part of San Elijo and the Coast Highway, but it will change many things on San Elijo and other existing streets that feed into them. There can only be so much parking, no matter how they draw it up. And once that parking is filled up, which it will if the trail goes in and becomes more popular, because those that utilize it have friends, and some of those friends will want to either ride a bike, walk, or possibly go long by some other means. And once San Elijo spaces are full, people will start going on side streets like Verde, other streets by Cardiff Elementary, and just all along San Elijo. This will especially be filled on a weekend, especially if the weather is nice and draws people to the beach, to the bike trial, to do whatever. If the rail to trail goes in, where they want to put it, I feel that it will really disenfranchise people who come to walk their dog, who come to enjoy a sunset, whether they live in Cardiff or wherever they live. Who come down to possibly eat a lunch, a snack, or even as I've seen many times, back in and have a little -- some type of a dinner, whether they brought it or, you know, got it from somewhere, brought it from home, or whatever. Another thing that will cause a problem: many people who go along that street that may not even be utilizing the trail that day, or depending on, you know, the time, it will be harder for those to park, to get in or to get out. And if there is ever an accident on the -- on 5, which there is from time to time, it will really become quite interesting because it will be total paralysis and gridlock. SANDAG, in the beginning, said that if we utilize the area across 101 that is already set up for bikes, that might need some modification; that it could go -- come in under budget. I think with the fact of what taxpayers have already put up with in many ways over the last number of years, that something that comes under budget, it would preserve the open space area and still -- there would just be that one existing piece that would not be next to the railroad, but could connect at some point. Whatever, you know, they could work out with people or the next city living down -- going south, or even possibly going north. Another thing that it will impact is emergency vehicles. Fire trucks, paramedics use 101 or San Elijo a lot. And not that -- I mean, hopefully people will,if they are backing out, will have enough sense to stop, but I can see -- you know, sometimes fire trucks go down that street. And if a bike -- the pike path goes in, I think that could possibly cause, you know, some existing problem. And then the one thing that I have not heard in any shape or form is they put up the barricades, which were ugly, and then they took them down and put up the railroad barricades, which are better. They are still not what I would call attractive, but they do what they need to do. But there are sections on San Elijo that if it's not shored up, putting in a rail to trail could be -- could cause definite problems for those using the bike trail and a liability for the City, because with this being an El Nino year -- in fact a super El Nino -- there will be -- we have not seen the last of our rain. And if that area isn't shored up where they put | Coastal Rail Trail-Oppose |
| 20 | 1/26/2016 | Comment Slip/Sign in Sheet | Greg Ford | [redacted] | | [redacted]net | Y | I understand there are numerous and often conflicting interests for a project like the rail trail. My vote on top priorities: 1) Minimize impact on open space. The dirt paths running along the space between the tracks in San Elijo are valued by local residents who prefer their natural state. 2) Make it safer for cyclists by expanding bike lanes, either on Coast HWY or on San Elijo. There is already a pedestrian corridor along Coast Hwy. There is less of a need to build a path for this. 3) Minimize fencing to maintain current coast access for local residents. While I fully support increasing access for cyclists, I think this rail trail would be limited in impact as cyclists will need to remain on Coast Hwy if heading south because of the San Elijo Lagoon. | Coastal Rail Trail-Oppose |
| 21 | 1/26/2016 | Comment Slip | Sarah Black | [redacted] | | | Y | Misuse of public funds; poor planning; issue needs to be reopened in a transparent manner with full public disclosure and participation. | General Program Opposition |
| 22 | 1/26/2016 | Comment Slip/Sign in Sheet | Jody Hubbard | [redacted] | | [redacted]n | Y | Very excited to have it! Railroad crossing at Montgomery with quiet zone is mandatory. Hardscape of trail should be less than 10 ft wide! Maybe 8ft? | Coastal Rail Trail-Support |
| 23A | 1/26/2016 | Comment Slip | Gerald Sodomka | [redacted] | | | | 1. NCTD right-of-way between Birmingham and Montgomery urgently needs dust control. | Air Quality |
| 23B | 1/26/2016 | Comment Slip | Gerald Sodomka | [redacted] | | | | 2. Misallocation of funds for rail trail. Better to put money toward grade separation at Chesterfield and lowering tracks. | Coastal Rail Trail-Oppose |

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| 23C | 1/26/2016 | Comment Slip | Gerald Sodomka | [redacted] | | | | 3. Grade crossing improvements at Chesterfield will make left turns more difficult. Traffic will back up more, people will get more impatient. Increasing chance of accidents. Put money towards grade separation! | Traffic |
| 23D | 1/26/2016 | Comment Slip | Gerald Sodomka | | | | | 4. Quiet zones!! ASAP | Noise |
| 24 | 1/26/2016 | Comment Slip | Michael Crull | | | n.com | Y | I think this is a great project and balances needed roadway, rail and enviornmental improvements. | General Program Support |
| 25 | 1/26/2016 | Comment Slip | Doug Flake | | | m | Y | No comment on amendment, but the $6.5 billion SANDAG projects to spend on the north coast corridor should be reallocated so much less is spent on roads and much more on rails. That would fund trenching the tracks through coastal north county when they're doubled. It would help local economies and it would help SANDAG meet CA greenhouse gas emission standards. Increasing freeway traffic will not reduce greenhouse gas emissions. Increasing rail use will. Reduce vehicular traffic and reduce greenhouse gas emissions. As I understand it, SANDAG has lost the CNFF lawsuit twice. It's likely the CA Supreme Court will uphold the court's decision , if the SC heats the case, support the lower court's decision, that will require SANDAG to significantly reduce greenhouse gas emissions. the way to achieve that is to reduce freeway and often road traffic and increase rail use and traffic. | Transit/Rail |
| 26A | 1/26/2016 | Comment Slip | Joan Gosewisch | | | thlink.net | Y | With careful planning, the beautification of the Encinitas Corridor can enhance the integrity and character of our city. Restoration of the eroding bluffs along the lagoons is critical. | Coastal Bluffs |
| 26B | 1/26/2016 | Comment Slip | Joan Gosewisch | | | thlink.net | Y | I support the rail trail. | Coastal Rail Trail-Support |
| 27 | 1/26/2016 | Comment Slip | Liz Lawson | | | | Y | I can appreciate the need for safe bike lanes through Encinitas, but I strongly dislike the current plan for the rail trail through Cardiff. A safe bike lane and sidewalk on San Elijo would accomplish this - and it would also preserve the parking, views and dirt walking and running paths that are there now. We do not need a big wide rail trail as proposed. It would ruin what many of us love about Cardiff. Please consider changes to the rail trail path. | Coastal Rail Trail-Oppose |
| 28A | 1/26/2016 | Comment Slip | Michael Tolda | | | | Y | I oppose this planned rail trail project for many reasons. It is poorly designed and has not been given enough public input. Leave the bike lanes on HWY 101. Del Mar doesn't have a fence blocking public access to beaches and bluffs. | Coastal Rail Trail-Oppose |
| 28B | 1/26/2016 | Comment Slip | Michael Tolda | | | | Y | Losing approximately 100 parking spaces on San Elijo Ave is also a major concern. | Parking |

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| 28B | 1/26/2016 | Comment Slip | Michael Tolda | [redacted] | | | Y | I'd like to file my objection to the coastal rail trail as proposed. I think it's poorly conceived and an ill-advised waste of public funds. It would negatively impact and forever change a unique section of the coastal area of San Diego county. In particular, Cardiff's last little stretch of natural habitat and semi-wildland that exists, that is thoroughly enjoyed by so many people for such a long time as it is. Particular concerns for the long-range ramifications that the building of this project as planned would have for the future: I foresee a huge parking lot existing where there is currently ice plant and other native species. Particularly in the area just west of Montgomery to Verde. Between Montgomery and Verde on San Elijo, there is open acreage there that I believe will inevitably turn into a parking lot to mitigate the estimated loss of 100 parking spaces further north on San Elijo, due to the construction of the rail trail project as proposed. I am quite concerned and unhappy with the change of plans from an underpass at Montgomery, which would be similar to what was built at Santa Fe to Swami's, being replaced with a most unfortunate at-grade crossing, which I see only as having a negative impact of both noise pollution, potential accidents, right in the heart of our community and adjacent to and in front of an elementary school. We like it the way it is, we think that we are having this forced upon us without sufficient time or input being allowed. And wait until they try to do this in Del Mar. I'll leave it at that. Thank you. | Parking |
| 28C | 1/26/2016 | Comment Slip | Michael Tolda | | | | Y | The change of plans from a pedestrian underpass to an at-grade crossing at Montgomery St. will be a significant loss of peace and quiet to the heart of our community. Please consider this ill conceieved project. | Noise |
| 29 | 1/26/2016 | Comment Slip | Aaron Kachorek | | | mail.com | | NO RAIL TRAIL | Coastal Rail Trail-Oppose |
| 30 | 1/26/2016 | Comment Slip | Sara Hoff | | | m | Y | airport transportation is needed. Fast access to the airport, please. S.F and L.A have done a better job on this problem. We need to have faster, better access. | Airport Access |
| 31A | 1/26/2016 | Comment Slip | Donald Peterson | | | .com | Y | I'm somewhat premature with this input as measure A (85/15) will be voted on next month Feb. 25. Next step is submitted to CA Coastal but during that review (assuming 9 months) would allow project ground breaking early 2017. Developer- Rick Caruso has included 9+ million for addressing traffic issues. Specifically on and off lane expansion should and could begin then rather than wait until 2018-19 closer to the project completion at Cannon Rd. | Roadway |
| 31B | 1/26/2016 | Comment Slip | Donald Peterson | | | .com | Y | Also the concept of a trail under I5 (much like the San Elijo Lagoon Bridge) with pedestrian path should be given priority in Carlsbad as well. I'm asking to be kept informed about similar changes at the Agua Hendionda Lagoon with anticipated timing and schedule. Will the enhancement (widening) of I5 force replacing of bridges at Agua Hendrionda Lagoon or just modifications? | Active Transportation (except Coastal Rail Trail) |
| 32 | 1/26/2016 | Comment Slip | Bill Lawson | | | | Y | In regard to the rail trail segment in Encinitas (Cardiff) from Chesterfield to E Street - I urge you to keep the existing open space and native plant species as it is. Do not make the rail trail on the east side of the tracks. If a rail trail must be built, use the existing coast highway. Do not build over the beautiful, open space on the east side of the tracks. | Coastal Rail Trail-Oppose |

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| 33 | 1/26/2016 | Comment Slip | Sean Wright | [redacted] | | | | Dear SANDAG, The Cardiff Rail Corridor is the last underdeveloped piece of coastal habitat in Encinitas. It is a beautiful stretch of land running east of the tracks with lovely views, wide open spaces, and wonderful sandstone formations. There is a natural dirt path running through the CRC that is used regularly by pedestrians, dog walkers, joggers, children (including my own), parents with strollers and bikers. People come there to exercise, enjoy the nature, soothe their minds, and even let their dog off the leash. It is a source of beach parking, especially in the summer months when the 101 is full and many people also park on the northern end to watch the sun set over Swami's. The CRC is an important part of our community character. It should be preserved for current and future generations rather than developed. Unfortunately, this may change. The city council majority of Tony Kranz, Lisa Shaffer, and Cardiff's own Catherine Blakespear have approved a plan to put the Cardiff segment on the Coastal Rail Trail directly through the CRC. This development will put a 17 foot wide slab of pavement with an adjoining 4 foot fence right through the CRC, destroying our last piece of underdeveloped coastal habitat in the process. It is wanton environmental destruction. Once the graters get in there, it will be trashed for good. The council majority knew residents would be up in arms over the fence blocking beach access, so they hastily approved a pedestrian at-grade crossing at Montgomery, right in front of Cardiff Elementary School, ignoring in the process that trains are required to sound their horns within a quarter mile of any at-grade crossing. Because of enviornmental destruction, train noise, the fence, the reduced beach parking, residents of Cardiff and Encinitas are up in arms over this project. A citizen's movement to stop the development was started around the website norailtrail.com. By signing up to the website, letters are sent in your name to city council, SANDAG, the coastal commission, and the local media. Already over 1,000 people have signed up. It is the largest letter writing campaign the city has ever seen. It is clear that a majority of citizens do not want this project. Yet the obstinate council majority continues to denigrate the movement and proceed with the project while attempting to assuage concerns with empty promises to "mitigate train noise, mitigate enviornmental impact, and not chop down too many trees." Can we trust our self-serving ideological minded council majority to do this right? I know SANDAG is tasked with building the CRT and you people are trying to do your jobs as instructed by the Encinitas council majority. However, let me tell you, the council majority does not speak for the citizens of Encinitas on this issue. It is pursuing it's own ideological agenda at the expense of the public. Rather than trying to mitigate enviornmental destruction and train noise, which can't be stopped, a much better alternative exists that would have wide community support. Put the CRT on the 101 and build an under-crossing at Montgomery to connect with it. Everyone wins. | Coastal Rail Trail-Oppose |
| 34 | 1/27/2016 | Email | Sean Wright | | | | Y | [EMAIL LARGE WITH IMAGES - SEE ATTACHMENT] | Coastal Rail Trail-Oppose |

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| 35 | 1/26/2016 | Court hearing Transcript | Sean Wright | [redacted] | | | | The Cardiff rail corridor is the last undeveloped piece of coastal habitat in Encinitas. It is a beautiful stretch of land running east of the tracks, with lovely views, wide open spaces, and wonderful sandstone formations.There is a natural dirt path running through Cardiff rail corridor that is used regularly by pedestrians, dog walkers, joggers, children -- including my own -- parents with strollers, and bikers.People come there to exercise, enjoy nature, sooth their minds, and even let their dogs off the leash. It's a source of beach parking, especially in the summer months when the 101 is full. Many people also park on the northern end to watch the sunset over Swami's. The Cardiff rail corridor is an important part of our community character. It should be preserved for current and future generations, rather than developed. Unfortunately, this may change. The council majority of Tony Kranz, Lisa Shaffer, and -- Cardiff's own -- Catherine Blakespear, have approved a plan to put the Cardiff segment of the coastal rail trail directly through the Cardiff rail corridor. This development will put a 17-foot-wide slab of pavement, with an adjoining four-foot fence, right through the Cardiff rail corridor, destroying our last piece of undeveloped coastal habitat in the process. It is wanton environmental destruction. Once the graders get in there, it will be trashed for good. The council majority knew residents would be up in arms over the fence blocking beach access, so they hastily approved a pedestrian at-grade crossing at the junction of Montgomery and San Elijo Avenue, right in front of Cardiff Elementary School, ignoring in the process that trains are required to sound their horns within a quarter mile of any at-grade crossing. Because of environmental destruction, train noise, the fence, and reduced beach parking, residents of Cardiff and Encinitas are up in arms over this project. A citizens movement to stop the development was started around the website NORAILTRAIL.COM. By signing up for the website, letters are sent in your name to City Council, SANDAG, the Coastal Commission, and the local media. Already over 1,000 people have signed up. It is the largest letter-writing campaign the City has ever seen. It is clear that a majority of citizens do not want this project, yet the obstinate council majority continues to denigrate the movement and proceed with the project, while attempting to assuage concerns with empty promises to mitigate train noise, mitigate the environmental impact, and not chop down too many trees. Can we trust our self-serving, ideological-minded council majority to do this right? I know SANDAG is tasked with building the coastal rail trail. And SANDAG is trying to do its job as instructed by the council majority. However, let me tell you, the council majority of Blakespear, Shaffer, and Kranz does not speak for the citizens of Encinitas on this issue. It is pushing its own ideological agenda at the expense of the public good. Rather than trying to mitigate environmental destruction and train noise, which can't be stopped, a much better alternative exists that would have wide community support in Encinitas. This is what SANDAG should be spending its money on. Namely, put the coastal rail trail on the 101 and build an undercrossing at the intersection of Montgomery and San Elijo Avenues to connect with it.<br>Everyone wins with this plan. Here is what this plan would accomplish. No. 1, it would preserve the | Coastal Rail Trail-Oppose |
| 36 | 1/26/2016 | Court hearing Transcript | Rich Kelso | | | | | My name is Rich Kelso, and I live on San Elijo Avenue. I've spoken before the City Council on three different times in the last two years. It has all gone on deaf ears. The last six months they have refused to listen to people about the rail trail. They have their own agenda. And Lisa Shaffer is, in my opinion, the lead person who is doing this. She is spreading mistruths.She says 50 percent truth of a sentence and 50 percent wrong, and she's a member of SANDAG, and we need to realize this.<br>Please listen to the citizens of Cardiff. We are very logical. Our presentation is to have the rail trail and then go underneath -- the actual Swami's underpass, which cost $5.5 million to build about three or four years ago -- and go down to 101. Everybody<br>would like to walk and ride along the bluff, and not up in San Elijo. On the south end of San Elijo, we have an extreme amount of very environmental situations that they want to destroy. They want to bring big machinery in and get rid of our sandstone bluffs and the natural habitat area. And they have no -- really, any reason. We asked them why do they want to do it here, and they said, "Well, we have to connect Encinitas to Cardiff," or "Somebody wants to walk safer."<br>They want to spend 5-to-$10 million on walls on a beautiful section of about 14-foot bluff. It's 18 2,000 feet long. And at the north end, that equates to 234 parking spaces that are going to be eliminated. There's just a lot of negative things that they are planning on doing. And we have had many meetings, and we've voiced our displeasure, and it's gone on deaf ears. And I'd like you, as an organization, to see what one of your representatives, Lisa Shaffer, is doing to<br>our community. Thank you. | Coastal Rail Trail-Oppose |
| 37 | 1/26/2016 | Court hearing Transcript | Joe Alkhas | | | | | I'm opposed to the current alignment of the coastal rail trail on San Elijo Avenue. In organizing the NORAILTRAIL.COM website, the expectation was an equal hearing and the proper respect of our elected officials in addressing the concerns of a large portion of the community.The response that we've received thus far has been disappointing. Every day new residents in our community join our campaign. And we anticipate that when the news of the coastal rail trail, its impacts, its financial burden, reach the residents of east Encinitas and surrounding Communities, we anticipate that the level of concern, the level of outreach, and feedback to the City Council is going to overwhelmingly | Coastal Rail Trail-Oppose |

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| 38 | 1/26/2016 | Court hearing Transcript | Jennifer Benedict | [redacted] | | | | My family and I have lived in Cardiff for 33 years and have always enjoyed walking our dogs across the street on the dirt path, and being able to walk across to our beach out front. And I would be greatly saddened to have an asphalt deck or cement path for walking the dogs, mostly. And, also, a fence would greatly hinder getting to the beach. Yeah, I like the nature we enjoy along the dirt path, as well. There are species of birds that we enjoy now -- egrets, osprey, and more -- that would be diminished, I feel, with cement or asphalt. Thank you. | Coastal Rail Trail-Oppose |
| 39 | 1/26/2016 | Court hearing Transcript | Richard Risner | | | | Y | I took the SANDAG 30 percent document, and I overlaid -- I am a landscape architect by trade, licensed in California, and I've worked for the government for over ten years, in state parks, doing environmental projects. So this is very near and dear to me, because we are going through some very sensitive habitat. Not only are we losing about 100 parking places, but we are also losing coastal maritime habitat, as well as succulent habitat, and possibly some vernal pool habitat that I've documented. I've taken a state environmental scientist and we've walked the site together, and we've mapped locations where the trail goes through and has impact on sensitive habitat. That habitat, once it's gone, we can never get it back. This is the only place east of the train tracks that has natural sandstone formations and supports this very fragile habitat throughout all of Cardiff and Encinitas. Some of the plant species are actually -- could possibly be listed on the CESA, which is the California Endangered Species Act. There was a few plant materials that were noticed out there that actually are very sensitive. And once they are gone, being an endangered species, we can't get those back. Overall, being a landscape architect, this is, like, one of the worst designs I've seen. It's more an engineering project than a landscape architect project. They don't take into consideration any of the environmental constraints on the project. There's no areas for water runoff and bioswales and clean water management before it gets discharged into the San Elijo lagoon system. So environmentally, I think it's just a terribly designed project, and there's no restoration as part of this project. It's all about hardscape and limiting people's access to the beach by putting in this fence that goes the whole length of the corridor, as well as, you know, removing additional beach parking. It went from 141 parking places to 41 that are proposed in the new design. I do have about 20 pages of documents that I have put together personally. And if anybody wants to contact me to review these documents, they are more than welcome to. You have my e-mail address. Thank you. | Coastal Rail Trail-Oppose |
| 40 | 1/26/2016 | Court hearing Transcript | Scott Kyle | | | | | I am here to voice my opinion that the proposed rail trail is a bad idea. We currently have a very beautiful, natural dirt trail that is functional and could stand no improvement. Basically paving over a natural dirt trail makes no sense at all. It's one of the last remaining unaltered pieces of coastline in the North County area. It's got beautiful sandy bluffs and wild foliage growing there. I brought a picture of that, but that's not going to go too well on the transcript. And there is already a perfectly usable trail for hiking or for walking and seeing the coastal vistas right on the other side of Coast Highway, in that area. My last point that I want to make is that the proposal to have an at-grade crossing at Montgomery will 3 add a significant amount of railroad horn noise to the neighborhood. And I am not a NIMBY person here -- not in my backyard. I live about two miles away from that crossing on Oxford Avenue, up the hill. But I still will hear it, and it will double the amount of ambient noise in my house and front yard. It would make far more sense to spend the $5 million building an undergrade crossing at Montgomery and leaving the existing dirt trail intact, as it is.Thank you very much. | Coastal Rail Trail-Oppose |